Connecting XML Data Sources to Word Using Windward Studios Report Designer

Welcome to Windward Studios Report Designer

Windward Studios takes a unique approach to reporting. Our Report Designer sits directly inside Microsoft Office so you get to use a familiar and powerful tool without having to learn a new designer. If you've ever used one of our competitors' products, you may be familiar with their modular designers that require you to build reports using bits and pieces, where every bit or text or every piece of data is a distinct object in your template. Windward changes all of that. With Windward in Microsoft Office, you design report templates just like you design any other document, utilizing Tags to insert your data wherever you need it right in-line with your other text and content.

How Does Windward Work?

Before we jump into template design, let's talk about the *philosophy* of Windward. Let's consider the example of a local energy company. Every month they need to send out bills to all their customers. Their data might look something like this:

First Name	Last Name	Address	City	State	Zip Code	March Bill Total	February Bill Total	January Bill Total
John	Smith	1234 Broadway Drive	San Francisco	CA	12345	$101.78	$98.22	$95.66
Bob	Johnson	5678 Main Street	Los Angeles	CA	78901	$134.97	$130.27	$137.80
Mary	Sue	9012 Elm Circle	Las Vegas	NV	23456	$158.62	$178.96	$163.74

Using Windward, you design a single template in Word or Excel that allows you to generate a unique bill for every single one of your customers.

This template uses **Tags** as placeholders for data. Every piece of text contained in Brackets [ ] is a Tag and will be replaced with data when the bill is generated. Windward does the heavy lifting – we pull in all the relevant information from your Datasource and format it as its specified in the original template:

Dear Bob Johnson,

Bob Johnson
5678 Main Street
Los Angeles, CA 78901

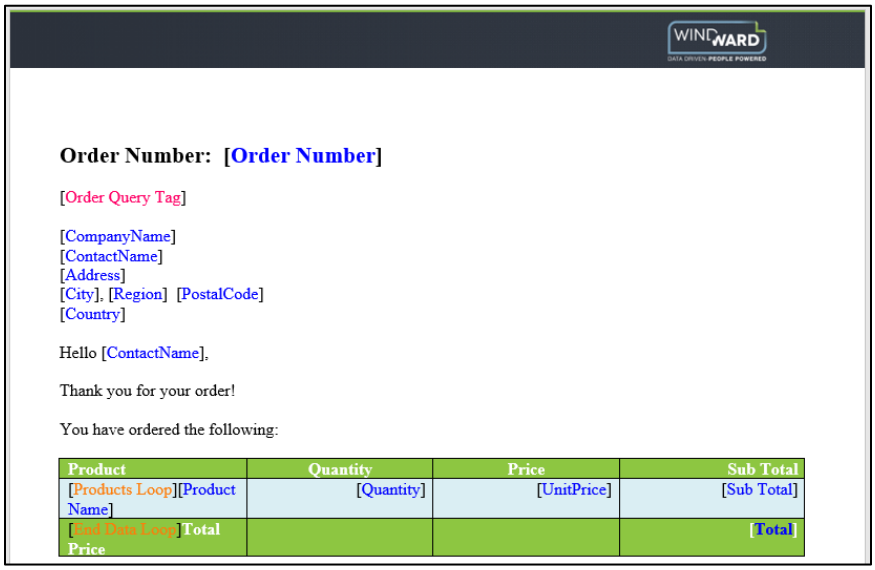
Your March Bill Total is: **$134.97**

Dear Mary Sue,

Mary Sue
9012 Elm Street
Las Vegas, NV 23456

Your March Bill Total is: **$158.62**

Now let's take a look at one of our sample templates, the Variable Invoice Sample – Template.docx.



Order Number: [Order Number]

[Order Query Tag]

[CompanyName]
[ContactName]
[Address]
[City], [Region] [PostalCode]
[Country]

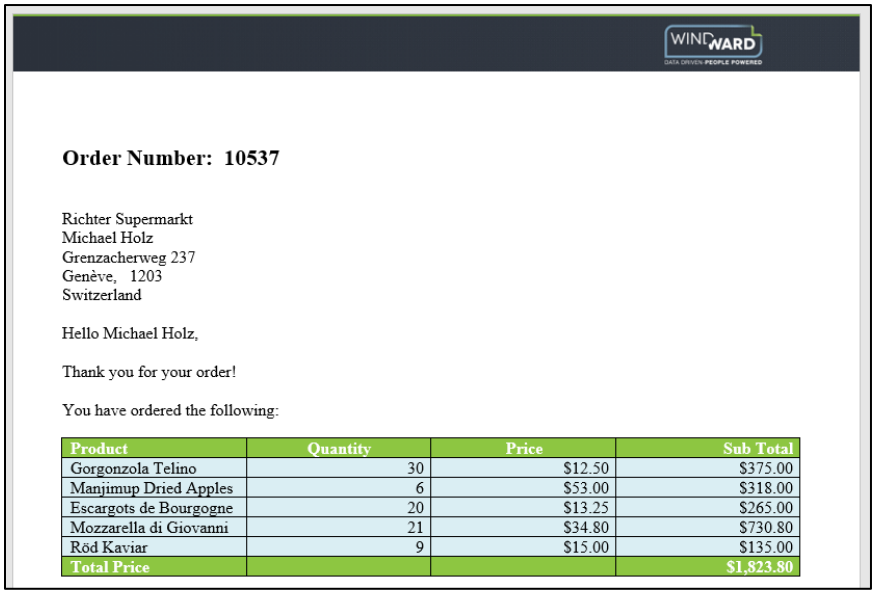
Hello [ContactName],

Thank you for your order!

You have ordered the following:

Product	Quantity	Price	Sub Total
[Products Loop][Product Name]	[Quantity]	[UnitPrice]	[Sub Total]
[End Data Loop]**Total Price**			**[Total]**

This template was created from scratch in Microsoft Word. Everything you see in the template, from the text to the header to the color formatting, functions just like it normally would in Word… with one major exception. All the colored text you see contained in Brackets [ ] are Tags. Windward uses Tags as placeholders for your data. Every Tag corresponds to an item in your Datasource. In this example, the Tags are used to fill in the data for any given Order Number and its subsequent information. This is the Output of the template:



Order Number: 10537

Richter Supermarkt
Michael Holz
Grenzacherweg 237
Genève, 1203
Switzerland

Hello Michael Holz,

Thank you for your order!

You have ordered the following:

Product	Quantity	Price	Sub Total
Gorgonzola Telino	30	$12.50	$375.00
Manjimup Dried Apples	6	$53.00	$318.00
Escargots de Bourgogne	20	$13.25	$265.00
Mozzarella di Giovanni	21	$34.80	$730.80
Röd Kaviar	9	$15.00	$135.00
Total Price			**$1,823.80**

All the Tags are now replaced with the corresponding data from the Datasource. Once you have Report Designer installed, you can open this template and play around with it to help get an idea of how Windward lets you design templates in a familiar environment where you can use all the tools available to you to build unique templates.

Training Overview

This Training Guide walks you through the fundamental steps you need in order to begin designing report templates with Windward Studios Report Designer in Microsoft Word using an XML Datasource.

The Five Steps to Windward:

1. Install
2. Connect to data
3. Design your template & insert your data
4. Refine your template
5. Output

Step 1 – Install

The first step to getting started is to install the Report Designer. Please visit the Windward Studios Downloads Page and download the Report Designer.

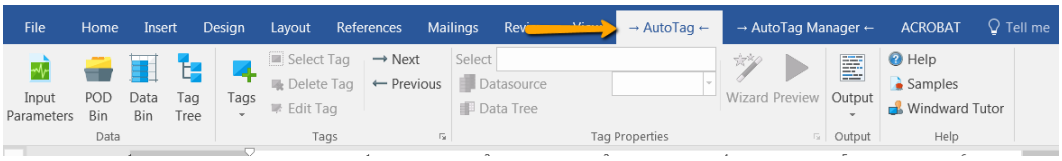
Please note: Windward Studios requires Microsoft Office running on Microsoft Windows to install.

1. Run the program WindwardWebInstall.exe.
2. Enter your AutoTag license key when prompted.
3. Start Microsoft Word or Excel.
4. When Word or Excel first starts, it may indicate that you do not have a valid license. Click Yes. At the prompt, copy and paste your license key into the license key field.
5. Verify that the AutoTag menu is available by opening MS Word or Excel. If AutoTag is not present, please reboot your system.
6. For troubleshooting, see the Instructions page.

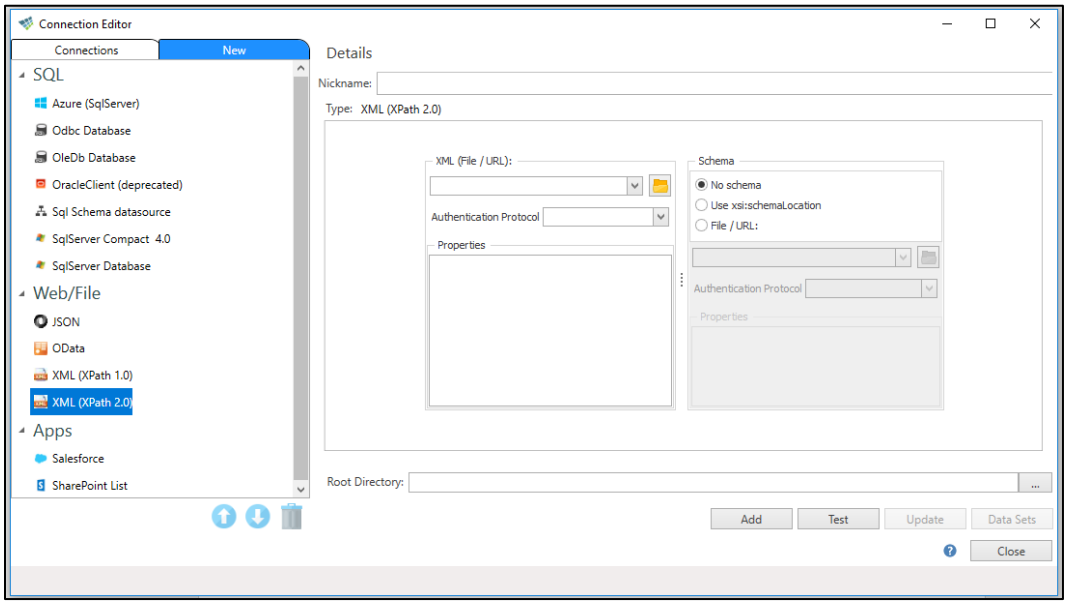
Step 2 - Connect To Data

In this training guide we are connecting to a sample XML Datasource provided by Windward.

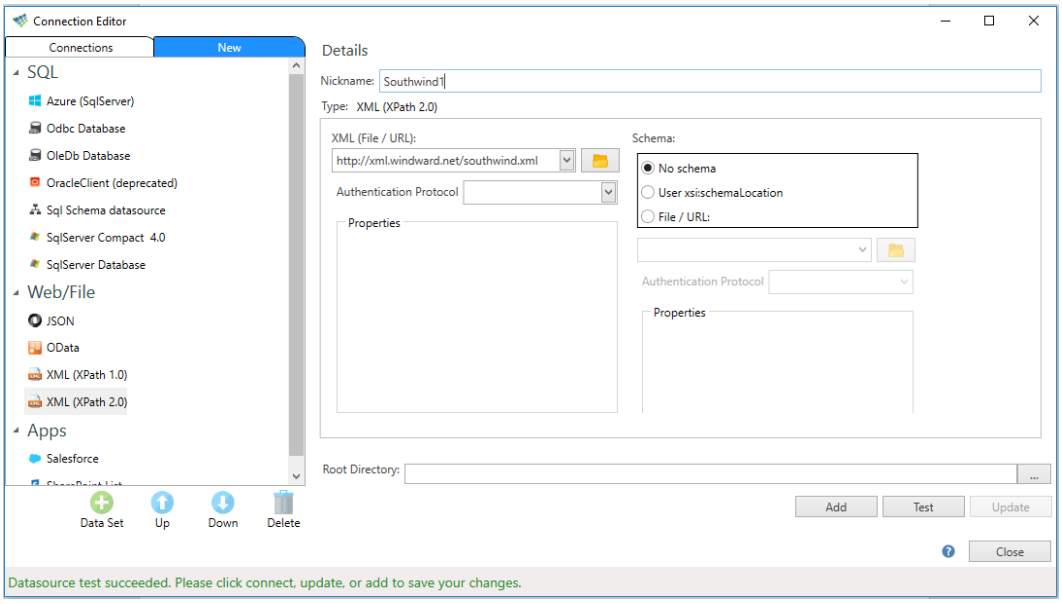
1. Open Microsoft Word. Now that you've installed Windward Studios Report Designer, you will see two new tabs in the Microsoft Office Ribbon – the [Windward] Tab and the [Windward Tools] Tab.



2. Click on the Windward Tab and click on the Data Sources button located on the right-hand side of the ribbon.
3. In the Connection Editor window, in the New tab, click on XML (Xpath 2.0) under Web/File. The Details pane will change to prompt you for your data source details.



4. Enter a Nickname for your data source connection. It is best practice to always assign a nickname to your Datasource in the Name field. This will make your life much easier down the road when working with templates or tracking down issues.
5. Enter the following in the XML (File/URL): section: http://xml.windward.net/southwind.xml
6. Click Test, and then click Connect to add your connection. If all parameters and credentials are correct and a connection is made, you will receive a successful notification. Clicking Close will save your information.



Step 3 – Design Your Template & Insert Your Data

In this Training Guide we're going to build a very basic order receipt that is generated anytime an order is completed.

1. Let's start by adding a basic outline for a written sales receipt. You can either type or copy-paste this text into your document:

Dear COMPANYNAME,

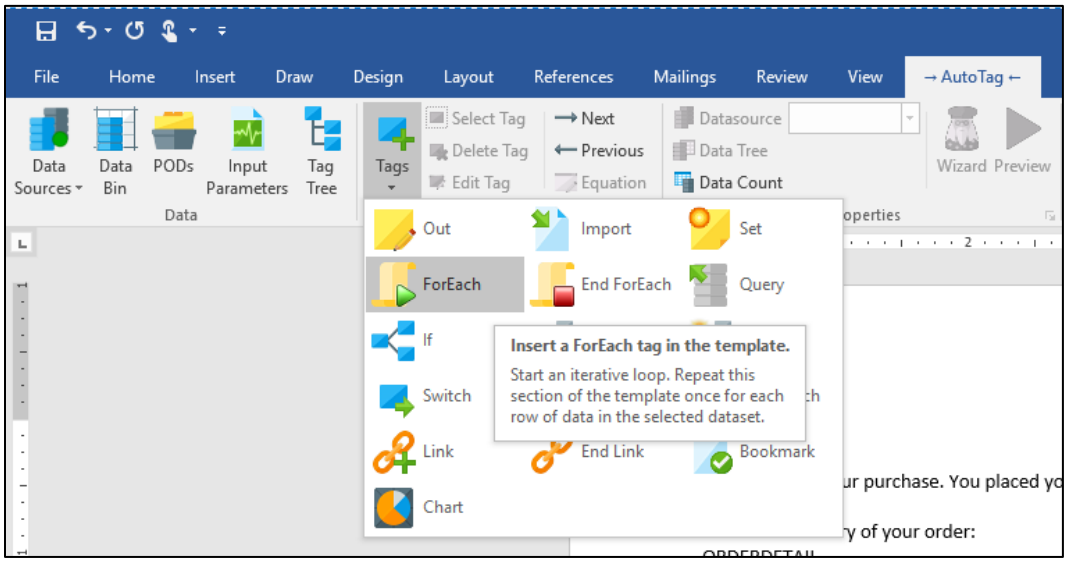
Thank you for your purchase. You placed your order on ORDERDATE. Your Order Number is ORDERID.

Here is a summary of your order:

Product ID	Price	Quantity	Discount
PRODUCTID	PRICE	QUANTITY	DISCOUNT

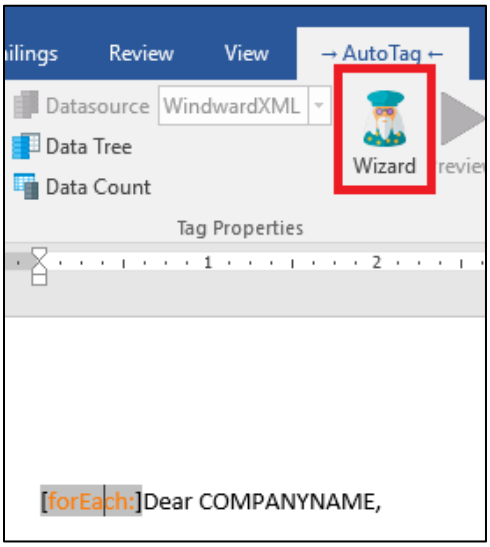
Thank you!

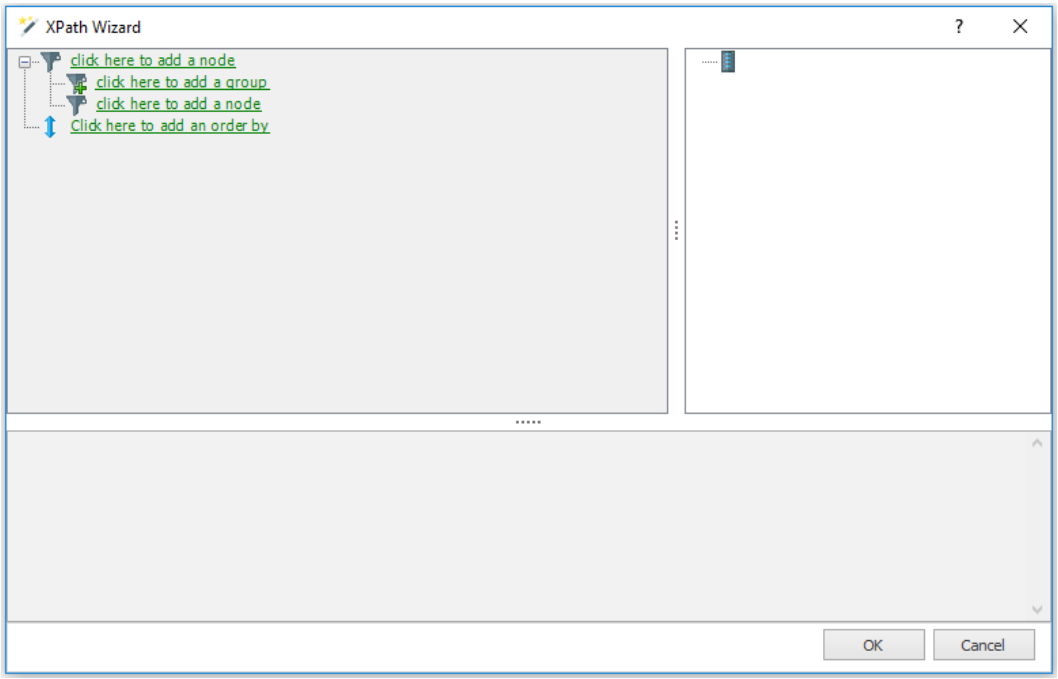
2. Now we're going to insert a Tag that gives your template the ability to generate as many documents as you need – the ForEach Tag. The ForEach Tag is used to step through your Datasource and insert individual pieces of data *for each* entry in the Datasource. First place your cursor at the very beginning of the document, before the 'Dear' text. Navigate to the [Windward] Tab, click the Tags dropdown menu, and click on the ForEach Tag to insert a ForEach Tag at the start of your document.



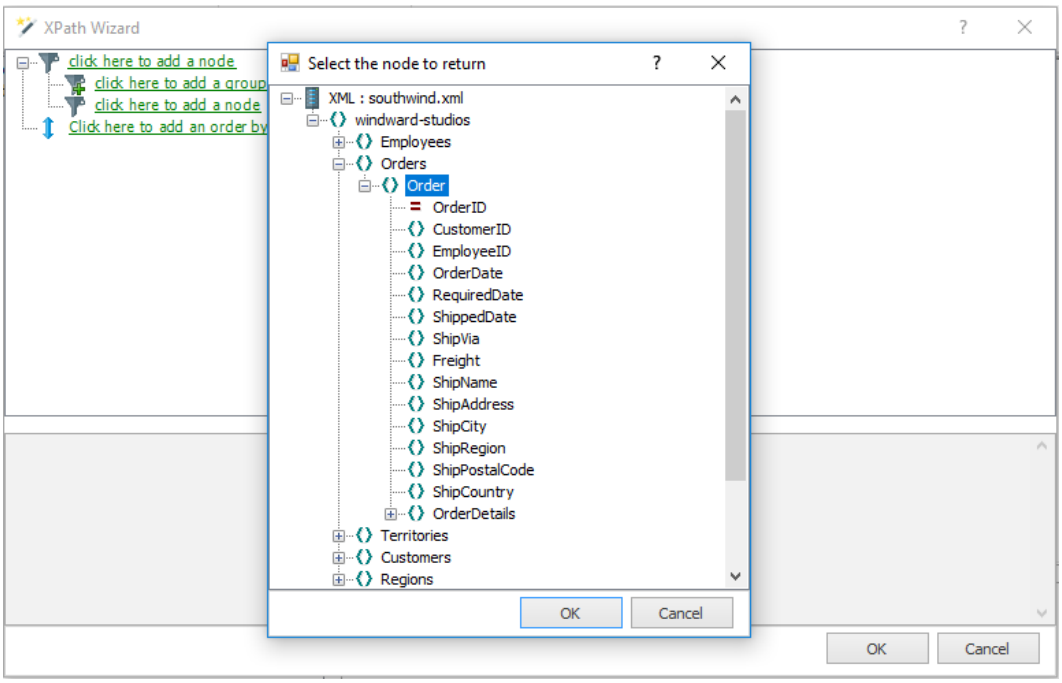
[forEach:]Dear COMPANYNAME,

3. Now we're going to setup the ForEach Tag so it knows what data we want to insert into this template. Click on the Tag to select the Tag and then click on the Wizard button in the [Windward] ribbon to open the XML Wizard.

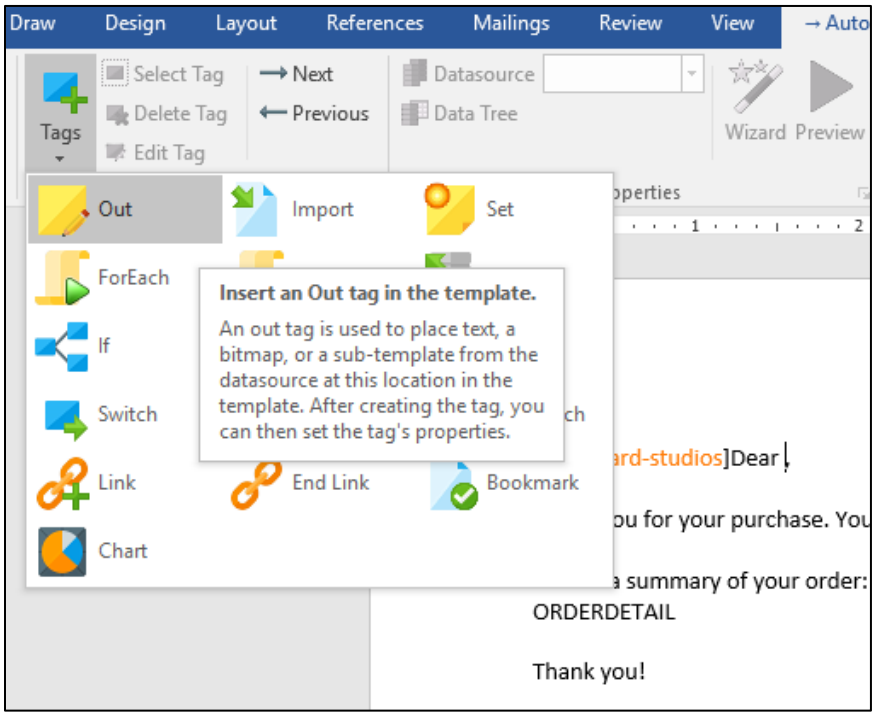




4. Click on the click here to add a node field at the top of the window, expand the windward-studios database, expand Orders, select the Order table and click OK, click OK in the Wizard window, and then click Save Tag.



5. Now that we've specified that we want to use the Order table set of data in our template, it's time to insert our data Tags.
    a. Let's start by inserting a Tag for the Company Name in place of our COMPANYNAME placeholder text. Begin by selecting and deleting the COMPANYNAME text.

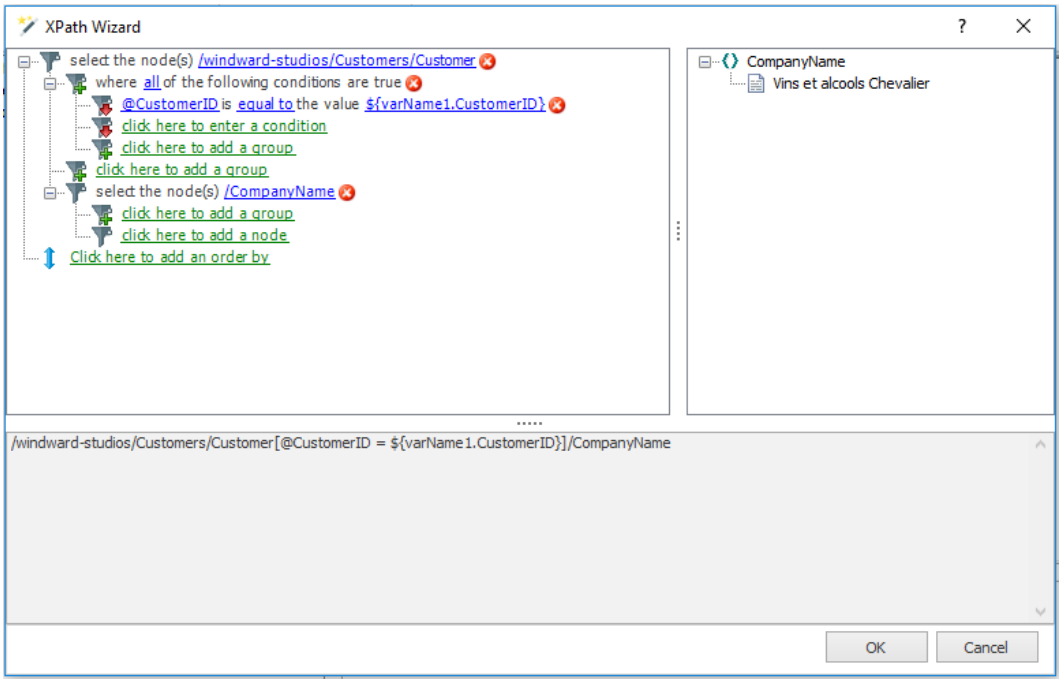


    b. Now use the Tags dropdown to insert an Out Tag.

[Order]Dear [out],

c. Double-click on that Out Tag to open the Tag Editor window.
d. In the Tag Editor window click on the Wizard icon to open the XML Wizard.

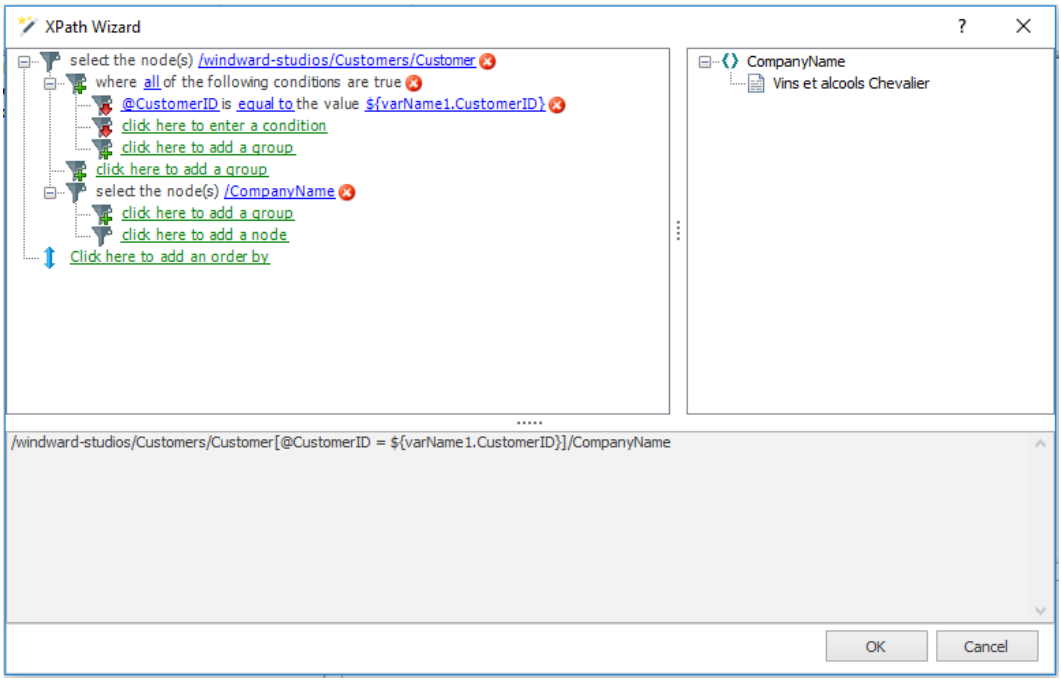
The XML Wizard is used to create a **Select Statement** for the data. A Select Statement is what allows AutoTag to know exactly what data you want to pull from your Datasource to use in your report. This can seem technical your first time through, but the query uses common language and you should be able to understand what it is we're going to pull from the Datasource as we build the statement. Since the CompanyName is in a different table than the Order information we're going to make sure we're pulling the correct CompanyName based off the OrderID. Your final Wizard window will look like this:



e. Click on the first line 'click here to add a node'.
f. Expand XML: southwind.xml, expand windward-studios, expand Customers, and then click on Customer to select the table and click ok.
g. Click on 'click here to add a group' on the second line. This defaults to 'where all of the following conditions are true'.
h. Click on 'click here to add a condition' on the third line. Click on 'click here to select a node', expand the Customer table in the popup window, select CustomerID, and click OK.
i. Click on 'click here to set the value', expand the dropdown, expand the Order table, and then double click on CustomerID.

We've now setup a condition that makes sure the CustomerName we're pulling into our document matches the CustomerID associated with each Order we are generating a receipt for. The last step is to insert the CompanyName.

j. Click on 'click here to add a node' on the sixth line, select CompanyName in the popup window, and click OK.
k. Click OK in the Wizard window, and then click Save Tag in the Tag Editor window.



Congratulations! We just created the CompanyName Tag for our template. Now let's create the remaining tags for our template. The OrderDate and OrderID tags are much easier to create since they are part of the Orders table we used for our ForEach tag.

6. For both of these tags, delete the placeholder text, insert an Out Tag, double click on the Out Tag, expand the Order table under the ForEach in the left-hand side of the Tag Editor window, select OrderDate and OrderID for their respective Tags, and then click Save Tag.
7. Now we need to create Out Tags for all the items in our table. Delete the placeholder text, insert an Out Tags, double click on the Out Tag, expand the Order table under the ForEach, expand OrderDetails, expand OrderDetail, select the appropriate node from the respective Tag, and then click Save Tag.
8. The final step is to add an EndForEach Tag so the document knows where to stop filling in data. Place the cursor after the **Thank you!** text and insert an End ForEach Tag from the Tags dropdown.

Our final template now looks like this:

[Order]Dear [CompanyName],

Thank you for your purchase. You placed your order on [OrderDate]. Your Order Number is [OrderID].

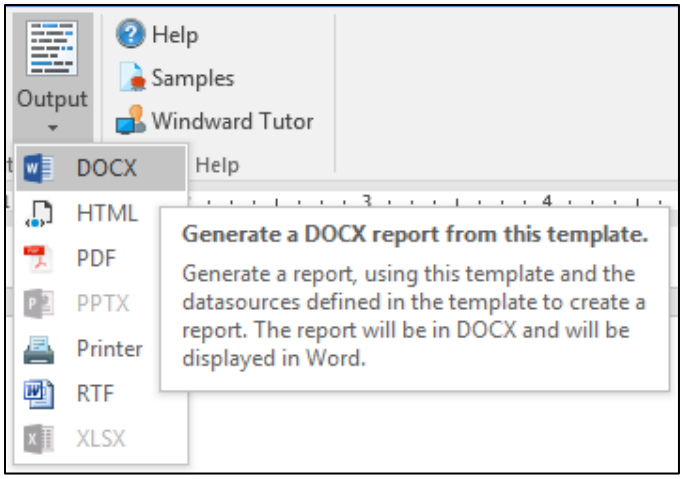
Here is a summary of your order:

Product ID	Price	Quantity	Discount
[ProductID]	[UnitPrice]	[Quantity]	[Discount]

Thank you!
[:forEach]

Step 4 – Refine Your Output

On the AutoTag Tab you can use the Output dropdown to generate this template into a report in any supported format. Let's start by generating it in DOCX format.



As you can see, we need to make a few revisions to our template to get it looking right.

Dear Vins et alcools Chevalier,

Thank you for your purchase. You placed your order on Thu Jul 04 14:25:55 MDT 1996. Your Order Number is 10248.

Here is a summary of your order:

Product ID	Price	Quantity	Discount
11	14.0000	12	0

Thank you!
Dear Toms Spezialitäten,

Thank you for your purchase. You placed your order on Fri Jul 05 06:39:18 MDT 1996. Your Order Number is 10249.

Here is a summary of your order:

Product ID	Price	Quantity	Discount
14	18.6000	9	0

Thank you!
Dear Hanari Carnes,

Thank you for your purchase. You placed your order on Mon Jul 08 16:46:22 MDT 1996. Your Order Number is 10250.

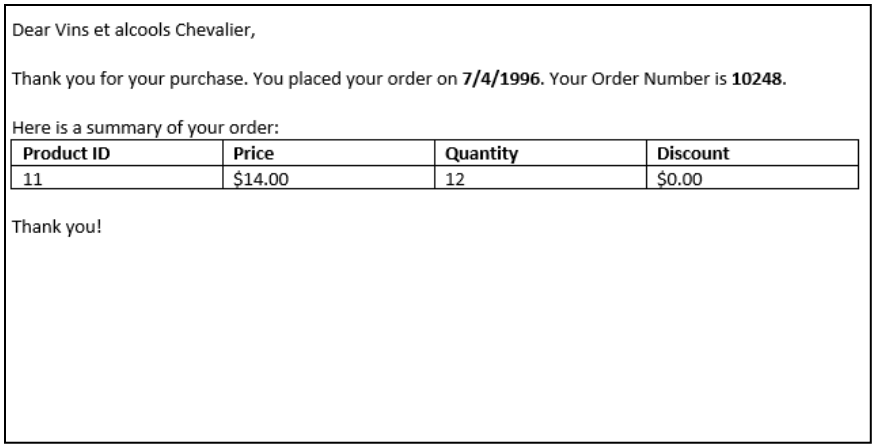
Here is a summary of your order:

Product ID	Price	Quantity	Discount
41	7.7000	10	0

Thank you!

1. The first easy fix is to move the End ForEach Tag to a new page so that we're only generating on receipt per page. Place the cursor in front of the End ForEach Tag, and use the Insert tab to insert a Page Break before this Tag. This moves the End ForEach Tag to a new page.
2. Now let's change the Data Type of the OrderDate, Price, and Discount Tags so they look better.
    a. Double click on the OrderDate Tag to open the Tag Editor.
    b. Switch the main pane to the Properties pane, click in the entry box to the right of Format, and open the formatting window by clicking the button on the right of the entry box. The formatting window allows us to select a format for the Tag. This is very similar to Excel, where you are presented with options to standardize how this data is displayed in the Output report. Since we're formatting OrderDate, click on the Date option and then select the most appealing format for you. Once you have your format click Apply and then click Close. Finally click Save Tag to close the Tag Editor window. Your Tag doesn't look any different, but when generated it will appear in the format you selected.
    c. Repeat this process for the UnitPrice and Discount Tags, making sure that you select Currency instead of Date in the Formatting window.
3. Now let's do some basic Word formatting on the rest of the document. Let's bold the OrderDate and OrderID Tags as well as the first row of our table. Feel free to format the rest of the template in any way you wish - any formatting you define here will carry over to your generated document.

When you're done, generate another DOCX Output of the template to see the changes.



Dear Vins et alcools Chevalier,

Thank you for your purchase. You placed your order on **7/4/1996**. Your Order Number is **10248**.

Here is a summary of your order:

Product ID	Price	Quantity	Discount
11	$14.00	12	$0.00

Thank you!

This Output looks MUCH better. Receipts are now on individual pages and we're bolding parts of the template to draw attention to it. The Price and Discount columns are also now in commonly accepted currency format.

Most customers find it very useful to make formatting changes and Output their document frequently to see how those changes appear. As you build more complex templates and use elements such as images and charts you'll find that it moves the rest of your content around as data is inserted.

Step 5 – Output Your Template

Once you have completed formatting your Output, you're ready to complete the final Output of your template. You can of course Output documents from Office, but in most cases you'll be using an integrated Engine to Output your documents. You can either copy the DOCX or XLSX template to your Engine server for Output or use the Generate Code button in Office in you use to the template dynamically in your application. The Generate Code button is found in the Tools tab.