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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.

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.

**Tech Bros Bought Sex Trafficking Victims Using Amazon and Microsoft Work Emails**An anonymous reader writes:  
Newsweek's National Politics Correspondent reports on "a horny nest of prostitution 'hobbyists' at tech giants Microsoft, Amazon and other firms in Seattle," citing "hundre…

**2017: The Year in Programming Languages**InfoWorld writes that 2017 "presented a mixed bag of improvements to both long-established and newer programming languages." An anonymous reader quotes their report:  
  
Developers followed a soap opera …

**Ask Slashdot: What Would an AI-Written Poem Look Like?**Slashdot reader dryriver writes:  
Imagine this. You are an AI running on the latest machine learning hardware, like Nvidia's new Tensor cores for example, or perhaps a data center full of Xeons and EPY…

**Iran Cuts Internet Access and Threatens Telegram Following Mass Protests**Long-time Slashdot reader cold fjord writes: As seething discontent has boiled over in Iran leading to mass protests, protesters have taken to the streets and social media to register their discontent…

**Slashdot's 10 Most-Visited Stories of 2017**Slashdot's most-visited story of 2017 was Google Has Demonstrated a Successful Practical Attack Against SHA-1, which was visited more than 212,000 times since it was published in Feburary. And our sec…

**How A Civilian Drone Crashed Into the US Army's Helicopter**"In September, Slashdot reported on an in-flight collision between an Army UA60 helicopter and a hobby drone over Staten Island," writes Slashdot reader ElizabethGreene. "The NTSB has released its fin…

**Louisana Police Bust an Infamous Nigerian Email Spam Scammer**MojoKid writes: You have probably at some point been contacted via email spam by someone claiming you are the beneficiary in a will of a Nigerian prince. As the scam goes, all you have to do is submit…

**Could We Reduce Data Breaches With Better Open Source Funding?**The CEO of Wireline -- a cloud application marketplace and serverless architecture platform -- is pushing for an open source development fund to help sustain projects, funded by an initial coin offeri…

**Blockchain Brings Business Boom To IBM, Oracle, and Microsoft**An anonymous reader quotes Fortune's new report on blockchain:  
Demand for the technology, best known for supporting bitcoin, is growing so much that it will be one of the largest users of capacity nex…

**In a Declining Comics Market, DC Beats Marvel** An anonymous reader quotes the Hollywood Reporter:  
Looking at the most-ordered comic books in the North American comic market, DC Entertainment had a particularly strong year, with seven of the top 1…

**How Big Tech is Getting Involved in Your Health Care**Apple's financing a study to see whether irregular heart rhythms can be detected with an Apple Watch. But that's just the beginning, according to a New York Times article shared by Templer421:  
  
As con…

**Neuro, Cyber, Slaughter: Emerging Technological Threats In 2017**"Wouldn't it be nice if advances in technology stopped throwing new problems at the world? No such luck," writes Bulletin of the Atomic Scientists. "Several emerging technological threats could -- soo…

**Math Says You're Driving Wrong and It's Slowing Us All Down**A new study in IEEE Transactions on Intelligent Transportation Systems mathematically suggests that if you and everyone else on the road kept an equal distance between the cars ahead and behind, traff…

**Call of Duty Gaming Community Points To 'Swatting' In Wichita Police Shooting**schwit1 shares a report from The Daily Dot: A man was killed by police Thursday night in Wichita, Kansas, when officers responded to a false report of a hostage situation. The online gaming community …

**Kodi Media Player Arrives On the Xbox One**The Kodi media player is now available to download on your Xbox One, making it one of the best Xbox One exclusives of the year. The Verge reports: Kodi is a very capable player that's highly expandabl…

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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