

Creating XDOC/PDF/HTML documents using Microsoft Word as template

Apparo Fast Edit

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1 Definition

You can use a Microsoft Word or LibreOffice Writer word document as a template and

- **Add chapters**
- **Replacing tags with your own data**
- **Creating Word tables with flexible amount of rows**
- **Adding pictures, hyperlinks**
- **Recalculate document**

using Apparo script commands.

The changed document can be stored as

- **Microsoft Word**
- **PDF**
- **HTML**
- **Excel**

document.

The idea is that the source Microsoft Word document contains the document structure, the text formatting and later the data is read from Apparo and stored into the document.

Use cases:

- Creating filled text forms
- Creating complex report files in Microsoft Word, PDF or HTML format

2 Examples

2.1 Example Microsoft Word Template

2.2 Example Script for Replacing Tags with Own Data

// Complete example for producing a PDF from a MS Word template including own calculations

// The MS Word template source document

```
var inputFile = 'D:\\Data\\controlling\\MJ_template_trainings.docx';
```

// Output files: docx, pdf and tiff

```
var outputFile1 = 'D:\\Data\\controlling\\MJ_trainings.docx';
```

```
var outputFile2 = 'D:\\Data\\controlling\\MJ_trainings.pdf';
```

```
var outputFile3 = 'D:\\Data\\controlling\\MJ_trainings.tiff';
```

//supported output formats are: DOC, DOCX, PDF (as well as XLSX, HTML, RTF, TXT, TIFF, PNG, JPEG, GIF)

// Reading the current date

```
var todayVar = afe.resolveVariable('CURRENT_DATE');
```

// Read the input file that contains tags that must be replaced and a complete list

```
var mySourceDocument = afe.afeDocumentReadFile(inputFile);
```

//Using replacing functions for the document

//REPLACE WITH STRING

//1st parameter - String: placeholder which will be replaced by a value

//2nd parameter - Object: a value that will be used

```
mySourceDocument.afeDocumentReplaceWithString('[CLIENT]', '<%AFE_CLIENT_ID%>');
```

```
mySourceDocument.afeDocumentReplaceWithString('[BCNAME]', '<%AFE_BC_NAME%>');
```

```
mySourceDocument.afeDocumentReplaceWithString('[AUTHOR]', '<%USER_NAME%>');
```

//REPLACE WITH HTML TEXT

//1st parameter - String: placeholder which will be replaced by a value

//2nd parameter - String: an HTML text that will be used

```
mySourceDocument.afeDocumentReplaceWithHtml("[NOTE_HTML]", "<b>My Company</b> & <font color='green'>Friends</font>");
```

//REPLACE WITH DATE

//1st parameter - String: placeholder which will be replaced by a value

//2nd parameter - Date: a value that will be used

//3rd parameter - String: date-formatting pattern (e.g. 'yyyy-MM-dd HH:mm:ss.SSS')

//4th parameter - String: language code

```
mySourceDocument.afeDocumentReplaceWithDate('[DATE1]', todayVar, 'MMMM dd, yyyy HH:mm:ss', 'en');
```

//REPLACE WITH NUMBER

//1st parameter - String: placeholder which will be replaced by a value

//2nd parameter - Number: a value that will be used

//3rd parameter - boolean: true if thousands separator is needed; otherwise, false

```
//4th parameter - int: number of decimal places
//5th parameter - String: language code (to use correct decimal separator '.' or ',')
mySourceDocument.afeDocumentReplaceWithNumber('[PRICE]', 1058, true, 2, 'en');
```

//REPLACE WITH HYPERLINK

```
//1st parameter - String: placeholder which will be replaced by a value
//2nd parameter - String: visible text of the hyperlink
//3rd parameter - String: target of the hyperlink
mySourceDocument.afeDocumentReplaceWithHyperlink('[LINK]', 'Visit Apparo', 'https://apparo.solutions');
```

//REPLACE WITH IMAGE

```
//1st parameter - String: placeholder which will be replaced by a value
//2nd parameter - String: image file location
//3rd parameter - int: width of the image
//4th parameter - int: height of the image
mySourceDocument.afeDocumentReplaceWithImage('[LOGO]', 'D:\\Data\\controlling\\images\\img.jpg',
30, 30);
```

//Using replacing functions for the table of the document:

//First of all we have to select the data from our database

// In this example the SQL can deliver many data row.

// Each data row must be stored in an own table row of the MS Word document

```
var productsArray = afe.executeSqlSelect('Select KEY_COL, VALUE_COL_VARCHAR, VALUE_COL_NUM,
VAL_COL_DATE, SORTING_COL_VARCHAR from MJ_MULTIVALUE_SOURCE where KEY_COL > ?', 0);
```

//Find the correct table in the document we want to fill

//1st parameter - String: table name that is placed just above the table (the selector will be removed)

//2nd parameter - boolean: true, if the table has a header; otherwise false

//3rd parameter - int: number of data rows the table will have (number of table rows without the header and footer rows)

```
var afeDocumentTable = mySourceDocument.afeDocumentGetTable('[DATA_TABLE1]', true,
productsArray.length);
```

//Fill the document table with a data retrieved from database

```
var i;
var sumCount = 0;
var rowData;
```

//LOOP the result from the DB and fill the document table with data

```
for(i = 0; i < productsArray.length; i++) {
    rowData = productsArray[i];
```

//Functions for table looks very similar to function for the document.

//There is just one extra parameter added:

//1st parameter - int: row index (starting from 0 in order to better work with a loop)

```
afeDocumentTable.afeDocumentReplaceWithString(i, '[ITEM_NAME]', rowData[1]);
afeDocumentTable.afeDocumentReplaceWithString(i, '[ITEM_RATING]', rowData[4]);
```

```
afeDocumentTable.afeDocumentReplaceWithNumber(i, '[ITEM_NO]', rowData[0], false, 0, 'en');
afeDocumentTable.afeDocumentReplaceWithNumber(i, '[ITEM_COUNT]', rowData[2], false, 0, 'en');
```

```
afeDocumentTable.afeDocumentReplaceWithDate(i, '[ITEM_DATE]', rowData[3], 'yyyy-MM-dd', 'en');
```

```

afeDocumentTable.afeDocumentReplaceWithHyperlink(i, '[ITEM_LINK]', 'Visit Apparo',
'https://apparo.solutions/en');
afeDocumentTable.afeDocumentReplaceWithImage(i, '[ITEM_LOGO]',
'D:\\Data\\controlling\\images\\img.jpg', 20, 20);

sumCount = sumCount + rowData[2];
}

mySourceDocument.afeDocumentReplaceWithNumber("[SUM_COUNT]", sumCount, true, 0, 'en');

//Update the fields in the document
mySourceDocument.afeDocumentUpdateFields();

//functions for the meta data of the document
mySourceDocument.afeDocumentSetAuthor("Author of my Apparo document");
mySourceDocument.afeDocumentSetSubject("Subject of my Apparo document");
mySourceDocument.afeDocumentSetTitle("Title of my Apparo document");
mySourceDocument.afeDocumentSetKeywords("myKeyword1,MyKeyword2,MyKeyword3");
mySourceDocument.afeDocumentSetCategory("Category of my Apparo document");
mySourceDocument.afeDocumentSetCompany("Company of my Apparo document");
mySourceDocument.afeDocumentSetCreatedTime(todayVar);
mySourceDocument.afeDocumentSetLastSavedTime(todayVar);
mySourceDocument.afeDocumentSetLastSavedBy("Last author of my Apparo document");
mySourceDocument.afeDocumentSetManager("Manager of my Apparo document");
mySourceDocument.afeDocumentSetNameOfApplication("Application name of my Apparo document");

//We can also lock the document with a password
mySourceDocument.afeDocumentLockWithPassword('myPassword');

//At the end we have to save the document.
mySourceDocument.afeDocumentSaveToFilesystem(outputFile1);
mySourceDocument.afeDocumentSaveToFilesystem(outputFile2);
mySourceDocument.afeDocumentSaveToFilesystem(outputFile3);

```

3 Example for Working with Word sections

Example template Word document:

[REPEATER_BLOCK1_START]

1. [CHAPTER_NAME]

[TABLE_IN_BLOCK]

	2022	2023	2024	2025
[ITEM_NAME]	[Y2022]	[Y2023]	[Y2024]	[Y2025]

About the calculation

The data were calculated at [TIMESTAMP].

Revision

The revision number of this calculation is [NUMBER]

Other

For the more detail see this link [LINK].

[REPEATER_BLOCK1_END]

```
var inputFile = 'c:\\temp\\Test document.docx';
var outputFile = 'c:\\temp\\Test document result.pdf';
```

// Create a Word object from file

```
var wordDocument = afe.afeDocumentReadFile(inputFile);
```

// Define the Section object that will be copied for each chapter.

```
var wordSection = wordDocument.afeDocumentGetSection('[REPEATER_BLOCK1_START]',
'[REPEATER_BLOCK1_END]');
var wordTable;
```

**// Read chapter names from the database - we will retrieve detail information about each chapter
// separately.**

```
var categoryNameArray = afe.executeSqlSelect('select distinct product_name_en,product_manuf from
sample_product order by product_name_en');
var categoryDataArray;
```

```
var i,j;
```

**// For each chapter we need to copy the section defined above and replace placeholders (variables) with
//correct values.**

```
for(i = 0; i < categoryNameArray.length; i++) {
```

```
    // Create a new copy of the section
    wordSection.createNewCopy();
```

```
// Replace the placeholders inside the current section.  
// The Section object has replacing methods with same names, same parameters and same meaning as  
// the Word object - see previous example.  
wordSection.afeDocumentReplaceWithString("[SUB-TITLE1]", categoryNameArray[i][0]);  
wordSection.afeDocumentReplaceWithString("[NAME]", categoryNameArray[i][1]);  
  
}  
  
// When we completed all the chapters we need to call this method in order to remove the section  
//template.  
wordSection.removeTemplate();  
  
// At the end do not forget to save our work.  
wordDocument.afeDocumentUpdateFields();  
wordDocument.afeDocumentSaveToFilesystem(outputFile);
```

4 List of commands

4.1 General Methods

afeDocumentReadFile(path): Reads a Word file from the specified path.

Example: var doc = afe.afeDocumentReadFile("D:\\Reports\\template.docx");

afeDocumentSaveToFilesystem(path): Saves the modified document to the given file path.

Example: doc.afeDocumentSaveToFilesystem("D:\\Reports\\output.docx");

afeDocumentUpdateFields(): Updates all fields in the Word document, e.g., table of contents or dates.

Example: doc.afeDocumentUpdateFields();

afeDocumentLockWithPassword(password): Protects the document with a password.

Example: doc.afeDocumentLockWithPassword("myPassword");

4.2 Replacing Placeholders with Own Data

afeDocumentReplaceWithString(placeholder, value): Replaces a text placeholder with a string value.

Example: doc.afeDocumentReplaceWithString("[NAME]", "John Doe");

afeDocumentReplaceWithHtml(placeholder, html): Replaces a placeholder with formatted HTML content.

Example: doc.afeDocumentReplaceWithHtml("[INFO]", "Important & <i>urgent</i>");

afeDocumentReplaceWithDate(placeholder, date, format, lang): Replaces a placeholder with a formatted date.

Example: doc.afeDocumentReplaceWithDate("[DATE]", new Date(), "dd.MM.yyyy", "en");

afeDocumentReplaceWithNumber(placeholder, number, ts, decimals, lang): Replaces a placeholder with a formatted number.

Example: doc.afeDocumentReplaceWithNumber("[PRICE]", 1999.95, true, 2, "en");

afeDocumentReplaceWithHyperlink(placeholder, text, url): Inserts a clickable hyperlink.

Example: doc.afeDocumentReplaceWithHyperlink("[LINK]", "Visit Apparo", "https://apparo.solutions");

afeDocumentReplaceWithImage(placeholder, path, width, height): Replaces a placeholder with an image.

Example: doc.afeDocumentReplaceWithImage("[LOGO]", "D:\\Images\\logo.png", 100, 50);

4.3 Working with Word Tables

afeDocumentGetTable(name, hasHeader, rowCount): Finds a table by its name and prepares it for data population.

Example: var table = doc.afeDocumentGetTable("[TABLE]", true, 5);

table.afeDocumentReplaceWithString(row, placeholder, value): Replaces text placeholders inside table rows.

Example: table.afeDocumentReplaceWithString(0, "[PRODUCT]", "Printer");

table.afeDocumentReplaceWithNumber(row, placeholder, number, ts, decimals, lang): Replaces number placeholders in a table row.

Example: table.afeDocumentReplaceWithNumber(0, "[PRICE]", 299.99, true, 2, "en");

table.afeDocumentReplaceWithDate(row, placeholder, date, format, lang): Replaces date placeholders in table rows.

Example: table.afeDocumentReplaceWithDate(0, "[DATE]", new Date(), "yyyy-MM-dd", "en");

table.afeDocumentReplaceWithHyperlink(row, placeholder, text, url): Replaces link placeholders in table rows.

Example: table.afeDocumentReplaceWithHyperlink(0, "[LINK]", "More Info", "https://example.com");

table.afeDocumentReplaceWithImage(row, placeholder, path, width, height): Inserts images into table rows.

Example: table.afeDocumentReplaceWithImage(0, "[IMAGE]", "D:\\Images\\product.jpg", 60, 60);

4.4 Working with Sections (Repeating Blocks)

You can copy freely definable parts of your Microsoft Word document and paste it automatically using your own values.

afeDocumentGetSection(start, end): Retrieves a document section between two markers.

Example: var section = doc.afeDocumentGetSection("[BLOCK_START]", "[BLOCK_END]");

section.createNewCopy(): Creates a copy of the section (used for repeated data blocks).

Example: section.createNewCopy();

section.removeTemplate(): Removes the template markers after processing.

Example: section.removeTemplate();

section.afeDocumentReplaceWith...: Same replacement functions as in the main document.

Example: section.afeDocumentReplaceWithString("[TITLE]", "Chapter 1");

4.5 Document Meta Data

afeDocumentSetAuthor(value): Sets the author of the document.

Example: doc.afeDocumentSetAuthor("John Doe");

afeDocumentSetSubject(value): Defines the subject of the document.

Example: doc.afeDocumentSetSubject("Quarterly Report");

afeDocumentSetTitle(value): Sets the title of the document.

Example: doc.afeDocumentSetTitle("Financial Overview Q1");

afeDocumentSetKeywords(value): Sets document keywords (comma-separated).

Example: doc.afeDocumentSetKeywords("finance,report,Q1");

afeDocumentSetCategory(value): Sets the category of the document.

Example: doc.afeDocumentSetCategory("Reports");

afeDocumentSetCompany(value): Sets the company name.

Example: doc.afeDocumentSetCompany("Apparo GmbH");

afeDocumentSetCreatedTime(date): Sets the creation time.

Example: doc.afeDocumentSetCreatedTime(new Date());

afeDocumentSetLastSavedTime(date): Sets the last saved time.

Example: doc.afeDocumentSetLastSavedTime(new Date());

afeDocumentSetLastSavedBy(value): Sets the last author.

Example: doc.afeDocumentSetLastSavedBy("D. Trump");

afeDocumentSetManager(value): Sets the manager name.

Example: doc.afeDocumentSetManager("Trump jun.");

afeDocumentSetNameOfApplication(value): Sets the name of the application.

Example: doc.afeDocumentSetNameOfApplication("Fast Edit Pro");

5 Support

If you need support, please write an eMail to:

support@apparo.solutions