Build a Weather App

DAY 2

Introduction!

For new students and new mentors :P

Important Notes

- You **need** to know Basic HTML to continue with this workshop.
- We will be using **HTML5**, **CSS3**, and **JavaScript** for building this complete web app. But today we will be only doing **CSS3**
- This workshop will be spread across 6 parts each week from 5:30 to 7:30 in this same room (SMITH 407).
- Last week we made the HTML structure for our website, I hope everyone remembers what we did!

How many people understand CSS Grids?

Raise your hands please!

Review Last Class

Let’s get started!

<!DOCTYPE html>

- A VERY SPECIAL TAG!!!!!!!!!!!!!
- Different from other tags as neither a container tag nor an empty tag
- This tag tells the webpage that the document is an HTML5 webpage
- Even if you don’t write this right now, your code will run perfectly! But this will be important when/if you start working as a developer
- Always comes on top of the html file

<html></html>

- This wraps everything below <!DOCTYPE html>
- Everything that you want to write will come inside this!
- Will only come once in a web page!

```
<!DOCTYPE html>
<html>
    ...
</html>
```

<body></body>

- We write all the content (text, images, tables, and basically all the visible part here)
- This will come directly inside <html> tag

```
<!DOCTYPE html>
<html>
    <body> ... all visible content comes here ... </body>
</html>
```

<head></head> - NEW!!

- WE DIDN’T TALK ABOUT THIS BEFORE!!
- This will also come directly *inside <html>* tag just like ***<body>***
- Add all the scripting, styles and page description which doesn’t show up on the webpage but runs in the background.

```
<!DOCTYPE html>
<html>
    <head></head>

    <body> ... all visible content comes here ... </body>
</html>
```

Heading Tags

- Heading tags denote titles, subtitles, etc.
- Container Tag as you can add content inside this!
- There are 6 different heading tags

  <h1></h1>

  <h2></h2>

  <h3></h3>

  <h4></h4>

  <h5></h5>

  <h6></h6>

The <h1> tag is the biggest and the <h6> tag is the smallest

Paragraph Tag

- The tag is used for smaller blocks of text like paragraphs
- Generally contain multiple lines.
- Container Tag as you can add content inside this!
- For example:

  Today I am going to learn about HTML and CSS!

HTML Links / Anchor Tag / Hyperlink

- The <a> tag is used for adding links to the webpage
- **Container Tag** as you can add content inside this!
- For redirecting to a page - use ***href*** attribute (short for hyperlink reference)
- Can be either internal or external links
- For example:

  Take me to google

Image Tag

- The <**img** /> tag is used for adding images to the webpage
- **Self Closing Tag** as you don’t need to add content inside this!
- For image source - use ***src*** attribute (short for source)
- Can be either internal or external source
- For example:

  <**img** src=“**desktop/photo.png**” />

Buttons

- The <**button**> tag is used for adding buttons to the webpage
- **Container Tag** as you can add content inside this!
- For example:

  <**button**>Take me to google</**button**>

Section Tag

- The <**section**> tag is used for adding sections to the webpage
- **Container Tag** as you can add content inside this!
- This is used to separate out data and organize your website
- You will understand how useful this is as we move forward
- For now -

  Think of <section> as individual slides of this ppt and the whole presentation as your website!

- See DubsTech website
- For example:
  <**section**> ... </**section**>

Div Tag

- The <**div**> tag is used for adding divisions to the webpage
- **Container Tag** as you can add content inside this!
- Separating content which is not big enough to become a <**section**> or content inside a <**section**>
- See DubsTech website
- For example:
  <**div**> ... </**div**>

Any questions up till now?

Don’t feel shy!

CSS - Cascading Style Sheet

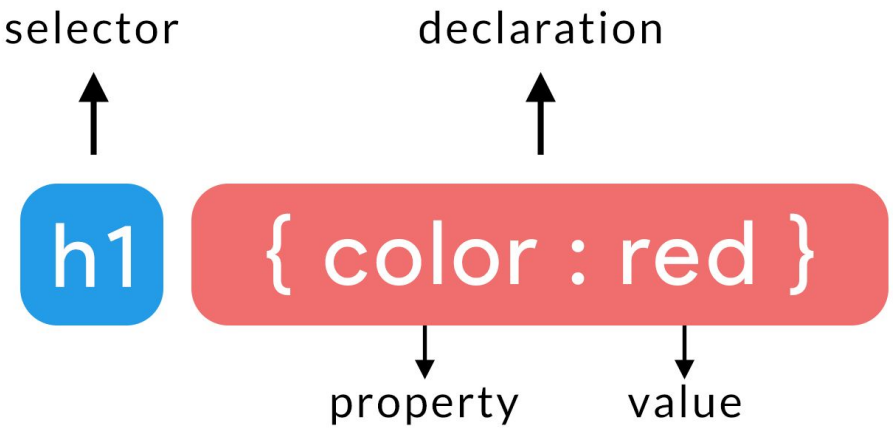
Let’s beautify it!

What is CSS?

- Short for Cascading Style Sheet
- Used for styling pages
- Latest Version is **CSS3**
- It can be implemented in different ways
- CSS is ***mostly*** case-insensitive

CSS Syntax

- First is **selector** : all the styles are applied to this.
- Second is **declaration** : what those styles are.
    - Property : what property are you changing.
    - Value : what are you changing it to.



Inline CSS

- Recall attributes!!
- Attributes are like properties to tags and **style** is also property.
- Rarely used.
- For example:

```
<p style="color : red;">This is a paragraph.</p>
```

CSS inside <head>

- We use <**style**></**style**> tag
- How do we use this:

```
<head>
    <style>
        p {
            color : red;
        }
    </style>
</head>
```

Separate CSS file

- For longer CSS and for extensive websites we love to keep the structuring and styles separately
- We do this by creating a new **.CSS** file and linking that with our **.HTML** file
- For linking these two files we use <**link** /> tag -

  <**link** **rel**="**stylesheet**" **type**="**text/css**" **href**="**style.css**" />
- After linking you can write it in the same way you wrote inside the style tag.

Height and Width

- There are many different measurements for height and width
- Rem, em, px
- When to use rem vs em vs px
- Short summary of above article: don't use px because it's not accessible. Read above article to find out more
- p {
    - width : 150em;

      height: 500em;

  }

Other Common Properties - Color

- Used to specify color of an element
- Can be passed a hex code
  - A hex code is a way of representing a color. Ex: #4263f5 is a blue
  - Check out Google color picker to play with hex codes
  - Mix and match with digits from 0 to 9 and alphabets from a to f (must be 3 or 6 character long)
- Can also be passed as an rgb value, but hex codes are more commonly used.
- Example -

```
p { color : red; }
```

Other Common Properties - Font

- Broadly used to specify font properties.
- Fonts like ***Arial*** and ***Times New Roman*** are common fonts.
- Example -

```
p { font : 15px arial, sans-serif; }
```

- But this is not the easiest way to add fonts. We can further specify individual font properties.
- Example -

```
p {
        font-size : 15px;
        font-family : arial, sans-serif;
}
```

Other Common Properties - Background

- Broadly used to specify background properties.
- Example -

```
p { background : white url("img.png") repeat left bottom; }
```

- But this is not the easiest way to add background.
- Example -

```
p {
        background-color : white;
        background-image : url("img.png");
        background-repeat : repeat;
        background-position : left bottom;
}
```

Any questions up till now?

Don’t feel shy!

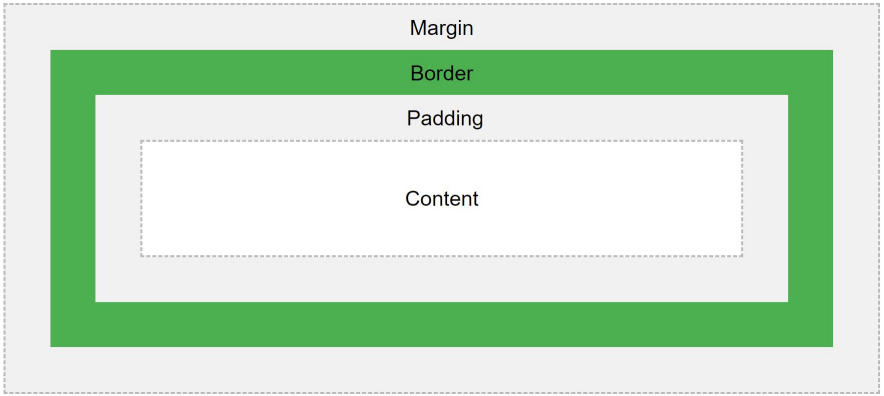
Let’s Practice a Little Bit!

Wohooo! Coding Time

Open exercises folder > exercise-1 folder into VS Code and read the prompt in the .html file

CSS Box Model

- The CSS Box model is essentially a box that wraps around every HTML element. It consists of:
  - Margin clears area around the **border**, making that area transparent
  - Border, a border that is between padding and margin
  - Padding, clears area around the **content**, making that area transparent
  - Content, the content of the HTML itself.



Margin

- Margin is the outermost layer of space from an element

```
p {
        margin-left : 10px;
        margin-right: 10px;
        margin-top: 10px;
        margin-bottom: 10px;
}
```

Border

2nd outermost space from element

```
p {
    border-left : 10px;
    border-right: 10px;
    border-top: 10px;
    border-bottom: 10px;
}
```

Padding

Innermost spacing on an HTML element

```
p {
    padding-left : 10px;
    padding-right: 10px;
    padding-top: 10px;
    padding-bottom: 10px;
}
```

HTML classes

- Classes are properties that you can give an HTML element
- They are case-sensitive.
- Ex: </box>

What do classes do?

- On their own classes don’t do anything
- Classes are useful though because they allow you to group HTML elements and apply a collective style

```
.apple { /* notice how there is a . in front of apple!
        padding-left : 10px;
        padding-right: 10px;
        padding-top: 10px;
        padding-bottom: 10px;
}
```

HTML Ids

- Ids are similar to classes except that ids must be unique - two elements cannot have the same id
- They are case-sensitive.

```
#apple { /* notice how there is a # in front of apple!
        padding-left : 10px;
        color: 10px;
}
```

The display property

- The display property can take a couple of values
- Some notable ones are block, inline, block-inline
- Inline vs block-inline
- Other useful display properties are hidden and none

```
div {
        display: inline;
}
```

Flexbox

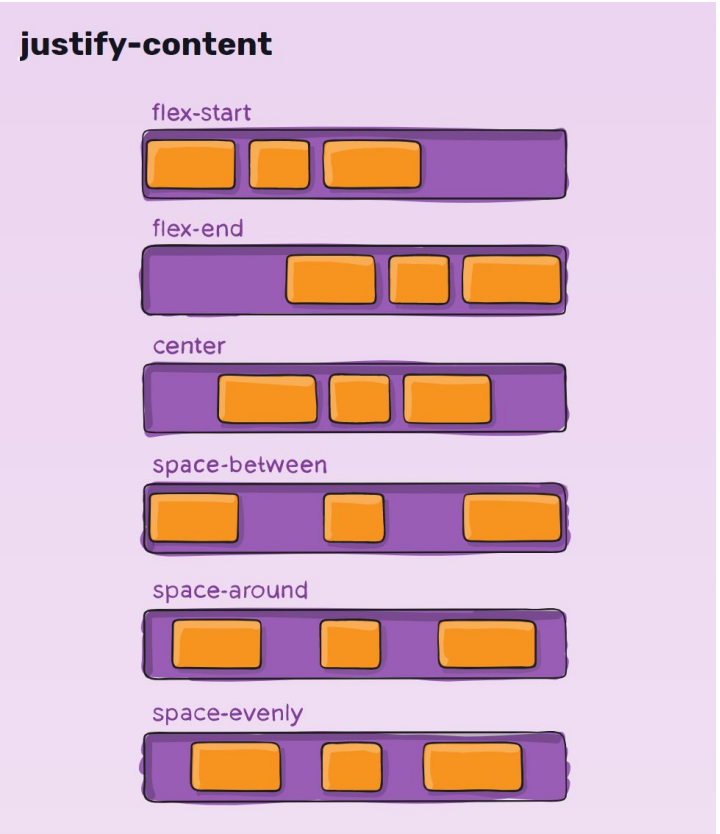
- Flexbox is a term used to describe elements with the property display:flex
- A flexbox is a unique way of displaying elements and can come in handy in a lot of situations
- Make a flexbox using the display property
- Every child element of a flexbox will become a flex item

```
div {
        display: flex;
}
```

Flexbox - Justify Content

The justify-content property is used to

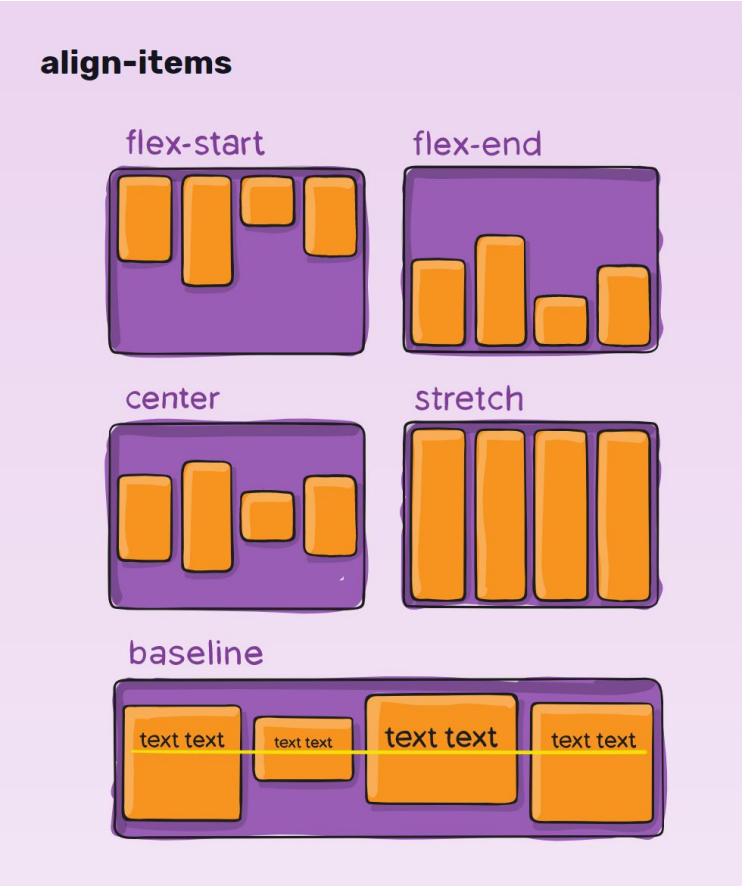
align items horizontally



Flexbox - align-items

Used to align elements vertically

in the container



More on flexbox

- An element is made into a flex box by specifying **display:flex**
- **flex-direction** - direction that elements go
- **flex-wrap** - whether or not to wrap elements once they reach the end of the container
- **flex-basis** - what percentage of the container should a certain flex element take up
- Read more about Flexbox on CSS Tricks
- Practice on Flexbox Froggy

Pseudo-selectors

- Pseudo-selectors allow us to specify a style only when a certain event occurs
- Ex we can use the :hover pseudo-selector to make an element red only when a user hovers over it
- Ex:

```
p:hover {
        background-color : red;
}
```

Open exercises folder > exercise-2 folder > open the html file in your browser and CSS file in VS Code. Now find the secret msg!

Let’s get back to our app now!

Finally!

Writing Code!

Follow Along!

That’s a lot for a day!

I think we should rest up a bit!