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SharpDocx

# Summary

SharpDocx is inspired by Web technologies like ASP.NET and JSP. Developers familiar with those technologies should feel right at home.

First you create a view in Word. A view is a Word document which also contains C# code. Code can be inserted anywhere: 24 would insert 24.

The next step is to create documents based on this view. This requires two lines of code:

var document = DocumentFactory.Create("view.cs.docx");

document.Generate("output.docx");

Out of the box SharpDocx supports inserting text, tables, images and more. This tutorial shows you how.

If you want, you can specify a view model to be used in your view. Then you could write things like < % foreach (var item in Model.MyList) { % >. See the Model sample.

If you want to do something that's not supported by SharpDocx, you can do so by creating your own document subclass. See the Inheritance example.

Generating documents with SharpDocx can be very fast: a slightly modified Model sample produced 25 documents per second on my modest laptop. That’s 1500 documents per minute. Single threaded.

# Contents

[Summary 1](#_Toc502494466)

[Contents 2](#_Toc502494467)

[The basics 3](#_Toc502494468)

[Write method 3](#_Toc502494469)

[Conditional content 3](#_Toc502494470)

[Loops 4](#_Toc502494471)

[Tables 5](#_Toc502494472)

[Images 6](#_Toc502494473)

[Replacing text 7](#_Toc502494474)

[Referencing assemblies and importing namespaces 8](#_Toc502494475)

[The Map 9](#_Toc502494476)

# The basics

At any point in the text you can insert C# statements. Like right here.

The result looks like this:



## Write method

If you want to display the value of i, you can use the Write method. Right now, i is 1.

There’s also a shorthand notation for the Write method: i is still 1.

You can insert line breaks by using ‘\n’:

This paragraph  
contains two  
line breaks.

## Conditional content

You can use an if statement to display conditional content.

This will be displayed.

In this case, any formatting will be lost because the code parser ignores any formatting.

If you want to conditionally display text with formatting, use two code blocks and place the text between curly brackets, like this.

This **will** *also* be displayed.

If you want, you can span multiple elements. E.g.

The diverging pronunciation of tomato (though not so much potato) is primarily one of regional dialect.

The pronunciation 'tuh-MAH-toh' is the standard pronunciation in the UK and is accepted in the US regions of New England along with parts of the lower East Coast, while 'tuh-MAY-toh' is found almost everywhere else.

## Loops

If you want to add something in a loop, you should do so programmatically. This example does loop, but doesn’t add anything to the document:

The value of i is **9.**

In the next loop we’ll call the AppendParagraph method, which *will* insert new paragraphs:

The value of i is **0.**

The value of i is **1.**

The value of i is **2.**

The value of i is **3.**

The value of i is **4.**

The value of i is **5.**

The value of i is **6.**

The value of i is **7.**

The value of i is **8.**

The value of i is **9.**

## Tables

Design your tables in Word, and create rows using the AppendRow method.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| i \* 1 | i \* 2 | i \* 3 | i \* 4 | i \* 5 | i \* 6 | i \* 7 | i \* 8 | i \* 9 | i \* 10 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 |
| 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 30 |
| 4 | 8 | 12 | 16 | 20 | 24 | 28 | 32 | 36 | 40 |
| 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 |
| 6 | 12 | 18 | 24 | 30 | 36 | 42 | 48 | 54 | 60 |
| 7 | 14 | 21 | 28 | 35 | 42 | 49 | 56 | 63 | 70 |
| 8 | 16 | 24 | 32 | 40 | 48 | 56 | 64 | 72 | 80 |
| 9 | 18 | 27 | 36 | 45 | 54 | 63 | 72 | 81 | 90 |
| 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |

## Images

Insert images using the Image method.

​

If only a file name is specified, SharpDocx searches this file in a directory specified by the ImageDirectory property. Right now this property has been set to ‘C:\Projects\SharpDocx\Samples\SampleProjects\Tutorial\bin\Debug\..\..\..\..\Images’.

The Image method accepts a second optional parameter that specifies the relative size of the image. Here’s  at 15%.

Images that are too wide to be displayed at 100% are automatically scaled back. Here’s an example:



## Replacing text

If you want to replace text, you can use the Replace method.

This will replace *all* occurrences of the specified string.

Here’s the **replaced text**. And here’s some more replaced text.

## Referencing assemblies and importing namespaces

If you want to use specific types in a view, you can use the Assembly and Import directives to get access to them. Directives look like regular code blocks, but they always start with < %@.

Reference an assembly with the Assembly directive.

Import namespaces with the Import directive.

In C# you would write:

using System.Xml.Linq;

Now we can use types in System.Xml.Linq. Let’s read some news.

**Largest Prime Number Discovered &ndash; With More Than 23m Digits**chalsall writes: Persistence pays off. Jonathan Pace, a GIMPS volunteer for over 14 years, discovered the 50th known Mersenne prime, 2^77,232,917 -- 1 on December 26, 2017. The prime number is calcula…

**Oceans Suffocating as Huge Dead Zones Quadruple Since 1950, Scientists Warn**Ocean dead zones with zero oxygen have quadrupled in size since 1950, scientists have warned, while the number of very low oxygen sites near coasts have multiplied tenfold. From a report: Most sea cre…

**By Next Week, Intel Expects To Issue Updates To More Than 90% of Processor Products Introduced Within Past Five Years**Intel said on Thursday that by next week it expects to have patched 90 percent of its processors that it released within the last five years, making PCs and servers "immune" from both the Spectre and …

**Mark Zuckerberg's 2018 Personal Challenge Is To Do His Job As CEO**An anonymous reader shares a report: Fun fact about Facebook's Mark Zuckerberg: Every year he gives himself a "personal challenge," which is not to be confused with the "New Year's resolutions" us ple…

**Personal Data of a Billion Indians Sold Online For $8, Report Claims**Michael Safi, reporting for The Guardian: The personal information of more than a billion Indians stored in the world's largest biometric database can be bought online for less than $8, according to a…

**Opinion: Chrome is Turning Into the New Internet Explorer 6**Tom Warren, writing for The Verge: Chrome now has the type of dominance that Internet Explorer once did, and we're starting to see Google's own apps diverge from supporting web standards much in the s…

**Intel Memory Access Design Flaw Partially Addressed by Apple in macOS 10.13.2 [Unconfirmed]**An anonymous reader shares a report: A serious design flaw and security vulnerability discovered in Intel CPUs has reportedly already been partially addressed by Apple in the recent macOS 10.13.2 upda…

**Microsoft Issues Rare Out-of-Band Emergency Windows Update For Processor Security Bugs**An anonymous reader shares a report: Microsoft is issuing a rare out-of-band security update to supported versions of Windows today (Wednesday). The software update is part of a number of fixes that w…

**Intel Says CEO Dumping Tons of Stock Last Year 'Unrelated' To Big Security Exploit**An anonymous reader shares a report: Late last year, the CEO of Intel sold millions of dollars in company stock, as CEOs often do. The sale appears to have occurred while developers were reportedly ru…

**Google Says Almost All CPUs Since 1995 Vulnerable To 'Meltdown' And 'Spectre' Flaws**Catalin Cimpanu, reporting for BleepingComputer: Google has just published details on two vulnerabilities named Meltdown and Spectre that in the company's assessment affect "every processor [released]…

**Asus Is Turning Its Old Routers Into Mesh Wi-Fi Networks**Asus' new AiMesh system lets you repurpose your existing Asus routers as part of a mesh network, potentially saving you lots of money since you won't have to replace your whole network with a bunch of…

**AI System Sorts News Articles By Whether Or Not They Contain Actual Information**In a new paper published in the Journal of Artificial Intelligence Research, computer scientists from Google and the University of Pennsylvania describe a new machine learning approach to classifying …

**Google's Project Zero Team Discovered Critical CPU Flaw Last Year**An anonymous reader quotes a report from TechCrunch: In a blog post published minutes ago, Google's Security team announced what they have done to protect Google Cloud customers against the chip vulne…

**Yes, Your Amazon Echo Is an Ad Machine**An anonymous reader quotes a report from Gizmodo: CNBC reports that Amazon is in discussions with huge companies that want to promote their goods on Echo devices. Proctor &amp; Gamble as well as Cloro…

**Ajit Pai Backs Out of Planned CES 2018 Appearance**New submitter sdinfoserv writes: Ajit Pai, the most hated person in tech since Darl McBride, backed out of a speaking engagement at CES 2018. Apparently he lacks the spine to justify himself before th…

In a real world scenario you wouldn’t fetch data or have this much code in a view. But hey, this is just an example.

## The Map

The Map maps OpenXmlElements to plain text and vice versa. It’s being used internally by the Replace method and for finding the C# code in views, among other things. At the moment Map.Text looks something like this:

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First you create a view in Word. A view is a Word document which also contains C# code. Code can be inserted anywhere: 24 would insert 24.  
The next step is to create documents based on this view. This requires two lines of code:  
 var document = DocumentFactory.C …

The Map might be handy when you want to search the document for text.