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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.

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# 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.[[1]](#footnote-2)

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.

**Apple Planning New, 'Robust' Parental Controls To Help Protect Children, Teens**An anonymous reader quotes a report from Ars Technica: An open letter to Apple from some investors sparked the tech giant to respond by promising new software tools for parents to restrict and monitor…

**James Dolan, Co-Creator of SecureDrop, Dead At 36**The Freedom of the Press Foundation is reporting that James Dolan, former Marine and co-creator of the whistleblower submission system SecureDrop alongside Aaron Swartz and Wired editor Kevin Poulsen,…

**A Crypto Website Changes Its Data, and $100 Billion in Market Value Vanishes**Paul Vigna, writing for WSJ: Prices for some of the most popular cryptocurrencies dropped sharply Monday. One apparent reason: an adjustment from a popular website on its digital-currency price quotes…

**Dell's Mobile Connect Application Will Allow Users To Easily Mirror Their Smartphone on PC; To Come Pre-installed On Company's Future PCs**From a report on VentureBeat: Smartphones and computers were designed in different eras, and they don't really work well together, forcing us to split our time between them. But Dell is trying to chan…

**'The Web is Not Google, and Should Not be Just Google': Developers Express Concerns About AMP**A group of prominent developers published an open-letter on Tuesday, outlining their deep concerns about Accelerated Mobile Pages, a project by Google that aims to improve user experience of the Web. …

**Super-Black Is the New Black**Feathers on birds of paradise contain light-trapping nanotechnology that makes some of the deepest blacks in the world, a new study has found. From a report: Blackbirds, it turns out, aren't actually …

**Microsoft Details Performance Impact of Spectre and Meltdown Mitigations on Windows Systems**Microsoft's Windows chief Terry Myerson on Tuesday outlined how Spectre and Meltdown firmware updates may affect PC performance. From a blog post: With Windows 10 on newer silicon (2016-era PCs with S…

**Facebook Dives into Home Device Market with Video Chat Product Named 'Portal', Report Says**An anonymous reader shares a report: Facebook is about to jump into the consumer hardware business in a big way with a video chat device named "Portal," which will put it in direct competition with Am…

**With WPA3, Wi-Fi Security is About To Get a Lot Tougher**One of the biggest potential security vulnerabilities -- public Wi-Fi -- may soon get its fix. From a report: The Wi-Fi Alliance, an industry body made up of device makers including Apple, Microsoft, …

**FBI Chief Calls Unbreakable Encryption 'Urgent Public Safety Issue'**The inability of law enforcement authorities to access data from electronic devices due to powerful encryption is an "urgent public safety issue," FBI Director Christopher Wray said on Tuesday in rema…

**Snowden Joins Outcry Against World's Biggest Biometric Database**Former U.S. intelligence-contractor-turned whistleblower Edward Snowden joined critics of India's digital ID program as the nation's top court is due to decide on its legality. From a report: Snowden …

**Microsoft Pauses Rollout of Spectre and Meltdown Patches To AMD Systems**Microsoft is suspending patches to guard against Meltdown and Spectre security threats for computers running AMD chipsets after complaints by AMD customers that the software updates froze their machin…

**Microsoft Says No More Windows Security Updates Unless AVs Set a Registry Key**Catalin Cimpanu, reporting for BleepingComputer: Microsoft has added a new and very important detail on the support page describing incompatibilities between antivirus (AV) products and the recent Win…

**Ibuprofen Linked To Male Infertility, Study Says**An anonymous reader quotes a report from The Guardian: Men who take high doses of ibuprofen for months at a time may be at greater risk of fertility issues and also other health problems, such as musc…

**Nvidia's GeForce Now Windows App Transforms Your Cheap Laptop Into a Gaming PC**The GeForce Now game streaming service that Nvidia announced for the Mac last year is finally coming to Windows PCs. According to their website, the service lets you stream high-resolution games from …

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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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.

1. Actually, this will only replace text in the body of the document, and not in headers, footers, end- or footnotes. So this won’t work as expected. But you can use code here. [↑](#footnote-ref-2)