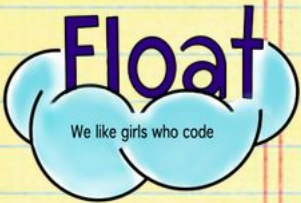


# *SHECODE* Lecture Series

Intro to Web Design and Development

Goal:

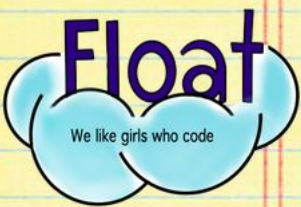
<http://goo.gl/hH63xU>



# HTML/CSS

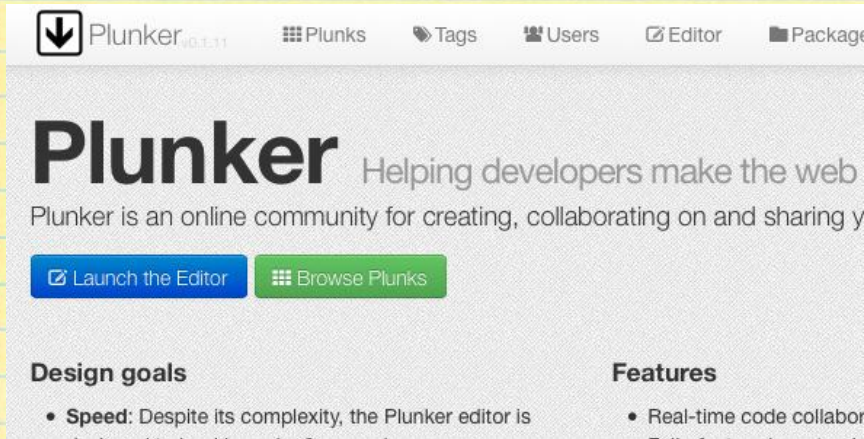
- HTML: HyperText Markup Language
- CSS: Cascading Style Sheets
- Get a Good Text Editor and Web Browser
- Make your own basic site from scratch!

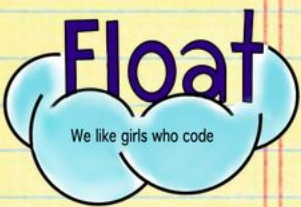




# Using a Text Editor

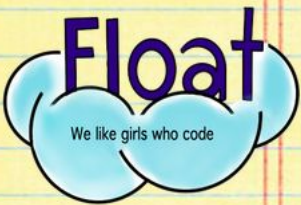
Go to Plunker: [plnkr.co](https://plnkr.co)





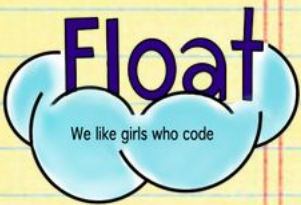
# HTML/CSS Overview





# What is a Website Exactly?

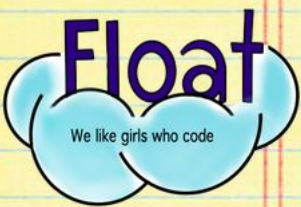
- A website is really a bunch of folders with files
- These files are written in HTML, CSS, Javascript, or a backend language (i.e. PHP, Ruby, Python, etc.)
- We are going to concentrate on the look of a website (front-end development)



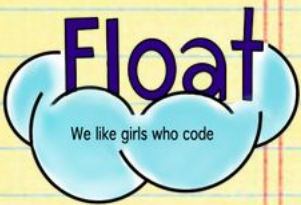
# Front-end Development

- Front-end is how to display content from server
- Interaction between three languages
  - HTML (hypertext markup language)
    - the actual content of web page ("bones")
  - CSS (cascading style sheets)
    - style of web page ("skin")
  - Javascript (a programming language, NOT Java)
    - any animations, moving things ("muscles")
- To be a true front-end web developer, you'll need to know all 3

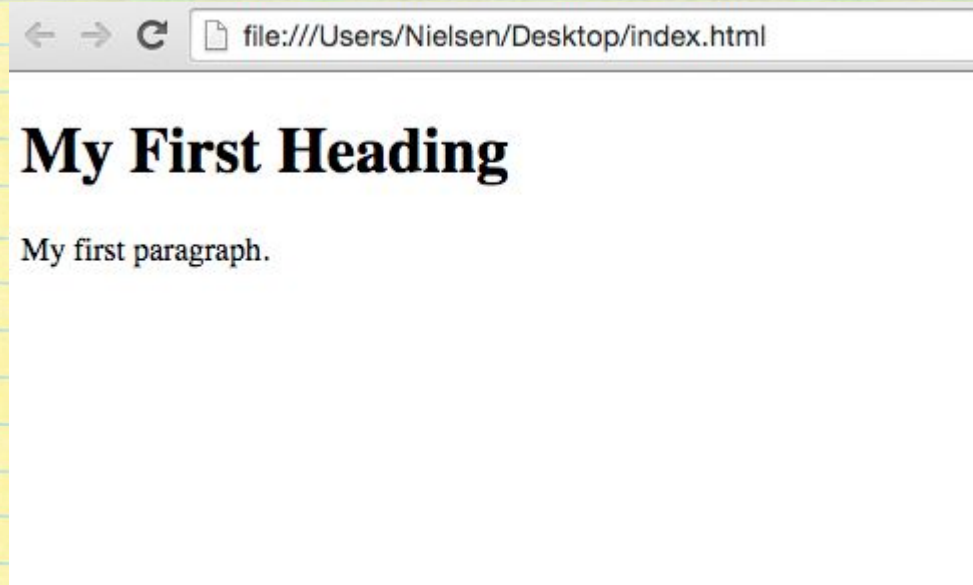




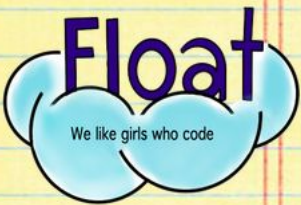
Let's see an  
example of a basic  
website



# Basic website using only HTML

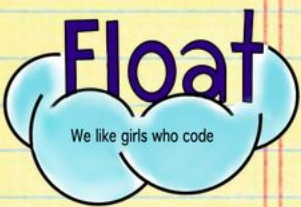






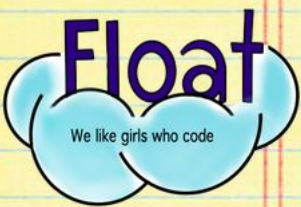
# Get this working on your computer!

- Look for the index.html file
  - Copy & paste the example code on the next slide



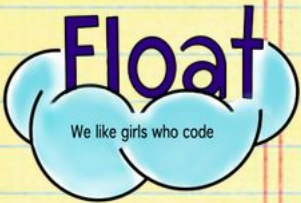
```
<!DOCTYPE html>
<html>
  <head>
    <title>My First Document</title>
  </head>
  <body>
    <h1>My First Heading</h1>
    <p>My first paragraph.</p>
  </body>
</html>
```





# Part 1: HTML

## (the basic website content)

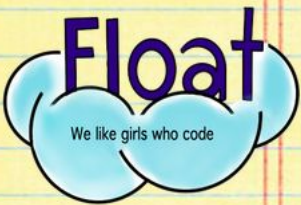


# Structure of HTML

Basic Doc (Source: [w3schools.com/html/default.asp](https://www.w3schools.com/html/default.asp)):

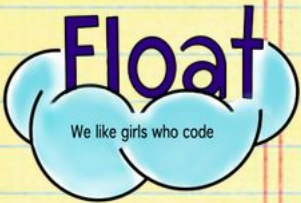
```
<!DOCTYPE html>
<html>
  <head>
    <title>My First Document</title>
  </head>
  <body>
    <h1>My First Heading</h1>
    <p>My first paragraph.</p>
  </body>
</html>
```





# What are tags?

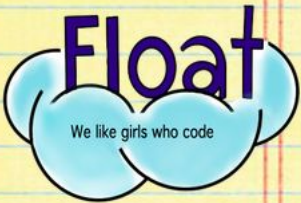
- HTML element that describes the content written between them
  - Gives content certain properties based on tagname
- Generally an opening and closing tag surround some code in the program
  - `<tagname> content </tagname>`
  - Think of tags like quotation marks, they come in pairs
- All HTML elements are surrounded by tags



# Understanding the Doc

- `<!DOCTYPE html>`
  - need this for browser to recognize file as HTML
- `<html>`
  - content in this bracket is html
- `<head>` and `<body>`
  - content for head and body of doc
- `<h1>` through `<h6>`
  - header 1, makes words big (h1 to h6 are decreasing in size)
- `<p>`
  - paragraph, puts words in section and new line

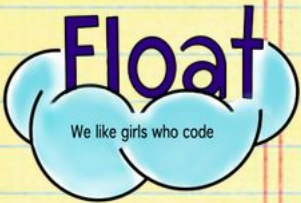




# Let's see that doc again

Basic Doc (Source: [w3schools.com/html/default.asp](http://w3schools.com/html/default.asp))

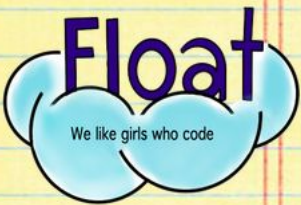
```
<!DOCTYPE html>
<html>
  <head>
    <title>My First Document</title>
  </head>
  <body>
    <h1>My First Heading</h1>
    <p>My first paragraph.</p>
  </body>
</html>
```



# More Popular Tags

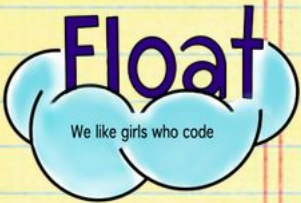
- **<div>**("division") space for content blocks of HTML
  - Use divs to Assign a section of code a class/id
  - **<div class="style1"> content </div>**
  - You can use CSS to make any div with class "style1" be however you want it (e.g. red background, size 14 font)
- **<li>**("list") list elements with bullets or numbers
  - inside <ul>("unordered list") or <ol>("ordered list")





# More Popular Tags

- `<a>` ("anchor") links to other web pages
  - `<a href="floatyale.com/about">About Float</a>`
- `<img>` ("image") shows image of link provided
  - ``
  - No words inside image, so just 1 tag instead of 2
- `</br>` ("break") empty new line
  - Also just 1 tag

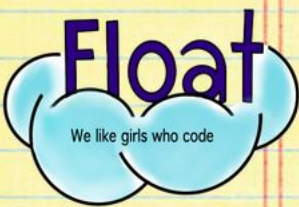


# Comments

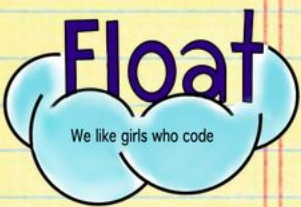
- Good practice because you WILL forget what the code you wrote represents sometimes (also allows others to read your code more easily)
- put anywhere in html file:

```
<!-- Hi, I'm a comment that won't show up in  
the browser at all because I'm awesome. -->
```





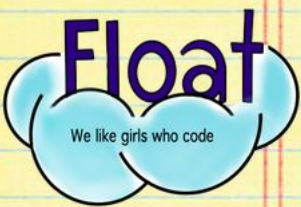
5 mins: edit your index.html  
and play around with  
different HTML tags!



# Part 2: CSS

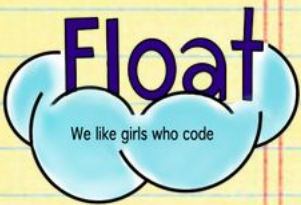
## (making your site pretty)





# My first basic website with HTML/CSS

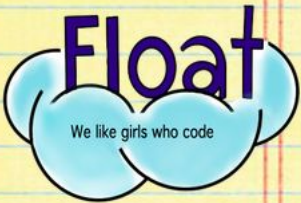




# Get this working on your computer!

- Find the file called style.css. You should have an index.html file and a style.css file.
  - Copy & paste the example code on the next slide





# Copy-paste: index.html

```
<!DOCTYPE html>

<html>

<head>

    <link rel="stylesheet" href="./style.css">

</head>

<body>

    <h1>My First Website!</h1>

    <p class = "red">This is my first paragraph, made in New Haven, CT on March
28, 2014.

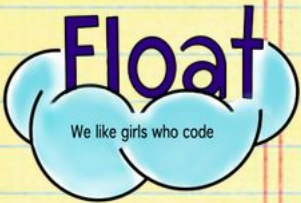
    <br> <br>

        This text is all written inside the body tag.</p>

    <p class = "blue"> This second paragraph is written in blue! How cool. </p>

</body>

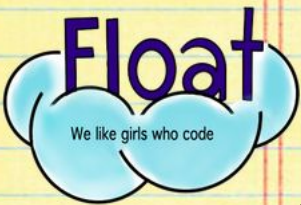
</html>
```



# Copy-paste: style.css

```
p{  
    font-size: 18px;  
    font-style: normal;  
    color: red;  
}  
  
.red{  
    font-size: 14px;  
    color: red;  
}  
  
.blue{  
    font-size: 20px;  
    color: blue;  
}
```





# How to link CSS to HTML?

- write all CSS in a separate file, the "stylesheet"
- Link to it within the head of your index.html:

```
<html>
```

```
<head>
```

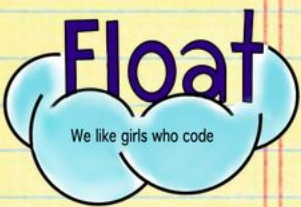
```
  <link rel="stylesheet" href="./style.css">
```

```
  <title>My First Document</title>
```

```
</head>
```

"/" means  
current working  
directory

- Since we said style.css is in the same working directory as index.html, always save the two files in the same folder!



# CSS Syntax

Selector

Property

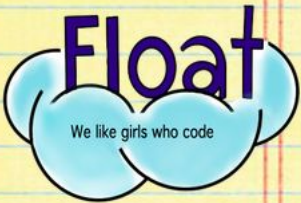
Value

```
p {  
  font-size: 14px;  
  color: red;  
}
```

Definition Block

This means every time you use the `<p>` tag in your HTML, content will be font-size 14px and color red.

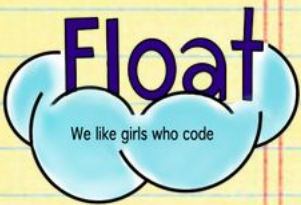




# What are CSS Selectors?

- CSS links with HTML
- Tags in HTML correspond to certain CSS selectors
- The style you write for a CSS selector will affect what's inside the tags in HTML

```
p{  
    font-size: 14px;  
    color: red;  
}
```

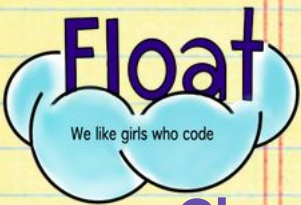


# Ways to Select HTML Elements

- By **tag name**
  - just use **p**, **img**, **div**, or whatever element name is in tag
  - usually used for global feel of site (ex. make all images have a border, make all text of site a certain font size)
- By **class or id**
  - **classes** are custom attributes given to one or more HTML elements, rather than *every* paragraph or *every* image
  - **id** is an attribute given to only one element

The CSS style you apply will affect all elements chosen by these selectors.



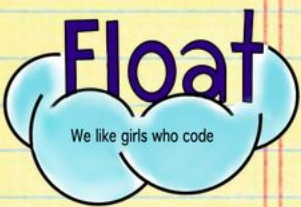


# Classes and ID Selectors

- **Classes** are for *reusable info*
    - You can use the same class on multiple elements and multiple classes on the same element
    - **name begins with “.” in CSS**
- 
- **IDs** are for *unique info*
    - Each element can have only 1 ID
    - each page can have only 1 element with that ID.
    - **name begins with “#” in CSS**

*Elements can have both an id & classes*

*Classes and IDs basically have the same functionality*



# Let's See it in Action

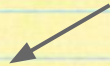
## HTML:

```
<p> Hi </p>
```

```
<div class="blue big"> from Float</div>
```

```
<div id="style1"></div>
```

Multiple classes,  
just separate with spaces!



## CSS:

```
.blue{  
    color: blue;  
}
```

```
.big{  
    font-size: 250%;  
}
```

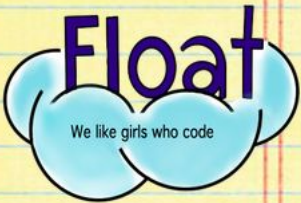
```
#style1{  
    background-color: #000000;  
}
```

Remember:

ID = "#"

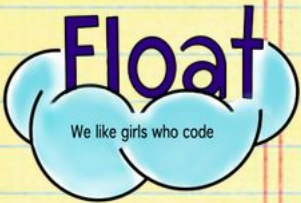
Class = "."





# CSS Selector Recap

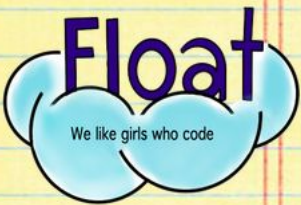
- Tag name (p, div, img etc)
  - use to define global styles
- Class (".")
  - can use on multiple elements
  - most commonly used
- ID ("#")
  - unique
  - many people discourage using this
- Top 20 selectors you should know: <http://code.tutsplus.com/tutorials/the-30-css-selectors-you-must-memorize--net-16048>



# Common CSS Styles

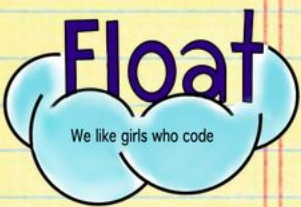
- `color`, `background-color`
  - use name (ex. red.) or hex value (ex. #FFFFFF)
- `width`, `height`, `font-size`
  - use percentage (50%) or pixel value (20px)
  - percentage is compared to current font
- `border (size, style, color)`
  - ex. `border: 1px double red;`
- Google is your friend to find the CSS style you want





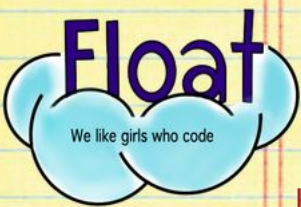
10-15 minutes: play with your HTML and CSS code in index.html and style.css and see what happens!

For a list of CSS colors,  
[http://www.w3schools.com/cssref/css\\_colornames.  
asp](http://www.w3schools.com/cssref/css_colornames.asp)



# Part 3: CSS properties (making your site *prettier*)



















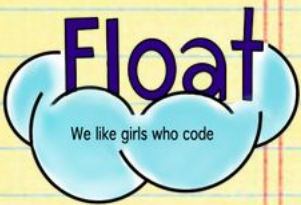
# CSS Properties

```
body {  
    background-color: #d0e4fe; OR background-img: url("www.xxx.pjpg");  
}
```

```
h1 {  
    color: orange;  
    text-align: center;  
    border-top-style: dotted;  
    border-right-style: solid;  
    border-bottom-style: dotted;  
    border-left-style: solid;  
    text-align: center;  
}
```

```
p {  
    font-family: "Times New Roman";  
    font-size: 20px;  
}
```

	Hue	Hex	Rgb
	0	#ff0000	rgb(255, 0, 0)
	15	#ff4000	rgb(255, 64, 0)
	30	#ff8000	rgb(255, 128, 0)
	45	#ffbf00	rgb(255, 191, 0)
	60	#ffff00	rgb(255, 255, 0)
	75	#bfff00	rgb(191, 255, 0)
	90	#80ff00	rgb(128, 255, 0)
	105	#40ff00	rgb(64, 255, 0)
	120	#00ff00	rgb(0, 255, 0)
	135	#00ff40	rgb(0, 255, 64)
	150	#00ff80	rgb(0, 255, 128)
	165	#00ffbf	rgb(0, 255, 191)
	180	#00ffff	rgb(0, 255, 255)
	195	#00bfff	rgb(0, 191, 255)



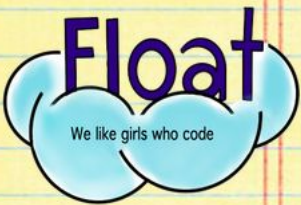
# FREE CODE! Ideas

- *Images*
- *Video*
- *Moving Backgrounds*
- *Form*

## Test Yourself!

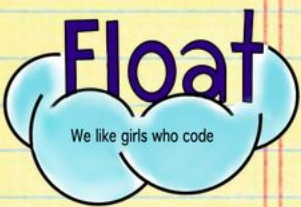
- <https://www.codecademy.com/learn>
- <https://dash.generalassemb.ly/projects>





# Resources

- Website Creation:
  - <https://dash.generalassembly.ly/projects>
  - <http://www.w3schools.com/html/>
  - <https://www.codecademy.com/learn>
  - <http://floatyale.com/lectures.php>
- US! Stay in touch
  - **Erika Hairston:** (908)403-2669 [erika.hairston@yale.edu](mailto:erika.hairston@yale.edu)
  - **Joyce Chen:**



# *SHECODE 2015*

**THANK YOU!  
Happy Coding!**