



# CSCI577b Software Engineering II Tech Talk

# Less

<http://lesscss.org/>

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Presentation available on <http://dpu.pw/less>  
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# What is Less

- **Pre-processor** for CSS with lots of extra features

- Use in Command Line:

```
$ lessc lessDemo.less > lessDemo.css
```

- Use on Client browser (using less.js)

```
<script src="less.js"></script>
```

```
<link rel="stylesheet/less" type="text/css" href="styles.less" />
```

- Use at Backend using many supported languages  
(, Java, .NET, PHP etc).



# Why need Less

- Repetition: e.g. color on different places
- Vendor Prefix to work with earlier versions e.g. border-radius, transition, linear-gradient ...

- `-webkit-`



- `-moz-`



- `-o-`



- ...

- Difficult to read and maintain



# Main Features

- **Variables:** @brand-color, @hover-color, @visited-color ...
- **Mixins:** group of CSS properties
- **Nested properties:** structure similar to HTML
- **Mixins as functions:** have parameters, return variables
- **Mixins guards:** conditional mixins
- **Operations** and **built-in functions** on color, string, math ...
- Other features: **loops**, **import** etc.

# Demo

<http://dpu.pw/lessDemo>

Less Code: <http://dpu.pw/lessDemoCode>



<b>Extension</b>	.less	.scss or .sass	.styl
<b>Syntax</b>	Identical to CSS	optional ; and {}	optional {}, : and ;
<b>Variable</b>	@some-color	\$some-color	some-color
<b>Written Language</b>	Javascript	Ruby	Javascript
<b>Installation</b>	npm install less -g	gem install sass	npm install stylus -g

# Reference

Less. <http://lesscss.org/>. [Accessed on: 2015/04/01]

Sass. <http://sass-lang.com/>. [Accessed on: 2015/04/01]

Stylus. <http://learnboost.github.io/stylus/>. [Accessed on: 2015/04/01]