

Part 1 - Getting Started

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Getting Started

About templates and merge fields

A WordWriter template is a Microsoft Word file that contains merge fields. A merge field displays a data source field (for example, a database column name). A merge field is created in Microsoft Word and bound in code to a data source. The data source may be an array, a DataSet, a DataTable, or a DataReader. When you run the code, WordWriter populates the merge fields with data source values. A template may contain multiple sets of merge fields. Each set of fields binds to a single data source.

Merge field syntax

- The general syntax is: `DataSource.ColumnName`
- Ordinal syntax (i.e. `#1.#2` for source one, column two) can also be used
- Data source and column names must not include Unicode characters.
- Data source and column names must begin with a letter (A-Z, a-z).
- Data source and column names may include the following characters only:
ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz1234567890_



If you [assigned a different data source separator](#), you can also use a "." in your data source and column names.

- Spaces are not allowed anywhere in a merge field.



Use brackets if your column name does not conform to these rules

The exception of these rules is when a column name is enclosed in brackets (for example, «Products.[Product Category]» . To include spaces or unicode characters in the data source column name, use this format:«DataSource.[Column Name]»

Setting up the Template

Adding merge fields

The final template will resemble this:



3 Brook Street
Watertown, MA 02472
<http://www.officewriter.com>

Dear «OrderDetails.FirstName» «OrderDetails.LastName»,

Thank you for your purchase! Below are the details of your order:

«OrderDetails.Date»



Item	Quantity	Unit Price	Line Total
«Item»	«Qty»	\$«Price»	\$«LineTotal»
Subtotal			\$«OrderDetails.Subtotal»
Tax			\$«OrderDetails.Tax»
Total Cost			\$«OrderDetails.Total»



Following the Sample Code

In the downloadable [WordWriter_Basic_Tutorials.zip](#) under *SalesInvoice*, there is a completed template file located in *SalesInvoice/templates/Part1_Invoice_Template.docx*.

1. Start with a blank .docx file.
2. Add the merge fields for the header. These values are a single row of data called "OrderHeader." The values are "FirstName," "LastName," and "Date."
3. Create a table for the order data and add the merge fields. These values are a single row of data called "OrderDetails." In this sample, the values are "Item," "Qty," "Price," "LineTotal," "SubTotal," "Tax," and "Total."
4. Format the currency fields with a formatting switch, such as: "#/ \$#,###0.00"

The template should resemble this:



3 Brook Street
Watertown, MA 02472
<http://www.officewriter.com>

Dear { MERGEFIELD OrderDetails.FirstName * MERGEFORMAT } { MERGEFIELD OrderDetails.LastName * MERGEFORMAT },

Thank you for your purchase! Below are the details of your order:

{ MERGEFIELD OrderDetails.Date * MERGEFORMAT }

Item	Quantity	Unit Price	Line Total
{ MERGEFIELD Item * MERGEFORMAT }	{ MERGEFIELD Qty * MERGEFORMAT }	{ MERGEFIELD Price \b \$ * MERGEFORMAT }	{ MERGEFIELD LineTotal \b \$ * MERGEFORMAT }
		Subtotal	{ MERGEFIELD OrderDetails.Subtotal \b \$ * MERGEFORMAT }
		Tax	{ MERGEFIELD OrderDetails.Tax \b \$ * MERGEFORMAT }
		Total Cost	{ MERGEFIELD OrderDetails.Total \b \$ * MERGEFORMAT }

5. The template can be styled as desired. Any formatting applied to a merge field will be persisted when WordWriter populates the data.

Adding a WordWriter Reference in Visual Studio



Following the Sample Code

In the sample code, the reference to *SoftArtisans.OfficeWriter.WordWriter.dll* has already been added to the *SalesInvoice* project.

Create a .NET project and add a reference to the WordWriter library.

1. Open Visual Studio and create a .NET project.
 - The sample code uses a web application.
2. Add a reference to *SoftArtisans.OfficeWriter.WordWriter.dll*
 - *SoftArtisans.OfficeWriter.WordWriter.dll* is located under **Program Files > SoftArtisans > OfficeWriter > dotnet > bin**

Writing the Code



Following the Sample Code

There is a sample web application page *Part1.aspx* and code behind *Part1.aspx.cs* available in the **SalesInvoice/** directory that shows the completed code.

1. Include the *SoftArtisans.OfficeWriter.WordWriter* namespace in the code behind.

```
using SoftArtisans.OfficeWriter.WordWriter;
```

2. In the method that will actually run the report, instantiate the `WordTemplate` object.

```
WordTemplate WT = new WordTemplate();
```

3. Open the template file with the `WordTemplate.Open` method.

```
WT.Open(Page.MapPath("//templates//Part1_Invoice_Template.docx"));
```

4. Create an object array for the header values and a string array for the column names.

`WordTemplate` can be bound to numerous types of .NET data structures: single variables, arrays (1-D, jagged, multi-dimensional), `DataSet`, `DataTable`, `IDataReader` etc. The source of the data can come from anywhere.

Some of the aforementioned structures have built in column names, such as the `DataTable`. When working with arrays, which don't have built in column names, you have to define the column names in a separate string array.

```
object[] orderHeader = { "Jane", "Doe", DateTime.Now.ToString("MM/dd/yy")};  
string[] orderHeaderColNames = { "FirstName", "LastName", "Date"};
```

5. Create two arrays as the `OrderDetail` data set.

```
object[] detailsArray = {"Sport-100 Helmet, Black", 3, 34.99, 104.97, 104.97, 4.46,  
109.43 };  
  
string[] detailColNames = {"Item", "Qty", "Price", "LineTotal", "Subtotal", "Tax",  
"Total" };
```

6. Use the `WordTemplate.SetDataSource` method to bind the order info to the merge fields in the template file.

`SetDataSource()` binds a single row of data to the template.

```
WT.SetDataSource(orderHeader, orderHeaderColNames, "OrderHeader");
```

7. Use `SetDataSource()` to bind the order details arrays. Note that the data source name is the last string.

```
WT.SetDataSource(detailsArray, detailColNames, "OrderDetails");
```

8. Call `WordTemplate.Process` to import the data into the file.

```
WT.Process();
```

9. Call `WordTemplate.Save` to save the output file.

`WordTemplate` has several output options: save to disk, save to a stream, stream the output file in a page's `Response` inline or as an attachment.

```
WT.Save(Page.Response, "Part1_Output.docx", false);
```

The final output should resemble this:



Paragraph

Emphasis

Heading 1

Heading 2

Heading 3

Normal

Strong

Subtitle

Title

Styles



3 Brook Street
Watertown, MA 02472
<http://www.officewriter.com>

Final Code

```

using SoftArtisans.OfficeWriter.WordWriter;
...

//Instantiate a new WordTemplate object
WordTemplate WT = new WordTemplate();

//Open the template file
WT.Open(Page.MapPath("//templates//Part1_Invoice_Template.docx"));

//Create the array of header values
object[] orderHeader = { "Jane", "Doe", DateTime.Now.ToString("MM/dd/yy")};
//Create the array of column names
string[] orderHeaderColNames = { "FirstName", "LastName", "Date"};

//Create the array of details values
object[] detailsArray = {"Sport-100 Helmet, Black", 3, 34.99, 104.97, 104.97, 4.46, 109.43 };
//Create the array of column names
string[] detailColNames = {"Item", "Qty", "Price", "LineTotal", "Subtotal", "Tax", "Total" };

//Set the data sources to import a single row of data for each source
WT.SetDataSource(orderHeader, orderHeaderColNames, "OrderHeader");
WT.SetDataSource(detailsArray, detailColNames, "OrderDetails");

//Process to import the data to the template
WT.Process();

WT.Save(Page.Response, "Part1_Output.docx", false);

```

Downloads

You can download the code for the Basic WordWriter Tutorials as a Visual Studio solution, which includes the Simple Expense Summary.

- [WordWriter_Basic_Tutorials.zip](#)

Next Steps

[Continue on to Part 2: Repeat Blocks](#)