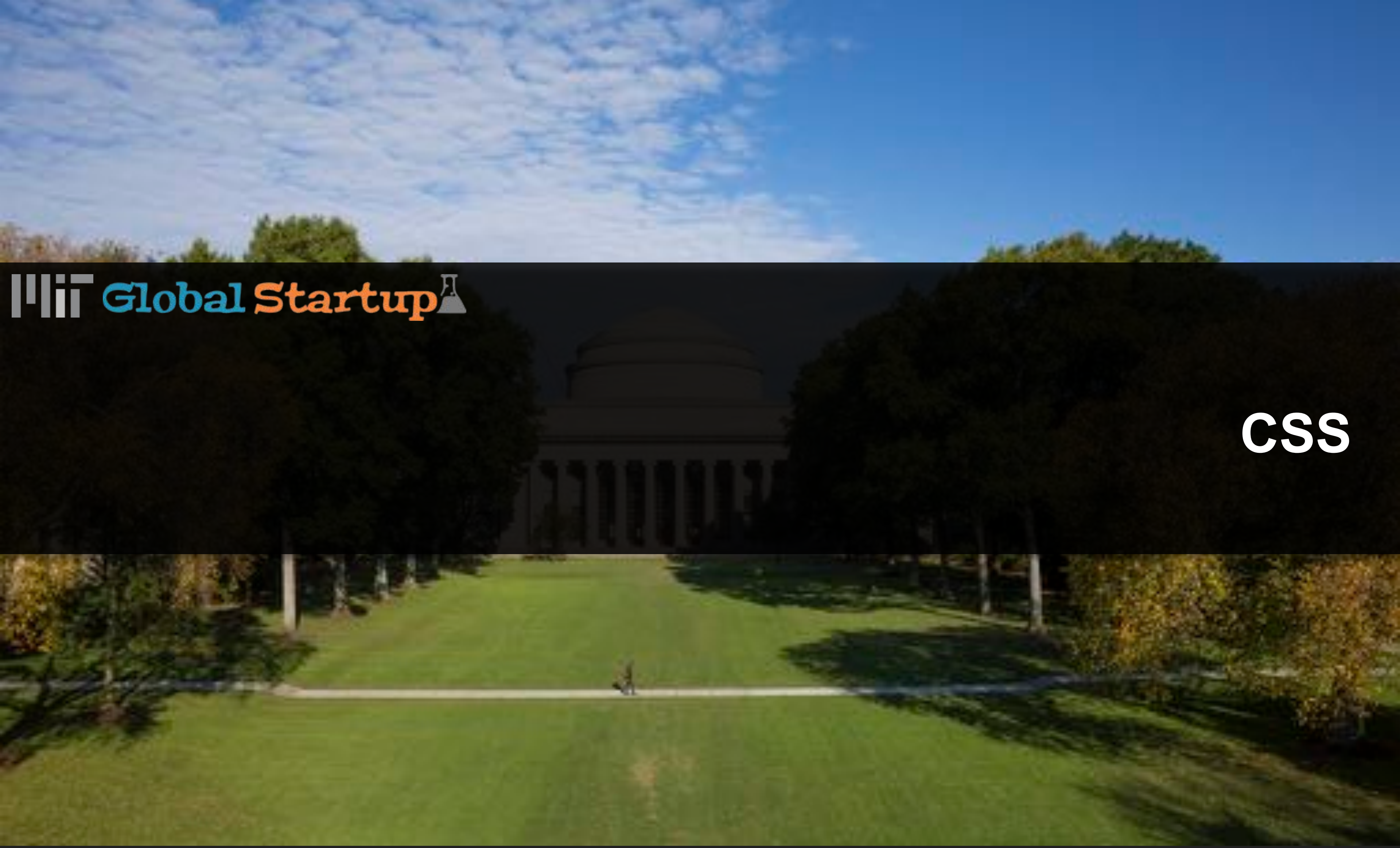
Global Startup

MEXICO 2015, iLAB XALAPA

http://tiny.cc/GSLMEX15



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CSS

CSS

- CASCADING STYLE SHEETS is a simple design language intended to simplify the process of making web pages presentable.
- CSS handles the look and feel part of a web page.
- Using CSS, you can control the following:
  - Color of the text
  - STYLE OF FONTS
  - Spacing   between paragraphs
  - How columns are sized and laid out
  - What background images or colors are used
  - As well as a variety of other effects…

Advantages

- **SAVES TIME** - write CSS once and then reuse same sheet in multiple HTML Pages
- **PAGES LOAD FASTER** - Just write one CSS rule for a tag and apply to all the occurrences. So less code means faster download times.
- **EASY MAINTENANCE** - Simply change the style, and all elements will be updated automatically.
- **SUPERIOR STYLES TO HTML** - CSS has a much wider array of attributes than HTML
- **MULTIPLE DEVICE COMPATIBILITY** - Style sheets allow content to be optimized for more than one type of device.
- **GLOBAL WEB STANDARDS** - Now HTML attributes are being deprecated and it is being recommended to use CSS.

Advantages

- A CSS comprises of style rules that are interpreted by the browser and then applied to the corresponding elements in your document.
- A style rule is made of three parts:
  - **SELECTOR**: A selector is an HTML tag at which style will be applied. This could be any tag like <h1> or <table> etc.
  - **PROPERTY**: A property is a type of attribute of HTML tag. Put simply, all the HTML attributes are converted into CSS properties. They could be color or border etc.
  - **VALUE**: Values are assigned to properties. For example color property can have value either red or #F1F1F1 etc.
  - Example:

SELECTOR { PROPERTY: VALUE; }

Type Selector

This is the same selector we have seen above. Again one more example to give a color to all level 1 headings :

```
h1 {
    color: #36CFFF; /*color for h1 heading*/
}
```

Universal Selector

Rather than selecting elements of a specific type, the universal selector quite simply matches the name of any element type

```
* {
   color: #000000;
}
```

Descendant Selector

Suppose you want to apply a style rule to a particular element only when it lies inside a particular element.

As given in the following example, style rule will apply to <em> element only when it lies inside <ul> tag.

```
ul em {
   color: #000000;
}
```

Class Selector

You can define style rules based on the class attribute of the elements. All the elements having that class will be formatted according to the defined rule.

```
.black {
    color: #000000;
}
```

You can make it a bit more particular. For example

```
h1.black {
    color: #000000;
}
```

ID Selector

You can define style rules based on the id attribute of the elements. All the elements having
that id will be formatted according to the defined rule.

```
#black {
    color: #000000;
}
```

You can make it a bit more particular.

```
h1#black {
    color: #000000;
}
```

Attribute Selector

You can also apply styles to HTML elements with particular attributes. The style rule below will
match all input elements that has a type attribute with a value of text:

```
input [type = “text”] {
    color: #000000;
}
```

Multiple Style Rules

You may need to define multiple style rules for a single element. You can define these rules to combine multiple properties and corresponding values into a single block as defined in the following example:

```
h1 {
color: #36C;
font-weight: normal;
letter-spacing: .4em;
margin-bottom: 1em;
text-transform: lowercase;
}
```

Grouping Selectors

You can apply a style to many selectors if you like. Just separate the selectors with a comma as given in the following example:

```
h1, h2, h3 {
color: #36C;
font-weight: normal;
letter-spacing: .4em;
margin-bottom: 1em;
text-transform: lowercase;
}
```

Embedded CSS

You can put your CSS rules into an HTML document using the <style> element. This tag is placed inside <head>...</head> tags. Rules defined using this syntax will be applied to all the elements available in the document. Here is the generic syntax

```
<head>
<style type="text/css" media="...">
Style Rules
............
</style>
</head>
```

Inline CSS

You can use style attribute of any HTML element to define style rules. These rules will be applied
to that element only. Here is the generic syntax:

```
<element style="...style rules....."><element
style="...style rules....">

<h1 style ="color:#36C;"> This is inline CSS </h1>
```

External CSS

- The <link> element can be used to include an external stylesheet file in your HTML document.
- An external style sheet is a separate text file with .css extension. You define all the Style rules within this text file and then you can include this file in any HTML document using <link> Element. Here is the generic syntax of including external CSS file:

```
<head>
<link type="text/css" href="..." media="..." />
</head>
```

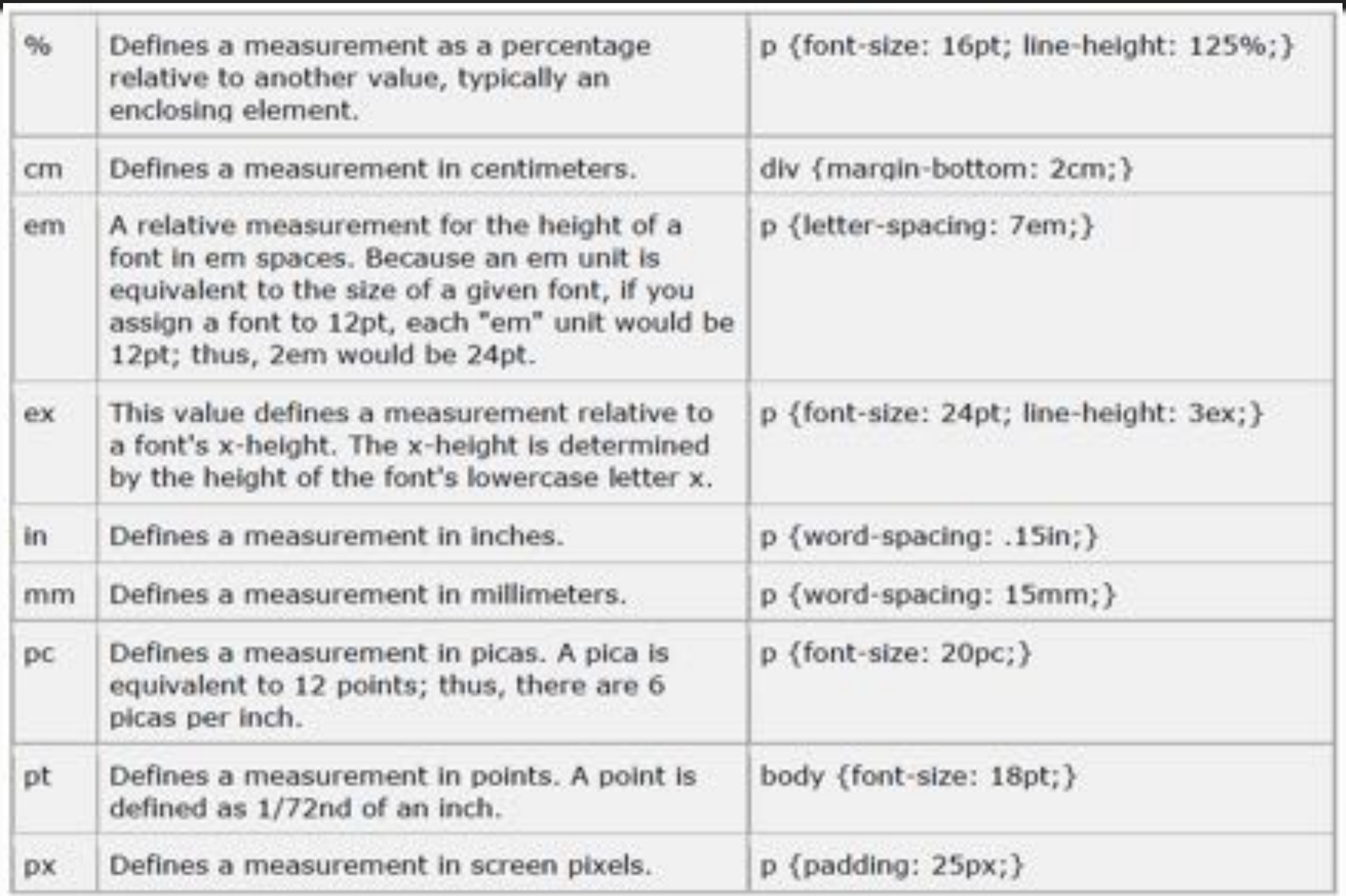
Rules CSS

- Any **INLINE STYLE SHEET TAKES HIGHEST PRIORITY**. So it will override any rule defined in <style>...</style> tags or rules defined in any external style sheet file.

- Any rule defined in <style>...</style> tags will override rules defined in any external style sheet file.

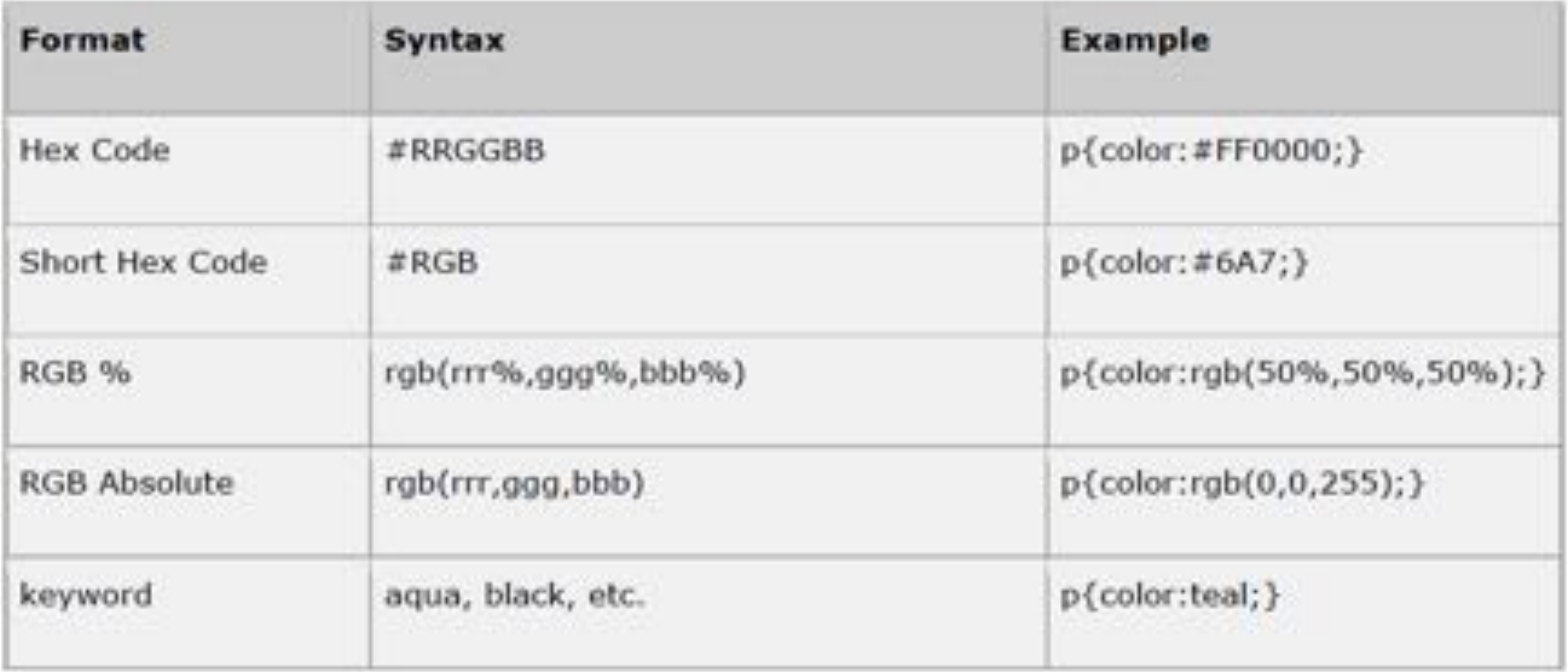
- Any rule defined in external style sheet file takes lowest priority and rules defined in this file will be applied only when above two rules are not applicable.

Attributes



%	Defines a measurement as a percentage relative to another value, typically an enclosing element.	p {font-size: 16pt; line-height: 125%;}
cm	Defines a measurement in centimeters.	div {margin-bottom: 2cm;}
em	A relative measurement for the height of a font in em spaces. Because an em unit is equivalent to the size of a given font, if you assign a font to 12pt, each "em" unit would be 12pt; thus, 2em would be 24pt.	p {letter-spacing: 7em;}
ex	This value defines a measurement relative to a font's x-height. The x-height is determined by the height of the font's lowercase letter x.	p {font-size: 24pt; line-height: 3ex;}
in	Defines a measurement in inches.	p {word-spacing: .15in;}
mm	Defines a measurement in millimeters.	p {word-spacing: 15mm;}
pc	Defines a measurement in picas. A pica is equivalent to 12 points; thus, there are 6 picas per inch.	p {font-size: 20pc;}
pt	Defines a measurement in points. A point is defined as 1/72nd of an inch.	body {font-size: 18pt;}
px	Defines a measurement in screen pixels.	p {padding: 25px;}

Colors



Format	Syntax	Example
Hex Code	#RRGGBB	p{color:#FF0000;}
Short Hex Code	#RGB	p{color:#6A7;}
RGB %	rgb(rrr%,ggg%,bbb%)	p{color:rgb(50%,50%,50%);}
RGB Absolute	rgb(rrr,ggg,bbb)	p{color:rgb(0,0,255);}
keyword	aqua, black, etc.	p{color:teal;}

References:

http://www.tutorialspoint.com/css

Homework

1) Practice using html and CSS.
2) Download Bootstrap
3) Choose your favorite Bootstrap framework. Look at the source code and email us 2 questions.

Look at the following slides for more details on each.

Practice using html & CSS

1) Try changing the parameters in the myCss.css file and see the effects it has on the page we made today. For example, try changing the background of the button, the letter spacing of the text, etc.
2) To practice and keep up with the class' speed please do the following exercises. Go to codecademy.com and log in. In your account start the course called "Make a Website" under the Web Developer Skills. Please try to complete the course to practice html and css.

Download Bootstrap

1) Go to http://getbootstrap.com/getting-started/
2) Click the “Download Bootstrap” button under the Download section. Follow the instructions to download and install Bootstrap

Framework Questions

1) Go to http://getbootstrap.com/getting-started/
2) Under the examples question click on your favorite Framework. We recommend Bootstrap Theme.
3) Go to Settings->More Tools -> Developer Tools in Chrome
4) Review the code in the “Elements” section and send Amrita and Estefania 2 questions you may have. They can be about tags, structure, usage, etc. (Email: gslmexico@mit.edu, subject: GSL Bootstrap Questions)