

Series: Web Application Dev in 5 days

September, 2022



Lesson 1: Frontend - HTML

Code version control using Git ([etechdev-precourse](#), 15-30 mins)



Activities

- The general concept behind WWW
- Structure of a web document
 - Fundamental tools (HTML, CSS, optional JS)
 - Declarations
 - Basic tags
- Create your first web document
 - Basic tags
 - Other tags
- Add new files to repo & push

Resources

- [Resources to learn HTML](#)
- [Resources to learn CSS](#)
- [Resources to learn JavaScript](#)

Learning Objectives

At the end of this project, you are expected to be able to explain to anyone, without the help of Google.

Generally:

- The www and how it works
- The key technologies used in building web pages which all web developers must learn
- Basic layout of a web document
- Basic HTML tags
- Write HTML documents with static content
- Add a new source file to a git repo and push

Tools

- GitHub Account
- Visual Studio Code
- Terminal
- HTML

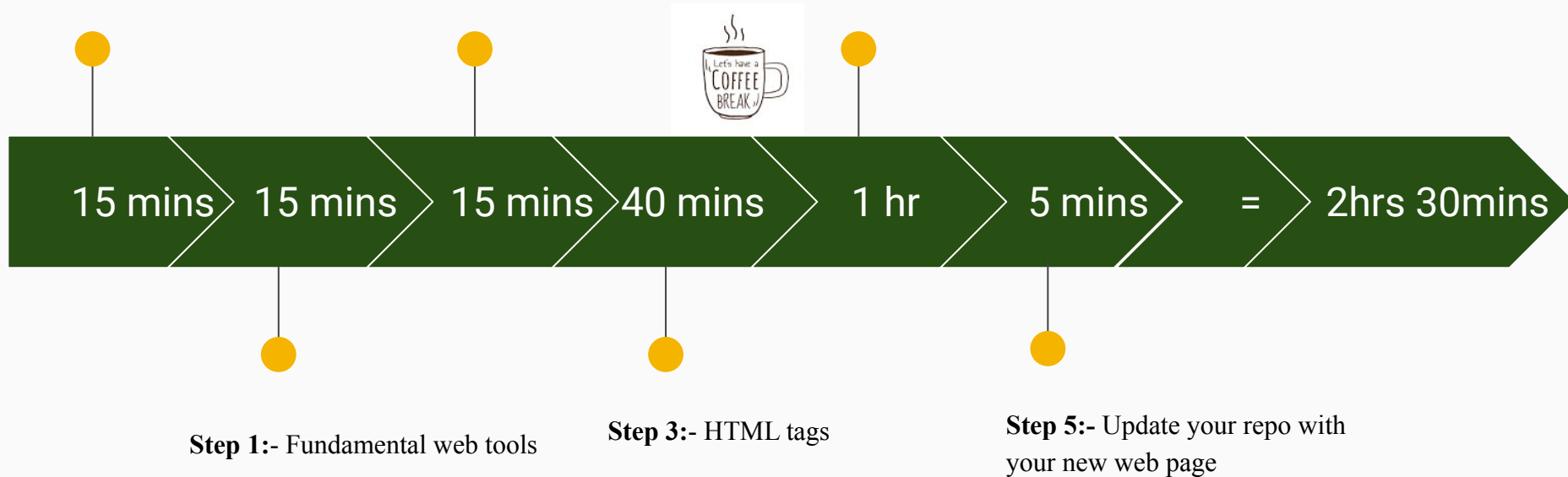


Procedure

Step 0:- www and how it works

Step 2:- Declaring a web document

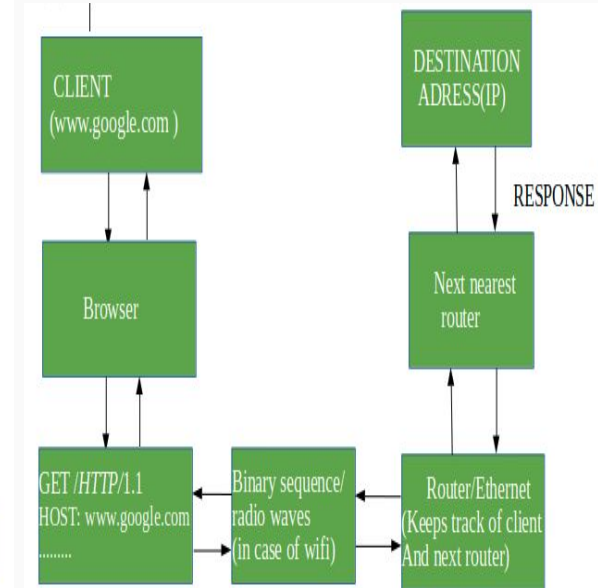
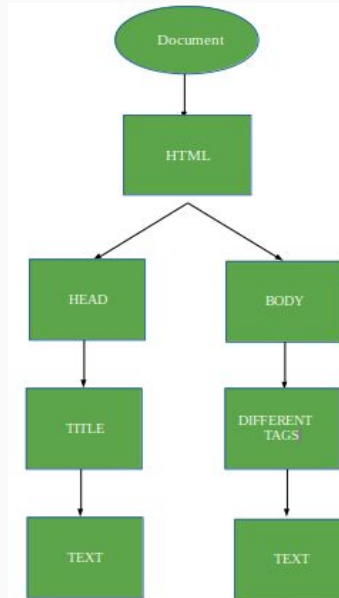
Step 4:- Your first web page



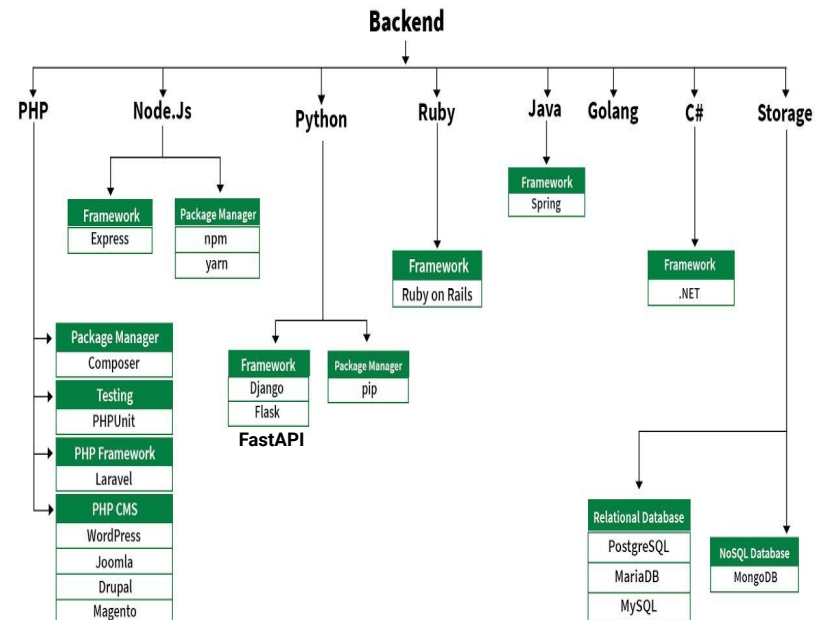
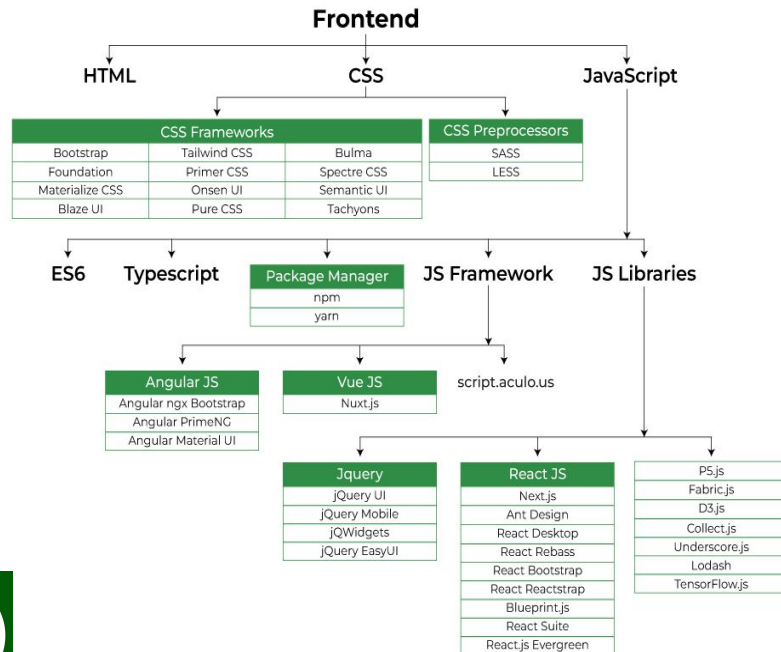
Step 0 - How **www** works (15 mins)

The World Wide Web is based on several different technologies: Web browsers, Hypertext Markup Language (HTML) and Hypertext Transfer Protocol (HTTP). A Web browser is used to access web pages. Web browsers can be defined as programs which display text, data, pictures, animation and video on the Internet.

- Client (User's browser URL to Network Cables & Router in binary)
- Internet vs Web (binary sent with destination address, DNS resolves to the server machine's address)
- Server (Decodes the request made then replies with the document's content which at client it gets decoded and displayed on browser)

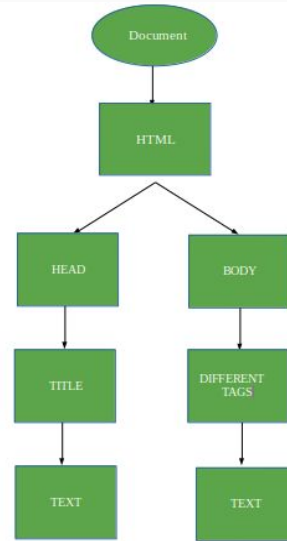


Step 1 - Fundamental Web Tools (15 mins)



Step 2 - Declaring a web document (15 mins)

- DOCTYPE Declaration
- HTML tag
- Head
 - Title
- Body
 - header
 - footer
- Open a text editor like VS Code
 - Create a file index.html and save inside the etechdev-precourse folder
- Type the code you see on the image on the right and save with Ctrl + S
- Then open file explorer and open the code with Chrome or Firefox browser.



```
<!DOCTYPE html>
<html>
<head>
<title>Page Title</title>
</head>
<body>

<h1>This is a Heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

Step 3 - HTML Tags (40 mins)

HTML tags are the fundamental building blocks of web pages.

- Meta info
- Programming

They are group into the various categories

- Basic HTML tags
- Formatting tags
- Forms and input tags
- Frames
- Images
- Audio/Video
- Links
- Lists
- Tables
- Styles and semantics

Basic HTML

Tag	Description
<u><!DOCTYPE></u>	Defines the document type
<u><html></u>	Defines an HTML document
<u><head></u>	Contains metadata/information for the document
<u><title></u>	Defines a title for the document
<u><body></u>	Defines the document's body
<u><h1> to <h6></u>	Defines HTML headings
<u><p></u>	Defines a paragraph
<u>
</u>	Inserts a single line break
<u><hr></u>	Defines a thematic change in the content
<u><!--...--></u>	Defines a comment



Step 4 - Your first web page (1 hr)

1. Hello World!
2. About Me

- Home
- Staff Marketplace
- Signup
- Login
- Help



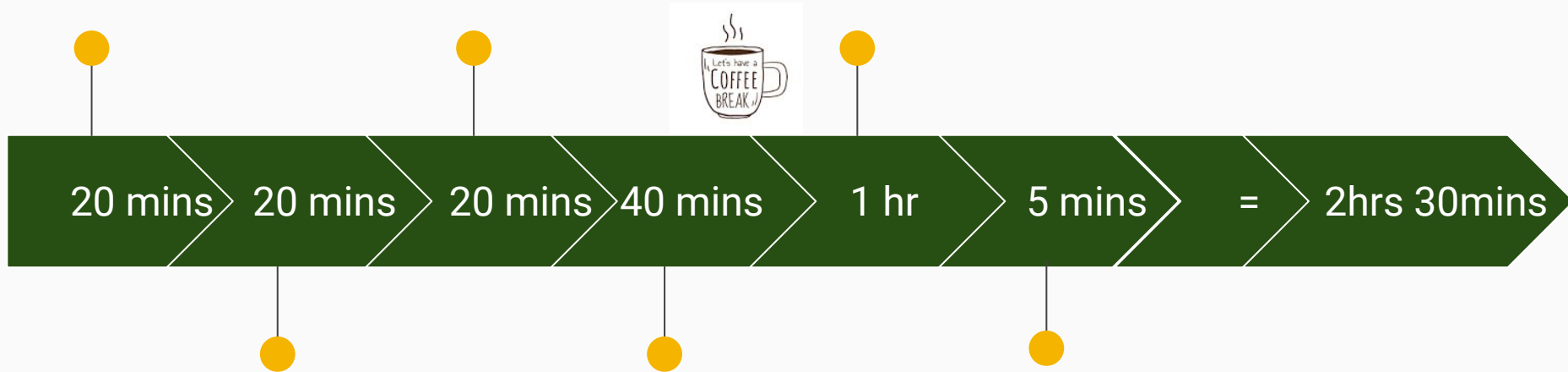
CSS (Cascading Stylesheet)



Step 0:- CSS Intro (Inline, internal & external)

Step 2:- Selectors

Step 4:- Box Model, Style a page



Step 1:- Syntax

Step 3:- Borders, Margins, Padding, backgrounds, colors, position, Height/Width, Borders, Outline, Fonts, Texts, Icons, Tables, Float, Overflow,

Step 5:- Update your repo with your new web page

Step 0 - CSS Introduction

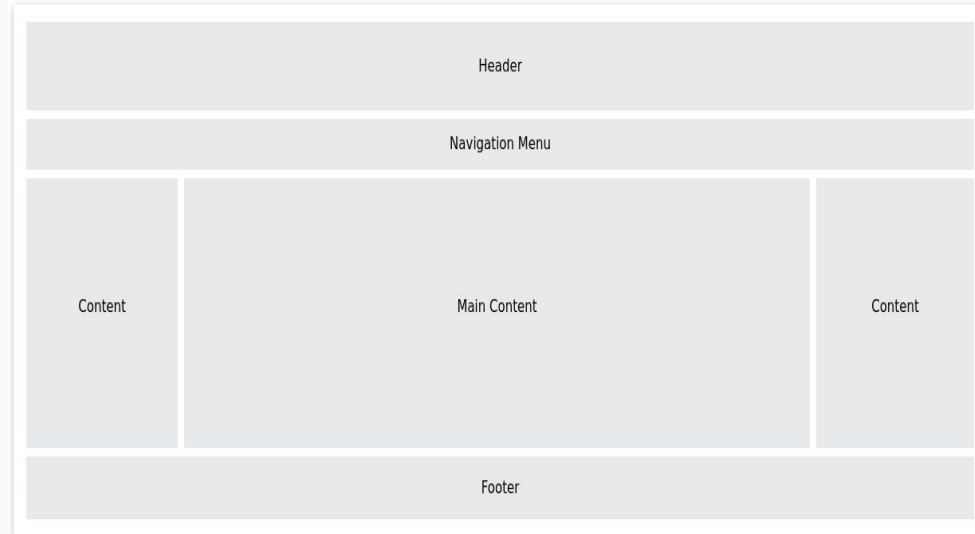
- CSS is the language we use to style a Web page.

What is CSS?

- CSS stands for Cascading Style Sheets
- CSS describes how HTML elements are to be displayed on screen, paper, or in other media
- CSS saves a lot of work. It can control the layout of multiple web pages all at once
- External stylesheets are stored in CSS files, with a .css file extension

Website Layout

A website is often divided into headers, menus, content and a footer:



Step 0 - CSS Introduction

There are three ways of inserting a style sheet:

- External CSS
- Internal CSS
- Inline CSS

External CSS

With an external style sheet, you can change the look of an entire website by changing just one file!

Each HTML page must include a reference to the external style sheet file inside the `<link>` element, inside the head section.

```
<!DOCTYPE html>
<html>
<head>
<link rel="stylesheet" href="mystyle.css">
</head>
<body>

<h1>This is a heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

```
body {
  background-color: lightblue;
}

h1 {
  color: navy;
  margin-left: 20px;
}
```

Step 0 - CSS Introduction

Internal CSS

An internal style sheet may be used if one single HTML page has a unique style.

The internal style is defined inside the `<style>` element, inside the head section.

```
<!DOCTYPE html>
<html>
<head>
<style>
body {
  background-color: linen;
}

h1 {
  color: maroon;
  margin-left: 40px;
}
</style>
</head>
<body>

<h1>This is a heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

Step 0 - CSS Introduction

Inline CSS

An inline style may be used to apply a unique style for a single element.

To use inline styles, add the style attribute to the relevant element. The style attribute can contain any CSS property.

```
<!DOCTYPE html>
<html>
<body>

<h1 style="color:blue;text-align:center;">This is a heading</h1>
<p style="color:red;">This is a paragraph.</p>

</body>
</html>
```

Step 1 - CSS Syntax

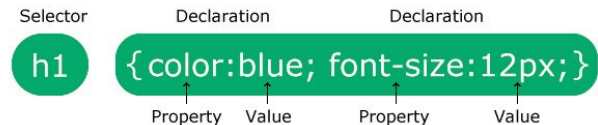
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A CSS rule consists of a selector and a declaration block.

- The selector points to the HTML element you want to style.
 - The declaration block contains one or more declarations separated by semicolons.
 - Each declaration includes a CSS property name and a value, separated by a colon.
 - Multiple CSS declarations are separated with semicolons, and declaration blocks are surrounded by curly braces.
- CSS Syntax**



Step 2 - CSS Selectors

A CSS selector selects the HTML element(s) you want to style.

We can divide CSS selectors into five categories:

- Simple selectors (select elements based on name, id, class)
- Combinator selectors (select elements based on a specific relationship between them)
- Pseudo-class selectors (select elements based on a certain state)
- Pseudo-elements selectors (select and style a part of an element)
- Attribute selectors (select elements based on an attribute or attribute value)

- The CSS element Selector (tag name)
- The CSS id Selector (#)
- The CSS class Selector (.)
- The CSS Universal Selector
- The CSS Grouping Selector

All CSS Simple Selectors

Selector	Example	Example description
<u>#id</u>	#firstname	Selects the element with id="firstname"
<u>.class</u>	.intro	Selects all elements with class="intro"
<u>element.class</u>	p.intro	Selects only <p> elements with class="intro"
<u>*</u>	*	Selects all elements
<u>element</u>	p	Selects all <p> elements
<u>element.element...</u>	div, p	Selects all <div> elements and all <p> elements



Congratulations!

Good job!

You have written your first HTML and CSS code, you rock! Now we will do more CSS and get into JavaScript in the next session.

You can now check your repository on GitHub to see if everything is good.

