

# Apparo Fast Edit

Cognos Version

Training Guide for the first steps



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## 1 Introduction

### 1.1 What is Apparo Fast Edit

- Apparo Fast Edit is bridging the gap between the IT and the business departments, making it easy for managers, accountants etc. **to create forms, data entry masks and even complex workflows for quick data input** without special knowledge in a programming language.
- Apparo Fast Edit is a **high-performance data entry software**. With it, you can enter, edit, delete data and also easily import data from Excel files in different ways (via email, via copy&paste or as file import).
- With Apparo Fast Edit, you can
  - a) **build stand-alone data entry solutions**, or
  - b) **extend your BI reporting system (e.g. IBM Cognos BI) or your enterprise portal**

### 1.2 What were the driving forces behind the development?

- Reporting and Data Entry should be connected.
- Business requirements should be implemented very flexibly.
- Business departments want fast solutions, without waiting for IT development.
- System should be integrated completely in BI or enterprise portal systems.
- Software should be able to expand and grow depending on needs.
- Software should be easy to use, also by business departments.

### 1.3 Resulting cornerstones of Apparo Fast Edit

- Forms definable in the Apparo Designer, without programming knowledge.
- Powerful variables and scripts or database procedures to maximize the flexibility
- Security based on existing authorization system (e.g. LDAP, Active Directory)
- Data quality must be secured by possible input validation of data types and values.
- Excel and CSV import possible (manual or automatic), also handling of file attachments.

Due to its many features Apparo Fast Edit can be adapted to fit almost any need. The online help in the Apparo Designer helps to start immediately by giving explanations and hints on all features and settings.

*There are two sides of Apparo Fast Edit*

- the **Backend** (Apparo Designer), on which forms, masks and Workflows are set up as so-called *Business Cases*

- and the **Frontend**, on which these forms are filled with data.

#### 1.4 Target groups and goal of this tutorial

- The target groups of Apparo Fast Edit are persons who create and edit data entry forms, for example in business units. No programming knowledge is necessary!
- The focus of this tutorial is to explain the basic thoughts and models that are necessary to translate a problem into a Fast Edit Business Case, and to highlight important features.
- After completing this tutorial, the user should be able to create simple and also complex Business Cases so that data can be entered easily and quickly into reports, dashboards, mask and forms into any relational database.

This tutorial is intended to help you through the first steps with Fast Edit. It also touches many more advanced topics to give you an overview over the vast possibilities.

You can find extensive information about the Fast Edit features in the document “User Guide”.

#### 1.5 Technical requirements

1. Apparo Fast Edit has to be installed and started.
2. A web browser has to be available, as Apparo Fast Edit is a web-based software.
3. The BI system has to be installed and ready.
4. As the language of the Fast Edit interface and the tutorial is English, basic English knowledge is necessary.
5. No BI Installation is needed for the standalone version.

#### 1.6 Basic Handling

- *Fields with an \*(asterisk) have to be filled in.*

Since Apparo Fast Edit works with databases and tables, buttons like “OK”, “Cancel” etc. have a defined effect in terms of database transactions.

- a) **“OK” (without a “Close” available):** All changes are stored in the database and the Business Case is closed.
- b) **“OK” (with a “Close” available):** All changes are stored in the database.
- c) **“Close”:** All changes are stored in the database and the Business Case is closed.
- d) **“Cancel”:** Rolls back database transaction(s). No changes are saved.

Note:

- *“OK” and “Close” are sending a COMMIT command.*
- *All button texts can be changed in the Apparo Designer on the “Button Titles” register, but this will not change their effect.*
- *If the feature ‘auto commit’ is enabled all changes are stored immediately.*

## 2 Main Concepts

In the following section, you will find a general overview of the main concepts and the technological background of Apparo Fast Edit.

For more technical information on the subject, please refer to the “System Architecture” document.

### 2.1 Databases and Users

Example: IBM Cognos BI & Apparo Fast Edit

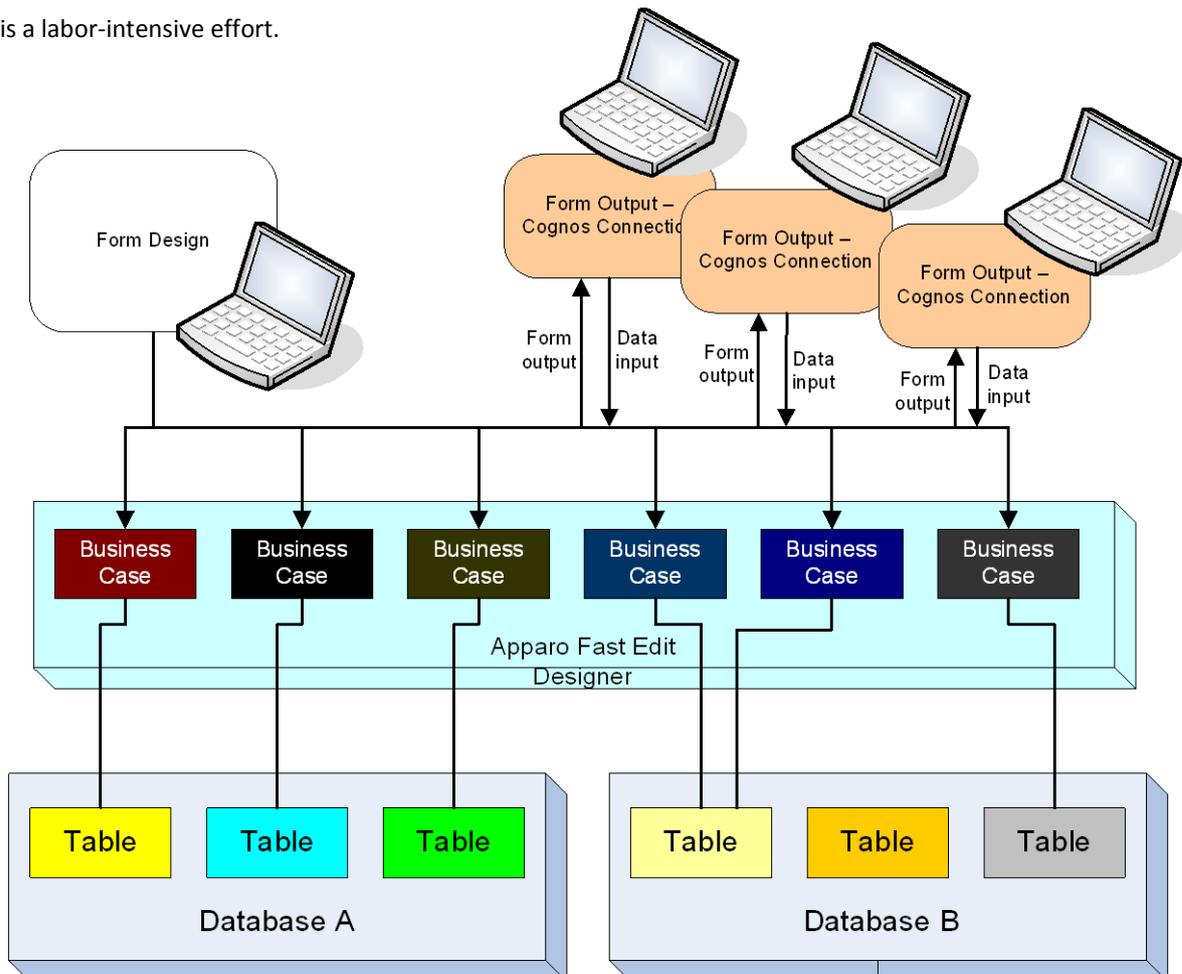
Apparo Fast Edit bridges the gap between the database, the form designer and the user.

IBM Cognos BI is a software that is optimized for data output.

That means:

- a) setting up the input forms and
- b) adding the data

is a labor-intensive effort.



With Apparo Fast Edit, a power user can build forms and masks which refer to tables in the database without any programming knowledge.

Members of the same or other business departments can use these forms for quick data entry in stand-alone forms or within a Cognos Report.

## 2.2 Usage of Apparo Fast Edit

Apparo Fast Edit is intended for collecting any type of data, changing of data and for the output of data.

Typical use cases of Apparo Fast Edit are the maintenance of:

- Master data
- Addresses
- Personnel data
- Project times and status
- User designations, lists and codes
- Report distribution (bursting table)
- ...basically any kind of figures, measures, survey results, plan data etc.

In addition, you can comment on Control Reports and release the comments.

## 2.3 Business Cases (BC)

The cornerstones of Apparo Fast Edit are the so-called Business Cases.

Each Business Case is an application that can be started in a Business Intelligence System or stand-alone.

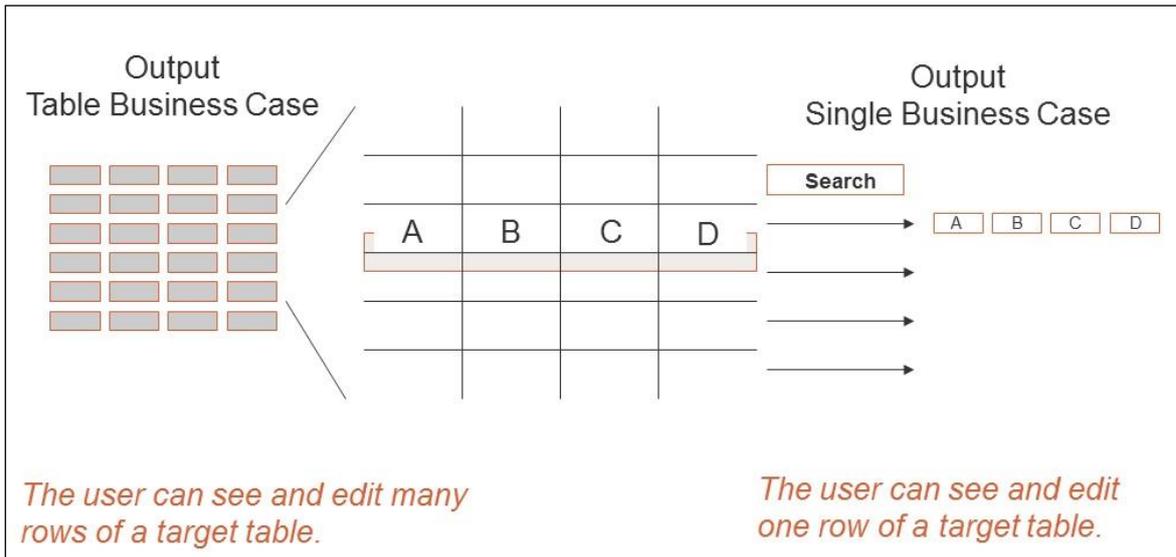
A Business Case contains input fields, prompts, logos, lookups, titles, buttons and functionality like deleting data, inserting, Excel-import and so on.

- While you can include more than one database and table in your Apparo Fast Edit set-up, each Business Case refers to only one table/view (lookups can refer to a different table).
- If you want to combine data of different tables, you need to use e.g. a master-detail relationship between Business Cases, as explained in the section “Linking Business Cases as Master-Detail connection”.
- You can filter the displayed data of a Business Case by another table (e.g. country > factory > personnel display). This is called a data hierarchy and explained in the section “Optimizing Business Cases”.

## 2.4 Business Case types

Business Cases come in four slightly different types:

- the Table Business Case (TBC) and
- the Single Business Case (SBC)
- the Email Business Case (EBC) to send emails
- the Email Import Business Case to import data sent by emails



**Similarities:**

- Can be used with search fields, filters, buttons...

**Differences:**

**Table Business Case (TBC)**

- Shows data of a whole database table (one row at a time for full display).
- Fewer available widget types than for the single Business Case, due to restrictions in display space (one table per screen).

**Single Business Case (SBC)**

- Shows only the columns of one database table row. (Via Search next rows available.)
- More widget types than the table Business Case, due to less restriction in space (only one data set per screen).

**Typical cases for Single Business Cases:**

- Data entry in a single data record
- Display of detailed entries from a table Business Case.
- Data entry of product or staff details.

**Typical cases for a Table Business Cases:**

- Data entry
- Display of long data lists.
- Data entry from Excel sheets
- Data export into Excel

When you open a single Business Case report, you can transport primary key(s) and report variables to the Business Case.

### 3 Clients

#### 3.1 Definition

Clients facilitate the **management of different business units.**

They enable the strict separation of the administration of the business cases in the designer and the easier separation of data from different departments.

Only super-users can create or edit clients, designer users don't have access to this feature.

Every user group can be assigned to one or more clients.

If a user is assigned to more than one client, he can select the client he wants to use in top right corner.

*Each client represents a capsulated Apparo Fast Edit environment with own connections, Business Cases, language, settings and security:*

Name	Database type	Host	Port	Database name/alias	Server name	User	Database schema
test	Oracle	blade1	1521	orcl		fesamples	FESAMPLES

Database connections of 'Client 1'

Name	Database type	Host	Port	Database name/alias	Server name	User	Database schema
Client2_connection	Oracle	blade1	1521	crm		testing	TESTING

Database connections of 'Client2\_Europe'

Business Case ID	Name	Type	Connection name	Target table/view	Last change user	Last change date
email_daten_import	E-Mail Datenimport	Email Import	test		Administrator	05-11-20
email_datenimport	Import der monatlichen Umsätze	Table	test	SAMPLE_FILE_IMPL	Administrator	05-11-20
xxx	xxx	Table	test	SAMPLE_PRODUCT	Administrator	31-10-20

Business Case of 'Client 1'

No business cases found

Business Cases of 'Client2\_Europe'

### 3.2 Creating a new client

The client tab can be opened with the button on the left menu. Click on 'New' to add a client:

	Client ID	Client name
<input type="checkbox"/>	▶ QA	▶ QA
<input type="checkbox"/>	▶ Forcea	▶ Forcea
<input type="checkbox"/>	▶ ARA-TEC	▶ ARA-TEC
<input type="checkbox"/>	▶ GAD	▶ GAD
<input type="checkbox"/>	▶ RhenusMai	▶ Rhenus Mai 2015
<input type="checkbox"/>	▶ Demo Env	▶ Demo Env

Clients can be imported and exported

#### 3.2.1 Client head

When creating a client you will be asked to fill these main settings:

- **Client identifier** = unique ID
- **Client name** = name, that will be shown
- **Client security groups** = assign security groups to this client
- **Client internal description** = description text for documentation purposes

Client attributes

Client identifier: UniqueClientID \*

Client name: NameThatWillBeShown \*

Client security groups (comma separated list):

Client internal description:

OK CANCEL

Click 'OK' to move on

### 3.2.2 Client security groups

This security groups are used to assign and to check the authorization.

**Authorization:**

Apart from administrators are only users who are members of the entered security groups, entitled to run the Business Cases of this client.

**Assignment:**

When you open a Business Case without client ID, e.g. from a BI report or an e-mail, the security group of clients will be used to assign the appropriate Business Case.

Without security group or if the user is member of more than one client, the allocation of Business Cases with the same ID, existing in different clients, is based on the order of the clients in the list from top to bottom.

### 3.2.3 General settings

The general settings are containing these properties:

- **Application name** = This name is shown in the top left corner. Default is 'Apparo Fast Edit'
- **Application logo** = Optional. A logo can be shown next to the application name
- **Auto import** = Enables client-wide the automated file import (server background) feature
- **Import period** = When auto import is enabled, this is the interval in seconds to check the defined folders for new Excel files for the auto import feature

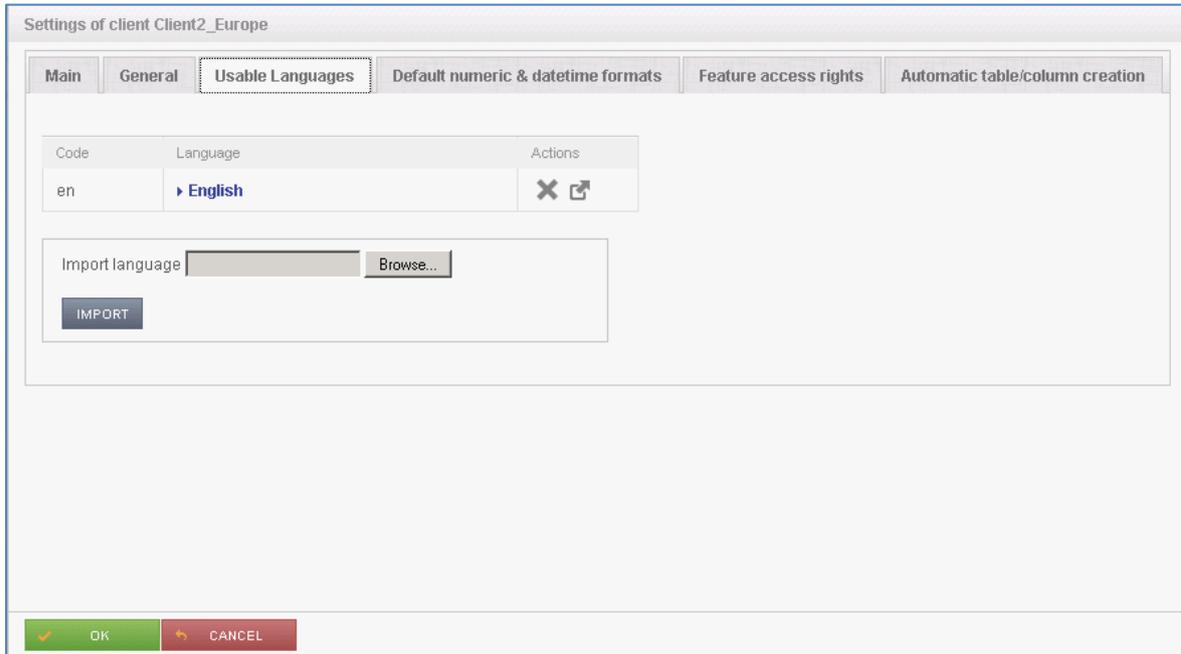
The screenshot shows a settings dialog box titled "QA for AFE3" with a "Setting" label in the top right corner. The dialog has several tabs: "Client head", "General", "Languages", "Default numeric & datetime formats", and "Access". The "General" tab is active. It contains the following settings:

- Application name:** A text input field containing "Apparo Fast Edit" with a red asterisk indicating it is required.
- Application logo:** A text input field containing "http://".
- Auto import:** An unchecked checkbox.
- Automatic file import period [s]:** A text input field containing "300" with a red asterisk indicating it is required.
- Export dependent connections:** A checked checkbox.

At the bottom of the dialog, there are two buttons: "OK" (green) and "CANCEL" (red).

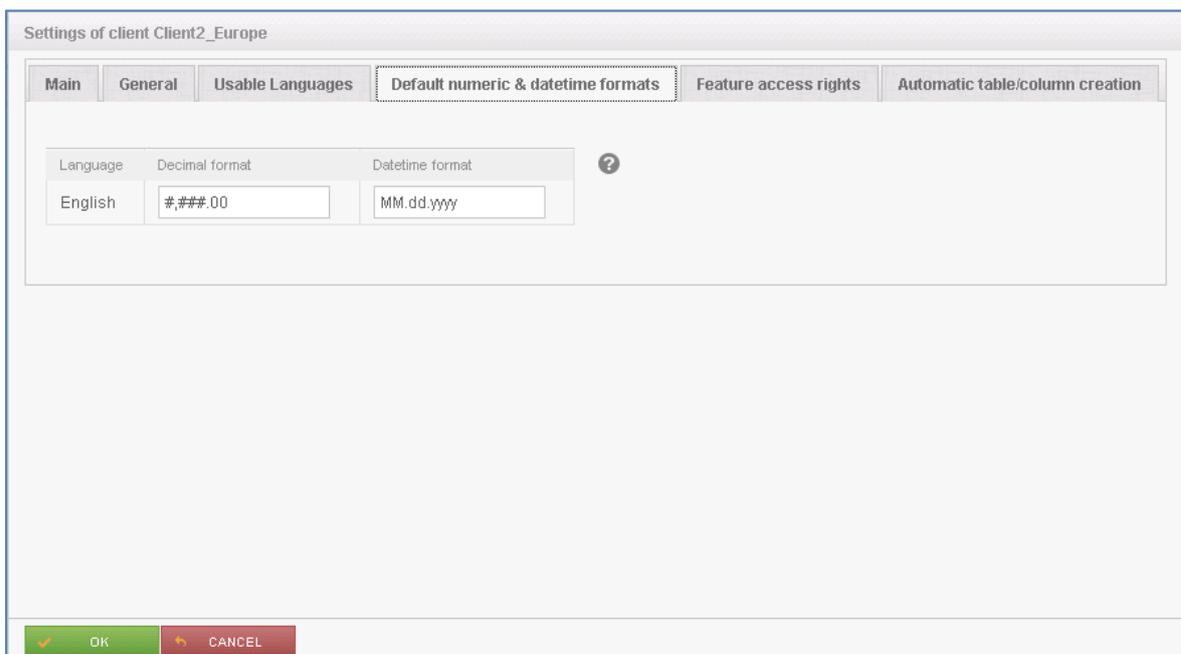
### 3.2.4 Usable languages

When creating a client there are no languages installed.  
You can import them from: [APPARO\_HOME]/FastEdit/languages



### 3.2.5 Default formats

In 'Default numeric & date time formats' you can adapt the defaults of these date types



Changing the decimal format is not implemented yet. Commas and thousands delimiter are controlled automatically by the users language.

### 3.2.6 Access rights

Define restrictions for accessing secured parts of Apparo Fast Edit. Only users with listed security groups will be able to access these particular functions.

**Apparo Client Administrator:** has unrestricted access to all features of this client  
*If no security group is defined, all mapped users will have admin access, which means folder and BC-level access rights will have no impact.*

**Apparo Connection Administrator:** can create, edit and delete database and email server connections

**Apparo Designer:** manages Business Cases - can create, delete and edit Business Cases and folders

**Apparo Import & Export Administrator:** can import and export Business Cases and connections

Enter comma separated list of security groups for each Apparo Fast Edit role:

Apparo Client Administrator	Admin_Group
Apparo Connection Administrator	
Apparo Designer	
Apparo Import & Export Administrator	
<input type="button" value="OK"/> <input type="button" value="CANCEL"/>	

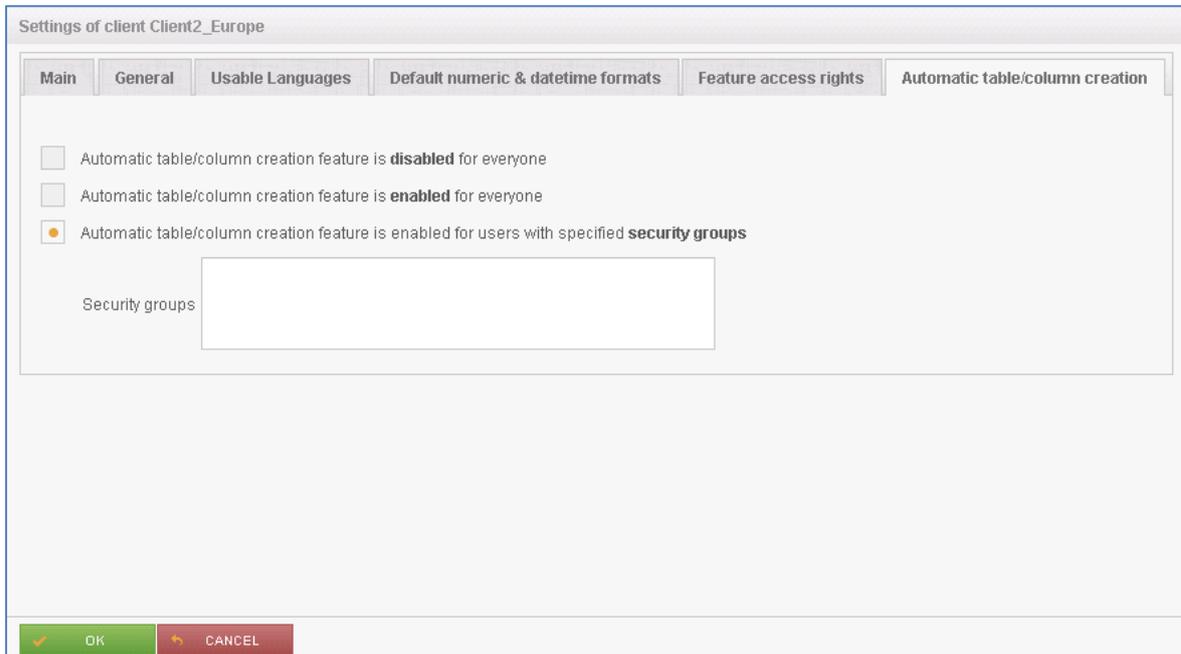
When empty, no restrictions are set.

### 3.2.7 Automatic table/column creation

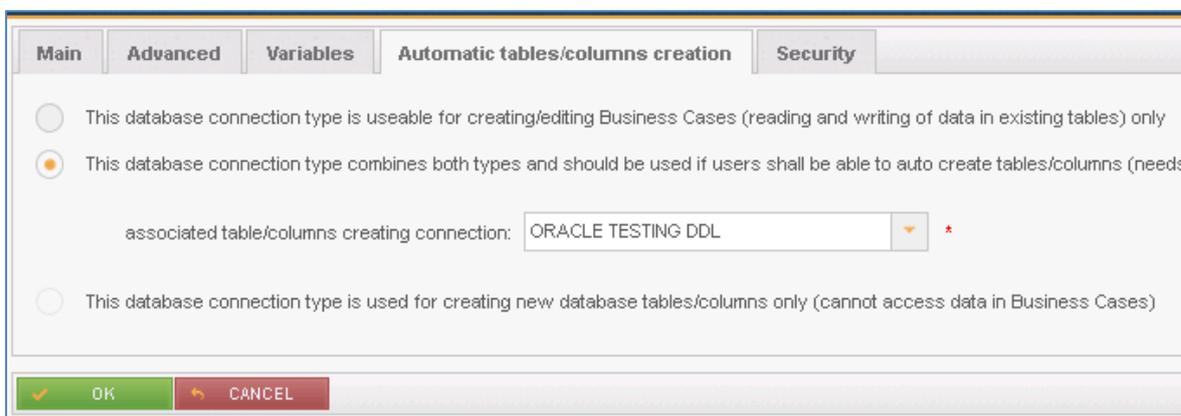
Defines the rights of designer users to use the automatic table creation feature.

When enabled, Apparo Fast Edit can create automatically tables or columns using a defined database connection.

This feature is disabled by default and can be enabled for everyone or for specified user groups only.



To use this feature you need a database connection of type DDL (This database connection type is used for creating new database tables/columns only) that will be mapped to database connection of type DML (This database connection type combines both types and should be used if users shall be able to auto create tables/columns)



This will be explained more detailed in a later chapter.

### 3.2.8 Excel export formats

To define the allowed excel export formats

**QA for AFE3** **Settings of**

**Client head** | **General** | **Languages** | **Default numeric & datetime formats** | **Access right**

You can specify here which Excel file formats can be used for exporting of a Business Case data.

- CSV - text file
- XLS - Excel 2003 and older
- XLSX - Excel 2007 and newer

### 3.2.9 Business Log

You can store all user activities (Business Cases, Designer) into a free definable database table.

Enable Business log

Business Log database table settings	
Database Connection	Please select a Database connection <input type="button" value="v"/> *
Database schema	Please select a DB schema <input type="button" value="v"/> *
Logging table	Please select a log table <input type="button" value="v"/> *
Column for the log sequence number	<input type="button" value="v"/>
Column for client name	<input type="button" value="v"/>
Column for username	<input type="button" value="v"/>
Column for the event timestamp	<input type="button" value="v"/>
Column for the Business Case ID	<input type="button" value="v"/>
Column for the message code	<input type="button" value="v"/>
Column for the message text	<input type="button" value="v"/>
Column for the log severity	<input type="button" value="v"/>

### 3.3 Templates, Styles, Colors and Fonts

In the client folder you will find different ways to create your own templates and to define a preset design.

The files can be found in the folders for each client.

[APPARO\_HOME]\FastEdit\clients\

- theme.css
- Favicon.ico
- Fonts.properties
- Colors.properties
- Buttons.properties
- All pictures and backgrounds of the designer are stored in the subfolder "images"

#### 3.3.1 Theme.css

The appearance of the designer and the business cases, you can change with CSS:

##### 3.3.1.1 Styles for the Designer

The styles of the designer can be found in the accompanying commentary by theme.css.

##### Example

```
/* ----- */
/* ----- BUSINESS CASE SETTINGS LEFT MENU ----- */
/* ----- */

/* Menu items background */
div#designerForm\3A featureMenu,
div#settingsTab{
    border:none;
    background-color: #e0e0e0;
    background-image: url("images/menuBkg.png");
    background-repeat: repeat-y;
    background-clip: content-box;
    background-origin: content-box;
}
```

##### 3.3.1.2 Styles for Business Cases

The colons used by the framework in the class designations have to be escaped in the CSS by \: Unfortunately, this does not work in older Internet Explorer, so we use in the following examples, the hex code "\3A"

##### Examples for addressing labels in different business case areas in CSS

**Hint:** *!important* prevents overwriting of the setting (e.g. by the property files or default styles)

##### Filter area

```
#businessCaseUIForm\3A searcharea label {
color: #00ff00 !important;
font-size: 2em !important;
}
```

#### Edit area, Widget-Label

```
#businessCaseUIForm\3A editareaHeader label{
color: #ccc !important;
font-size: 1.5em !important;
}
```

#### Calculation area

```
#businessCaseUIForm\3A calcarea label{
color: #000 !important;
font-size: 3em !important;
}
```

#### Bulk update area

```
#businessCaseUIForm\3A bulkupdatearea label{
color: #eee !important;
font-size: 3em !important;
}
```

#### Header and Footer

```
#businessCaseUIForm\3A header label{
color: #eee !important;
font-size: 3em !important;
}
```

Header or footer can be so addressed only as a unit, but as you can use HTML in header and footer, as well as in almost all settings, e.g. the widget label, you can easily address any elements by Span tags: "<span class =\" class\_name \"> TEXT </ span>\".

### 3.3.2 Favicon.ico

The favicon is a small graphic that is displayed by the browser usually in the address bar and / or in the tab:



If you replace this file, please remind the right format .ico

### 3.3.3 Fonts.properties

This file contains the settings for the font in the business cases.  
Please note that **the settings for all property files apply only when restarting Fast Edit in the Configuration Manager.**

#### Example for the font settings of the widget label

```
#Default font settings for widget's "label"
bc.widget.label.fontface=Arial
bc.widget.label.size=12
bc.widget.label.style=bold
```

#### Example for the font settings of the widget texts

```
#Default font settings for widget
bc.widget.text.fontface=Arial
bc.widget.text.size=12
bc.widget.text.style=normal
```

### 3.3.4 Colors.properties

To define the default colors for business cases of a client  
After a change it is necessary to restart Apparo Fast Edit via Configuration Manager/Start Fast Edit button

Excerpt:

```
#BusinessCase
businessCase.bgColorHeader=FFFFFF
businessCase.bgColorFooter=FFFFFF
businessCase.windowBgColor=FFFFFF
businessCase.fontTitleHeader.color=000000
businessCase.fontDescriptionHeader.color=000000
```

This file contains all possible color settings for the business cases.  
These colors are the default colors if not explicitly one color has been overridden in the business case.  
That means depending on the client a business case can automatically use different colors.

### 3.3.5 Buttons.properties

Contains settings for the standard button size and color  
After a change it is necessary to restart Apparo Fast Edit via Configuration Manager/Start Fast Edit button

Excerpt

```
# the label text color if the user is pointing to this button
buttonStandard.Grey.hover.textColor=#e9edf2
# the button color if the user is pointing to this button
buttonStandard.Grey.hover.bgColor=#FFFF00

# Common buttons settings
#####
# height of Standard buttons (in px)
buttonStandard.height=50
```

## 4 The Apparo Designer

### 4.1 Introduction

In the following section, you will be introduced to the Apparo Designer.

The Apparo Designer is the area in which the Business Cases or Business Case sets are created. Anything from the database connection to the data fields, access rights, archiving, corporate design, data import etc. is defined here.

### 4.2 Start screen with a list of all Business Cases

Start	Business Case ID	Name	Type	Connection name	Target table/view	Last change user	Last change date
<input type="checkbox"/>	▶ SAMPL WF WORKFLOW1 (1)	▶ SAMPLES Input of the measures in the sales office	Table	SAMPLES	SAMPLE_FORECAST	testuser1 displayname	12/12/14 7:30 AM
<input type="checkbox"/>	▶ SAMPL WF WORKFLOW2 (2)	▶ SAMPLES Input of the measures in the sales office	Table	SAMPLES	SAMPLE_FORECAST	testuser1 displayname	12/12/14 7:33 AM
<input type="checkbox"/>	▶ SAMPL WF WORKFLOW2 (1)	▶ SAMPLES Controlling	Table	SAMPLES	SAMPLE_FORECAST	testuser1 displayname	12/12/14 7:30 AM
<input type="checkbox"/>	▶ SAMPL WF WORKFLOW2 (2)	▶ SAMPLES Controlling	Table	SAMPLES	SAMPLE_FORECAST	testuser1 displayname	12/12/14 7:33 AM
<input type="checkbox"/>	▶ SAMPL WF WORKFLOW3 (1)	▶ SAMPLES Show all history entries of a product	Table	SAMPLES	SAMPLE_FORECAST	testuser1 displayname	12/12/14 7:30 AM

At the start of the Apparo Designer, you will see a list of all business cases that are stored in the Apparo Repository. If the Apparo Repository does not contain any definition, this list will have no entries.

### 4.3 Definition

**Each business case is an own application that can be called separately.**

**Business cases can be linked together, so that from the user's perspective, a business case can also consist of several masks.**

**All business cases are stored in the Apparo Repository, which is a separate database.**

### 4.4 Buttons and Sorting

The following buttons are at your disposal:

- New - creates a new Business Case
- Delete - deletes all selected Business Cases
- Copy - copies all selected Business Cases
- Import - imports Business Cases from a file
- Export - exports selected Business Cases into a file
- Filter - filters all business cases from the input string by its ID

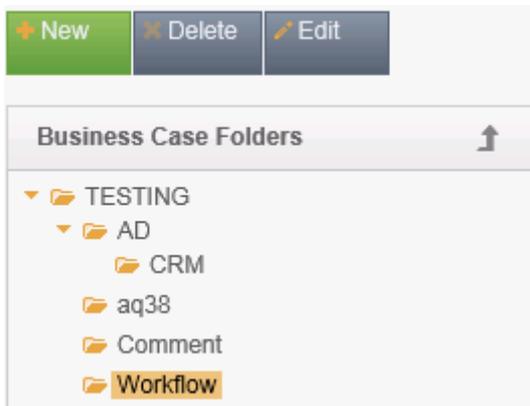
The sort can be changed by clicking the orange arrows:

<input type="checkbox"/>	Start	Business Case ID	Name	Type	Connection name	Target table/view	Last change user	Last change date
--------------------------	-------	------------------	------	------	-----------------	-------------------	------------------	------------------

#### 4.5 Folder

Business Cases can be grouped in folders. Inside the folder you can create subfolders.

For the Folders pane, there are three buttons:



Depending on the given rights, the user can:

- Create new folders and subfolders
- Delete folder and its contents (subfolders, business cases)
- Change the properties of the folder

#### Folder properties:

The image shows a dialog box titled 'Settings of this Business Case folder Workflow'. It contains four rows of labels and text input fields:

Name of this Business Case folder	Workflow
Necessary security group to see and open this folder	Group_1
Necessary security group to edit/delete this folder	Group_2
Necessary security group for running the included Business Cases of this folder and subfolders	Group_2, Group_1

At the bottom of the dialog box, there are two buttons: 'OK' (green) and 'CANCEL' (red).

The following properties can be changed:

- Name of the folder
- The necessary security group to open the folder
- The necessary security group to edit the folder
- The necessary security group to execute containing Business Cases

#### 4.6 Description and normal mode

In the description mode most of the settings are explained briefly while the normal mode lacks these descriptions.

Example of the description mode:

Apparo Fast Edit Connections en TESTING Cognos Connection

Database connections | Email connections

A database connection is necessary to access the target tables and lookup tables for reading and writing. Every Business Case is using a database connection (exception: dMdl Business Case). If a database connection is in use then pooling of many connections for faster usage is a default feature. You can use script variables in all settings. Script variables can be defined in a connection or in a Business Case. Currently Apparo Fast Edit can access relational databases only (no OLAP).

Security: It's possible to restrict the access to some database tables/Views only. That means a Business Case can't change values of other database tables because the database grants for this database connection don't allow these changes. Please talk with your database administrator if you need a database connection that doesn't have full access for achieving security requirements.

You can test a database connection if it is working fine with selecting the database connection entry and pressing button TEST DB CONNECTIONS.

Buttons: New, Test DB connections, Import, Export

Name	Database type	Host	Port	Database name/alias	User	Database schema	Actions
AFP_Data	MS SQL Server	db7	1433	AFP	AFP		i
Apparo Stundenverwaltung	Oracle	db2	1521	orcl	appstunden		i
ATSVR041	MS SQL Server	db7	1433	master	testing		i

Hide descriptions

The same page in normal mode:

Apparo Fast Edit Connections en TESTING Cognos Connection

Database connections | Email connections

Buttons: New, Test DB connections, Import, Export

Name	Database type	Host	Port	Database name/alias	User	Database schema	Actions
AFP_Data	MS SQL Server	db7	1433	AFP	AFP		i
Apparo Stundenverwaltung	Oracle	db2	1521	orcl	appstunden		i
ATSVR041	MS SQL Server	db7	1433	master	testing		i
BI_Cognos_SQL	MS SQL Server	BDEGSAP06	1433	BI_Cognos	sa_cognos		x
BI_OS	IBM DB2	db11	50000	SAMPLE	TESTING		i
BI_Stage_SQL	MS SQL Server	BDEGSAP06	1433	Stage	sa_cognos		x
conn1	IBM DB2	db11	50000	SAMPLE	TESTING		x

Show descriptions

The Designer is switching the mode by clicking the **Show descriptions** button on the right side of the screen.

## 4.7 Database connections

### 4.7.1 Buttons



The following buttons are at your disposal:

- **New** - creates a new database connection
- **Test DB-Connection** - is testing all selected DB connections
- **Import** - imports DB connections from a file
- **Export** - exports all selected DB connections into a file

### 4.7.2 Creating a new database connection

Click on the button 

### 4.7.3 Settings of the tab ,Main'

Depending on the selected connection, you must configure the following settings:

- **Connection name** - Freely selectable unique identifier for the connection
- **Database type** - select from list your database type
- **Database host** - IP address or host name of the database
- **TCP/IP Port** - listening port of the database
- **Database name** - Name of the DB
- **Working schema** - what schema must be used
- **Database user** - user name of the login
- **Password** - password of the login

## 5 Creating a Table Business Case (TBC)

### 5.1 Introduction

In the following section, we will show the general steps to create a Business Case by using a table Business Case as example. All important points (creating, widgets, design, and output) are explained. Remember that each Business Case refers to a specific table in a database. If you need data from several tables, you need to work with e.g. master-detail relationships or **Lookup** widgets.

### 5.2 Areas of a Table Business Case

A Table Business Case consists of different (partially optional) areas

The screenshot shows the 'Apparo Fast Edit' interface. At the top, there's a header bar with 'Apparo Fast Edit' on the left and 'Administrator Demo Cognos Connection' on the right. Below the header, there's a section titled 'Überschrift des Kopfbereiches' (Header area) with a description 'Beschreibung des Kopfbereiches'. This is followed by a 'Widget im Filter-Bereich' (Filter area) containing search and filter buttons. Below that is a 'Widget im Massenupdate-Bereich' (Bulk update area) with an 'UPDATE' button. The main part of the interface is a table with columns for 'Widget im Edit-Bereich', 'weiteres Widget im Edit-Bereich', 'Last user', and 'Last change'. The table contains five rows of data, with the third row (102,00) selected. Below the table is a 'Widget im Einfüge-Bereich' (Insert area) with a plus sign and a text input field. At the bottom, there's a 'Widget im Kalkulationsbereich' (Calculation area) and a footer bar with buttons for 'OK', 'ABBRECHEN', 'SCHLIEßEN', 'LÖSCHEN', 'EINFÜGEN', 'EXPORT ZU EXCEL', 'EXCEL ZEILEN-IMPORT', and 'WIDGETS IM BUTTON BEREICH'. The footer also includes 'Seite: 1 / 1' and some icons.

- Header area** - includes the title and description
- Filter area** - for example, contains filter widgets to filter the data output
- Bulk update area** - mass update panel
- Edit area** - to modify existing data
- Insert area** - for adding new records
- Calculation area** - used to display information, such as text or calculations of variables
- Navigation area** - includes page counter, navigation and buttons for resizing
- Button area** - contains buttons
- Footer area** - comparable to the header area

### 5.3 Create a new Business Case



Click on the button:

Now select the entry 'Table'

Please select type of Business Case you want to create now		
Business Case type	Business Case type description	
 <b>Table</b>	A table Business Case is showing many data rows on the same page. The user can filter the data, edit, import from Excel, export to Excel and so on.	
 <b>Single</b>	A single Business Case is showing just one data row only.	
 <b>Set</b>	A grouping of multiple Business Cases (table/single) for more comfortable usage. You can define global filters that are filtering all Business Cases automatically too.	
 <b>Email import</b>	Importing Excel data directly by email - send Excel sheets using email attachments and Apparo Fast Edit will import the Excel data directly into the database including file uploads. No web browser is necessary, just an email.	
 <b>Email</b>	An eMail Business Case is a definition of an email text including usage behavior and can be used in another Business Cases of type 'table' or 'single' only. In these Business Cases it is possible to define buttons that can use this eMail Business Case.	

Business Case selection

Following, the general settings for the business case

Please provide a unique short name (ID), a name and select the target table.

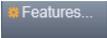
The description is optional and can contain declarations, release notes, or other information.

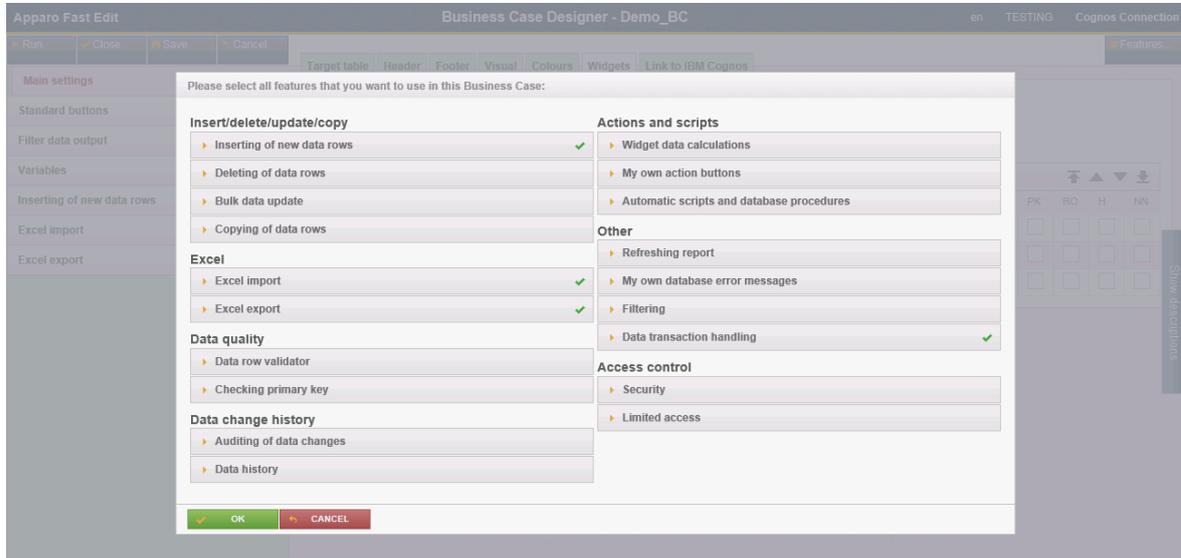
If multiple database connections are set up, this selection is automatically extended by the points 'database connection' and 'database schema'.

Main settings

## 5.4 Business Case Functions

The functions of a business case open automatically after creating a business case.

If the business case is opened later for editing again, you can open the feature selection with the button on top right corner: 



The features are divided into seven sections. The various functions can be enabled or disabled as needed. If a function is activated, then the selection menu in the Business Case edit view will be extended accordingly.

The advantage of this activation is obvious, if the Business Case is opened for editing again after some time, then you can see with one look at the menu, which features are used in this business case.

## 5.5 Features areas and features

- **Insert/delete/update/copy**
  - Inserting of new data rows
  - Deleting of data rows
  - Bulk data update
  - Copying of data rows
- **Excel**
  - Excel Import
  - Excel Export
- **Data quality**
  - Data row validator
  - Checking primary key
- **Data change history**
  - Auditing of data changes
  - Data history
- **Actions and scripts**
  - Widget data calculations
  - My own action buttons
  - Automatic scripts and database procedures
- **Other**
  - Reloading reports
  - My own database error messages
  - Filtering
  - Data transaction handling
- **Access control**
  - Security
  - Limited access

## 5.6 Edit view of the Business Case

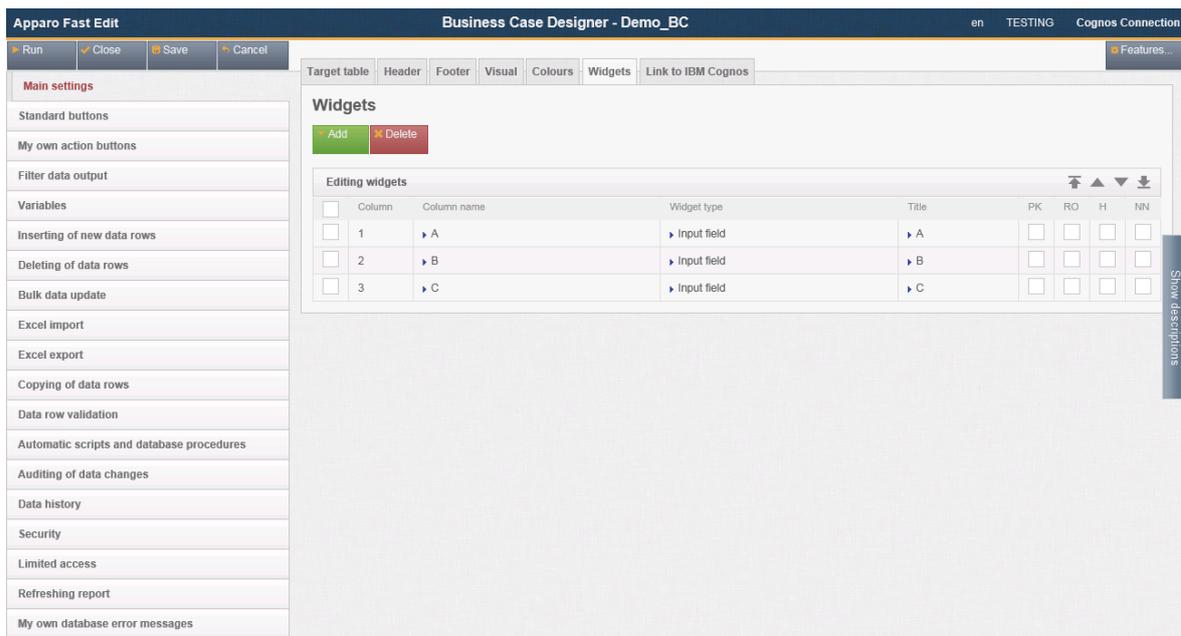
The edit screen is divided into two areas:

**Menu bar**, the buttons on the controller and all activated functions as menu items contains.

Buttons:

- **Start** - saves all changes and starts the business case
- **Close** - saves all changes and closes the edit view
- **Save** - saves all changes
- **Cancel** - discards any unsaved changes and closes the Business Case

**Settings area**, contains settings for the various functions and optionally divided again into tabs.



Edit view in activation of all functions



Edit view in deactivation of all functions. Only the basic functions are displayed.

## 5.7 Business Case Settings

### 5.7.1 Main settings

The main settings are divided into several tabs and are containing the settings of the data source and the optics of the business case. Above all, it contains the widget settings.

Widgets are the actual control and output elements of a business case. This can be a filter, input or selection fields, buttons and more.

Because of their importance are Widgets the first tab you see when you open the Main settings.

The screenshot displays the 'Widgets' configuration screen in the Apparo Fast Edit Business Case Designer. The interface is organized into several sections:

- Filtering widgets:** A table with 4 rows. Each row includes a checkbox, a 'Row' number, a 'Column' number, a 'Column name' (e.g., PRODUCT\_LINE\_ID, MONTH\_ID, STATUS\_ID, STATE\_REVISION\_ID), a 'Widget type' (e.g., Lookup dropdown, Lookup multiselect), a 'Title' (e.g., Product line filter, Month filter, 'My status' data filter, Controlling status filter), and an 'H' checkbox.
- Bulk update widgets:** A table with 2 rows. Each row includes a checkbox, a 'Column' number, a 'Column name' (e.g., STATUS\_ID), a 'Widget type' (e.g., Lookup dropdown, Label with variables), a 'Title' (e.g., Change status), and 'RO' and 'H' checkboxes.
- Editing widgets:** A table with 5 rows. Each row includes a checkbox, a 'Column' number, a 'Column name' (e.g., OFFICE\_ID, PRODUCT\_LINE\_ID, PRODUCT\_ID, MONTH\_ID), a 'Widget type' (e.g., Spacer & Title, Input field, Lookup dropdown), a 'Title' (e.g., Office, Product line, Product, Month), and checkboxes for 'PK', 'RO', 'H', and 'NN'.

On the left side, the 'Main settings' sidebar is visible, containing various configuration options such as 'Standard buttons', 'My own action buttons', 'Filter data output', 'Variables', 'Inserting of new data rows', 'Bulk data update', 'Excel import', 'Excel export', 'Automatic scripts and database procedures', 'Auditing of data changes', and 'Data history'. A 'Show descriptions' button is located on the right side of the widget configuration area.

Main settings, Widgets

## 5.8 Widgets

This chapter covers the central area of a Business Case.

Here you can have different widgets that are normally connected with the target table, positioned in different areas.

Each widget has its own individual settings.

### 5.8.1 Edit view

You can open the settings of an existing widget, by clicking on the column name or widget type:

Editing widgets								↑	▲	▼	↓
<input type="checkbox"/>	Column	Column name	Widget type	Title	PK	RO	H	NN			
<input type="checkbox"/>	1		▶ Spacer & Title	▶			<input type="checkbox"/>				
<input type="checkbox"/>	2	▶ OFFICE_ID	▶ Input field	▶ Office	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			

Depending on the type of widget has the edit view different options, divided into tabs.

Apparo Fast Edit Business Case Designer - SAMPLES Input of the measures in the sales office en TESTING Cognos Connection

Widget settings of database column OFFICE\_ID

Widget type Mapping & Other Flags Visual Visual help texts Data output format

Input field Input field: Simple input field with one line.

Text area

Checkbox

Simple dropdown (target table only)

Lookup dropdown (for all tables)

Label

Label with variables

Spacer & Title

Business Case link

File upload/download

Internal description

Show descriptions

OK CANCEL

Widget edit view for the type ,Input field'

Apparo Fast Edit Business Case Designer - SAMPLES Input of the measures in the sales office en TESTING Cognos Connection

Widget settings of database column OFFICE\_ID

Widget type Mapping & Other Flags Lookup & Dropdown & Multiselect Visual Visual help texts Data output format

Input field

Text area

Checkbox

Simple dropdown (target table only)

Lookup dropdown (for all tables)

Label

Label with variables

Spacer & Title

Business Case link

File upload/download

Lookup Dropdown (for all tables): Combo-Box with values of another free definable lookup table. It is possible to filter, sorting etc.

Internal description

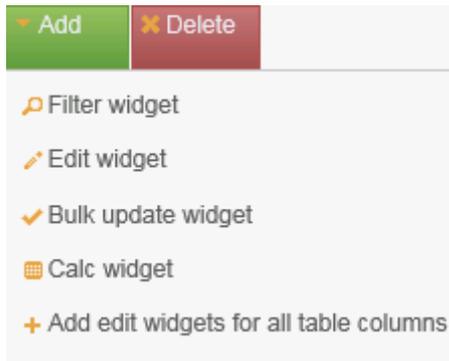
Show descriptions

OK CANCEL

Widget edit view for the type ,Lookup dropdown (for all tables)'

## 5.9 Widget types and areas

When creating a new widget, you will first be asked for which area it is intended:



The option to add widgets for all database columns 'Add edit widgets for all table columns, is adding an 'input field' widget for each existing database column, if no widget is existing for this database column.

The corresponding areas for the widget types are:

- **Filter area**
- **Edit area**
- **Bulk update area**
- **Calculation area**

Based on the area for which the widget is thought, is there a selection of different widget types:

**Input field** - A standard entry field which allows the input of alphanumeric data

**Text area** - A multiline entry area that allows formatted text

**Checkbox** - Allows exactly two values, checked or not checked

**Simple dropdown** (for target table only) - Based on data in the target table

**Lookup dropdown** (for all tables) - Replaces numerical values with plain text from a 2nd table

**Simple multiselect** - Select multiple values

**Lookup multiselect** - Multiselect based on a lookup table

**Label** - Enables you to output text

**Label with variables** - Enables the output of text and values of variables

**Spacer & Title** - To set up void spaces between individual widgets

**Business Case Link** - To call e.g. detail BCs, data values are passed here

**File Upload/Download** - To attach files to data rows

Business Case Link and File Upload/Download can only be used in the edit area.

Multiselect is only available in the filter area.

## 5.10 Widgets in the Edit Area

The edit area in a table business case (TBC) is mainly used for displaying data in list form and gives users the ability to edit the data.

The screenshot shows the 'Widgets' configuration panel in the Apparo Fast Edit Business Case Designer. The panel is divided into three sections:

- Filtering widgets:** A table with columns for Row, Column, Column name, Widget type, Title, and H. It lists filters for Product line ID, Month ID, Status ID, and State Revision ID.
- Bulk update widgets:** A table with columns for Column, Column name, Widget type, Title, RO, and H. It lists 'Change status' and 'Label with variables'.
- Editing widgets:** A table with columns for Column, Column name, Widget type, Title, PK, RO, H, and NN. It lists 'Spacer & Title', 'Office', 'Product line', 'Product', and 'Month'.

Widgets of an area are grouped  
Example for edit widgets in the user view:

The screenshot shows the 'Workflow Demo Step 1 Data Input' user interface. It features several filters at the top: Product line filter, Month filter, 'My status' data filter (set to 'Ready for approval open'), and Controlling status filter. Below the filters are 'SEARCH' and 'RESET FILTERS' buttons. A 'Change status' section allows updating the status of all selected rows. The main data table is circled in red and contains the following data:

Product line *	Product *	Month *	My status	Revision status	Plan data	Plan2	Plan3	Plan4	Plan5	Plan6	Plan7
<input type="checkbox"/>	T-Shirts	T-Shirt Holiday	open	Declined	9090.00	80	4000				
<input type="checkbox"/>	Polohemden	New Yorker	Ready for approval	Open	500.00	600	700	800	900	950	900
<input type="checkbox"/>	Polohemden	New Yorker	Ready for approval	Open	15.00	400	500	600	700	800	200
<input type="checkbox"/>	Polohemden	New Yorker	Ready for approval	Open	500.00	600	700	800	900	950	900
<input type="checkbox"/>	Polohemden	New Yorker	Ready for approval	Open	500.00	600	700	800	900	950	900
<input type="checkbox"/>	Polohemden	New Yorker	Ready for approval	Open	77.00	600	700	800	900	950	900
<input type="checkbox"/>	Polohemden	New Yorker	Ready for approval	Open	500.00	600	700	800	900	950	900
<input type="checkbox"/>	Polohemden	New Yorker	Ready for approval	Accepted	88.00	600	700	800	900	950	900

In the edit area you can choose between these types of widgets:

- **Input field** - A standard entry field which allows the input of alphanumeric data
- **Text area** - A multiline entry area that allows formatted text
- **Checkbox** - Allows exactly two values, checked or not checked
- **Simple dropdown** (for target table only) - Based on data in the target table
- **Lookup dropdown** (for all tables) - Replaces numerical values with plain text from a 2nd table
- **Label** - Enables you to output text
- **Label with variables** - Enables the output of text and values of variables
- **Spacer & Title** - To set up void spaces between individual widgets
- **Business Case Link** - To call e.g. detail BCs, data values are passed here
- **File Upload/Download** - To attach files to data rows

### 5.11 Special functions in the widget settings

There are some special functions in the widget settings:

### 5.12 Reading and Writing Expressions

Reading and writing expressions allow the usage of SQL to manipulate data before it is shown to users or stored to the database.

The screenshot shows the 'Widget settings of database column OFFICE\_ID' window. It has a dark blue header with 'Apparo Fast Edit' on the left, 'Business Case Designer - SAMPLES Input of the measures in the sales office' in the center, and 'en' on the right. Below the header is a tabbed interface with tabs for 'Widget type', 'Mapping & Other', 'Flags', 'Visual', 'Visual help texts', and 'Data output format'. The 'Flags' tab is selected. Inside this tab, there is a 'Column name' dropdown menu set to 'OFFICE\_ID', an 'Enable expressions' checkbox which is checked, and two text input fields: 'Read expression' (empty) and 'Write expression' (containing '<%Expression%>'). At the bottom of the 'Flags' tab, there is an unchecked checkbox and the text 'The used read and write expressions having an inverse behaviour'.

Variables are allowed here

Common examples for expressions are:

- TRIM() - Removes spaces from strings
- UPPER() - Turns all letters into upper cases
- LOWER() - Turns all letters into lower cases

### 5.13 Conditional options

Many functions can be controlled with reference to conditions.

Thus, there are e.g. for the function 'Hidden', which hides a widget for the user when activated, several options.

**Widget settings of database column OFFICE\_ID**

Widget type	Mapping & Other	Flags	Visual	Visual help texts	Data output format										
<b>Hiding</b>															
<input type="checkbox"/> Hide this widget in the inserting area															
<input checked="" type="checkbox"/> Hide this widget in edit and inserting area for															
<table border="1"> <tr> <td>all users</td> <td>▼</td> </tr> <tr> <td>all users</td> <td></td> </tr> <tr> <td>selected security groups</td> <td></td> </tr> <tr> <td>specific value</td> <td></td> </tr> <tr> <td>if variable returns true</td> <td></td> </tr> </table>						all users	▼	all users		selected security groups		specific value		if variable returns true	
all users	▼														
all users															
selected security groups															
specific value															
if variable returns true															
<b>Read-only</b>															

#### For all users

This option is set by default. It hides the widget for all users.

#### For selected security groups

This hides the widget, but only for users who are member of one of the entered user groups. Other users can see the widget.

**Hiding**

Hide this widget in the inserting area

Hide this widget in edit and inserting area for

selected security groups	▼	▶ Specify settings for security group
--------------------------	---	---------------------------------------

Hide the widget for the selected user groups

### Widget security groups definition - Hidden

**Existing security groups**

Security group

Group\_A

**Add new security group**

Security group

+ ADD SECURITY GROUP

[← BACK TO WIDGET EDITOR](#)

### Security group editor

#### For a specific value

The option applies here as soon as the value of one of the columns in the target table in the corresponding data row matches with the stored value.

In our example, the widget would be hidden once in a data row in the office ID column the value '3' appears.

**Hiding**

Hide this widget in the inserting area

Hide this widget in edit and inserting area for  ▼  ▼ has value

The values can also be configured dynamically by using variables. `<%VARIABLE%>`

## 5.14 Widget settings for the example ,Input field'

Each widget type has its own settings. The following settings using the example of the widget type ,input field' can be found in almost all widget types. Distinctive features of each widget type are described in the following chapter ,More widget settings'

Apparo Fast Edit Business Case Designer - SAMPLES Input of the measures in the sales office en TESTING Cognos Connection

Widget settings of database column OFFICE\_ID

Widget type Mapping & Other Flags Visual Visual help texts Data output format

Input field Input field: Simple input field with one line.

Text area

Checkbox

Simple dropdown (target table only)

Lookup dropdown (for all tables)

Label

Label with variables

Spacer & Title

Business Case link

File upload/download

Internal description

Show descriptions

OK CANCEL

### 5.14.1 Mapping & Other

Apparo Fast Edit Business Case Designer - SAMPLES Input of the measures in the sales office en TESTING Cognos Connection

Widget settings of database column OFFICE\_ID

Widget type Mapping & Other Flags Visual Visual help texts Data output format

'Order by' priority 1

Column name OFFICE\_ID Enable expressions

Default value for all users

Constant value Use constant value in insert and update case

<%OFFICE%> for selected security groups Specify settings for security group

Use this constant value if the current user is not a member of the above defined groups/roles.

Variable for using content in detail BC

Show descriptions

OK CANCEL

#### ,Order by' priority

Sorting the editing rows using this sort order (1,2,3,...: sorting ascending, -1,-2,-3,...: sorting descending etc.).

The number is defining the position of this widget in the order, for example -2: means ascending order, widget ist on 2. position of the order list

You cannot use same value for more than one widget e.g. -1,1 or 1,1

#### Column name

Here you can select the database column that is connected to this widget. The widget is reading the content of the column and is writing to this column. It is possible to use a variable in this column name too.

### Default value

If you define a default value (using a variable is possible too) then the user will see this value in this input field in the inserting area. It is possible to define different default values for different user roles/groups. Use English format to define numeric or date values. Default value of lookup widget must be the lookup key value.

### Constant value

A constant value is a value that will be always used for this widget. Even if the widget is hidden, read-only or if the user is inserting a value, then the constant value will be used. It is possible to define different constant values for different user roles/groups.

The function ,constant value' has the following options:

A screenshot of a dropdown menu with the following options:

- Use constant value in insert and update case
- Do not use constant value
- Use constant value in insert case only
- Use constant value in insert and update case
- Use constant value in insert case if variable returns 'true'
- Use constant value in insert and update case if variable returns 'true'

### Variable for using content in detail BC

If this Business Case has a widget of type 'Business Case Link' for opening a detail Business Case, it is possible to define a variable that contains the value of the current widget.

The detail Business Case can use this report variable with the current value of this widget for example for output.

Important: In the detail Business Case you must define this report variable in tab "Variables" too.

### 5.14.2 Flags

In the tab Flags you can control the behavior of the widget in detail.

The screenshot shows the 'Widget settings of database column OFFICE\_ID' configuration window. The 'Flags' tab is selected. The settings are organized into three sections:

- Hiding:**
  - Hide this widget in the inserting area
  - Hide this widget in edit and inserting area for: specific value, OFFICE\_ID, has value 3
- Read-only:**
  - Read-only in edit and inserting area for: all users
  - Read-only in edit area for: all users
  - Read-only in inserting area: all users
  - Show content as a label and don't display the widget frame and read-only colour
  - Complete row must be read-only if widget value is like: for all users
- Other:**
  - Database column is the primary key or a part of it
  - Database column is computed by database (for example using a database trigger or auto-increment feature)
  - Show a small icon for easier deleting of the complete content of this widget
  - Value is mandatory (not null)
  - Remove all spaces at the begin and at the end automatically
  - Store value in upper case
  - Store value in lower case

### Hiding-Group

Includes options for hiding widgets.

#### Hide this widget in the inserting area

If enabled, the user will not see this widget in the inserting area. If you use a constant value then it will be used no matter if the widget is hidden or not.

#### Hide this widget in edit and inserting area for

The data field is to be used, but not shown in insert and editing area, optional security group based. That means this widget can be hidden for certain user groups only.

Options:

### Read only group

Includes options to disable the entering or changing of values in widgets

#### Read-only in edit and inserting area for

The data field cannot be altered in editing and inserting area but it is still visible with another background color, optional security group based.

Options:

#### Read-only in edit area for

The data field cannot be altered in editing area, optional security group based. Read-only widgets have an own background color.

Options:



**Read-only in inserting area**

The data field cannot be altered in inserting area, optional security group based. Read-only widgets have an own background colour.

Options:



**Complete row must be read-only if widget value is like**

If the current widget has this value then the complete row is read-only. Use English format to define numeric or date values.

This feature is helpful if you work with different record states like 'open', 'closed' and when just certain records must be updateable. You can use a variable in this field too.

## Other-Group

Contains all other settings

**Other**

- Database column is the primary key or a part of it
- Database column is computed by database (for example using a database trigger or auto-increment feature)
- Show a small icon for easier deleting of the complete content of this widget
- Value is mandatory (not null)
- Remove all spaces at the begin and at the end automatically
- Store value in upper case
- Store value in lower case

### **Database column is the primary key or a part of it**

The widget is the primary key of the underlying table or is an part of the key (with combined keys). This definition is independent of the primary key definition in the database and at least one column must be defined as primary key. A primary key is identifying an unique data row of the target table/view.

### **Database column is computed by database** (for example using a database trigger or auto-increment feature)

The database table column value is filled automatically by the database (e.g. with triggers, auto-increment field). Apparo Fast Edit is not changing this value in the target table.

### **Show a small icon for easier deleting of the complete content of this widget**

Showing a small delete icon for deleting the widget content.

### **Value is mandatory (not null)**

If a widget value is mandatory then the user must input a value into this widget (or using default or constant value). The definition of this behavior is independent from the definition of the target table column in the database.

If a filtering widget is mandatory it is a good idea to define a default value for him too. You will avoid some error messages at the Business Case startup.

### **Remove all spaces at the begin and at the end automatically**

If enabled then all spaces at the begin and end are removed automatically before storing into database table

### **Store value in upper case**

If enabled then all characters are changed to upper case before storing into database table

### **Store value in lower case**

If enabled then all characters are changed to lower case before storing into database table

### 5.14.3 Visual

In the tab 'Visual' you will find the header (column heading), and settings for the layout, and settings to limit the maximum allowed input length in this widget.

By default the maximum entry length is defined by the database column definition, for example Varchar(20) allows a maximum of 20 alphanumeric characters. This can be further limited by the input of an own value

The screenshot shows the 'Widget settings of database column OFFICE\_ID' dialog box. The 'Visual' tab is selected. The 'Column label' section has a table with two rows: German with 'Filiale' and English with 'Office'. The 'Visual settings' section includes: Label style (Arial, Bold, Left, 000000), Widget align (Left), Column width (px) (130), Border color (DDDDDD), Font (Arial, Normal, Left, 000000), and Maximum input length (Defined by database column definition). At the bottom are 'OK' and 'CANCEL' buttons. A 'Show descriptions' button is on the right side of the dialog.

The layout can also be controlled by CSS.

#### 5.14.4 Visual help texts

Contains the settings for description and hint text

Apparo Fast Edit Business Case Designer - SAMPLES Input of the measures in the sales office en TESTING Cognos Connection

Widget settings of database column OFFICE\_ID

Widget type Mapping & Other Flags Visual Visual help texts Data output format

**Description text**

Language	Description text
German	Üblicherweise werden solche Werte versteckt, zu Demozwecken sichtbar
English	Normally hidden, for demonstrating purposes in this case visible

**Hint text**

Language	Hint text
German	
English	

OK CANCEL

Show descriptions

#### Description text

This text can describe the widget and can be helpful for the user. You can add a more detail description text for each installed language.

The user is seeing this text if he is pointing to the label of this widget.

#### Hint text

The hint text is displayed only if the widget has no value.

Is displayed in the input area in gray text, e.g. 'Enter date in the format: dd.MM.yy'

## 6 Single Business Cases (SBC)

A single business case (SBC) is used to represent a single data set (database row). A typical application is a data entry screen or a detailed view.

The functions and settings of the SBC are substantially identical to those of Table business cases. This chapter focuses on the features and the settings that apply only to the single business case.

User view of a SBC, the widgets are visually divided into 2 columns.

### 6.1 Structure of the SBC

- **Header area** - with the title and description
- **Data area** - where the widgets are arranged in columns
- **Navigation pane** - used to navigate between records and the switch button for the data input mode
- **Button area** - contains the default and user-defined buttons
- Optional **footer area** - for info and graphics

## 6.2 Arrangement of the widgets in the SBC

The widgets in the SBC can be output with multiple columns, the order is determined by the line.

Target table | Header | Footer | Visual | Colours | **Widgets** | Link to IBM Cognos

### Widgets

▼ Add ✖ Delete

Editing widgets ↑ ▲ ⇅ ⌵ ▼ ⬇

<input type="checkbox"/>	Column	Row	Column name	Widget type	Title	PK	RO	H	NN
<input type="checkbox"/>	1	1		▶ Spacer & Title	▶			<input type="checkbox"/>	
<input type="checkbox"/>	1	2	▶ PRODUCT_ID	▶ Input field	▶ Product ID	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	1	3	▶ PRODUCT_LINE_ID	▶ Lookup dropdown (for all tables)	▶ Product line	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	1	4	▶ PRODUCT_NAME_EN	▶ Input field	▶ Product name	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	1	5	▶ PRODUCT_COLOUR	▶ Simple dropdown (target table only)	▶ Colour	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	1	6	▶ PRODUCT_SIZE	▶ Simple dropdown (target table only)	▶ Size	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	1	7	▶ PRODUCT_MODEL	▶ Simple dropdown (target table only)	▶ Model	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	1	8	▶ PRODUCT_MANUF	▶ Input field	▶ Manufactur	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	1	9	▶ PRODUCT_START_DATE	▶ Input field	▶ Start date	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	1	10		▶ Business Case link	▶ Prices:			<input type="checkbox"/>	
<input type="checkbox"/>	2	1	▶ PRODUCT_DESCR	▶ Text area	▶ Product  description	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Designer view:** The arrangement of the widget by columns and rows

In the tab widgets you can assign the widgets to the columns.  
There are, in comparison to the table business case, two new controls:

Move widget(s) to another column , creates a new column.

Merge all widgets , dissolves all columns.

### Move widget(s) to another column

With this switching element are all the selected widgets assigned to a new column

### Widgets

➤ Neu ✖ Löschen

Edit-Widgets ↑ ▲ ⇅ ⌵ ▼ ⬇

<input type="checkbox"/>	Spalte	Zeile	Spaltenname	Typ	Titel	PK	RO	H	NN
<input checked="" type="checkbox"/>	1	1	▶ ID	▶ Eingabefeld	▶ Id	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	1	2	▶ NAME	▶ Eingabefeld	▶ Name	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	1	3	▶ DRIVER	▶ Eingabefeld	▶ Driver	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	1	4	▶ COLOR	▶ Eingabefeld	▶ Color	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

With the arrow buttons  and  you can move widgets within and between columns

6.2.1 Columns - a users view

Apparo Fast Edit

BC Titel

Beschreibung	Column 1	Column 2	Column 3
Row 1 Id	4,00		Typ Racing Car
Row 2 Name	Bugatti S Prem		Gear 7,00
Row 3 Driver	Testee MCDrive		Drive Front
Row 4 Color	Black		Owner

**User view:** Column 2 contains only a placeholder and was inserted to create a gap between the other columns.

The widths of the three columns are defined in tab ,Visual' , column 2 is 30 pixels wide.

The width of the label (widget identifier) is also defined there, column 2 requires only 1 px (minimum width) as placeholder in our example, is no label required.

The terms 'column' and 'line' refer only to the visual presentation and may not be consistent with database columns or rows.

## 6.3 Visual

Here you define the general optical settings for the single business case. These settings are different from those in Table Business Case

### Options

#### Label width (px)

Width of the label in pixels

#### Widget width (px) \*

Width of the input area of the widget

#### Visual column label widths

Defines the visual column label widths. If no value is defined for visual column label width then 'Label Width' property is used as default value; e.g.

- 100,150,200      3 visual columns with label widths 100 (px), 150 (px) and 200 (px)
- 100,,200        3 visual columns with label widths 100 (px), 'Label Width' (px) and 200 (px)
- ,,200            3 visual columns with label widths 'Label Width' (px), 'Label Width' (px) and 200 (px)

IMPORTANT: Negative numbers are not valid.

### Visual column widget widths

Defines the visual column widget widths. If no value is defined for visual column widget width then 'Widget Width' property is used as default value; e.g.

100,150,200	3 visual columns with widget widths 100 (px), 150 (px) and 200 (px)
100,,200	3 visual columns with widget widths 100 (px), 'Widget Width' (px) and 200 (px)
,,200	3 visual columns with widget widths 'Widget Width' (px), 'Widget Width' (px) and 200 (px)

IMPORTANT: Negative numbers are not valid

### Gap width between data rows(px)

The optical gap between data rows in pixels, default is 2

### Enable a general button bar for rich text widgets

If this feature is enabled then the user is seeing only one button bar with bold, italic, underline etc. buttons for changing the text style in rich text widgets.

This button bar is necessary if widgets of type text area with rich text functionality are used (using bold, italic, underline, different colours). The general button bar is visible like in Microsoft Word. If disabled then each text area with rich text feature has an own button bar.

### Enable dialog window with error message in case of error

If this setting is enabled than a pop-up dialog window will be displayed after each error.

### Window background image URL

It is possible to use own background picture using an URL.

### Show just the first data row only

When enabled only first data row will be displayed; otherwise additional buttons "<<" and ">>" will be displayed to show previous respectively next data row.

### No data to display message

Message presented to user when there are no data to display

## 7 Combining Business Case

There are two main ways to combine Business Cases.

- As Business Case Set
- As master-detail relationship

### 7.1 Business Case Set

Table and Single Business Cases can be combined in a **Business Case Set**. Single or Table Cases are displayed together so that navigating is made easier. The Business Cases are not inherently connected.

SAMPLES - product lines
SAMPLES - sales planning

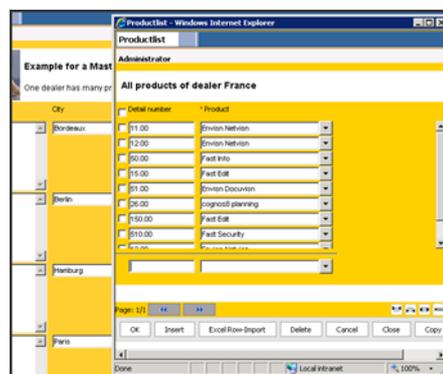
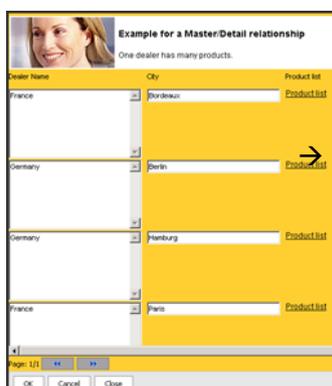
### Produktlinien

Einfache Ausgabe einer Liste.  
Eine detaillierte Beschreibung können Sie hier herunterladen [<DOWNLOAD>](#)

Produkt-Lin	Produktlinie *	Anzahl Pr	Produktliste
1	Trousers	0	▶ Anzeigen...
2	T-Shirt	5	▶ Anzeigen...
3	Polo shirts	3	▶ Anzeigen...
4	Jackets	4	▶ Anzeigen...
5	Bags	2	▶ Anzeigen...
11	Underwear	0	▶ Anzeigen...
6	Bikinis	0	▶ Anzeigen...

### 7.2 Master-detail relationship

Business Cases can also be combined in a **master-detail relationship**. In this case, the contents of two tables are handled together. The database transactions are performed on both tables at the same time.



*Both combinations are explained more detailed later in this tutorial.*

### 7.3 Primary Keys

- A primary key identifies a unique row in a table.

*A typical example is a unique product ID:*

01			
02			
03			
04			

- It can either be a single primary key (one attribute) or a compound key consisting of several primary keys (more than one attribute).

*An example for a compound key would be a supplier-product relationship. Each supplier offers one or more products, so the supplier ID alone is not enough to identify the row:*

01		a	
01		b	
01		c	
02		m	

- When creating a Business Case, the number of primary keys has to be set to the minimum necessary to identify every unique row.
- The primary keys in a Fast Edit Business Case do not depend on the underlying database table design. *However, the primary keys of the table are usually also used for the Business Cases.*

Each column (also many columns at the same time) can be used as the primary key(s).

In Fast Edit you can define a completely different primary key than in the underlying table (the same applies to any null/not null-definitions). In the Insert and Update cases, only the primary key definition from Fast Edit will be taken into consideration.

However, in about 90% of the Business Cases, the same primary keys as in the underlying table are used.

The primary key of the database table column is important for:

- The definition of a lookup table for the **Lookup Multi-select** widget (field "Lookup table key column").
- The widget **Business Case Link**, with which the two tables of the two Business Cases can be edited in one database transaction.

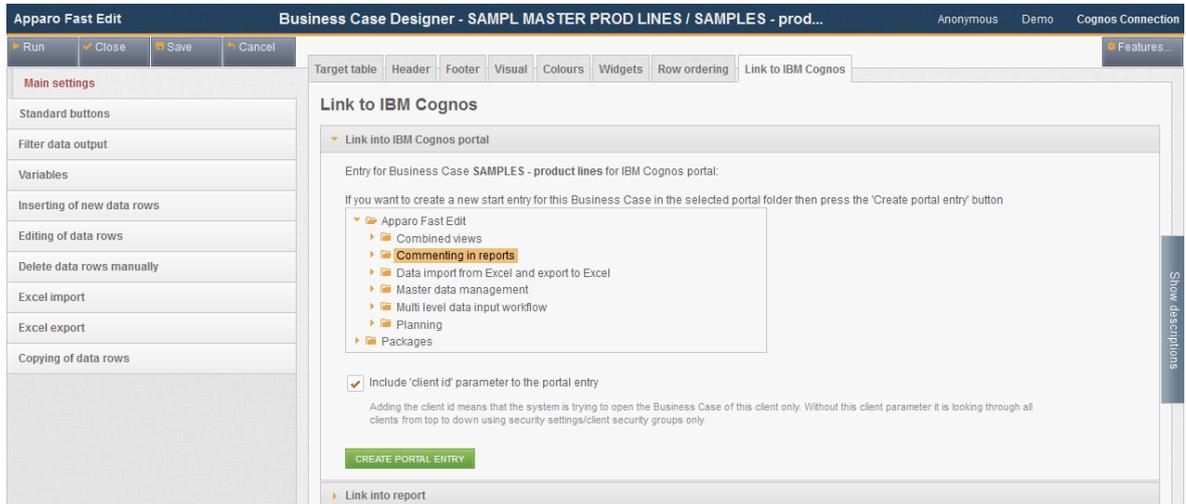
## 8 Create a portal entry for a Business Case

To make a Business Case accessible for business users, we need to create a link in the portal.

First, open the business case:

Select the "Link to IBM Cognos" tab.

Select the Portal folder in which the Business Case should appear:



You need to click directly on the folder name to select the folder.

Then press the "Create portal entry" button to create a Business Case entry in this folder.

Business users start the Business Cases usually exclusively through the portal entry.

## 9 Creating database table and columns with the Designer

You can allow your users Designer to create new database tables with the designer or to add columns to existing tables.

This function allows only simple database tables and the following basic data types:

- Number
- Text
- Date

### 9.1 Activation of the feature in the client settings

This feature is disabled by default and must be enabled in the client. Optionally, you can restrict this function to certain security groups.

The screenshot shows the 'Automatic table/column creation' settings dialog. It has a title bar 'Apparo Fast Edit Settings of client Demo' and a language 'en Demo'. The dialog has several tabs: 'Client head', 'General', 'Languages', 'Default numeric & datetime formats', 'Access rights', 'Automatic table/column creation' (selected), 'Excel export formats', and 'Business Log'. There are three radio button options:
 

- Automatic table/column creation feature is disabled for everyone
- Automatic table/column creation feature is enabled for everyone
- Automatic table/column creation feature is enabled for users with specified security groups

 At the bottom, there are 'OK' and 'CANCEL' buttons.

### 9.2 Create the required database connections

As mentioned in Chapter, 'Clients', you will need two different database connections.

The screenshot shows the 'Database connections' table in the Apparo interface. It has a title bar 'Database connections' and a language 'en Demo'. There are two tabs: 'Database connections' (selected) and 'Email connections'. There are four buttons: 'New', 'Test DB connections', 'Import', and 'Export'. The table has the following columns: Name, Usage, Database type, Host, Port, Database name/alias, User, Database schema, and Actions. There are two rows of data:
 

Name	Usage	Database type	Host	Port	Database name/alias	User	Database schema	Actions
FESAMPLES DDL	creating tables/columns (DDL)	Oracle	db2	1521	orcl	fesamples	FESAMPLES	i
FESAMPLES ORACLE	reading/writing only (DML)	Oracle	db2	1521	orcl	fesamples		i

### 9.3 Create a database connection to create tables / columns (DDL)

This database connection type also requires, in addition to read and write, the right to create tables.

First enter the required connection data:

Apparo Fast Edit
Database connect

Main

Advanced

Variables

Automatic tables/columns creation

Security

Connection name  \*

Database type  \*

- Exasol
- IBM DB2
- IBM DB2 Client
- IBM DB2 i
- IBM Netezza
- Informix
- MS SQL Server 2005
- MS SQL Server 2008-2016
- Oracle
- Oracle (using service name)
- Oracle Client
- PostgreSQL
- SAP Sybase ASE
- SAP Sybase IQ
- SAP Sybase SQL Anywhere
- Teradata

Database host  \*

TCP/IP port

Database name  \*

Working schema

Database user

Password

✓ OK

↶ CANCEL

Then select in the tab, 'Automatic table / column creation' the third radio button:

This database connection type is used for creating new database tables/columns only (cannot access data in Business Cases)

**Apparo Fast Edit** **Database connection configuration - FESAMP**

This database connection type is useable for creating/editing Business Cases (reading and writing of data in existing tables) only  
 This database connection type combines both types and should be used if users shall be able to auto create tables/columns (needs  
 This database connection type is used for creating new database tables/columns only (cannot access data in Business Cases)

Template for create table statement

```
CREATE TABLE <%=SCHEMA_NAME%>.<%=TABLE_NAME%> (<%=
COLUMN_DEFINITIONS%>)
```

Template for create index statement

```
CREATE INDEX ix_<%=TABLE_NAME%>_<%=COLUMN_NAME%> ON <%=
SCHEMA_NAME%>.<%=TABLE_NAME%> (<%=COLUMN_NAME%>)
```

It is not possible to create with this DB connection Business Cases.

#### 9.4 Creating and linking the DB connection type ,read / write only (DML) '

After you have added the necessary connection information, select the in tab ,Automatic table / column creation' the option ,This database connection type combines both types and should be used if users shall be able to auto create tables/columns (needs a predefined connection for creating new tables/columns)'

Then, assign the previously created DDL connection here.

**Apparo Fast Edit** Database connection configuration - FESAMPLES ORACLE

Main Advanced Variables **Automatic tables/columns creation** Security

This database connection type is useable for creating/editing Business Cases (reading and writing of data in existing tables) only

This database connection type combines both types and should be used if users shall be able to auto create tables/columns (needs a predefined connection for creating new tables/columns)

associated table/columns creating connection: FESAMPLES DDL

This database connection type is used for creating new database tables/columns only (cannot access data in Business Cases)

OK CANCEL

This completes the setup of the database connection.

#### 9.5 Automatically create a database table when creating new Business Cases

To create a new table when creating a new Business Case, select <Create new data storing table> in the setting ,Target database table/view'

**Apparo Fast Edit**

**Main database Business Case settings**

Identifier / Short name DEMO\_AUTO\_TABELLE \*

Business Case name DEMO\_AUTO\_TABELLE \*

Database connection FESAMPLES ORACLE \*

Database schema FESAMPLES \*

Target database table/view <Create new data storing table> \*

Notes

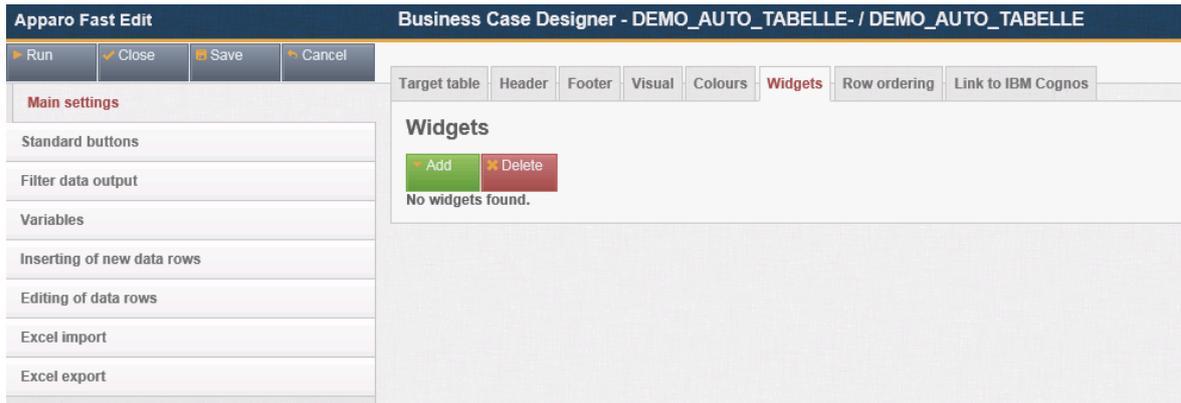
Next CANCEL

Select table

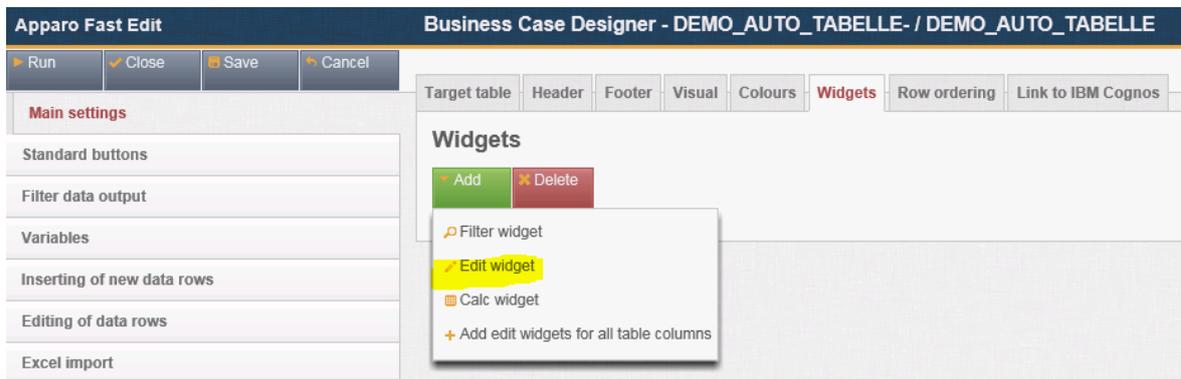
- <Create new data storing table>
- ABHAENGIGKEITEN
- AFE\_BUSINESS\_LOG
- ANTWORTTYP
- ARD\_NONSAP\_COMBINED\_FEED
- COLOR\_LOOKUP
- COLOURS\_IMP
- COLOURS\_IMP\_AUDIT

Afterwards please click on NEXT.

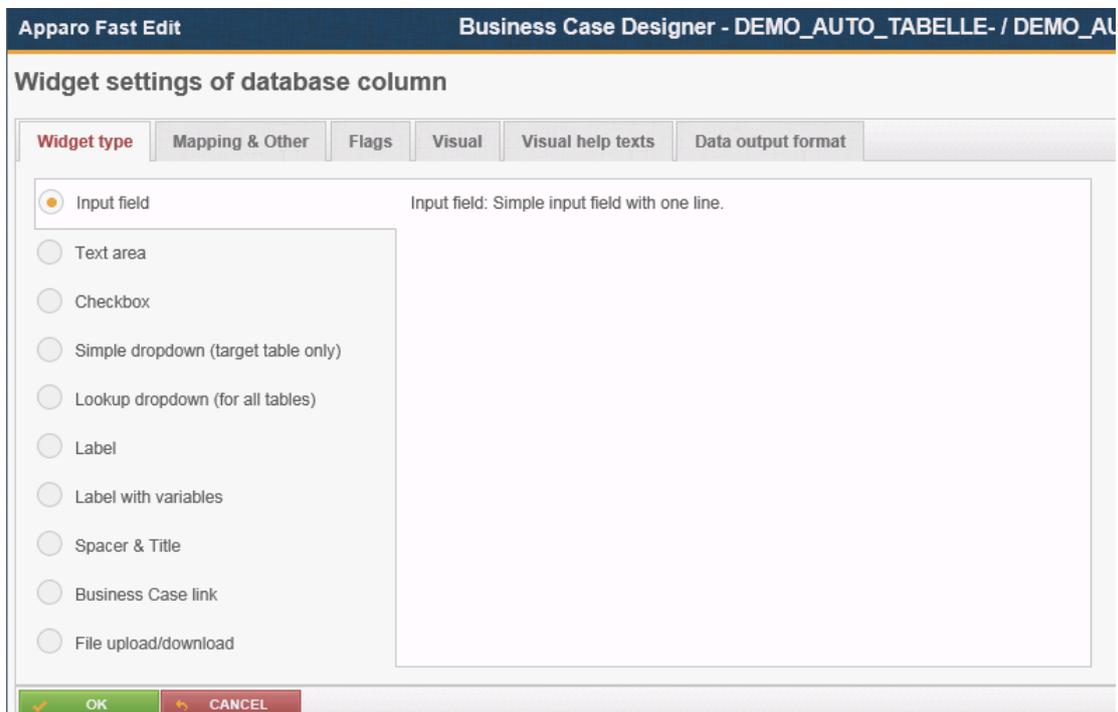
Then you will see a blank widget overview page.



The table will not appear until you create the first Edit widget



First, select the widget type



And then open the tab 'Mapping and Other' and select in the setting column name '<Create new data storing column>'

**Apparo Fast Edit** Business Case Designer - DEMO\_AUTO\_TABELLE- / D

**Widget settings of database column**

Widget type: **Mapping & Other** | Flags | Visual | Visual help texts | Data output format

Column name: [Dropdown menu with '<Create new data storing column>' selected]

Default value: [Text input field]

Constant value: [Dropdown menu with 'Do not use constant value' selected]

Variable for using content in detail BC: [Text input field]

[OK] [CANCEL]

Then a window will appear, in which you specify the table name and the column names and types.

**Defining the name of new data storing table and data storing column**

Data Storing Table Name: [AutoTable] max. 18 characters

Data storing column name: [ID] max. 18 characters

Data storing column type: [Number selected from dropdown menu]

[CREATE] [CANCEL]

When creating further edit widgets then you will only be asked for the name and type for the new database column.

## 10 E-mail Business Cases (EBC)

An e-mail business case is used to send e-mails.

It contains the definitions, such as subject and body.

Content, recipient, etc. can be made dynamic with variables.

An e-mail business case is called usually by button from Single or Table business cases.

An e-mail business case can access all the widget reference variables of the current line.

All other variables can also be used.

Apparo Fast Edit		en TESTING Cognos Connection
Sender	info@apparo.de	
Recipient(s)		
Subject	Your trial request	
Text	<p>Thank you for your interest in Apparo Fast Edit. My name is Markus Koerber and I'm your personal contact.</p> <p>Please read the document in attachment "How to" for downloading the software. Please use the following 60 day valid product key:</p> <p>2e-da-9d-65-6d-a5-8c-e9-48-fd-92-ec-7f-c5-da-7a-b5-7c-90-db-a7-f8-24-d7-18-7a-95-f3-9d-d4-ed-f6-de-7a-eb-b3-f2-48-7a-55</p> <p>If you have questions then please contact me directly.</p> <p>Mit freundlichen Grüßen / Kind regards</p> <p>Markus Körber Management Backoffice</p>	
SEND		DON'T SEND

## 10.1 Creating an EBC

When you create an e-mail business cases you have to fill first, like all other types of business case, the general settings.

The email connection is used only to send and can also be used in other e-mail business cases.

The optional security group ensures that only authorized users can send e-mails.  
A number of security groups are to be entered separated by a comma.

### Main settings

Identifier / Short name	<input type="text" value="eMail Freelancer Mail"/>
Business Case name	<input type="text" value="eMail Freelancer Mail"/>
Email connection	<input type="text" value="Email Business Case connection"/> ▼ *
Business Case security group	<input type="text"/>
Notes	<div style="border: 1px solid #ccc; height: 60px;"></div>

## 10.2 Header and Footer

In the header or footer, you can define captions and descriptions, specify fonts and styles and insert logos. In the title, the description and the logo URL variables can be used.

### Header

Title & Description	Language	Title	Description
	German	<input type="text" value="Anfrage-eMail an den Freelancer"/>	<input type="text"/>
	English	<input type="text"/>	<input type="text"/>

**Title style**

Font face	<input type="text" value="Arial"/> ▼	Size	<input type="text" value="14"/>	Style	<input type="text" value="Bold"/> ▼	Align	<input type="text" value="Left"/> ▼	Colour	<input type="text" value="#000000"/> <input type="color" value="#000000"/>
-----------	--------------------------------------	------	---------------------------------	-------	-------------------------------------	-------	-------------------------------------	--------	----------------------------------------------------------------------------

**Text style**

Font face	<input type="text" value="Arial"/> ▼	Size	<input type="text" value="12"/>	Style	<input type="text" value="Normal"/> ▼	Align	<input type="text" value="Left"/> ▼	Colour	<input type="text" value="#000000"/> <input type="color" value="#000000"/>
-----------	--------------------------------------	------	---------------------------------	-------	---------------------------------------	-------	-------------------------------------	--------	----------------------------------------------------------------------------

**Background colour**

Left logo URL

Right logo URL

[Show descriptions](#)

### 10.3 E-mail properties

Here you can define the sender e-mail, the recipient list and their settings.

#### Email properties

**Sender & recipients**

Sender email address

Try to use automatically the email address of the user if the email is stored in the security system

User can change the sender email address

Recipient(s) Please input into this field all email recipients separated by comma. Optional the user can edit this list too.

User can change the recipient list for this email

Sender & recipients style

Font face	Arial	Size	12	Style	Normal	Align	Left	Colour	#000000	
-----------	-------	------	----	-------	--------	-------	------	--------	---------	--

**Subject**

Subject

User can change the email subject

Subject style

Font face	Arial	Size	12	Style	Normal	Align	Left	Colour	#000000	
-----------	-------	------	----	-------	--------	-------	------	--------	---------	--

**Settings**

Definition of size of the textarea for the email body text. This textarea is visible if the user can edit the email body text.

Widget width(px)  \*

Label width(px)  \*

User can decide if for the following email(s) settings can be changed again or not

#### Sender & Recipients

##### Sender email address

Does the indicated in the e-mail sender address this need not match the e-mail sender from the e-mail link. Variables can be used.

Options:

- Try to use automatically the email address of the user if the email is stored in the security system
- Users can change the sender address

##### Recipient(s)

Contains all recipients, separated by commas. Variables can be used.

Optionally, the user can modify the list.

## Subject

Contains the subject of the e-mail, variables can be used.  
Optional user may change the subject.

## Settings

Defines the size of the text area for the e-mail text (visible if the user is allowed to change the e-mail text).

- Widget Width (px)
- Label Width (px)

## 10.4 E-Mail body

Contains the 'E-mail Body', also known as e-mail text.  
If you use formatted text, the email HTML format is used.  
You can use all the variables of the calling business cases.

**Email body**

Good day,  
text lorem ipsum|

Mit freundlichen Grüßen / Kind regards

Markus Körber  
Apparo Sueddeutschland GmbH  
Regensburg, Germany

Phone: 0049 (0)177 893 4127  
mailto: m.koerber@apparo.de

www.apparo.info

Magdeburg - Regensburg - Braunschweig - Wien

User can change the email body

## 10.5 Button titles

Contains the label of the buttons in all installed languages

**Button titles**

Language	Send email	Don't send email
German	Sende eMail	Abbrechen
English	Send	Don't send

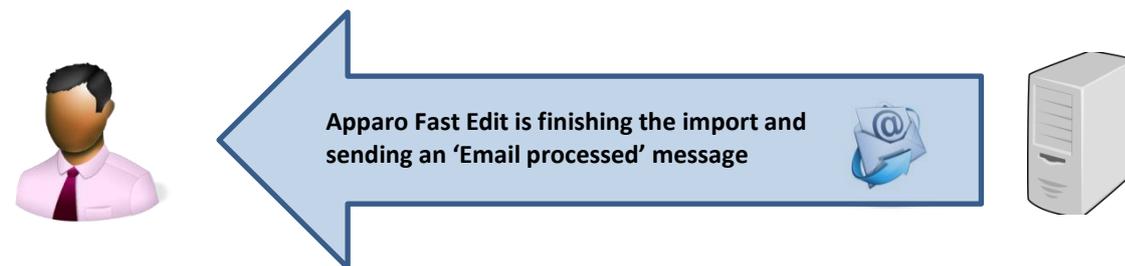
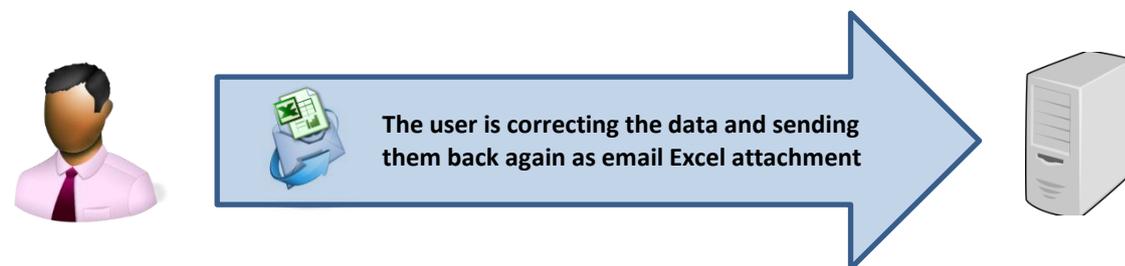
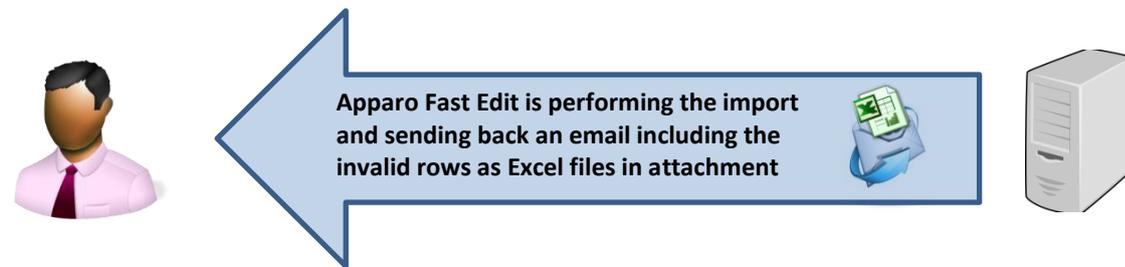
## 11 E-Mail Import Business Case (EIBC)

The Excel Email Import feature enables you to import data that is stored in Excel files (CSV, XLS and XLSX) from email attachments.

That means the user can send an email with **Excel files in attachment and the data of these Excel files will be imported automatically in your relational databases.**

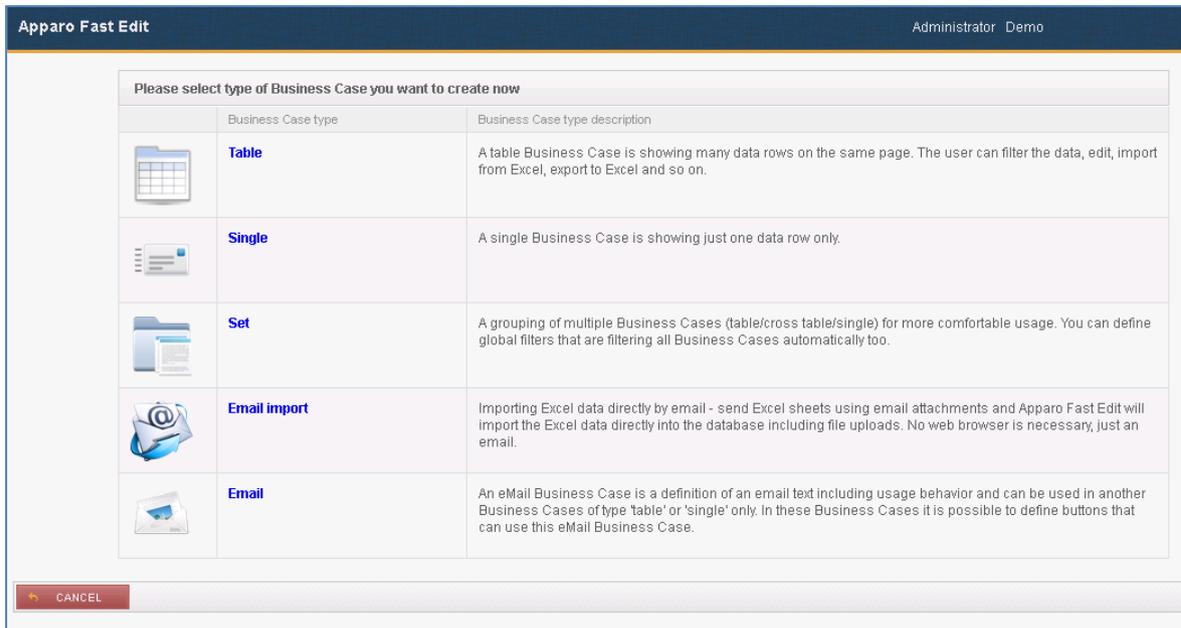
The user is getting automatically answer-emails that are informing the user about the progress or data quality issues.

All activities can be logged in database table, the emails and attachments can be stored physically on the server.



### 11.1 Creating a new Business Case of Type 'Email Import'

When clicking on New Business Case in the Business Case list the following selection list will appear:



Click on Email Import to create a new 'Email Import Business Case'

For the setup we will need a pre-defined email connection and at least one database connection, used for the Business Case that will perform the import.

These Business Cases are also containing all definitions for securing the data quality.

**The Business Cases must have activated the Excel file import feature.**

### 11.1.1 New Business Case - Main Settings

The main settings require the following settings:

- **Identifier:** The short name of the Business Case (must be unique)
- **Business Case Name:** This name will appear as name when we link the Business Case to the portal
- **Email connection:** The email connection for sending and receiving emails
- **Internal description:** Optional. For documentation purposes only.

**Apparo Fast Edit**

**Email Import Business Case (EIBC) - Main settings**

Identifier / Short name  \*

Business Case name  \*

Email connection  ▼

Enabled

Notes

**NEXT** **CANCEL**

Fill all necessary fields and click 'Next' to create the Business Case

## 11.2 Overview of all possible settings

Once the Business Case is created we will see the following overview.

Here you can save and close the Business Case and click through the tabs of the settings:

- **Introduction:** Contains usage examples and explanations
- **Main Settings:** Contains the main settings and the server path for storing emails and attachments
- **Importing Groups:** Contains the import groups, the detailed settings how shall be imported
- **eMails:** Here you can define the text of a failure email, for the case that no import group is matching
- **Logging:** Contains the logging settings, details like user name can be mapped here to a database column
- **Variables:** Contains predefined variables and you can create own JavaScript variables

The screenshot shows the 'Apparo Fast Edit' window titled 'Business Case Designer - Monthly turnover'. The user is logged in as 'Administrator Demo'. The interface has a sidebar on the left with tabs for 'Introduction', 'Main Settings' (selected), 'Import Groups', 'eMails', 'Logging', and 'Variables'. The main area is titled 'Email Import Business Case (EIBC) - Main settings' and contains the following fields:

- Identifier / Short name:  \*
- Business Case name:  \*
- Email connection:  ▼
- Enabled:
- Notes:

## 11.3 Main Settings

This tab contains, beside from the main settings, the path for storing emails and attachments physically on the server.

The screenshot shows the same 'Apparo Fast Edit' window, but the 'Main' tab is now 'Email file system storage'. The sidebar remains the same. The main content area is titled 'Email file system storage' and contains the following field:

- Path for storing the email content:

email file system storage

## 11.4 Importing Groups

An import group contains the definitions what attachments are expected and what Business Case shall perform the import. It also contains the security settings, log settings and the response email texts.

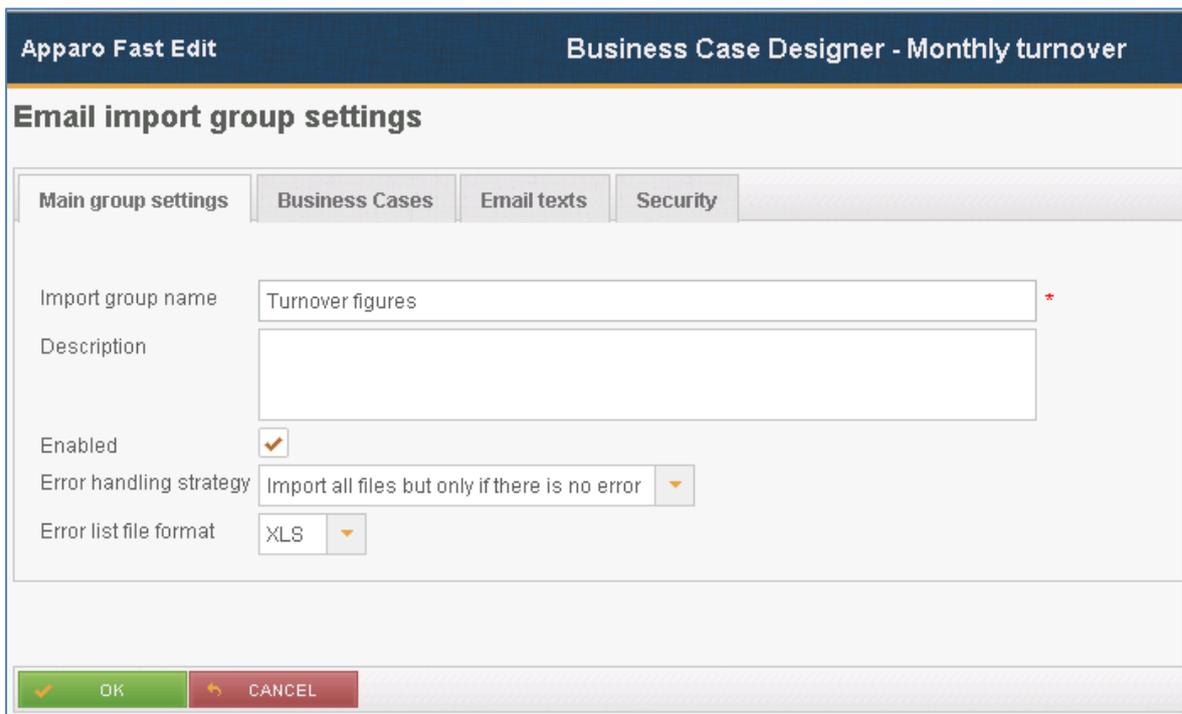


Adding a new import group

## 11.5 Importing group settings

### 11.5.1 Main group settings

It contains the import group name (unique) and an optional description text. You can enable or disable the import group here.



### 11.5.2 Business Cases

Contains the mapping to all Business Cases that are defined to perform the import. When an email from a valid sender arrives, Apparo Fast Edit automatically analyses the structure of the attachments and comparing the structure with the defined import groups.

The screenshot shows the 'Business Case Designer - Monthly turnover' window. At the top, it says 'Apparo Fast Edit' and 'Administrator Demo'. The main title is 'Email import settings for table Business Case'. Below this, there is a dropdown menu for 'Table Business Case' set to 'Table\_BC\_for\_import' and a text area for 'Notes'. A green button labeled 'ADD NEW FILE ATTACHMENT' is visible. Below that is a table titled 'Email attachment file list to be read in following order' with columns for 'Order number', 'Change order', 'File name pattern', and 'Description'. The table is currently empty, with a message below it stating 'At the moment this import group has no file attachment definitions.' At the bottom, there are 'OK' and 'CANCEL' buttons.

### 11.5.3 Add new attachment

You need to define at least one email attachment for every defined importing Business Case.

The screenshot shows the 'Email file attachment settings - Excel file' dialog box. It has two tabs: 'Basic settings' (selected) and 'Advanced Excel document data constraints'. A note at the top says 'Please note, that only the first sheet of an excel file will be imported.' The 'Basic settings' section includes: 'File name pattern' set to '\*.excel', 'Description' (empty text area), 'Min. and max. occurrences' set to '1 - 1', 'Starting row' set to '1', and 'Language' set to 'English'.

Creating a new file attachment

The following properties are expected:

- **File name pattern:** Defines the allowed file extension (\*.excel allows all Excel files: .xls, .xlsx, .csv)
- **Description:** For the internal documentation
- **Starting row:** For the case the contains a header in row 1, we start the import in row 2
- **Min and Max occurrences:** The minimum should be at least 1 – the user gets an error email if the attachment contains less attachments than expected
- **Language:** Important for language sensitive data types e.g. date

#### 11.5.4 Advanced Excel document data constraints

This feature is optional:

Here you can define the expected data column types, this feature allows Apparo Fast Edit to better distinguish similar Excel file attachments.

**Email file attachment settings - Excel file**

Basic settings
**Advanced Excel document data constraints**

**Expected row and column counts**

Number of data columns

Minimum row count

Maximum row count

**Expected data column types**

This functionality is not supported for CSV files.

Column name (eg. A, B or AA)

Column type  ▼

Short description

**ADD COLUMN TYPE**

Column name (eg. A, B or AA)	Column type	Short description	Actions
No column definitions found			

#### Expected data column types

### 11.5.5 Email texts

Contain the bodies of different auto response emails.  
Optional. When empty, no email will be sent.

There different kinds of response emails:

- **'Matching email import group found'**: Sent when email received
- **'Confirmation email'**: Sent when confirmation by user is necessary
- **'Security constraints not met'**: Sender does have the required rights for the import
- **'Email processing cancelled because of error'**: Sent in case of data errors and the import is set to 'Cancel the import in case of errors'
- **'Errors occurred, but import was performed'**: Sent when the import is finished with errors
- **'Email successfully imported'**
- **'Limited access prevented email processing'**: The feature 'limited access' is activated and prevents the import
- **'Error list'**: Email with file attachment containing all erroneous rows

Apparo Fast Edit		Business Case Designer - Monthly turnover		Administrator Demo	
<b>Email import group settings</b>					
Main group settings		Business Cases		Email texts	
<b>Matching email import group found</b>					
Email subject	[Data Import] <%ORIG_EMAIL_SUBJECT%> / Ticket <%IMPORT_TICKET_ID%> / Info - email received				
Email body	<p>This is an automatically generated email by Apparo Fast Edit. Ticket number: &lt;%IMPORT_TICKET_ID%&gt;</p> <p>Data structure of your email's attachments is correct. They are going to be imported now. You will receive additional emails informing you about the import progress.</p>				
<b>Email successfully imported</b>					
Email subject	[Data Import] <%ORIG_EMAIL_SUBJECT%> / Ticket <%IMPORT_TICKET_ID%> / Success - all files from your email have been ir				
Email body	<p>This is an automatically generated email by Apparo Fast Edit. Ticket number: &lt;%IMPORT_TICKET_ID%&gt;</p> <p>Your email attachments were imported completely successfully. The import is finished now.</p>				

Auto response email texts

### 11.5.6 Security

The email import can be secured:

- by limiting the allowed email senders (as list of email addresses)
- by limiting the email senders based on a security group:
  - the user account including email address must be stored in an MS Active Directory system
- by using a text keyword that must be delivered in the subject or body of the email
- by enabling a confirmation email (an automated email is returned to the sender, which has to be confirmed within a defined timeframe)
- by a list of trusted email servers (only emails of listed servers are accepted)

All emails can be encrypted using SSL

The general access can be restricted by using the limited access feature in the tab 'Security':

- **No limitations:** Default value, no restrictions
- **Limited for all:** Nobody can use this import group
- **Limited for variable value:** Not useable if a variable return 'true' – e.g. a variable returns true during the time period when the database is performing maintenance tasks

The screenshot shows the 'Apparo Fast Edit Business Case Designer - Monthly turnover' interface. The 'Email import group settings' dialog box is open, with the 'Security' tab selected. The settings are as follows:

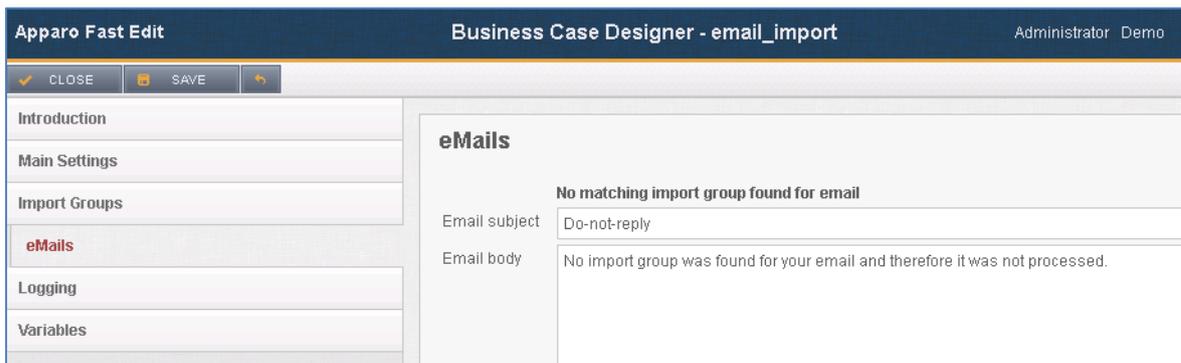
- Allowed email sender addresses:** A text area containing the placeholder text '<%sender\_list%>'. Below it is a large empty text box for input.
- Security keywords:** A text area containing the placeholder text '<%keyword\_list%>'. Below it is a large empty text box for input.
- Email confirmation required:** A checkbox that is currently unchecked.
- Confirmation reply must come within:** A text input field followed by the word 'minutes'.
- Authorized security groups:** A large empty text box for input.
- Business Case limited access:** Three radio button options:
  - No limitation (default)
  - Limited for all
  - Limited for variable value

## 11.6 eMails

It contains the general error message for the case that no matching import group could be found to perform the import.

This can have different causes:

- Erroneous setup of import groups
- Erroneous attachments (e.g. file does not match the file import template)
- The import group can be temporary disabled by the administrator
- disabled by a variable (e.g. a time controlled variable to avoid issues during a maintenance period)



General error message

## 11.7 Logging

All events can be logged into an own database table.

In order to log all possible values the table will need the following columns:

- **Column for client name:** What client was used for the import
- **Column for sender address:** What sender address tried to import
- **Column for event timestamp:** Timestamp
- **Column for ticket ID:** Ticket ID, unique ID for the import event
- **Column for storage path:** Where is the email and attachment stored
- **Column for Business Case ID:** What Business Case performed the import
- **Column for importing group name:** What import group performed the import
- **Column for the import message:** Plain text with error message
- **Column for the log severity:** Can be warning, error, info or debug
- **Column for the message code:** A number representing the message

Email import log settings	
Database Connection	AFE3_MJ_1
Logging table	MY_EMAIL_IMPORT_LOG_TABLE
Column for the log sequence number	SEQUENCE_NUMBER
Column for client name	CLIENT_NAME
Column for sender address	SENDER
Column for the event timestamp	EVENT_TIMESTAMP
Column for the ticket ID	EMAIL_TICKET_ID
Column for storage path	STORAGE_PATH
Column for the Business Case ID	BC_IDENTIFIER
Column for the import group name	IMPORT_GROUP
Column for the import message	MESSAGE
Column for the log severity	STATUS

Mapping of the database table based log

## 11.8 Variables

Allows to create own JavaScript variables.  
Hint: JavaScript variables can perform SQL too.

There is a list with pre-defined variables, ready to use.

The screenshot shows the 'Apparo Fast Edit' application window. The title bar reads 'Business Case Designer - email\_import' and the user is identified as 'Administrator Demo'. The interface has a sidebar on the left with a menu containing 'Introduction', 'Main Settings', 'Import Groups', 'eMails', 'Logging', and 'Variables' (which is highlighted in red). The main content area is divided into two sections: 'User defined variables' and 'Internal variables ready for use'. The 'User defined variables' section has buttons for 'ADD NEW VARIABLE' and 'DELETE SELECTED', and a table with one entry: a checkbox, the variable name '<%testvar%>', and the variable type 'Script variable'. The 'Internal variables ready for use' section contains a table with seven pre-defined variables and their descriptions.

Variable name	Variable description
<%AFE_HOME_DIR%>	Folder on the server which contains AFE settings
<%BC_NAME%>	Name of currently opened Business Case
<%SERVER_NAME%>	Name of server where Apparo Fast Edit is running
<%CURRENT_DATE%>	Current date and time
<%DATE%>	Current date
<%TIMESTAMP%>	Current date and time
<%TIME_MS%>	The number of milliseconds since 1.1.1970 (UNIX timestamp)

## 12 Action Business Cases (ABC)

Action BC is helpful for adding database action like changing data, calling scripts server side without user interactivity. It is possible to call an Action BC using AJAX.

An Action BC can contain own web output too, even buttons like yes/no are possible.

An Action BC can call database procedures or scripts automatically.

Please select type of Business Case you want to create now		
	Business Case type	Business Case type description
	<b>Table</b>	A table Business Case is showing many data rows on the same page. The user can filter the data, edit, import from Excel, export to Excel and so on.
	<b>Single</b>	A single Business Case is showing just one data row only.
	<b>Set</b>	A grouping of multiple Business Cases (table/single) for more comfortable usage. You can define global filters that are filtering all Business Cases automatically too.
	<b>Email import</b>	Importing Excel data directly by email - send Excel sheets using email attachments and Apparo Fast Edit will import the Excel data directly into the database including file uploads. No web browser is necessary, just an email.
	<b>Email</b>	An eMail Business Case is a definition of an email text including usage behavior and can be used in another Business Cases of type 'table' or 'single' only. In these Business Cases it is possible to define buttons that can use this eMail Business Case.
	<b>Action</b>	Purpose of Action Business Case is to execute scripts or database procedures.

You can find an execution example for AJAX and Cognos Report Studio in tab "Link to IBM Cognos" in the detail description. This example is using jquery as framework on the client side.

## 12.1 Example for calling a database function using AJAX

### 12.1.1 Create a new Action Business Case

Please select type of Business Case you want to create now		
	Business Case type	Business Case type description
	<b>Table</b>	A table Business Case is showing many data rows on the same page. The user can filter the data, edit, import from Excel, export to Excel and so on.
	<b>Single</b>	A single Business Case is showing just one data row only.
	<b>Set</b>	A grouping of multiple Business Cases (table/single) for more comfortable usage. You can define global filters that are filtering all Business Cases automatically too.
	<b>Email import</b>	Importing Excel data directly by email - send Excel sheets using email attachments and Apparo Fast Edit will import the Excel data directly into the database including file uploads. No web browser is necessary, just an email.
	<b>Email</b>	An eMail Business Case is a definition of an email text including usage behavior and can be used in another Business Cases of type 'table' or 'single' only. In these Business Cases it is possible to define buttons that can use this eMail Business Case.
	<b>Action</b>	Purpose of Action Business Case is to execute scripts or database procedures.

Select "Action" and define the main settings:

Please use a database connection too because later it is necessary to define a database procedure that must be called automatically.

#### Main Action Business Case settings

Identifier / Short name	<input type="text" value="Action BC Example"/> *
Business Case name	<input type="text" value="Action BC Example"/> *
Database connection	<input type="text" value="SAMPLES"/> ▼
Show output	<input type="text" value="There will be no user interface output"/> ▼
Business Case security group	<input type="text" value=""/> ▲▼
Notes	<input type="text" value="This BC will call a Oracle procedure using AJAX"/>

### 12.1.2 Define a report variable

Please click to tab “Variables” and add a new variable.

Variable type	Variable type description
 ▶ Script variable	You can use JavaScript to compute advanced calculations and the result can be used in Apparo Fast Edit as any other variable. The execution is done server side only.
 ▶ Report variable	Report variables: They are used to deliver content to a Business Case using the URL e.g. from a report or to deliver the content of a widget from one Business Case to another one.
 ▶ SQL variable (for all tables)	SQL variable to execute commands on all tables. Every time the SQL variable is used then the defined SQL is executed. The variable content is the first column of the first row of the executed SQL. You can use the variable (e.g. <%current_year%> in many input fields of the Business Case definitions, e.g. in header text, default value, constant value and so on.

Select “Report variable”.

The report variable is helpful for delivering a value from the Cognos report to this Action BC. It will be used later as a parameter in the call of the database function.

Now the name and output settings:

### Variable for Business Case

Variable name  \*

Variable description  
 This variable is necessary to deliver a value of the report to the Business Case.  
 It can be used e.g. as a parameter for calling a database procedure.

**Variable value** | **Data output format**

Default value

OK  CANCEL

Change the output format to numeric:

**Variable value** | **Data output format**

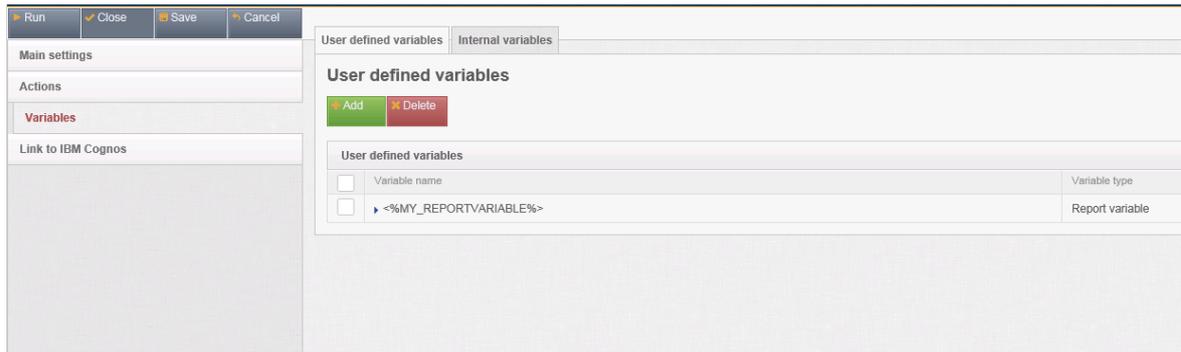
Output type  \*  
 Number  
 Date / Time

Decimal places

Show separate groups

OK  CANCEL

Now the report variable is defined:

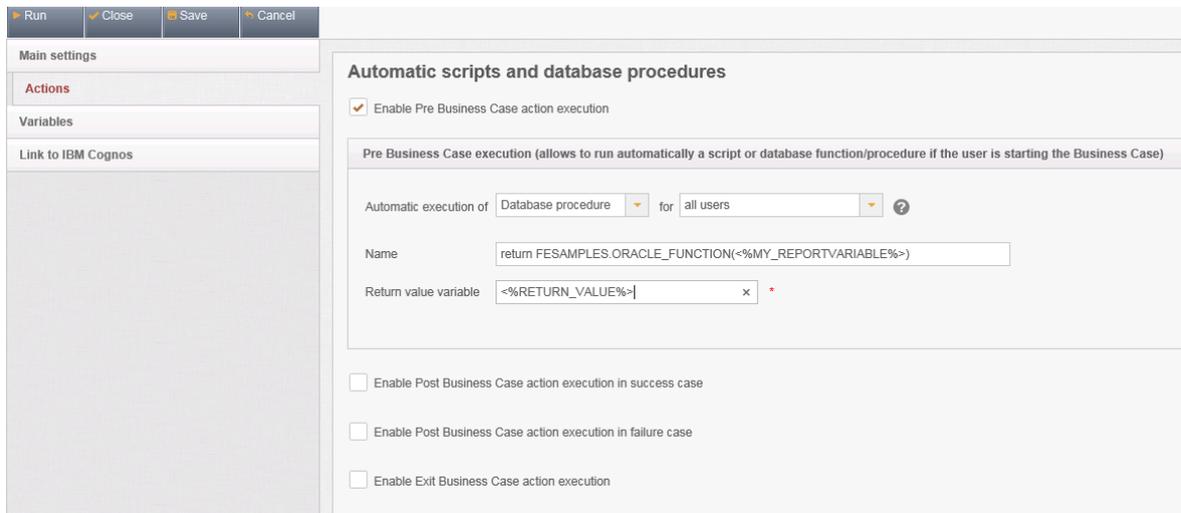


### 12.1.3 Define the actions

In the „Actions“ tab you can define the business logic that must be called if the Action BC is running.

In this example it must call the Oracle function oracle\_function with parameter <MY\_REPORTVARIABLE%>.

**Please be sure that you use right character case of the function/procedure name.**



## 12.1.4 Creating the Cognos Report Studio report

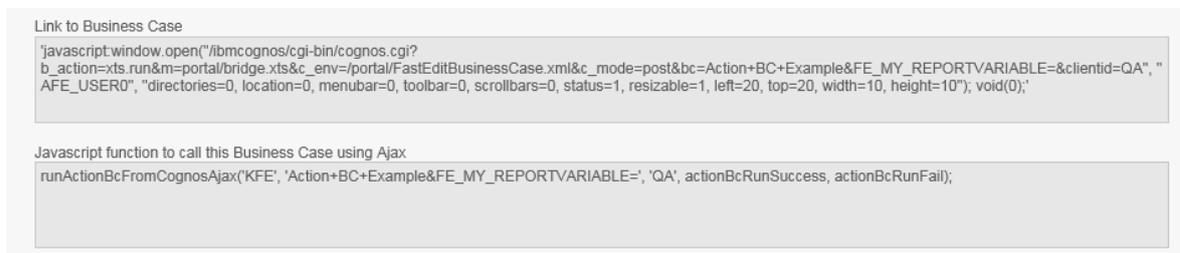
Select tab “Link to IBM Cognos”:



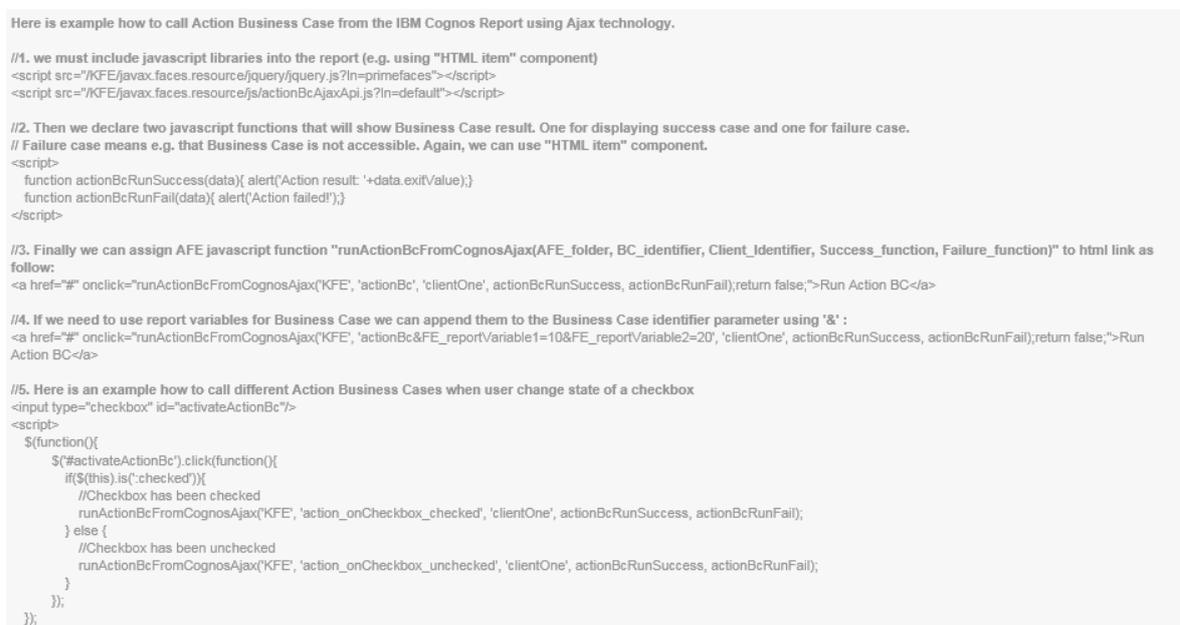
Select area “Calling Business Case using http/Ajax”.

This first expression is used for calling this Business Case using http, e.g. in hyperlink element in the report.

We take the second part later because this is for using AJAX.



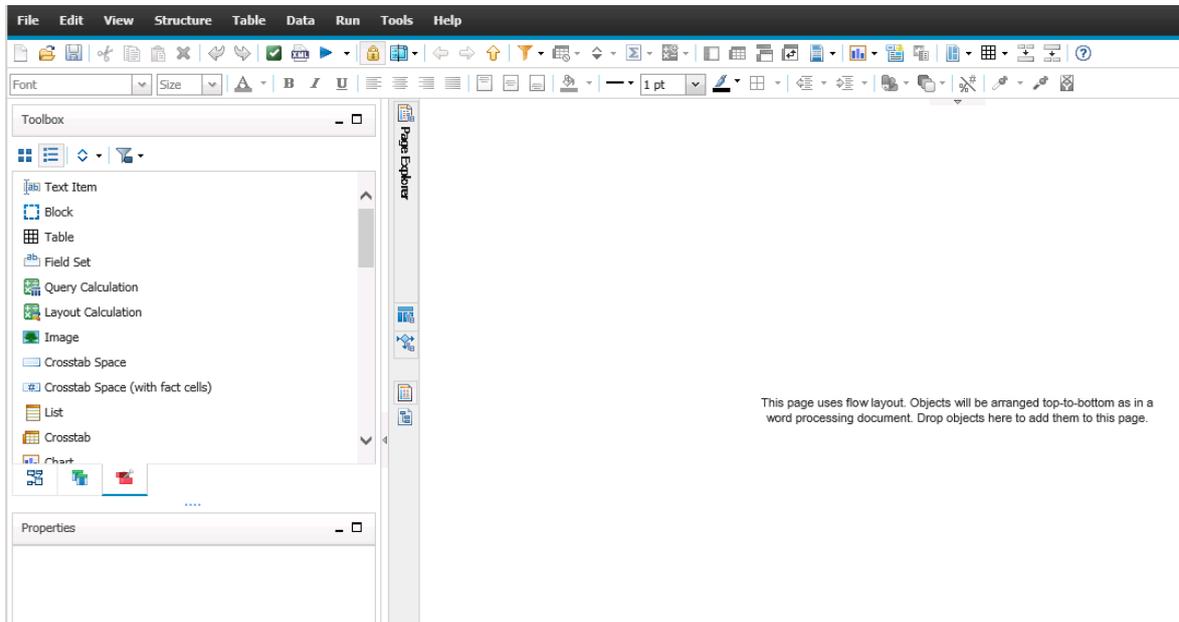
You can see a complete javascript source code example in this part too:



The Cognos report is requiring these javascript source code parts for calling the Action Business Case. **The easiest way is to copy & paste these code parts now.**

### 12.1.5 Creating new Report Studio report

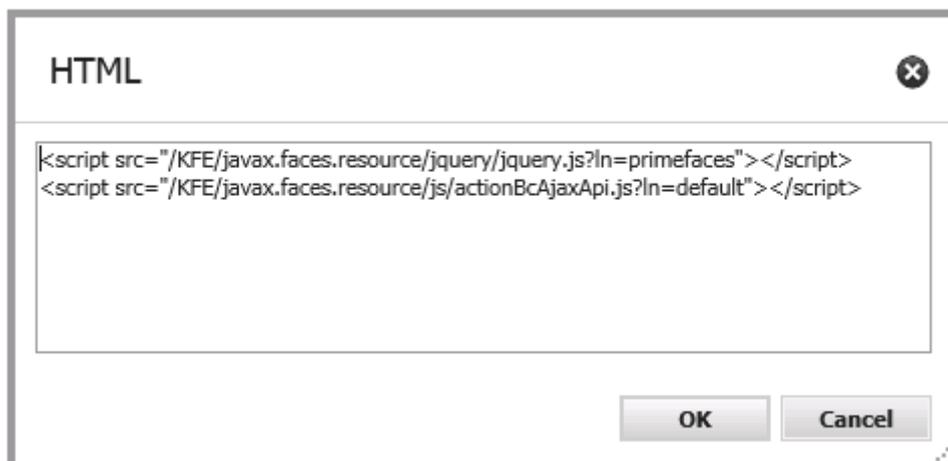
In this example we create a new blank report but it is possible to enhance an existing report too.



#### Add widget

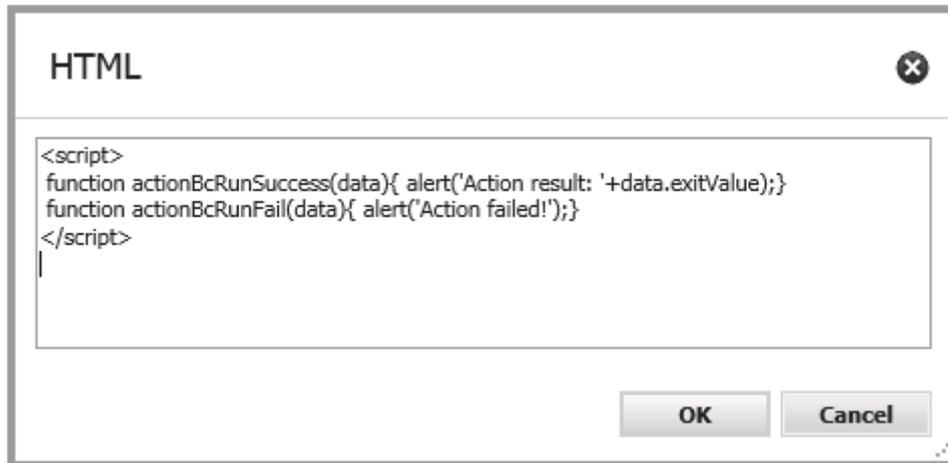
-  Singleton
-  Conditional Blocks
-  **HTML Item**
-  Rich Text Item
-  Hyperlink
-  Hyperlink Button
-  Date
-  Time

... to the report and copy the first part into it:



Please copy & paste the source code from the page like described before.

Add additional HTML item:



These functions are used for success and failure case.

Add new HTML item that is defining the business logic of the report. In this example we have a checkbox item (that means checked or not checked).

If checked then it is calling automatically an Action Business Case, if unchecked then it is calling another Action Business Case (in our example it is calling the same BC too).

```

HTML
<input type="checkbox" id="activateActionBc"/>
<script>
$(function(){
  $('#activateActionBc').click(function(){
    if($(this).is(':checked')){
      //Checkbox has been checked
      runActionBcFromCognosAjax('KFE', 'action_onCheckbox_checked', 'clientOne', actionBcRunSuccess, actionBcRunFail);
    } else {
      //Checkbox has been unchecked
      runActionBcFromCognosAjax('KFE', 'action_onCheckbox_unchecked', 'clientOne', actionBcRunSuccess, actionBcRunFail);
    }
  });
});
</script>
OK Cancel

```

In this example the client name is "QA" and the Action Business Case Id is "Action BC Example". Additional we are using a report variable.

Therefore it is necessary to edit this source code and copy the **generated code for AJAX** (see above) from the Business Case to the report:

```

HTML
<input type="checkbox" id="activateActionBc"/>
<script>
$(function(){
  $('#activateActionBc').click(function(){
    if($(this).is(':checked')){
      //Checkbox has been checked
      runActionBcFromCognosAjax('KFE', 'Action+BC+Example&FE_MY_REPORTVARIABLE=', 'QA', actionBcRunSuccess, actionBcRunFail); }
    } else {
      //Checkbox has been unchecked
      runActionBcFromCognosAjax('KFE', 'Action+BC+Example&FE_MY_REPORTVARIABLE=', 'QA', actionBcRunSuccess, actionBcRunFail); }
    });
  });
</script>
OK Cancel

```

You see the text FE\_MY\_REPORTVARIABLE – this is for delivering the report variable MY\_REPORTVARIABLE. It needs a value too.

Please add value 4711 and edit the source code again. Of course in reality the report can compute this value.

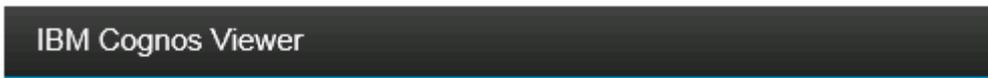
The final result is:

The screenshot shows a window titled "HTML" with a close button in the top right corner. The main area contains the following code:

```
<input type="checkbox" id="activateActionBc"/>
<script>
$(function(){
$('#activateActionBc').click(function(){
if($(this).is(':checked')){
//Checkbox has been checked
runActionBcFromCognosAjax('KFE', 'Action+BC+Example&FE_MY_REPORTVARIABLE=4711', 'QA', actionBcRunSuccess, actionBcRunFail); }
else {
//Checkbox has been unchecked
runActionBcFromCognosAjax('KFE', 'Action+BC+Example&FE_MY_REPORTVARIABLE=4711', 'QA', actionBcRunSuccess, actionBcRunFail); }
});
});
</script>
```

At the bottom right of the window, there are two buttons: "OK" and "Cancel".

If you can the report then you will see just a simple checkbox:



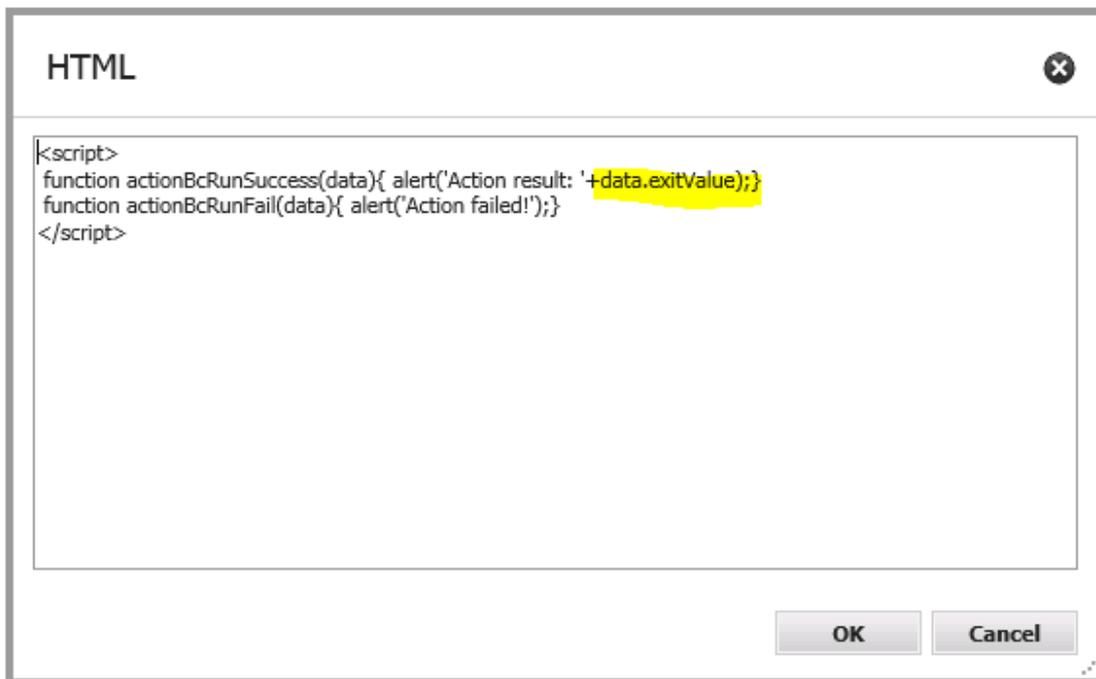
### 12.1.6 Database function definition

The database function has following definition in this example:

```
create or replace
function oracle_function(i_value in number) return number AS a number;
begin
                /* Space for business logic */
return i_value;
end;
/
```

Now the user can run the report and check/uncheck the checkbox. Every time the function oracle\_function including parameter value of the javascript code will be called automatically. The return code of the oracle function will be returned to the report too.

The return code can be read with:



Of course the client settings like business log are executed too.

### 13 Business Case Sets (Set)

Sets group multiple business cases in a tab view. The business cases can be accessed with tabs and edited comfortable.

#### 13.1 Selection and positioning of business cases in the set (Set)

**Main settings**

Identifier / Short name

Business Case name

Select Business Cases

Available		Selected	
SAMPL APP PROD PRICE (1)	→	SAMPL MASTER PROD LINES (1)	↑
SAMPL APP PROD PRICE1 (1)	→	SAMPL MASTER PROD PRICE (1)	↑
SAMPL APP PROD PRICE2 (1)	←		↓
SAMPL APP PROD PRICE3 (1)	←		↓
SAMPL APP PROD PRICE4			
SAMPL APP SALES MAN (1)			
SAMPL PLAN SALES PLAN (1)			
abbott_demo			
SAMPL MASTER PROD LIST (1)			
SAMPL WF WORKFLOW1 (3)			

Notes

In 'Available' you find all existing business cases.

By double-clicking or using the arrow keys, these are assigned to the set.

The positioning within the set is also done via arrow keys or the mouse.

By holding down the Ctrl key you select multiple business cases and move it to the desired position.

### 13.2 Colors

In colors you can set the color of the tabs (tab):

#### Colours

Inactive tab background colour	<input type="text" value="#CCCCCC"/>	<div style="width: 20px; height: 15px; background-color: #CCCCCC; border: 1px solid #ccc;"></div>		*
Inactive tab text colour	<input type="text" value="#000000"/>	<div style="width: 20px; height: 15px; background-color: black; border: 1px solid #ccc;"></div>		*
Active tab background colour	<input type="text" value="#FFFFFF"/>	<div style="width: 20px; height: 15px; background-color: white; border: 1px solid #ccc;"></div>		*
Active tab text colour	<input type="text" value="#000000"/>	<div style="width: 20px; height: 15px; background-color: black; border: 1px solid #ccc;"></div>		*

### 13.3 Tab Widths

In Table width you define the width of the tabs

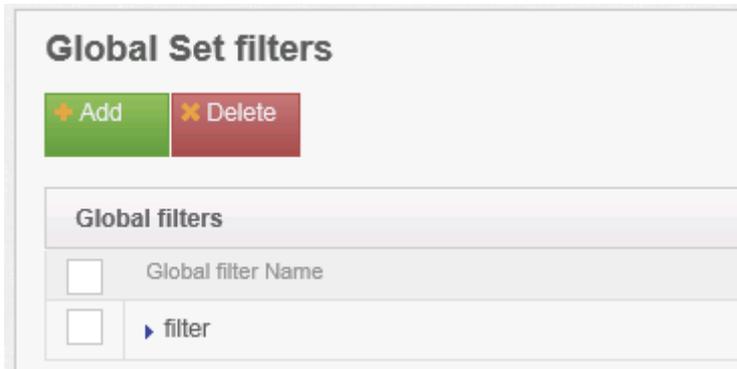
#### Tab widths

Business Case name	Tab width
SAMPLES - product lines	<input type="text" value="200"/>
SAMPLES - product pricing3	<input type="text" value="200"/>

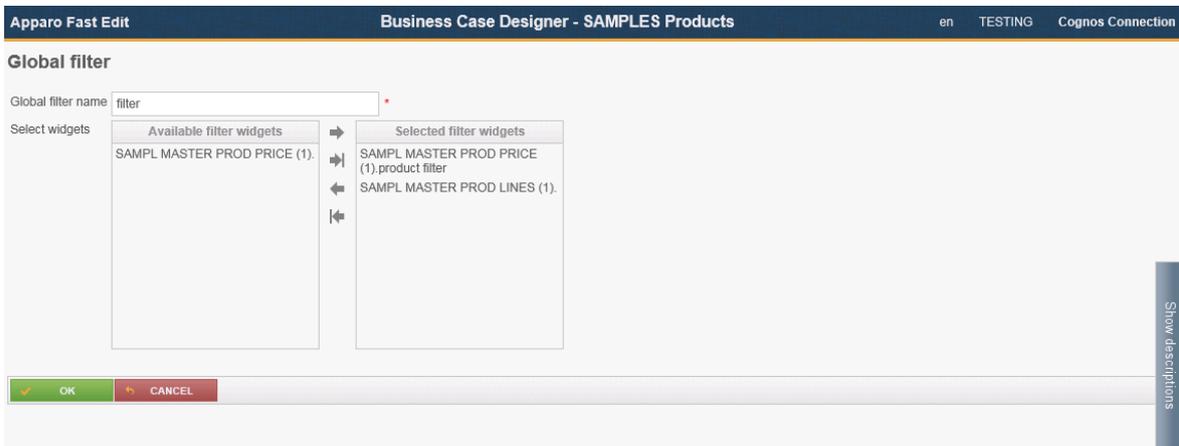
### 13.4 Global Set filters

A global filter is a connection between different filter widgets of different Business Cases of a Business Case Set. That is helpful if some Business Cases of this Set must be filtered in the same way when if the user is jumping to another Business Case.

Example: All Business Cases must filter for the same product and the user is selecting the product just once. It is possible to use many different global filters parallel, e.g. for product and for product-line.



All existing filter widgets of the Business Cases in the Set are listed here. To create a global Set filter, move all related filters to 'Selected filter widgets' and hit OK.

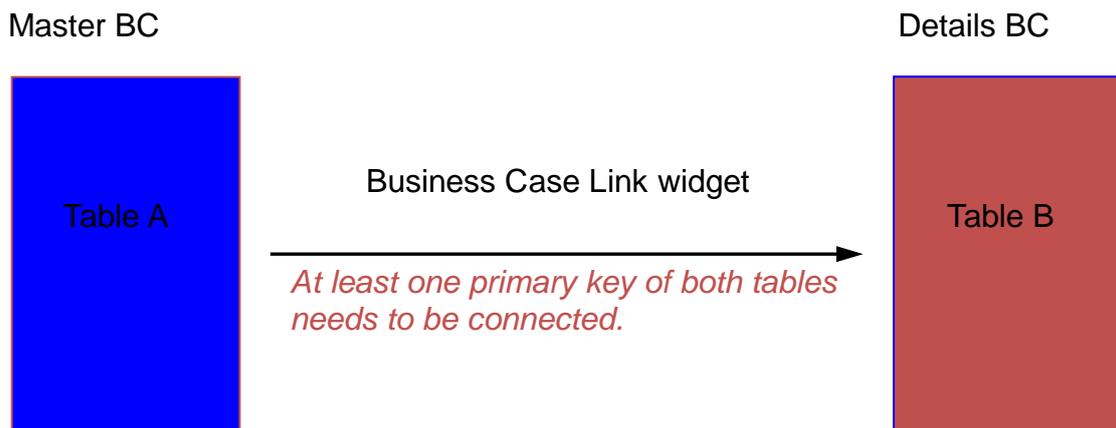


## 14 Linking BC as Master-Detail connection

In the context of relational databases, a master-detail relationship is the same construction as using a foreign key. (See also the Wikipedia entry [http://en.wikipedia.org/wiki/Foreign\\_key](http://en.wikipedia.org/wiki/Foreign_key).)

### 14.1 Master-Detail basics

- Usually, each Business Case refers to one table/view.
- The master-detail-relationship is a way to combine the tables of the Business Cases. It uses the “foreign key” concept of relational databases.
- All user changes in the connected Business Cases are transmitted in one database transaction.



Example:

- The referenced master table includes an invoice header with a unique **InvoiceNumber**.
- The referencing detail table includes each **InvoicePosition** (including the referred *InvoiceNumber* as foreign key).

Invoice ( **InvoiceNumber**, Date...)

InvoicePositions ( **PositionNumber**, *InvoiceNumber*, ...)

The advantage of using a master-detail relationship in Fast Edit as compared to normal database programming is that the logic behind the connection is handled by Fast Edit. You don't have to deal with the construction within the detail table itself, as the mapping is all the information necessary for Fast Edit.

A master table may have many referencing detail tables. However, in the context of Fast Edit, a new Business Case must be created for each master-detail relationship.

The general procedure is as follows:

- The master Business Case needs a **Business Case Link** widget. This widget is the connection to the detail Business Case, by mapping the primary key(s). Note that usually only one of the primary keys needs to be mapped, as this is enough to connect the two Business Cases.
- The detail Business Case needs no special widget. It is only connected to the master Business Case by the mapping.

Once the two Business Cases are connected, entering data in the detail table results in one database transaction for master and detail table.

It is recommended that for the connected column(s), you assign the same column names in both tables. You can only map to widgets with “primary key” tag in the linked Business Case.

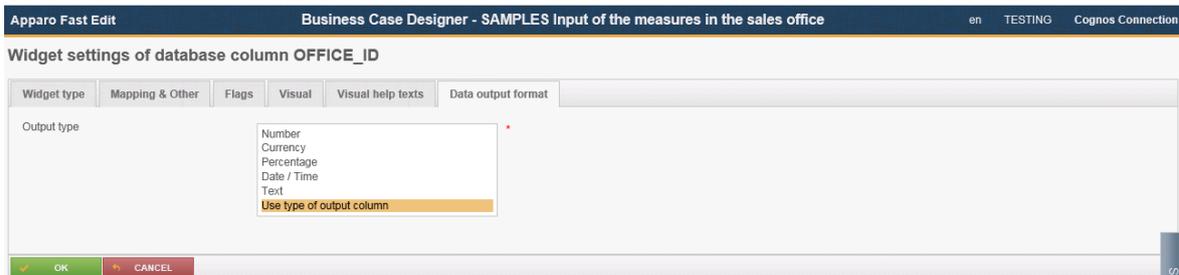
The optical appearance and title text of the Business Case link is defined on the “Visual” register of the widget.

## 15 Optimizing Business Cases

### 15.1 Securing data quality

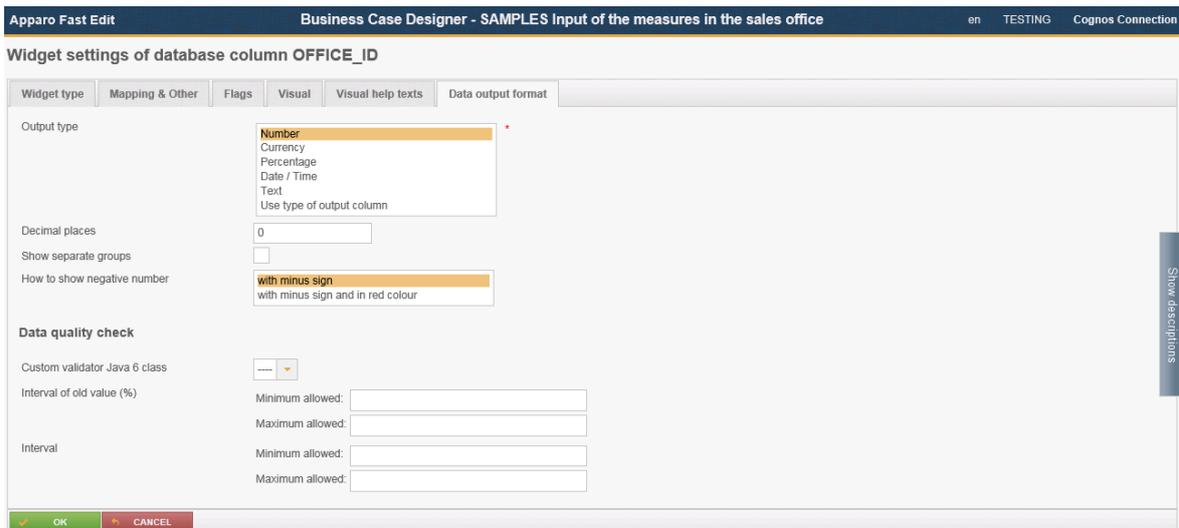
#### 15.1.1 Data output format

Under data output format you will find several options for testing the validity of the data. The default setting 'Use type of output column data' and provides no further adjustments. With this option, the definition in the database of the associated database column determines which data type is used.



#### Output types:

- **Number** - Requires a number
- **Currency** - Shows number values with currency symbol
- **Percentage** - Percentages, e.g. 12,34%
- **Date / Time** - Requires a date / time
- **Text** - To enter text, as a special validation option, there are regular expressions



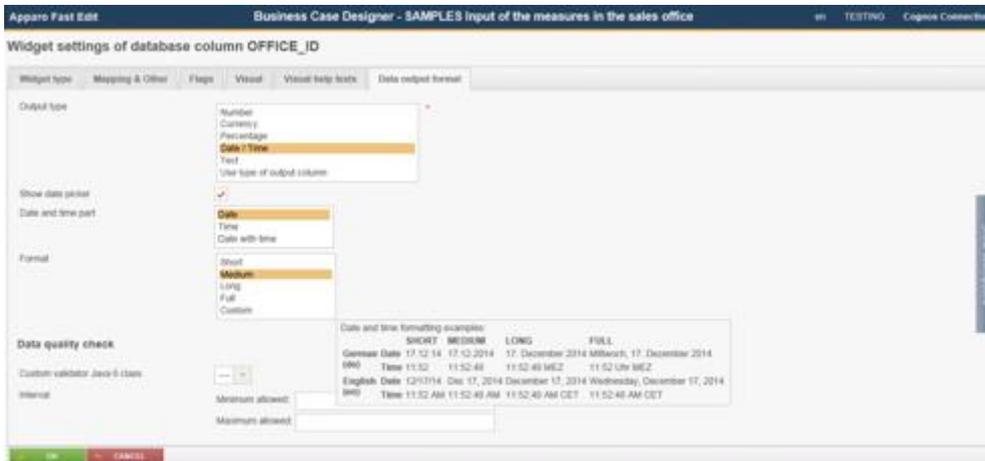
- Decimal places** - You can set the number of decimal places displayed
- Show separate groups** - Serves for better readability of large numbers e.g. 1,000,000,000
- How to show negative number** - Negative numbers can only be viewed by a minus or colored red

### Output type ,Currency'

Is identical to the output type ,number', but contains as a further option the setting for a currency symbol

Currency symbol

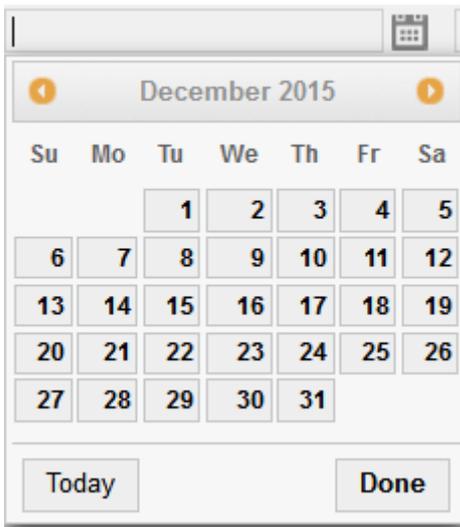
### Output type ,Date and Time'



With ,Show date picker' (default) users can easily pick a date

### Change type

F



The date pickers prevents entry mistakes

### 15.1.2 Data Quality check

#### Custom validator Java 7 class

Custom validator Java 6 class

Optional. A Java 7 class that is testing the input value. The file directory of this file is defined in the Apparo Configuration Manager. This class is called automatically before Apparo Fast Edit is updating or inserting this row.

#### Interval of old value (%)

Interval of old value (%) Minimum allowed:   
Maximum allowed:

Hereby you limit the validity of the entered values based on the existing values.

Example: In the widget, the value is 100. In this case, users may only enter values between 50% and 100% of the original value, so values between 50 and 100. Otherwise, the user receives an error message.

#### Interval

Interval Minimum allowed:   
Maximum allowed:

Limits the validity of entries based on an absolute interval. Permissible are values only from 1000 to 2000. Interval limits can be set dynamically with variables.

#### Regular Expression (Only for type ,Text')

Regular expression for data quality

Using a regular expression is helpful to define more complex input rules. For example you can define that the first character must be an 'A' and then just numbers are allowed. Click the '?' icon to see the detail instructions.

Characters		
Character	Description	Example
Any character except [ $\backslash^{\$} \cdot   ? * + ( )$ ]	All characters except the listed special characters match a single instance of themselves.	a matches a
$\backslash$ (backslash) followed by any of [ $\backslash^{\$} \cdot   ? * + ( )$ ]	A backslash escapes special characters to suppress their special meaning.	$\backslash+$ matches +
$\backslash xFF$ where FF are 2 hexadecimal digits	Matches the character with the specified ASCII/ANSI value, which depends on the code page used. Can be used in character classes.	$\backslash xA9$ matches © when using the Latin-1 code page.
$\backslash n$ , $\backslash r$ , and $\backslash t$	Match an LF character, CR character and a tab character respectively. Can be	$\backslash n$ matches a

### 15.1.3 Data row validation

Enables validation of input when inserting or updating data

**You can:**

- Access all widget content via widget reference variables
- Use SQL variables
- Define own error texts, which are output automatically

```

Data row validation
Data row validator

var a = <%WIDGETVALUE1%>;
var b = <%WIDGETVALUE2%>;
var c = <%WIDGETVALUE3%>;
var d = <%SQL_VARIABLE1%>;

// prepare empty result, what means that row data is valid
var result = "";

if (c != 'A' && a > b) {
  if (<%LANGUAGE%> == 'en') {
    result = 'Product data is invalid';
  } else {
    result = 'Produktdaten sind falsch';
  }
}
if (d == 1234) {
  if (<%LANGUAGE%> == 'en') {
    result = 'Calculation is wrong';
  } else {
    result = 'Berechnung ist falsch';
  }
}
}
// return the result
result;

```

**Technical:**

You define a JavaScript routine that can access widget reference variables or SQL variables. An example can be obtained by clicking the question mark icon. If the data row contains an error, an appropriate error message can be defined and the user is seeing exactly this error message.

## 15.2 Tracking of data changes

### 15.2.1 Auditing of data changes

The audit function you can use to document all data changes.

There are 2 different types of audit:

Simple Auditing

To save the audit information into the target table.

Auditing of data changes		
Simple auditing settings		
	Inserting a new row case	Updating or deleting row case
User name column	USER_ID ▾	USER_ID ▾
Date column	STAMP ▾	STAMP ▾
State (U,I,D) column		▾
Row edit type column		▾
In delete case delete data row physically		<input type="checkbox"/>

It is possible to save the user name, date and time and the type of change for each row in the target table.

There are 2 different types of changes possible:

- The user adds a new row
- The user deletes or modifies a row.

The following states are possible: U = Update, I = Insert (paste), D = Delete (Delete).

#### Options

##### User name column

Stores the name of the user

##### Date column

Date column for storing update or insert date and time

##### State (U, I, D) column

The database column in that the state(U=Update,I=Insert,D=Delete) will be stored.

##### Row edit type column

In this auditing column the row edit type can be stored. The row edit type (type of string) is describing the way of editing.

##### In delete case delete data row physically

Physically delete row(s) with 'D' flag from table. If disabled then all deleted rows get the state 'D' and are not physically deleted.

## Detailed Auditing

Storing detailed audit information in a separate audit database table helpful if every small change (eg a column) with name, timestamp, etc. should be documented.

Detailed auditing settings	
Database schema	FESAMPLES
Auditing database table	SAMPLES_ADV_AUDITING
Auditing column for user name	USERNAME
Date column	CHANGE_DATE
State (U,I,D) column	STATE_TYPE
Row edit type column	ROW_EDIT_TYPE
Custom value column	CUSTOM_VALUE <input type="text" value="<%REPORT_VAR1%>"/>
Target table name column	TARGET_TABLE
Business Case identifier column	BCID
SQL statement column	SQL_COMMAND
Summary change column	

### Options

#### Database schema

The database schema in that the auditing table is already stored.

#### Auditing database table

The database table for the auditing data.

#### Auditing column for user name

The database column of the auditing table in that the user name who has changed data will be stored.

#### Date column

The auditing column for storing the date/time of the data change.

#### State (U, I, D) column

The auditing table column in that the state must be stored (U=update, I=insert, D=delete).

#### Row edit type column

In this auditing column the row edit type can be stored.

#### Custom value column

In this auditing column a custom value with variables can be stored that is stored in the auditing table only.

#### Target table name column

In this auditing column the name of the target table of this Business Case can be stored.

#### Business Case identifier column

In this auditing column the Business Case ID (short name) can be stored.

#### SQL statement column

In this auditing column the SQL statement can be stored. Be sure that this column can store a long text.

#### Summary change column

This text contains all data changes in one string like oldValue=1, newValue=2,..The column names are defined in the widget list beneath.

### 15.2.2 Data History

Apparo Fast Edit can historicize a record (slowly changing dimension type 1 and 2). Information about "Slowly changing dimension", see:

[http://en.wikipedia.org/wiki/Slowly\\_Changing\\_Dimensions](http://en.wikipedia.org/wiki/Slowly_Changing_Dimensions)

**Note: For a historicizing the database must be able to perform "save points".**

**Since the Sybase / Informix / Teradata JDBC driver does not support this feature, the historicization of records within a Sybase or Informix or Teradata database is not possible.**

This function automatically copies data rows when they are modified.

It automatically manages the current record and makes it possible to either overwrite or historicize records within time frame definitions.

The user usually sees only the current line and not the data changes or deletions (if only virtually), the new rows are simply copies of the original lines.

The Business Case is managing automatically 'date from', 'date to' and "current" columns of the target table.

With these date columns it is possible to see the time dependencies of the changes.

#### Background

Apparo Fast Edit is combining data rows together to a 'row group'. A 'row group' are data rows that are storing detail information about an entity, for example a "product entity" has many different prices over the time.

Please don't use widgets (columns) for the history feature that contain read/write expressions.

### **Time resolution**

If there are 2 or more data changes into a row in the same time frame then Apparo Fast Edit will update the row only. If the next change is outside of the time frame then Apparo Fast Edit is copying automatically this row and changing the 'date from' and 'date to' columns automatically too.

### **'Valid from' date column**

The 'valid from' database column of the target table is used for storing the begin of the time frame for a row.

**Validate that the new 'valid from' value precede the latest existing 'valid from' value of this row group.**

Useful for manually entered valid from values

HINT: this column must be a part of the primary key

### **'Valid to' date column**

The 'valid to' database column of the target table is used for storing the end of the time frame for a row. This setting is optional. It is automatically managed by the Business Case.

### **Use for current flag**

The 'current' database column of the target table is used for marking the current row of a group. This setting is optional. It is automatically managed by the Business Case.

### **Advanced settings for the history feature:**

#### **Date for infinity**

The infinity date is used in the 'date to' column for the current data row. The current row is usually valid to this date.

#### **Value for ,is current' lines**

Value for current line (for example, 1)

Value of non-current line (for example, 0)

## 16 Adding a Business Case into a Cognos report

In this program section, you can enrich existing IBM Cognos reports with a hyperlink for a business case.

Each list or cross table in a report can be extended with a hyperlink, with which the user can open a business case from this report.

Business Cases can be called from outside of lists / cross tables too.

Example:

You have developed the following report with Report Studio. The table SAMPLE\_PRODUCT is a sample table of Apparo Fast Edit, which can be created optionally.

Example report		
PRODUCT_ID	PRODUCT_LINE_ID	PRODUCT_NAME_EN
<PRODUCT_ID>	<PRODUCT_LINE_ID>	<PRODUCT_NAME_EN>
<PRODUCT_ID>	<PRODUCT_LINE_ID>	<PRODUCT_NAME_EN>
<PRODUCT_ID>	<PRODUCT_LINE_ID>	<PRODUCT_NAME_EN>

The data rows are dependent on the columns PRODUCT\_ID and PRODUCT\_LINE\_ID.

Therefore the business case also has a primary key that consists of 2 columns:  
**PRODUCT\_ID and PRODUCT\_LINE\_ID.**

Output of the report:

PRODUCT_ID	PRODUCT_LINE_ID	PRODUCT_NAME_EN
350	6	Bino
440	2	T-Shirt Moscow
480	6	Bino
490	2	T-Shirt Moscow
500	1	test
510	4	Alon
520	4	Gilbert
390	1	test
400	4	Alon
410	4	Gilbert
420	4	Luxor
430	4	Madox
450	3	Oxford L
460	3	New Yorker
470	3	Nightblue
320	2	T-Shirt Vienna
330	5	Lueneburgjjj

The sample business case uses as primary key also PRODUCT\_ID and PRODUCT\_LINE\_ID:

**Widgets**

Add Delete

**Filtering widgets**

<input type="checkbox"/>	Row	Column	Column name	Widget type	Title	H
<input type="checkbox"/>	1	1	▶ PRODUCT_LINE_ID	▶ Lookup dropdown (for all tables)	Search product line	<input type="checkbox"/>
<input type="checkbox"/>	1	2	▶ PRODUCT_ID	▶ Lookup dropdown (for all tables)	Product name	<input type="checkbox"/>

**Editing widgets**

<input type="checkbox"/>	Column	Column name	Widget type	Title	PK	RO	H	NN
<input type="checkbox"/>	1		▶ Spacer & Title	▶			<input type="checkbox"/>	
<input type="checkbox"/>	2		▶ Business Case link	▶ Details			<input type="checkbox"/>	
<input type="checkbox"/>	3	▶ PRODUCT_LINE_ID	▶ Lookup dropdown (for all tables)	▶ Product line	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	4	▶ PRODUCT_ID	▶ Input field	▶ Product ID	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Select the Tab ,Link to IBM Cognos' and click on ,Link into report':

**Link to IBM Cognos**

▶ Link into IBM Cognos portal

▼ Link into report

For linking this Business Case into an existing Cognos Report Studio report you must add a "HTML item" widget into a List widget or outside of a List. The HTML item widget must have in the setting "Source type" the value "Report expression". Please replace the primary key values with valid column names or remove unnecessary primary key parameters. Use number2string(column name) for a parameter if it is a numeric value and not a string.

Include 'client id' parameter to the portal entry

Adding the client id means that the system is trying to open the Business Case of this client only. Without this client parameter it is looking through all clients from top to down using security settings/client security groups only

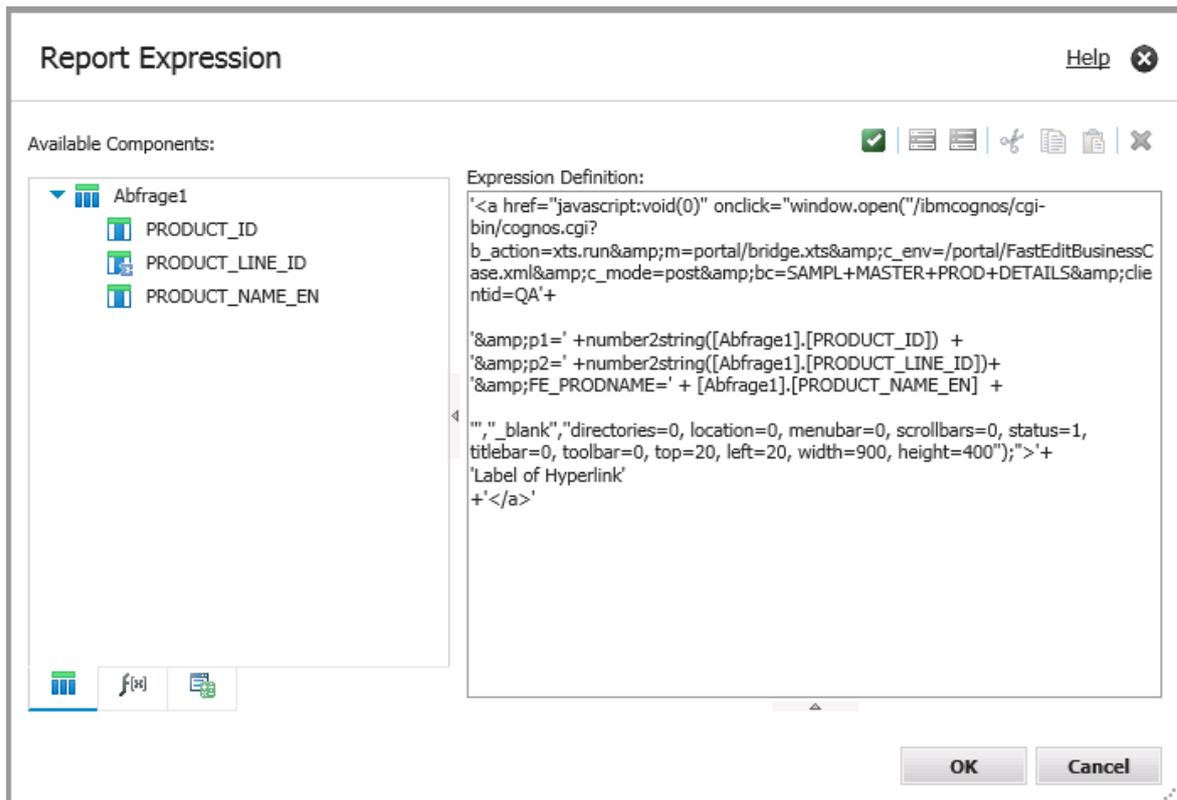
Link to call the Business Case

```
'<a href="javascript:void(0)" onclick="window.open('/ibmcognos/cgi-bin/cognos.cgi?
b_action=xts.run&m=portal/bridge.xts&c_env=/portal/FastEditBusinessCase.xml&c_mode=post&bc=SAMPL+MASTER+PROD+LIST&
amp;clientid=QA'+
'&p1=' + [DEFINE HERE PRIMARY KEY VALUE 1 AND USE number2string() IF IT IS A NUMBER]+
'&p2=' + [DEFINE HERE PRIMARY KEY VALUE 2 AND USE number2string() IF IT IS A NUMBER]+
'&FE_PRODUCT_NAME=' + [DEFINE HERE VALUE OF REPORT VARIABLE PRODUCT_NAME AND USE number2string() IF IT IS A NUMBER]+
'" _blank","directories=0, location=0, menubar=0, scrollbars=0, status=1, titlebar=0, toolbar=0, top=20, left=20, width=900, height=400");">'
Label of Hyperlink
'+</a>'
```

Copy the complete HTML expression and create in Report Studio a new **HTML item** that should be part of the list.

PRODUCT_ID	PRODUCT_LINE_ID	PRODUCT_NAME_EN	HTML-item
<PRODUCT_ID>	<PRODUCT_LINE_ID>	<PRODUCT_NAME_EN>	< HTML-item >
<PRODUCT_ID>	<PRODUCT_LINE_ID>	<PRODUCT_NAME_EN>	< HTML-item >
<PRODUCT_ID>	<PRODUCT_LINE_ID>	<PRODUCT_NAME_EN>	< HTML-item >

Change the source type to "Report Expression" and paste the HTML expression:



Now change the value for the primary key 1 to:

**number2string([Abfrage1].[PRODUCT\_ID])**

and primary key 2 to:

**number2string([Abfrage1].[PRODUCT\_LINE\_ID])**

The report variable FE\_PRODNAME gets the content of the column PRODUCT\_NAME\_EN.

Result:

```
'<a href="javascript:void(0)" onclick="window.open('/ibmcognos/cgi-bin/cognos.cgi?b_action=xts.run&m=portal/bridge.xts&c_env=/portal/FastEditBusinessCase.xml&c_mode=post&bc=SAMPL+MASTER+PROD+DETAILS&clientid=QA'+
```

```
'&p1=' + number2string([Abfrage1].[PRODUCT_ID]) +  
'&p2=' + number2string([Abfrage1].[PRODUCT_LINE_ID])+  
'&FE_PRODNAME=' + [Abfrage1].[PRODUCT_NAME_EN] +
```

```
","_blank","directories=0, location=0, menubar=0, scrollbars=0, status=1, titlebar=0, toolbar=0, top=20,  
left=20, width=900, height=400');">'+
```

```
'Label of Hyperlink'
```

```
+ '</a>'
```

When starting the report now, you get the result:

PRODUCT_ID	PRODUCT_LINE_ID	PRODUCT_NAME_EN	HTML-Element
350	6	Bino	<a href="#">Label of Hyperlink</a>
440	2	T-Shirt Moscow	<a href="#">Label of Hyperlink</a>
480	6	Bino	<a href="#">Label of Hyperlink</a>
490	2	T-Shirt Moscow	<a href="#">Label of Hyperlink</a>
500	1	test	<a href="#">Label of Hyperlink</a>
510	4	Alon	<a href="#">Label of Hyperlink</a>
520	4	Gilbert	<a href="#">Label of Hyperlink</a>
390	1	test	<a href="#">Label of Hyperlink</a>
400	4	Alon	<a href="#">Label of Hyperlink</a>
410	4	Gilbert	<a href="#">Label of Hyperlink</a>
420	4	Luxor	<a href="#">Label of Hyperlink</a>
430	4	Madox	<a href="#">Label of Hyperlink</a>
450	3	Oxford L	<a href="#">Label of Hyperlink</a>

With click on the hyperlink opens a new window with the business case, which uses the primary key values and the report variable.

An own primary key combination is used for each row of the report.  
The Business Case uses these values and will open a new window:

### Apparo Fast Edit

#### Produktdetails

Product id	340,00
Product line id	1,00
Product name en	V-Shirt
Product colour	black
Product size	L
Product model	E3
Product manuf	Adidas
Product descr	Description
Product filename	E3.png
Product start date	25.02.2014
Product notes manager	
Product notes worker	
Product notes customer	
Product name de	T-Shirt V-Ausschnitt

## 17 Calling external scripts / procedures / functions

### 17.1 Own action buttons

Action buttons can call executables files or scripts, database procedures, URLs and eMail Business Cases.

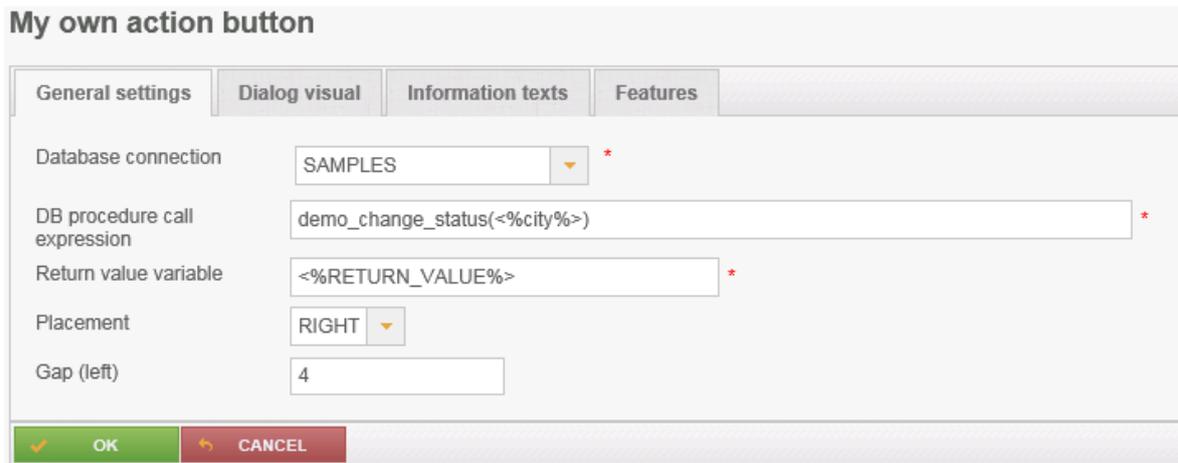
It is possible to specify different behavior patterns. For example, single call or a call for each selected row of data, etc.



### 17.2 Executable button

With Apparo Fast Edit you have several options for further processing of the data. With "Executable Button" you can add a button for processing (like .bat, .cmd, .sh, .sql). All files that are to be called up must be stored in the script file directory which was defined in the Apparo Configuration Manager. Using the Apparo Configuration Manager it is possible to change the used file directory.

#### 17.2.1 General Settings



#### Executable filename

Here you can select the batch processing file or sql file, which will be executed by this button.

#### Arguments

Optional you can use arguments (variables are allowed too) that will be delivered to the script or database procedure.

#### Return value variable

In this variable is the return value of the function/script stored.

#### Placement

Arrangement of buttons on the screen.

**Gap**

Space to the next button in pixel

### 17.2.2 Dialog visual

Here you will find settings for the layout and behavior of the message window.

#### My own action button

General settings	Dialog visual	Information texts	Features
<b>"Please wait" font</b>			
Font face	Size	Style	Align
Arial	14	Bold	Left
Colour			000000
🔒			
<b>Output message font</b>			
Font face	Size	Style	Align
Arial	14	Bold	Left
Colour			000000
🔒			
<b>Finish message font</b>			
Font face	Size	Style	Align
Arial	14	Bold	Left
Colour			000000
🔒			
Background colour	FFFFFF		
🔒			
Logo URL	<input type="text"/>		
Dialog window size	Width	Height	
	300	* 150	*
Automatically close dialog window	<input checked="" type="checkbox"/>		
✔ OK		✖ CANCEL	

### 17.2.3 Information texts

At this point you can define a label for your button and individual texts for waiting and finishing.

#### My own action button

General settings	Dialog visual	Information texts	Features
Language	Button label	"Please wait" message	Finish message
German	<span style="color:red"> \$	<input type="text"/>	<input type="text"/>
English	<span style="color:red">A	<input type="text"/>	<input type="text"/>
✔ OK		✖ CANCEL	

## 17.2.4 Features

Here you can define the behavior of the button.

### My own action button

General settings	Dialog visual	Information texts	Features
Refresh Business Case data after finish	<input checked="" type="checkbox"/>		
Show process output	<input type="checkbox"/>		
Hidden for	▶ Specify settings for security group		
Execution mode	Execute the script/procedure/email once		
Send eMail after execution	<input type="checkbox"/>		

#### Refresh Business Case data after finish

If enabled, the Business Case is reloading the database data again after execution of the script/procedure. This is helpful if your script/procedure is changing data that must be displayed in the Business Case too.

#### Show process output

If enabled, the user will see the script output in a small window.

#### Execution mode

Execute the script/procedure/email once

Here you can define the exact behavior of this button. Your script/procedure can be called for each row, selected row or just once.

Execute the script/procedure/email once	▼
Execute the script/procedure/email once	
Execute the script/procedure/email for all rows of the current page only	
Execute the script/procedure/email for each row of all pages	
Execute the script/procedure/email for each already selected row only	

#### Send eMail after execution

After execution of a script or database procedure it is possible to send automatically an eMail. This eMail Business Case has access to all widget values of this Business Case.

That means that the eMail body can contain values of this current Business Case.

### 17.3 Database procedure button

#### My own action button

General settings	Dialog visual	Information texts	Features
Database connection	SAMPLES *		
DB procedure call expression	demo_change_status(<%city%>) *		
Return value variable	<%RETURN_VALUE%> *		
Placement	RIGHT ▾		
Gap (left)	4		
<input type="button" value="OK"/> <input type="button" value="CANCEL"/>			

#### Database connection

Here you can select the database connection on which the button will be proceeded.

#### DB procedure call expression

How to call a database function or procedure:

*[Calling convention] procedure/function\_name ( argument1, argument2, ..., argumentN )*

Please use same character cases for schema and procedure/function like defined in your database.

If the database connection of this procedure/function is same as the one for Business Case than the procedure/function is executed within the same database transaction.

The procedure must not commit or rollback the existing transaction, but is allowed to start its own inner (named) transaction (if supported by database) or use savepoint's.

For character or string argument use ' character to enclose argument.  
Use at least one space between [Calling convention] and procedure name.

Your parameters may contain Apparo Fast Edit variables, for example: <%USER\_NAME%>  
Do not enclose Apparo Fast Edit variables with apostrophes or quotes.

#### **Oracle or IBM DB2 database:**

**return** - For calling a stored function that returns a value

#### **MS SQL Server database:**

Calling functions on SQL Server is not supported. It is possible to have a return value from procedure but [Calling convention] must be empty in this case.

Please use in your SQL Server procedure at the begin "SET NOCOUNT ON;" Then it is possible to use SQL commands in your procedure without having impact to the return value.

#### **Sybase database:**

**select** - For calling a stored function that returns a value

#### **Teradata database:**

**return macro** - For calling a Teradata macro that returns a value

**macro** - For calling Teradata macro that does not return a value

**return** - For calling a stored functions that returns a value

**Return value variable**

In this variable is the return of the function/script stored.

**Placement**

Here you can decide about the arrangement of buttons on the screen.

**Gap**

Space to the next button in pixel

## 17.4 URL buttons

With these buttons you can call any URL:

- Web Sites & Portals
- Reports & Dashboards
- Business Cases

### My own action button

General settings	Dialog visual	Information texts	Features
URL	<input type="text" value="http://google.com"/>		
Placement	LEFT <input type="button" value="v"/>		
Gap (right)	<input type="text" value="4"/>		
<input type="button" value="OK"/>		<input type="button" value="CANCEL"/>	

## 17.5 E-mail Buttons

With these buttons you can send e-mails.

General settings	Dialog visual	Information texts	Features
Email settings	<input type="text" value="eMail Freelancer Mail"/> * <input type="text" value="_Demo_email_BC"/>		
Placement	LEFT <input type="button" value="v"/>		
Gap (right)	<input type="text" value="4"/>		
<input type="button" value="OK"/>		<input type="button" value="CANCEL"/>	

The settings for the e-mail you make in the selected e-mail business case. All variables of the calling business case can be used.

## 17.6 Pre/Post execution

**Post Business Case execution in success case** (allows to run automatically a script or database function/procedure after the user has closed the Business Case with 'Ok' or 'Close' button)

Automatic execution of  for  ?

Name

With Pre/Post-Execution it is possible to run automatically a script or a database procedure/function at certain moments.

It is possible to start a shell-script, database function/procedure or SQL-script before Business Case/server side file import starts, and/or after it is finished before forced Excel row import starts, and/or after it is finished after the user has inserted or updated data row

This behavior can be defined for all or for users that are members of a specified group.

If the current user is member of a specified group then just the shell-script, database function/procedure, SQL-script of this group is executed only.

In all other cases the default script/function/procedure is called only.

For now Apparo Fast Edit is supporting Oracle, Microsoft SQL Server, IBM DB/2, Sybase ASE/IQ (chained mode only) and Teradata databases.

A SQL-script is a text file with file name extension .sql that contains SQL-statements like INSERT, UPDATE, DELETE.

The commands are executed using the same database session like the Business Case and are separated by a semicolon.

### **Pre Business Case execution**

(allows to run automatically a script or database function/procedure if the user is starting the Business Case)

### **Post Business Case execution in success case**

(allows to run automatically a script or database function/procedure after the user has closed the Business Case with 'Ok' or 'Close' button)

### **Post Business Case execution in failure case**

(allows to run automatically a script or database function/procedure after the user has closed the Business Case with 'CANCEL' or 'X' button)

Fast Edit is checking the browser state by default every 180 seconds, it may take up to 3 minutes after closing the BC with 'X' before the script/procedure is executed.

### Post insert execution

(allows to run automatically a script or database function/procedure after a new row was inserted)

*This insert can be done:*

- From inserting area (Table Business Case)
- From insert mode (Single Business Case)
- From Excel file import
- From Excel row import using copy and paste
- From automatic server import
- From automatic import of email data-file attachments
- By copying row/s in the same window

The procedure or script will **NOT be executed after modifying a row in edit area.**

### Post update execution

(allows to run automatically a script or database function/procedure after a row was updated)

*This update can be done:*

- From inserting area (Table Business Case)
- From insert mode (Single Business Case)
- From Excel file import
- From Excel row import using copy and paste
- From automatic server import
- From automatic import of email data-file attachments
- By copying row/s in the same window
- After modifying a row in edit area

Optionally, a query window to activate that appears when the user updates a row of data from the input area.

### Post Excel import execution

(allows to run automatically a script or database function/procedure after any kind of Excel import has finished)

*All Apparo Fast Edit variables can be used here, including:*

- <%IMPORTED\_ROWS%> count of imported rows
- <%INSERTED\_ROWS%> count of inserted rows
- <%UPDATED\_ROWS%> count of updated rows
- <%IMPORTED\_FILE\_NAME%> file name of the imported file (if applicable)
- <%EXCEL\_IMPORT\_ID%> An unique ID of type string

## 18 Filter data output

The function filter data output represents the global filter of the business case. Additional filters can be added through filter widgets.

### Filter data output

The SQL filter conditions are filtering data rows of the target table for the output.

CURRENT\_FLAG = 1 and OFFICE\_ID=<%OFFICE%>

+ - \* / & | ^ || = > < >= <= ( ) '

▶ Security group based filtering

You can create different filters for different security groups. If a user is a member of the security group, only the security groups based filter is used instead of the global BC filter.

Variables are allowed.

### Syntax

In the filter, you can use native SQL. It represents the Where clause of the SQL query and filters the output of the target table.

### Example

SELECT \* FROM target table WHERE [=data output filter]

### 18.1 Filter widgets

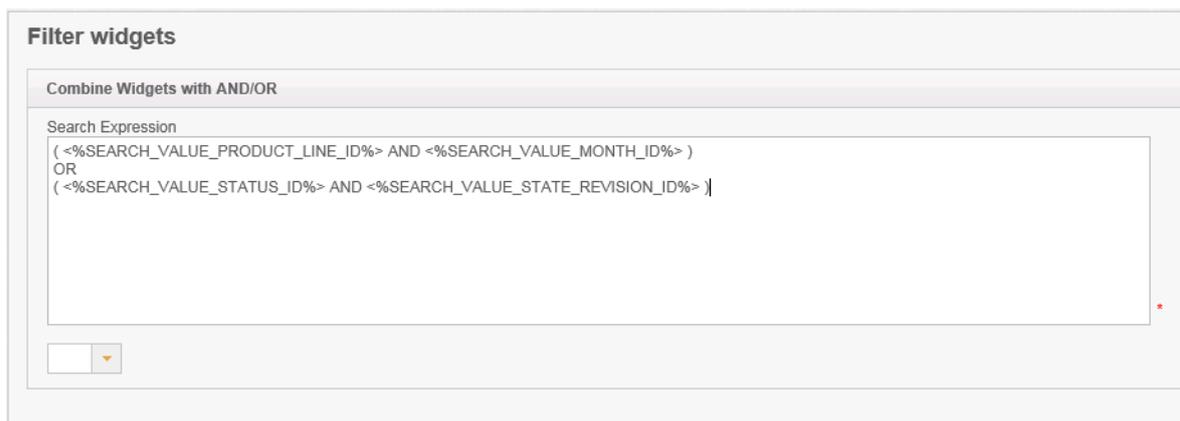
Contains the optical settings for the additional filter page and the settings for combining filter widgets

### 18.2 Filtering prompt page settings

You can add a filter page that is displayed before the user can see the data page for editing, inserting etc. The filter page will be used automatically if you add a filtering widget that is placed in the filter page. On this page you can define the title, description and other optical definitions of this filter page.

### 18.3 Combine Widgets with AND/OR

The function extends the filtering possibilities with filter widgets.



Standard type of searching is combining all used searching widgets with logical 'AND' operator. If you want to combine them differently then you must use 'Advanced Type Of Searching'. In 'Search Expression' you can define your own combination of searching widgets. You can combine them with operators 'AND' and 'OR' and you can also use brackets '(' and ')'

**Each searching widget must be used exactly once in the search expression.**

The following examples contain combinations of these four filters widgets

#### Examples

**One of the set criteria is met:**

```
<%SEARCH_VALUE_PRODUCT_ID%> or <%SEARCH_VALUE_PRODUCT_COLOUR%> or
<%SEARCH_VALUE_PRODUCT_SIZE%> or <%SEARCH_VALUE_PRODUCT_LINE_ID%>
```

**The product line and ONE of the other filter criteria is met:**

```
<%SEARCH_VALUE_PRODUCT_LINE_ID%> and (<%SEARCH_VALUE_PRODUCT_ID%> or
<%SEARCH_VALUE_PRODUCT_COLOUR%> or <%SEARCH_VALUE_PRODUCT_SIZE%>)
```

**The product line or the combination of ALL other filter criteria are met:**

```
<%SEARCH_VALUE_PRODUCT_LINE_ID%> or (<%SEARCH_VALUE_PRODUCT_ID%> and
<%SEARCH_VALUE_PRODUCT_COLOUR%> and <%SEARCH_VALUE_PRODUCT_SIZE%>)
```

## 19 Variables

### 19.1 Definition

Variables are placeholders, they return one or more values. They can contain fixed values or perform calculations and queries dynamically.

At run time, i.e. when running the Business Case, the value of the variable is calculated and returned to the variables location.

**Syntax:** <%Variable\_name%>

Variable names are case-sensitive.

User defined variables	
<input type="checkbox"/>	Variable name
<input type="checkbox"/>	> <NextID%>
<input type="checkbox"/>	> <bulk_text%>
<input type="checkbox"/>	> <OFFICE%>
<input type="checkbox"/>	> <city%>

Basically, there are user-defined variables and internal variables.

**Apparo Fast Edit supports 6 different types of variables:**

- Internal pre-defined variables
- Operating system environment variables
- Script variables
- SQL variables
- Report variables
- Widget reference variables

Variables can be used in practically all settings and other variables

**In Business Cases, you can create these types of variables:**

Variable type	Variable type description
Script variable	You can use JavaScript to compute advanced calculations and the result can be used in Apparo Fast Edit as any other variable. The execution is done server side only.
Report variable	Report variables: They are used to deliver content to a Business Case using the URL e.g. from a report or to deliver the content of a widget from one Business Case to another one.
SQL variable (for all tables)	SQL variable to execute commands on all tables. Every time the SQL variable is used then the defined SQL is executed. The variable content is the first column of the first row of the executed SQL. You can use the variable (e.g. <current_year%> in many input fields of the Business Case definitions, e.g. in header text, default value, constant value and so on.
SQL variable (for target table only)	SQL variable for Business Case target table only.

## 19.2 Use of variables in the Designer

Many widget settings can be made dynamic with variables.

### Examples:

#### 19.2.1 Variables in lookup definitions

Lookup table key column for comparing	PRODUCT_ID	<input type="checkbox"/> Reading expression
Lookup table value column for output	NAME_<%LANGUAGE%>	* <input type="checkbox"/> Reading expression

The associated database column is composed of, Name\_ 'and the return value of the language used. German users are assigned to the column NAME\_DE and English users to the NAME\_EN column

#### 19.2.2 Variables in labels, hint texts, the header and footer

Column label	
Language	Column label
German	<%LABEL_DE%>
English	<%LABEL_EN%>

In this example, the heading of the column is output by variables

#### 19.2.3 Variables in filter definitions:

SQL where condition	PRODUCT_LINE_ID = <%PRODUCT_LINE_ID%>	<input type="checkbox"/> Reading expression
---------------------	---------------------------------------	---------------------------------------------

Dynamic SQL filter

#### 19.2.4 Variables used in data validations

##### Example for the use of dynamic variables as interval:

In a widget of type "input field", the permissible range of values is restricted:

Interval	Minimum allowed:	<%MIN_INTERVAL%>
	Maximum allowed:	<%MAX_INTERVAL%>

Example of dynamic intervals that restrict the values input by calculations.

*Dynamic values are realized via variable:*

Our SQL variable is of type SQL variable (target table only). This has the advantage that automatically all user-group-dependent filters are used.

The current line is identified by the value in the widget PRODUCT\_ID. That PRODUCT\_ID is a primary key.

The following sample SQL for SQL variable would be possible:

**SELECT min\_value FROM target\_table WHERE product\_id = <%PRODUCT\_ID%>**

In this case, <%PRODUCT\_ID%> refers to the widget PRODUCT\_ID in the Business Case and returns the current value.

The SELECT returns the value min\_value of the current line and stores it in the new SQL variable "VAR\_MIN\_CALC".

The SQL is executed every time when accessing the variable "VAR\_MIN\_CALC".

##### Example for the use of variables in the data row validation:

**Data row validation**

Data row validator

```

var a = <%WIDGETVALUE1%>;
var b = <%WIDGETVALUE2%>;
var c = '<%WIDGETVALUE3%>';
var d = <%SQL_VARIABLE1%>;

// prepare empty result, what means that row data is valid
var result = "";

if (c != 'A' && a > b) {
  if (<%LANGUAGE%> == 'en') {
    result = 'Product data is invalid';
  } else {
    result = 'Produktdaten sind falsch';
  }
}
if (d == 1234) {
  if (<%LANGUAGE%> == 'en') {
    result = 'Calculation is wrong';
  } else {
    result = 'Berechnung ist falsch';
  }
}
}
// return the result
result;

```

In this example widget reference variables, SQL variables and internal variables have been used

### 19.2.5 Variables in variables

#### Examples for the use in variables

##### Script variable:

Variable value	Data output format
<p><b>Script body</b></p> <p>Script language : javascript</p> <pre>var result; if('&lt;%LANGUAGE%&gt;'=='de') { result = 2; } else { result = 1 ; } result;</pre>	

In this example, an internal variable is used within a JavaScript variable

##### SQL variable:

SQL expression
<pre>select COUNTRY_ID from FESAMPLES.SAMPLE_FORECAST where ID = &lt;%ID%&gt;</pre>
<div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 5px;"> <input type="text"/> </div> <div style="border: 1px solid #ccc; padding: 5px;"> <span>+</span> <span>-</span> <span>*</span> <span>/</span> <span>&amp;</span> <span> </span> <span>^</span> <span>  </span> <span>=</span> <span>&gt;</span> <span>&lt;</span> <span>&gt;=</span> <span>&lt;=</span> <span>(</span> <span>)</span> <span>'</span> </div>

SQL variable: Widget reference variables are often used in SQL variables. JavaScript variables are also possible.

### 19.3 Internal Variables

The following variables are predefined and can be used immediately:

Variable name	Variable description
<%AFE_HOME_DIR%>	Folder on the server which contains AFE settings
<%AFE_BC_NAME%>	Name of currently opened Business Case
<%AFE_BC_ID%>	ID of the Business Case
<%AFE_CLIENT_ID%>	ID of the used client
<%SERVER_NAME%>	Name of server where Apparo Fast Edit is running
<%USER_NAME%>	Name of currently logged user
<%USER_LOGIN%>	Unique login name of currently logged user
<%LANGUAGE%>	Identifier of language in which user interface is displayed
<%CURRENT_DATE%>	Current date and time
<%DATE%>	Current date
<%TIMESTAMP%>	Current date and time
<%TIME_MS%>	The number of milliseconds since 1.1.1970 (UNIX timestamp)
<%PRIMARY_KEY%>	The primary key of current row
<%PRIMARY_KEYS%>	Comma delimited list of the used primary keys
<%ROW_EDIT_TYPE%>	Type of data modification. Output is of type string
<%SELECTED_ROWS_COUNT%>	This variable is helpful for output e.g. "Are you sure you want to delete X rows?"
<%ROWS%>	Count of current visible rows
<%BULK_UPDATED_ROWS%>	Count of all updated rows
<%INSERTED_ROWS%>	Count of all inserted rows during Excel import
<%UPDATED_ROWS%>	Count of all updated rows during Excel import
<%IMPORTED_ROWS%>	Count of all imported rows during Excel import
<%IMPORTED_FILE_NAME%>	Name of the currently imported Excel file
<%EXCEL_IMPORT_ID%>	Universally unique identifier (UUID) of type String of each Excel import
<%EXPECTED_COLUMNS%>	List of expected columns for Excel import
<%LINE%>	This variable is helpful for display error during import e.g. "Import error in line X:"
<%SAME_PK_ROWS%>	It is helpful for display error message like "There is already a row with the same primary key value(s). Counting <%SAME_PK_ROWS%>"
<%UPLOADED_FILE_NAME%>	Name of the uploaded file (file upload/download widget)
<%DELETED_FILE_NAME%>	Name of the deleted file (file upload/download widget)
<%RETURN_VALUE%>	In this variable the return code of the function/script is stored.

If the Business Case uses search fields, e.g. a filter lookup, then the matching variables are automatically defined for each search widget:

<%SEARCH_KEY_COLOR%>	Key-Value of the Lookup widget, mapped to column 'COLOR'
<%SEARCH_VALUE_COLOR%>	Value of the Lookup widgets, mapped to column 'COLOR'

## 19.4 Report Variables

They are used to deliver content to a Business Case using the URL e.g. from a report or to deliver the content of a widget from one Business Case to another one.

Using a hyperlink in the report, the value can be transported to the connected Business Case.

A report variable in reports has the syntax FE\_name.

Here you can define the "name".

**Variable for Business Case**

Variable name  \*

**Variable value** | **Data output format**

Default value

The default value is used only if the report does not provide a value for this variable.

**Variable for Business Case**

Variable name  \*

**Variable value** | **Data output format**

Output type

Decimal places

Show separate groups

In output format can set the data type.

### Example of calling a Business Case from a Cognos report (URL):

```
/cognos8/cgi-bin/cognos.cgi?b_action=xts.run&m=portal/bridge.xts&c_env=/portal/env.xml&c_mode=po
st&c_cmd=/KFE/pages/userInterface.jsf?bc=BCNAME&FE_Var1=1234&backLink=%2Fcontent%2Ffolde
r%5B%40name%3D%27Apparo+Fast+Edit+Demonstration%27%5D
```

In the URL has the report variable Var1 the value 1234

In reality report variables are often used to transport e.g. the values of prompts to the Business Case.

## 19.5 SQL Variables

There are 2 different types of SQL variables:

- **SQL variable (for all tables)**

SQL variable for executing selects in all tables. Each time you use the variable the associated SQL is executed. This variable contains the content of the first row, first column (depending on the SQL command)

- **SQL variable (for target table only)**

SQL variable for the Business Case target table. All filters of the Business Case are considered.

Example:

The screenshot shows a configuration window for an SQL variable. At the top, the 'Variable name' is set to '<%NextID%>'. Below this, there are two tabs: 'Variable value' and 'Data output format'. The 'Database connection' is set to 'SAMPLES'. The main area is titled 'SQL expression' and contains a text box with the following SQL query: 'select NVL(MAX(ID),0) + 1 from FESAMPLES.SAMPLE\_FORECAST'. Below the text box is a small dropdown menu and a toolbar with various operators: +, -, \*, /, &, |, ^, ||, =, >, <, >=, <=, (, ), and '. At the bottom of the window are 'OK' and 'CANCEL' buttons.

The main difference is that a **SQL-variable (for target table only)** automatic uses:

- The filter of the Business Case
- All security-dependent filters
- All Widget dependent filters

Therefore, the SQL of the variable must also use the target table so that the filter will also find the same column names.

**SQL variables (for target table only)** are very useful for calculations that relate to the target table - e.g. sum of all sales, as all the used filters are considered automatically.

Since the output changes when using filter widgets, usually this dynamic filter restriction must also be considered.

In a **SQL variable (for target table only)** this is done automatically, in opposite to a SQL variable (for all tables).

An SQL variable is always executed when it is used.  
As result, the first result value is used.

## 19.6 Script Variables

A script variable is a routine that returns a value. It is not connected to a database session.

**Script body**

Script language : javascript

```

var result;
if('<%LANGUAGE%>'=='de')
{
result = 'Berlin';
}
else
{
result = 'London' ;
}
result;

```

The calculated value is returned by ,result'

You can use in the JavaScript routine SQL variables, reference variables and internal variables too. The Logic is defined by **JavaScript** and can be combined with SQL-Queries.

You can use scrip variables within database connection settings, but connection pooling will be disabled then.

### 19.7 Widget reference variables

They include the value of a widget in the corresponding row.

Due the row reference these variables can be used only where a row reference is applicable.

They cannot be used e.g.: in the calculation area or in the header and footer.

**Syntax:** <%COLUMN\_NAME%>

Editing widgets								
<input type="checkbox"/>	Column	Column name	Widget type	Title	PK	RO	H	NN
<input type="checkbox"/>	1		▶ Spacer & Title	▶			<input type="checkbox"/>	
<input type="checkbox"/>	2	▶ OFFICE_ID	▶ Input field	▶ Office	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	3	▶ PRODUCT_LINE_ID	▶ Lookup dropdown (for all tables)	▶ Product line	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	4	▶ PRODUCT_ID	▶ Lookup dropdown (for all tables)	▶ Product	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	5	▶ MONTH_ID	▶ Lookup dropdown (for all tables)	▶ Month	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	6	▶ SALES	▶ Input field	▶ Sales	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	7	▶ STATUS_ID	▶ Lookup dropdown (for all tables)	▶ My status	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	8	▶ STATE_REVISION_ID	▶ Lookup dropdown (for all tables)	▶ Revision status	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	9	▶ FORECAST	▶ Input field	▶ Plan data	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

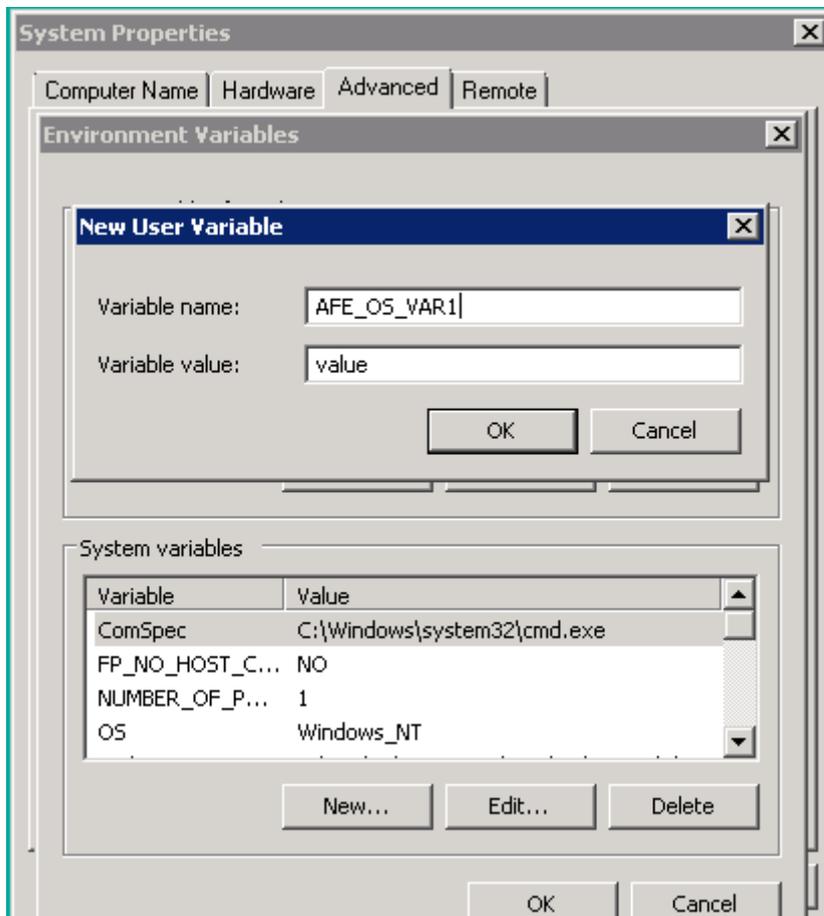
Example of a widget reference variables: <%OFFICE\_ID%>

## 19.8 Environmental variables

These variables are defined in the operating system and can be used in all Business Cases.

**Syntax:** <%AFE\_VARIABLE%>

**Example of the definition in Windows:**



To be recognized by Fast Edit the variable must start with 'AFE\_'

## 19.9 Debugging variables

In the use of script and SQL variables with increasing complexity occur more frequently logical and/or syntactical errors. This chapter gives you an insight on how to recognize or find the errors.

### 19.9.1 Definition

With debugging the search and elimination of errors is called in computer science.

### 19.9.2 Variable output for debugging purposes

If variables are not shown on the Business Case, e.g. when they are used in other variables or used for passing parameters in script or DB procedure calls, it is often difficult to detect errors.

It is therefore advisable to output these variables directly in the Business Case, at least during the development phase.

#### Variable output in the head area

Variables without row reference can be output directly in the head area:

**Apparo Fast Edit**

**++DEBUG++**  
**BC\_NAME: SB\_VARIABLE\_SQL\_TBC**  
**Sprache: de**

Count:32  
 Count\_target:1

Search\_key\_sql:102  
 Search\_key\_sql\_target:102  
 Search\_value\_sql:TEST102  
 Search\_value\_sql\_target:TEST102

SUCHEN
FILTER ZURÜCKSETZEN

3232

ÄNDERN

	SALES_ID *	SALES_NAME	SALES_DESCR
<input type="checkbox"/>	102,00	TEST102	102

## Variable output in the edit area

Variables with row reference, that are generally widget reference variables or script- and SQL variables, containing widget reference variables, cannot be output in the header for debugging purposes because widget reference variables always contain the content of the widget, in the row they are used.

Apparo Fast Edit					
SALES_ID *	SALES_NAME	SALES_DESCR	++DEBUG++		
102,00	TEST102	102	VAR ID*100: 10200.0	VAR ID+NAME: 10200.0TEST102	RandomColor: <b>HEADER</b>
103,00	103	103	VAR ID*100: 10300.0	VAR ID+NAME: 10300.0103	RandomColor: <b>HEADER</b>
104,00	104	104	VAR ID*100: 10400.0	VAR ID+NAME: 10400.0104	RandomColor: <b>HEADER</b>

### 19.9.3 Debugging script variables

In addition to the substantive examination by outputting in the head area, there are other ways to check for errors:

#### Syntax check for script variables

JavaScript variables make it possible to check the included JavaScript commands for syntax errors. If errors occur, the corresponding line is highlighted and a description of the error is displayed below the script area.

In the following example, the semicolon at the end of the first line is missing:

Script-Definition

Script-Sprache : javascript

```

1  var x = <%SALES_ID%> * 100
2  //Rückgabegabe des berechneten Wertes
3  x;
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20

```

**SYNTAX-ÜBERPRÜFUNG**

**Prüfungsfehler:**

Line: 1 - Expected ';' and instead saw 'x'.  
 »/\*global afe\*/ var x = 123 \* 100

If the syntax is without errors, the error check displays an appropriate message:



### Error output in the log

Errors in JavaScript variables are always output in the AFE Log.

You can find the file "afe.log" in the folder [Apparo-HOME]/FastEdit/logs/

When using our example variable in the header area you would find the following error in the log:

```
2015-05-07 14:02:03,547 [ajp-apr-9800-exec-8] WARN ScriptVariableResolver - The exception is:
sun.org.mozilla.javascript.internal.EvaluatorException: syntax error (<Unknown source>#1) in <Unknown
source> at line number 1
```

```
2015-05-07 14:02:03,547 [ajp-apr-9800-exec-8] WARN ScriptVariableResolver - Error in script variable
named '100'
```

```
2015-05-07 14:02:03,547 [ajp-apr-9800-exec-8] WARN ScriptVariableResolver - The script body is:
```

```
var x = * 100;
```

```
//Rückgabegabe des berechneten Wertes
```

```
x;
```

*The widget reference variable here was not resolved because of the missing row reference and was producing an erroneous formula.*

#### 19.9.4 Debugging SQL variables

Error in SQL variables are displayed in the output in the header or edit area, and in the file afe.log.

A better way to identify problems with SQL variables provides the SQL Trace log, which must be activated in the designer:



You can find the file "afeSQL.csv" in the folder [Apparo-HOME] / FastEdit / logs /

In the trace log all SQL queries are stored in tabular form with the following information:

Timestamp, client, business case, user name, execution time, SQL command

07.05.2015 15:26	T3	sb_variable_sql_TBC1	de	0:00:00.000	Select count(SALES_ID) from TESTING.SAMPLE_SALES
---------------------	----	----------------------	----	-------------	--------------------------------------------------

Typical error outputs are:

**Select cuont (SALES\_ID) from TESTING.SAMPLE\_SALES ORA-00904: "CUONT": invalid identifier**

Or

**Select SALES\_DESCR from ".SAMPLE\_SALES where SALES\_ID = " ORA-00903: invalid table name**

## 20 Data hierarchies

For the presentation of hierarchical data are lookup widgets ideal.

The easiest way is to explain this with an example.

For our example, we select geographical data. The top level are the continents, subordinated therein are countries and therein regions.

### 20.1 What do we need?

For the illustration of this hierarchy we need four database tables.

1. The target table, which stores the actual records
2. Three lookup tables containing the IDs of the data set, the real name and the ID of the parent element.

The assignment to the parents are done via the ID of the predecessor, for example, each country has additionally added the ID of the continent on which it is located.

To practice it, the scripts of each table:

Target table:

```
CREATE TABLE SAMPLE_LOOKUP
(
  "LOOKUP_ID" NUMBER,
  "LOOKUP_CONTINENT" NUMBER,
  "LOOKUP_COUNTRY" NUMBER,
  "LOOKUP_REGION" NUMBER )
```

Lookup table continent:

```
CREATE TABLE SAMPLE_LOOKUP_CONTINENT
(
  "CONTINENT_ID" NUMBER,
  "CONTINENT_NAME" VARCHAR2(100 BYTE) )
```

CONTINENT_ID	CONTINENT_NAME
1	AMERICA
2	AFRICA
3	AUSTRALIA
4	EUROPE
5	ASIA
6	ANTARCTICA

Lookup table country:

```
CREATE TABLE "TESTING"."SAMPLE_LOOKUP_COUNTRY"
(
  "COUNTRY_ID" NUMBER,
  "COUNTRY_NAME" VARCHAR2(100 BYTE),
  "CONTINENT_ID" NUMBER )
```

COUNTRY_ID	COUNTRY_NAME	CONTINENT_ID
3	BRAZIL	1
4	ZAMBIA	2
5	RSA	2
6	MOROCCO	2

Lookup table region:

```
CREATE TABLE "TESTING"."SAMPLE_LOOKUP_REGION"
(
  "REGION_ID" NUMBER,
  "REGION_NAME" VARCHAR2(100 BYTE),
  "COUNTRY_ID" NUMBER )
```

REGION_ID	REGION_NAME	COUNTRY_ID
1	California	1
2	Illinois	1
3	Alabama	1
4	Ontario	2
5	Quebec	2
6	Manitoba	2

## 20.2 Expected result

At the end we want a Business Case, in which the selection of a country is depending of the previously selected continent. The selectable countries shown are on the selected continent. If we choose the country, then the only selectable regions in the final lookup widget, are laying in the previously selected country. For the filter widgets used this should also apply.

**Apparo Fast Edit**

**Data hierarchy example**

Searching Continent:  Searching country for:  Searching REGION FOR:

SEARCH RESET FILTERS

<input type="checkbox"/>	CONTINENT	COUNTRY IN	REGION
<input type="checkbox"/>	EUROPE	SPAIN	Catalunia
<input type="checkbox"/>	EUROPE	SLOVAK REPUBLIC	High Tatras
<input type="checkbox"/>	ASIA	JAPAN	Kyushu
<input type="checkbox"/>	AMERICA	CANADA	Ontario
<input type="checkbox"/>	AFRICA	MOROCCO	Grand Casablanca

EUROPE

FRANCE  
SLOVAK REPUBLIC  
SPAIN

Page: 1 / 1

OK CANCEL CLOSE DELETE INSERT EXPORT TO EXCEL EXCEL ROW-IMPORT CSV FILE IMPORT

## 20.3 Implementation

### 20.3.1 Creation of the Business Cases

First, we need a Business Case, which is assigned to the target table.

**Apparo Fast Edit**

### Main database Business Case settings

Identifier / Short name: Demo\_Hierarchy \*

Business Case name: Demo\_Hierarchy \*

Database connection: TESTING \*

Database schema: TESTING \*

Target database table/view: SAMPLE\_LOOKUP \*

Notes: [Empty text area]

NEXT CANCEL

First, our Business Case looks like this:

**Apparo Fast Edit** Business Case Designer - Demo\_Hierarchy- / Demo\_Hierarchy en Demo Cognos Connect

Run Close Save Cancel

Target table: Header Footer Visual Colours **Widgets** Row ordering Link to IBM Cognos Features

Main settings

Standard buttons

Filter data output

Variables

Inserting of new data rows

Editing of data rows

Excel import

Excel export

### Widgets

Add Delete

Editing widgets							
Column	Column name	Widget type	Title	PK	RO	H	NN
<input type="checkbox"/>	1	LOOKUP_ID	Input field	Lookup id	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	2	LOOKUP_CONTINENT	Input field	Lookup continent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	3	LOOKUP_COUNTRY	Input field	Lookup country	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	4	LOOKUP_REGION	Input field	Lookup region	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 20.3.2 Customizing of the Business Case

We set the widget ID as the primary key and hide the widget. We produce the consecutive numbering either by DB trigger or an SQL variable, which we set as a constant in the widget.

Apparo Fast Edit Business Case Designer - Demo\_Hierarchy / Hierarchie D

Widget settings of database column LOOKUP\_ID

Widget type Mapping & Other Flags Visual Visual help texts Data output format

Column name LOOKUP\_ID \* Enable expressions

Default value | for all users

Constant value Use constant value in insert case only

<%NEW\_ID%> for all users

Variable for using content in detail BC

OK CANCEL

In the next step we will modify the widget types of the remaining widgets to lookup widget (Lookup dropdown (for all tables))

For the child widgets, we add an additional filter in the setting, SQL where condition. Thus, the selection of widget is limited to all elements in the lookup table associated with the previously selected continent. The value for this comes from the widget continent previously selected, and will be handed over with the widget reference variable <% LOOKUP\_CONTINENT%>.

Apparo Fast Edit Business Case Designer - Demo\_Hierarchy / Hierarchie Demo

Widget settings of database column LOOKUP\_COUNTRY

Widget type Mapping & Other Flags Lookup & Dropdown & Multiselect Visual Visual help texts Data output format

Database connection Testing 1

Lookup schema TESTING

Lookup table SAMPLE\_LOOKUP\_COUNTRY

Lookup table key column for comparing COUNTRY\_ID  Reading expression

Lookup table value column for output COUNTRY\_NAME  Reading expression

Multivalue 'Order By' Ascending

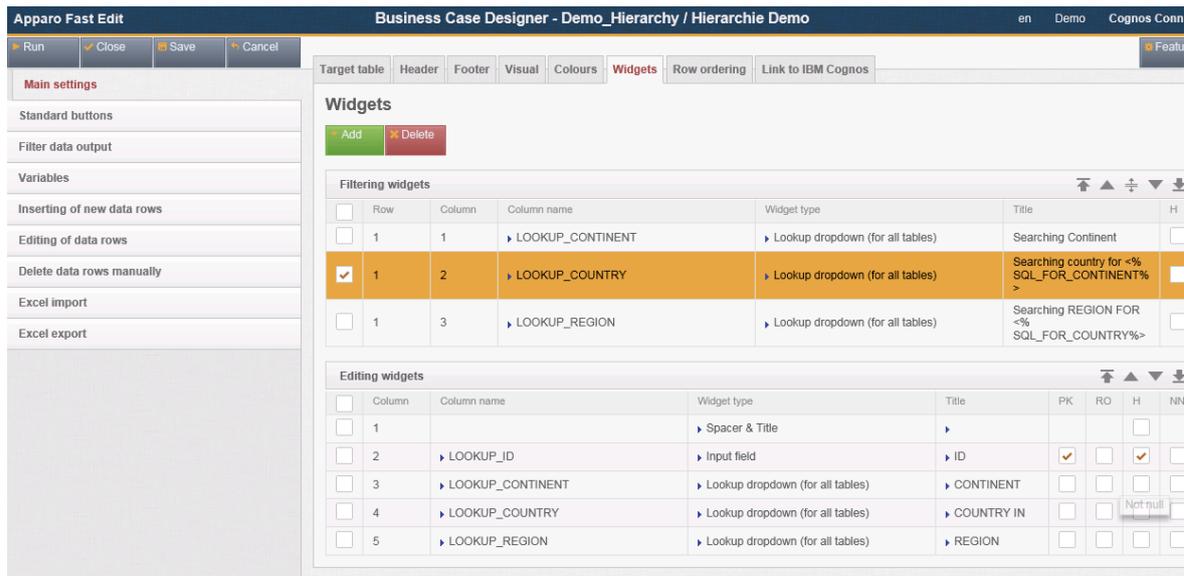
Lookup table sort column Use same column like for displaying the value

SQL where condition CONTINENT\_ID = <%LOOKUP\_CONTINENT%>

This applies accordingly for the to be generated filter widgets, but as the widget reference variable for the previous filter element is here used:

CONTINENT\_ID = <%SEARCH\_KEY\_LOOKUP\_CONTINENT%>

Then our business case should look like this:

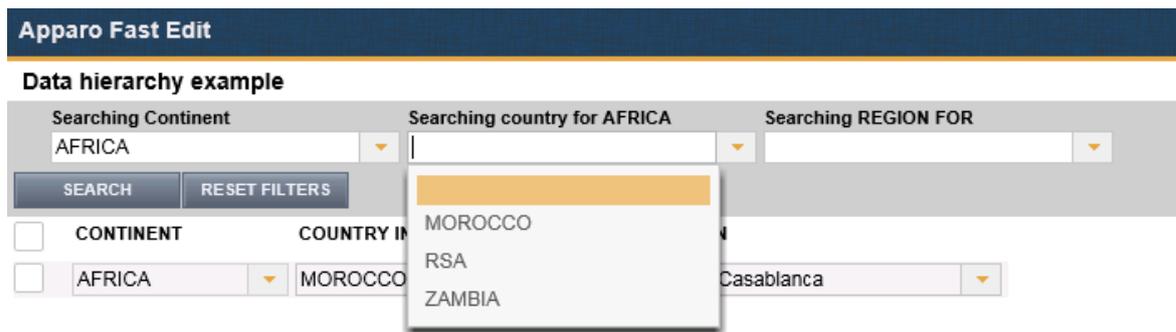


In the title of the subordinate filter widgets, we have also added a variable to display the previously selected item.

The SQL variable contains the following Select:

```
SELECT CONTINENT_NAME FROM TESTING.SAMPLE_LOOKUP_CONTINENT WHERE CONTINENT_ID = <%SEARCH_KEY_LOOKUP_CONTINENT%>
```

And the result for the user looks like this:



## 21 Excel Import

Excel is still one of the most powerful data processing programs. An ideal way to edit and present data in a simple way.

Unfortunately, Excel has disadvantages, the data is locked in a local file.

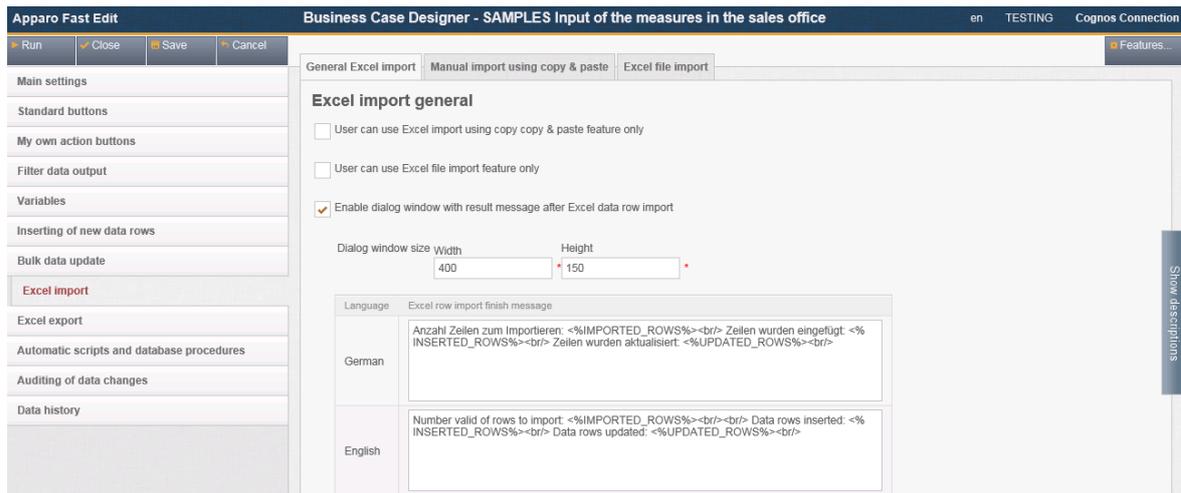
Apparo Fast Edit offers several ways for the Excel import. Thus, the data can be tested auditable for errors and transferred in appropriate media (databases).

### Excel import options

- With copy & paste directly from an open Excel file (Manual Import)
- By file import via the browser (File Import)
- Through automatic import from defined directories (Auto Import)
- By importing e-mail attachments (E-Mail Import)

The automatic import and import via e-mail attachment always requires a table business case, in which the settings for the (manual) import are defined.

## 21.1 General Excel Import



### Options

#### User can use Excel import using copy & paste feature only

If enabled then the Business Case has just the Excel import functionality using copy & paste. This means that then directly after Business Case starts the user is seeing only the Excel row import area so this Business Case is just usable for Excel row import.

If this Business Case is using the same primary key(s) like defined in the database table then it is helpful for improving import performance to disable the feature "Check primary key constraints before storing".

#### User can use Excel file import feature only

If enabled then the Business Case has just the Excel file import functionality. The user can select an Excel file and import the data.

This means that then directly after Business Case starts the user is seeing only the Excel file import page so this Business Case is usable only for the Excel file import.

#### Enable dialog window with result message after Excel data row import

After an Excel import the user can see a small finishing message. You can alter the text of this message here.

#### Special Import variables

<b>IMPORTED_ROWS</b>	Count of processed rows
<b>INSERTED_ROWS</b>	Count of inserted rows
<b>UPDATED_ROWS</b>	Count of updated rows

## 21.2 Import strategy

General Excel import	Import strategy	Manual import using copy & paste	Excel file import	Automatic Excel file import
<b>Excel import strategy</b>				
<input checked="" type="checkbox"/>	Insert new data row	always		
<input checked="" type="checkbox"/>	Update existing data row	always		
	Excel import strategy	Import valid rows and ignore invalid rows		
	Autocommit after	1000 rows		
	For import use widget definitions of	inserting area		
<input type="checkbox"/>	Write into a readonly widget too			
<input type="checkbox"/>	Write into a hidden widget too			
<input type="checkbox"/>	Check exact count of decimal places for numeric widgets			

### Insert new data row

If enabled then new data rows (the primary key values of this new data row are not found in the target table) are inserted

There are two options, either a new row is always inserted or only with the prior examination (via JavaScript variable)

always

always

only if script variable returns true

### Update existing data row

If this is enabled, existing rows will be overwritten (if the primary key combination is used twice), either always or by variable checking.

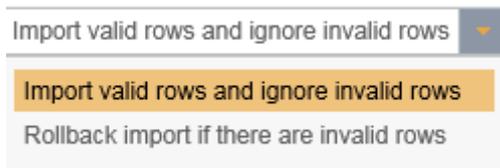
always

always

only if script variable returns true

### Excel Import Strategy

With this feature you can configure the behavior of an Excel import.



You can select between a complete rollback if there is invalid content (no data will be imported) or whether only valid content will be imported.

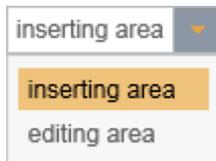
### Auto-commit after 1000 rows

Apparo Fast Edit will commit the database transaction after defined number of rows has been processed in Excel import.

If value is 0 or no value is defined then this feature is disabled.

If the above setting is set to "rollback import if there are invalid rows" than this feature is disabled.

### For import use widget definitions of



The Excel import is using the widget definitions (read-only, hidden) of the inserting area or editing area. That can be important if you want to define the list of expected columns, different behaviour for read-only widgets etc.

### Write into a readonly widget too

If enabled then Excel import is overwriting the value of an read-only widget too

### Write into a hidden widget too

If enabled then Excel import is expecting a value for a hidden widget too

### Check exact count of decimal places for numeric widgets

When enabled then numeric values to be imported must exactly match the specified count of decimal places defined in the widget's data output format setting (must be set to "number").

### 21.3 Manual Import using copy & paste

This feature enables a direct import of data rows from Excel using copy and paste into this Business Case. The user can mark many Excel rows (even more than 100.000 rows is possible), press the Excel import button and paste it into the text area. Of course the ordering of the Excel columns must be the same like in the Business Case. Read-only and hidden widgets are not used for mapping but are used if they have a constant value. It is not allowed to import Excel cell values that span over multiple rows, in this case use file import.

General Excel import	Import strategy	Manual import using copy & paste	Excel file import	Automatic Excel file import		
<b>Manual Excel import</b>						
Column list description	Language	Column list description				
	German	Fügen Sie hier die kopierten Excelzeilen mit 'STRG+V' ein.  Erwartete Spaltenwerte: <% EXPECTED_COLUMNS%>				
	English	Insert your copied Excel rows here using 'CTRL+V'  Expected columns: <% EXPECTED_COLUMNS%>				
Style	Font face	Size	Style	Align	Colour	
	Arial	12	Normal	Left	000000	
Mapping from Excel	like widgets from inserting area					
	like widgets from inserting area					
	using an individual mapping					

#### Column list description

You can define a description text that is helpful for the user to know all expected Excel columns. All variables are useable and HTML tags are possible too. You can use the internal variable <%EXPECTED\_COLUMNS> that has a list of all expected columns using the widget labels. All hidden or read-only widgets are expecting no Excel column value but the default/constant values of the hidden/read-only widgets are used automatically

#### Mapping from Excel

If you want to important into different widgets than of the editing/inserting area then you can define an individual mapping for Excel file import too.

## 21.4 Excel File Import

This feature enables a manual import of a Excel data file into Apparo Fast Edit. The user can select an Excel file and the Business Case is importing the complete file.

Important: You must define a mapping of Excel columns like A,B,C and the associated widget. Just define the Excel column name in the right widget. You can define the count of header rows that must be ignored in tab "File Import".

The screenshot shows the 'Excel file import' configuration window. The 'Error file format' dropdown menu is open, showing options: 'Same as input file' (highlighted), 'Excel 2007 or newer (XLSX)', 'Excel 2003 or older (XLS)', and 'Comma-separated values (CSV)'. Below the settings is a table for mapping Excel columns to widgets.

Widget type	Database column	Excel column name (like B or BA)	Default value	Constant value
Input field	OFFICE_ID	<input type="text"/>		~%OFFICE%~
Lookup dropdown (for all tables)	PRODUCT_LINE_ID	A <input type="text"/>		
Lookup dropdown (for all tables)	PRODUCT_ID	B <input type="text"/>		
Lookup dropdown (for all tables)	MONTH_ID	C <input type="text"/>		
Input field	SALES	<input type="text"/>		
Input field	FORECAST	D <input type="text"/>		
Input field	FORECAST2	E <input type="text"/>		
Input field	FORECAST3	F <input type="text"/>		
Input field	FORECAST4	G <input type="text"/>		
Input field	FORECAST5	H <input type="text"/>		

### Options

#### Header row count

This number of rows are ignored during the import

#### Error file format

Format of a file containing errors and their descriptions, a user can download after an import that finished with errors.

**Same as input file**

Excel 2007 or newer (XLSX)

Excel 2003 or older (XLS)

Comma-separated values (CSV)

### Data file import description

Contains the text of the ‚Choose file‘ dialog

### Mapping Excel to widgets

For the import a mapping necessary. This mapping is defining all Excel columns that must imported using this Business Case.

If you input for example Excel column F for the 1. widget then all values of Excel column F will be imported into 1. widget.

If the Excel document has no value in a cell and the mapped widget has a default value defined then Apparo Fast Edit is using automatically the default value.

If a widget has a constant value then this value will be used for import depending on the setting (use constant value in insert case only or in insert/update case).

### Settings for a CSV file for importing

When importing CSV files additional settings are required.

Settings for a CSV file for importing

Character set of import file	ISO-8859-1
Field separator	;
Use language defined separator	<input type="checkbox"/>
Quote mark	"

#### Character set of import file

Enthält eine Liste der verfügbaren Zeichensätze.

#### Field separator

Definition of the field separator. Using the next setting it is possible to use an own separator for each used language.

Hint: If you need tab character as separator use "\\t"

#### Use language defined separator

When checked then Apparo Fast Edit detects language type from file (for example from filename\_en.xlsx as "en") and uses separator defined for detected language from language messages.

#### Quote mark

Definition of the quote mark - character used to enclose fields containing a separator, usually "

## 21.5 Automatic Excel file import

It is possible to import files automatically which are accessible by the server (for example Excel files). In this case Apparo Fast Edit checks whether files according to a specific file mask are available in a file directory of your choice.

If yes, these files will be imported into the working directory. After the import these files are stored into the history file directory.

The settings "Field Separator" and "Header Row count" are used for manual file import too.

The time interval for looking into the feeding directory is definable in 'Global Settings' Automatic import means that the business don't needs to be started. After enabling the features the import happens within the entered time period.

If the feeding directory is located on a second server, the Windows user who starts AFE must have the rights to access the directory on this second server.

All Excel file import settings are also used during automatic Excel file import

General Excel import	Import strategy	Manual import using copy & paste	Excel file import	Automatic Excel file import
<b>Automatic Excel file import</b>				
All Excel file import settings are also used during automatic Excel file import				
Source file directory	<input type="text" value="c:\path"/>			
File Mask	<input type="text" value="*.csv"/>			
Working file directory	<input type="text"/>			
Error File Directory	<input type="text"/>			
Error filename template	<input type="text" value="error_&lt;%IMPORTED_FILE_NAME%&gt;"/>			
History file directory	<input type="text"/>			
History filename template	<input type="text" value="&lt;%IMPORTED_FILE_NAME%&gt;_&lt;%TIME_MS%&gt;"/>			
Language	<input type="text" value="German"/> ▼			

## Options

### Source file directory

Defines the file directory in which Apparo Fast Edit looks for files to import. It is looking after each 'n' seconds into this directory.

The path can be: \\servername\folder1\folder2 or x:\folder1\folder2 or <%VARIABLENAME%\folder or <%VARIABLENAME%>. The variable must deliver a correct path.

If empty then no automatic import will occur on this Business Case.

### File Mask

The importable files must have the defined file mask.

File mask can contain wildcards ? and \*.

Example: \*.xls

Caution: If the filename matches the file mask of multiple Business Cases,

the used Business Case will be random. If empty, no automatic import will occur on this Business Case.

### Working file directory

Optionally Apparo Fast Edit is moving the files to the 'Working file directory' first and then the import process is starting.

If empty, working file and directory will be the same as the feed file.

### Error File Directory

File directory for error files with the error messages. If empty, no error results will be stored.

Error filename template

### Template file name for error files.

The usage of variables is possible, for example:

<%IMPORTED\_FILE\_NAME%>

name of the imported file (without path)

<%TIME\_MS%>

numeric (UNIX) timestamp

If empty, no error results will be stored.

### History file directory

After import the files are moved into this file directory. If empty, no history will be stored.

### History filename template

Template file name for history files.

Mask can contain placeholders <%PlaceholderName%> where PlaceholderName is one of:

IMPORTED\_FILE\_NAME name of the imported file (without path)

TIME\_MS numeric (UNIX) timestamp

If empty, no history will be stored.

### Language

Language definition (important for formatting such as formatting of date).

## 22 Conditional formatting

### 22.1 Background color

#### 22.1.1 Widget background

You will find the conditional settings for the widget background in the tab 'Visual':

Click on add and define the color you want.

In the variable you can calculate anything you want, important is that the variable returns the string 'true' if the condition hits.

The screenshot shows the 'Widget settings of database column FORECAST' dialog in the APPARO Business Case Designer. The 'Visual' tab is active. Under 'Visual settings', the 'Background colour' section is expanded, showing two conditional rules:

- Rule 1: Background colour #FF0000 (red) if value of variable <%=NOTOK%> is string 'true' (with a close button).
- Rule 2: Background colour #00b050 (green) if value of variable <%=OK%> is string 'true' (with a close button).

An 'ADD' button is visible at the bottom of the conditional rules section.

#### Example for the OK variable:

```
var z = <%=FORECAST%>;
if (z >= 100){var x = 'true';}
else {var x = 'false';}
x;
```

**Result:**

**22.2 Row background color**

You find this setting in the Business Case edit view, tab Colours:

Click on add and define the color you want.

In the variable you can calculate anything you want, important is that the variable returns the string 'true' if the condition hits

**Result:**

APPARO<sup>®</sup> QA for AFE3

**Workflow Demo Step1 Data Input**

BERLIN office  
This Business Case illustrates part 1 of the data entry workflow demo.  
Here you can read a detailed description <DOWNLOAD>

Product line filter:  Month filter:  'My status' data filter:  Ready for approval  open Controlling status filter:

SEARCH RESET FILTERS

Change status: open  Hier können Sie den Status für alle selektierten Zeilen mit einem Klick ändern

UPDATE

<input type="checkbox"/>	Product line	Product	Month	My status	Revision - Status Controlling	Plan data	Plan2	Plan3	Plan4
<input type="checkbox"/>	Trousers	Talli	*09-2011	Ready for approval	OPEN	999	55	500	
<input type="checkbox"/>	test	T-Shirt Vienna	*01-2012	Ready for approval	OPEN	200	50	70	
<input type="checkbox"/>	Polo2	Oxford L	*06-2012	open	OPEN	50	10	10	
<input type="checkbox"/>					OPEN				

Page: 1 / 1

OK CANCEL CLOSE & SAVE DELETE EXPORT TO EXCEL EXCEL ROW-IMPORT CSV FILE IMPORT APPROVE ALL DATA

**22.3 Conditional formatting using HTML & JavaScript**

The goal is to have following output:

<input type="checkbox"/>	Product line	Product	Month	My status	Revision - Status Controlling	Plan data	Trend
<input type="checkbox"/>	Trousers	Hemfort	*08-2011	Ready for approval	OPEN	1400	↑
<input type="checkbox"/>	Trousers	Hemfort	*08-2011	Ready for approval	ACCEPTED	400	↓
<input type="checkbox"/>	T-Shirts	T-Shirt Holiday	*08-2011	Ready for approval	OPEN	123	↓
<input type="checkbox"/>					OPEN		

Page: 1 / 2

OK Excel Row-Import CSV File Import Export to Excel Cancel Close & Save

This example shows how we created the colored text for the widget 'Revision – Status Controlling' and the arrows for the widget 'Trend'

**22.3.1 Colored text for Status Controlling**

This is generated by a JavaScript. For the output we are using 'label with variables' containing the variable.

```
Variable: <%conditional%>
var z = <%STATE_REVISION_ID%>;
if (z == 3){var x = '<span style="color:red">DECLINED</span>';}
else if (z == 2){var x = '<span style="color:green">ACCEPTED</span>';}
else {var x = '<span style="color:yellow">OPEN</span>';}
x;
```

### 22.3.2 Arrows for the ,Trend' widget

This is generated by a JavaScript. For the output we are using 'label with variables' containing the variable. We inserted the arrow images into \Apparo\FastEdit\clients\images

```
Script-Variable: <%trend%>
var trend = <%FORECAST%>;
if (trend > 1000){var x = '';}
else if (trend < 1000){var x = '';}
else{var x = '';}
x;
```

## 23 Movies

Please find a collection of Videos about Apparo Fast Edit here

[Movies.apparo.solutions](http://Movies.apparo.solutions)

## 24 Support

If you need support please write an email to:

[support@apparo.info](mailto:support@apparo.info)