Comenius University, Bratislava
Faculty of Mathematics, Physics and Informatics

Tutorial to SASS and Compass

Bachelor Thesis

2013

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Study programme: Computer Science
Study field: 2508 Computer Science, Informatics
Department: Department of Computer Science
Supervisor: RNDr. Tomáš Kulich, PhD.

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Title: Tutorial to Compass and Sass

Aim: Create documentation and cookbook to Sass language and Compass framework

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Assigned: 03.10.2012

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Cieľ: Vytvoriť dokumentáciu a na príkladoch založené 'how-to' k jazykom Compass a Sass

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Abstract

The goal of the first chapters is to teach a reader a syntax and features of the preprocessor SASS. The following chapters are devoted to framework Compass, which is targeted to speed up development of projects. More about it is in chapters 3, 4 and 5. The last part is giving practical examples written in SASS using Compass, that can be used in real-life projects. The complete text has online version at darjanin.com/sass-tutorial. The source codes for examples are located on the same page.

Keywords: sass, compass, css, tutorial

Abstrakt

Zámerom práce je v prvých kapitolách priblížiť syntax a možnosti preprocesora SASS. V nasledujúcich sa pozriem na možnosti frameworku Compass, ktorého účelom je uľahčiť prácu na projektoch v CSS, keďže obsahuje mixiny, ktoré ušetria mnohé riadky v CSS. Podrobnosti nájdete v kapitolách 3, 4 a 5. Posledné kapitoly chcú poskytnúť čitateľovi funkčné príklady, napísané v SASS s použitím Compassu, použiteľné v projektoch z reálneho života. Celý text sa nachádza aj na adrese darjanin.com/sass-tutorial, kde sa nachádzajú aj stiahnuteľné zdrojové kódy k príkladom.

Kľúčové slová: sass, compass, css, tutoriál

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Introduction

The look of the Internet had changed dramatically through last decades of existence. What was at begin just simple text file is today much more. The content is not the only important thing. The way how we are presented on the Internet has come to the front. For purpose of easier styling our web documents was released Cascading Style Sheets (CSS) style sheet language. In last years it was improved a lot and the number of features which was added to it is in hundreds. But there are always things that developers wants today, but it takes some time for approve appending new ones. And there is created space for another developers that come with their own solutions. One of them is CSS preprocessors.

The goal of the preprocessors is to add new features to existing styling language without loosing support of Internet browsers. The solution for that is to write converters that translate code written with syntax of our chosen preprocessor and translate it to the CSS. The output than could be optimized for example to save the time of page loading. There are more ways how this converting can be achieved. LESS is preferring javascript file which translates LESS on the client side. In other view, SASS [1], about which is this work, converts sass or scss syntax on the developer computer, or there exists frameworks like Ruby on Rails which has SASS converter integrated.

Chapter 1

First steps

For editing SASS files you need just your favorite text editor in which you write CSS. The files name should end with extension .sass or .scss. The difference between this names would be explained later, when we move to the syntax.

Before I can show you the syntax of SASS and how to use it, you need to install SASS interpreter. It is written in Ruby so this is the first requirement. And the second requirement is to start your terminal application (or command line in Windows).

1.1 Installation

1.1.1 Windows

For this platform it would be the most difficult task. At first if you don't have Ruby installed you must to download it from `http://rubyinstaller.org/downloads/`. When you are done and Ruby is prepared on your computer, go to Start, Accessories and start Command prompt. Or I think faster way (and working in Windows 8 too) is to press `Win+R` and then run `cmd`. When the command line shows enter

```
gem install sass
```

If you want some fine text editor on this platform which has more features than Notepad and it's free than I would recommend Notepad++.

1.1.2 Linux

Ruby is not installed in common distributions, but you can install it with your package manager. In Debian systems (Ubuntu) use

```
sudo apt-get install ruby1.9.3
```

When the installation is done just run

```
gem install sass
```

Is there possibility that you would need to put `sudo` in front of gem. Then it would ask for your password.

There are many text editors for Linux distribution. So I give few choices. Easy to use and probably the simplest is the Gedit which comes with any distribution with Gnome. For terminal fans is there always Vim.

1.1.3 Mac OS X

On this platform it is the easiest, because Ruby comes installed. Open Terminal.app and run the command:

```
gem install sass
```

The default text editor which comes with this system isn't good choice for developers because it has problems with plain text formats. But there is always the VIM.

1.2 Hello World

When our working environment is prepared, it is time to show you how to use it. It is just simple example to show you what sass does.

Create folder with name `hello_world` so you can find it later. Create file `hello.scss` in the folder `hello_world`.

```
$red: #dd1213;
.hello{
    color: $red;
}
```

Then set in terminal the working directory to `hello_world` and run command `sass hello.scss`. The output should be

```
.hello{
    color: #dd1213;
}
```

How can you see the sass converted the `$red` to `#dd1213` and output is just CSS code. If everything worked for you than I can move on to explaining the syntax of SASS.

Chapter 2

SASS syntax

At begin I need to tell you one secret. All CSS code is valid SASS code. But it has some exceptions like everything. There are two supported syntaxes for SASS. One has extension .sass and it uses just indention like Ruby for example. The second one is more CSS like and its extension is .scss. Trough this tutorial I'm going to use the more css version. Is easier to understand and if you are expert on CSS, you would have no difficulties to understand it.

2.1 Variables

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2.2 Mixins

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2.3 Nesting

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2.4 Inheritance

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Conclusion

At the end comes here some conclusion of the work.

Bibliography

[1] SASS homepage. http://sass-lang.com. [Online; accessed 31-January-2013].