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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.

## 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\net45\..\..\..\..\..\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.

**Feds Can't Force You To Unlock Your iPhone With Finger Or Face, Judge Rules**A California judge has ruled that American cops can't force people to unlock a mobile phone with their face or finger. The ruling goes further to protect people's private lives from government searche…

**The Super-Secure Quantum Cable Hiding In the Holland Tunnel**Zorro shares a report: Commuters inching through rush-hour traffic in the Holland Tunnel between Lower Manhattan and New Jersey don't know it, but a technology likely to be the future of communication…

**Android Studio 3.3 Now Available To Download On Stable Channel, New Version Focuses On 'Refinement and Quality'**Android Studio 3.3 is now available to download through stable channel, Google said Monday. The top new features of Android Studio 3.3 include a navigation editor, profiler tracking options, improveme…

**The Last of Manhattan's Original Video Arcades**Video arcades -- those recreational arenas of illuminated screens and 8-bit soundtracks -- have been fading from the cultural landscape since the end of the Donkey Kong '80s. The advent of home video …

**GoDaddy is Injecting Site-Breaking JavaScript Into Customer Websites**Web hosting service GoDaddy is injecting JavaScript into customer websites that could impact the overall performance of the website or even render it inoperable, according to Australian programmer Igo…

**Streaming TV May Never Again Be as Simple, or as Affordable, as It is Now**An anonymous reader shares a report: Disney and WarnerMedia are each launching their own streaming services in 2019 in a challenge to Netflix's dominance. Netflix viewers will no longer be able to wat…

**A Guy Made a Computer Mouse That is Also a Functional Laptop**A YouTube user who goes by Electronic Grenade has designed a computer mouse that is also a functional laptop. From a report: As detailed in a video published on Sunday, the computer mouse computer con…

**In CEO Search, Intel Still Hasn't Found What It's Looking For**Intel has been trying to fill the most prominent role in the $400-billion chip industry for more than six months. The company's board still hasn't found what it's looking for. From a report: Intel dir…

**Top Android Phone Makers Are Killing Useful Background Processes and Breaking 3rd-Party Apps To 'Superficially Improve' Battery Life, Developers Allege**A team of developers has accused several popular smartphone vendors of compromising the functionality of third-party apps and other background processes on their phones in an attempt to "superficially…

**Too Many Workers Are Trapped By Non-Competes**Why have wages been so slow to rise at a time when demand for workers has pushed the U.S. unemployment rate to its lowest point in nearly half a century? One answer: contracts that tie millions of uns…

**USB Type-C Headphones Were Nowhere in Sight at CES 2019**In a sea of 3D audio products and true-wireless earbuds, USB Type-C headphones were nowhere in sight at CES 2019. From a report: This absence isn't an accident, however. Rather, it's the deafening sil…

**Google Reportedly Blacklists 'Ethereum' As a Google Ad Keyword, Startup Claims**An anonymous reader quotes a report from Yahoo: Google has reportedly blacklisted keywords mentioning Ethereum (ETH) on its advertising platform Google Ads, smart contract auditing startup Decenter tw…

**World's Longest Aircraft Gets Full-Production Go-Ahead**The Airlander 10 -- the world's longest aircraft -- is set to go into full production with the model designed to take its first passengers. "It comes after the prototype Airlander 10 -- a combined pla…

**Battlefield 5's Poor Sales Numbers Have Become a Disaster For Electronic Arts**dryriver writes: Electronic Arts has mismanaged the Battlefield franchise in the past -- BF3 and BF4 were not great from a gameplay perspective -- but with Battlefield 5, Electronic Arts is facing a r…

**A Neural Network Can Learn To Recognize the World It Sees Into Concepts**An anonymous reader quotes a report from MIT Technology Review: As good as they are at causing mischief, researchers from the MIT-IBM Watson AI Lab realized GANs, or generative adversarial networks, a…

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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 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)