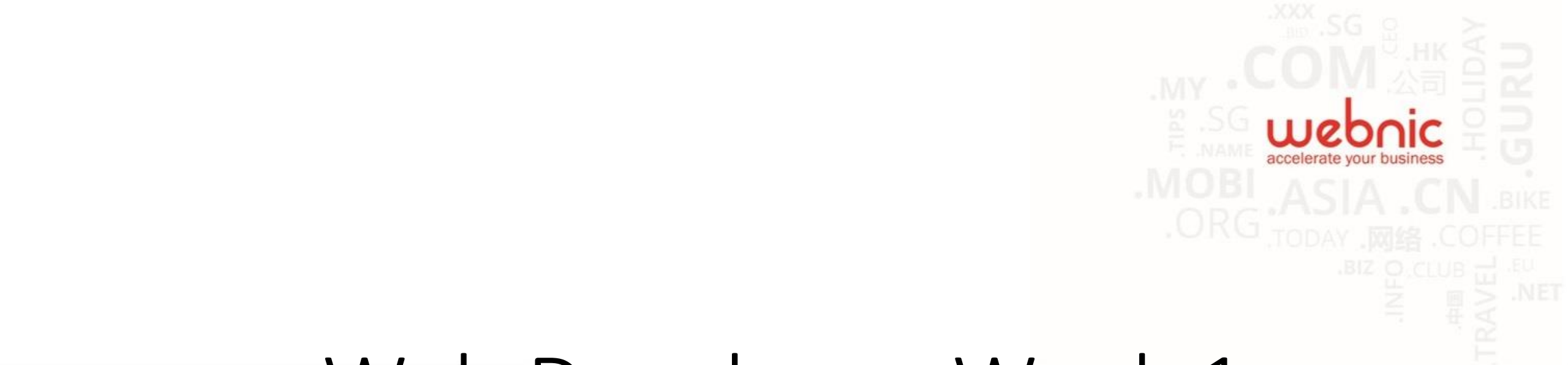


Web Developer Week 1

Introduction to Course Outline, Internet, Development Tools, HTML, CSS & GIT Repository

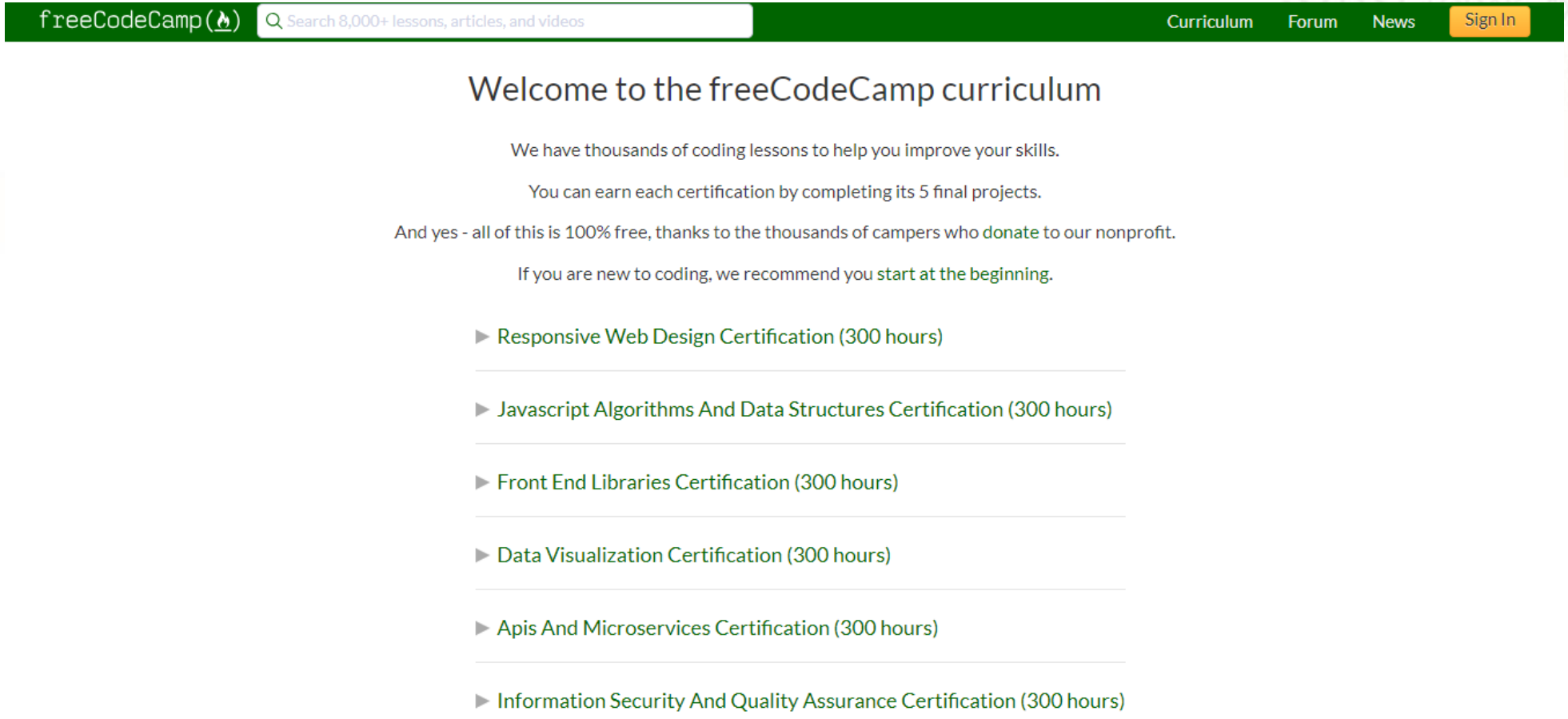
Course Outline

- Introduction to HTML, CSS & Git Repository
- Basic HTML & CSS
- Advance HTML & CSS
- Introduction to JavaScript
- Deep Dive into JavaScript
- Advance JavaScript
- Introduction to JQUERY & Bootstrap
- Final Project

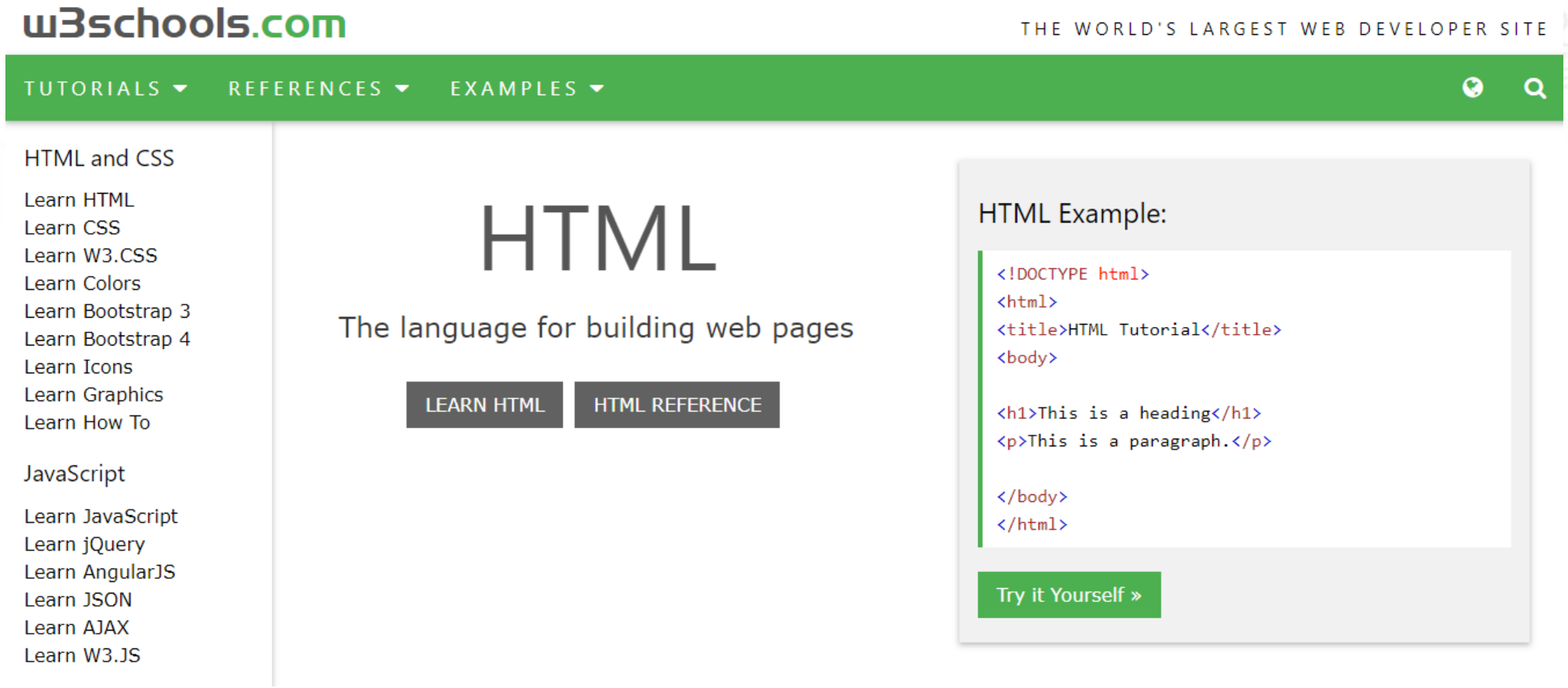
Course Structure

- Lecture time – Learn a new thing
- Let’s code – Practice what you have learn
- Exercise – Practice according to given online module
- Final Project – Build a storefront and present it.

Continuous Online Learning



Your Reference When You Are Alone



Your Reference When You Are Alone

Troubleshooting

1. Read the error
2. Search from Google
3. Ask friends
4. Meet new friends stackoverflow


Let's Get Started

What is Internet & WWW

- A giant collection of documents, or pages, stored on computers around the globe.
- It represents a wealth of text, images, audio, and videoavailable to anyone with a computer and an Internet connection.

What is HTTP

- set of rules that determine how browsers should request Web pages and how server computers should deliver them. Having agreed-upon protocols allows seamless communication among the many different types of computers that connect to the Internet.

What is Servers

- Server is a computer program or a device that provides functionality for other programs or devices, called "clients".

Server

A Computer stored all the HTML, CSS, JS, etc..

Hey, show me the homepage

Here you go

HTML, CSS, JS, etc…

Client

Your Google Chrome

What is Web & Application Server

- Web Server
  - A computer that stores and sends (serves) requested Web pages and other files.
  - Any computer that has Web server software installed and is connected to the Internet can act as a Web server.
  - E.g: APACHE, Microsoft IIS, Nginx, …
- Application Server
  - Application software is computer software designed to perform a group of coordinated functions, tasks, or activities for the benefit of the user.
  - Usually is where the “backend” live.
  - Not necessary to connect internet.
  - E.g: Tomcat

User Agent

- Retrieves, renders and facilitates end user interaction with Web content.
- So called “Browser”. But not limited to that only.
  - E.g. Facebook App act as user agent to help you browse those links shared in FB.

How Static page is loaded

Web Server

HTML,
CSS, JS,
etc…

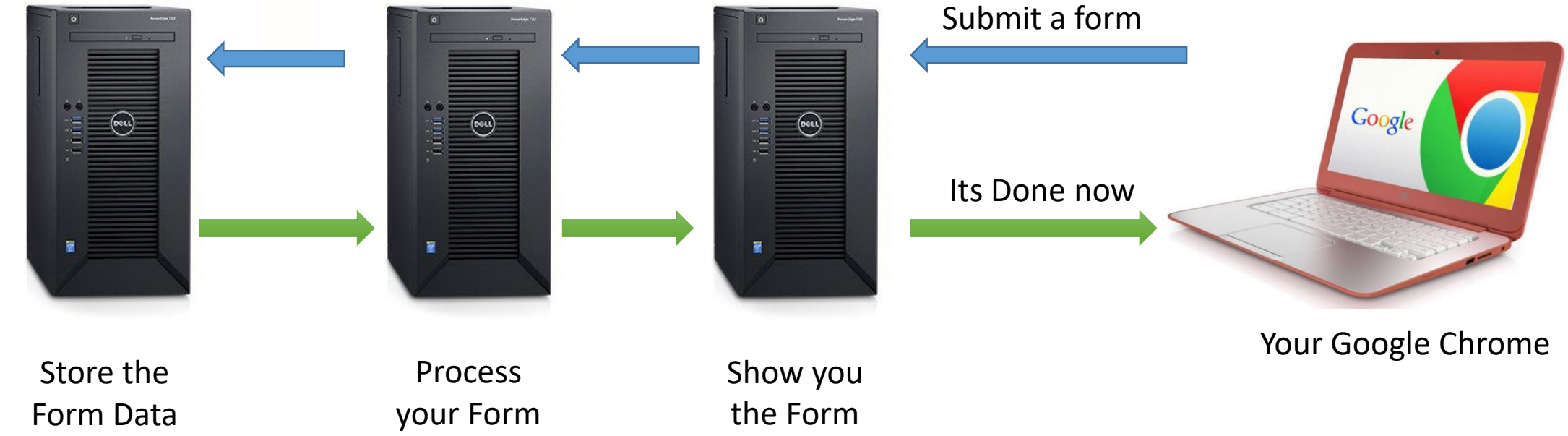
Hey, show me the homepage

Here you go

Client

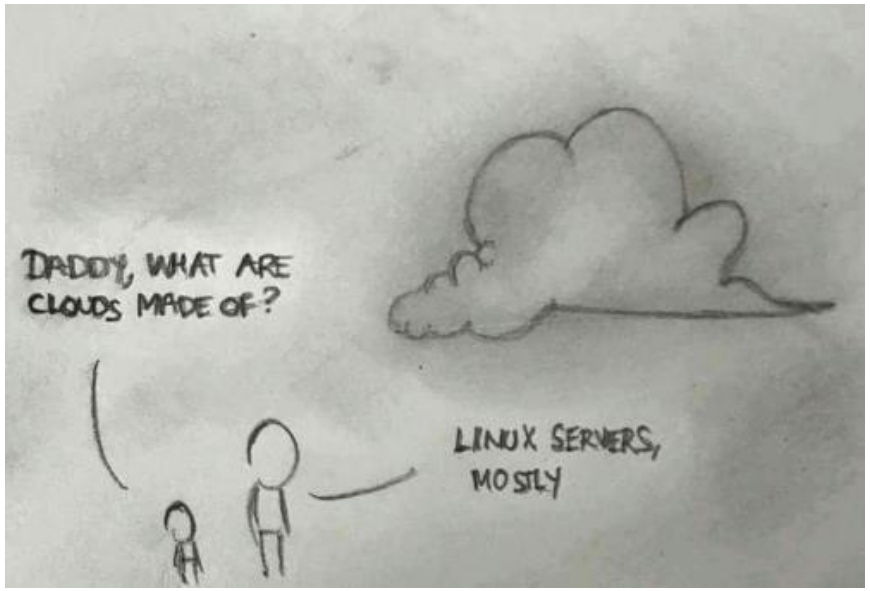
Your Google Chrome

How Dynamic page is loaded



What is cloud

- Cloud computing is shared pools of configurable computer system resources and higher-level services that can be rapidly provisioned with minimal management effort, often over the Internet. Cloud computing relies on sharing of resources to achieve coherence and economies of scale, similar to a public utility.
- Made of a bunch of computer.



Text Editor

- Simple Text Editor
  - Simple text editors, also called plain-text editors, are easy to find. Microsoft Windows Vista comes with Notepad, while Apple Mac computers come with TextEdit.
  - Notepad
- Advance Text Editor
  - A text editors come with word processing.
  - Notepad++, Visual Studio Code, Sublime, etc…

Online IDE

- Codepen
- JSFiddle

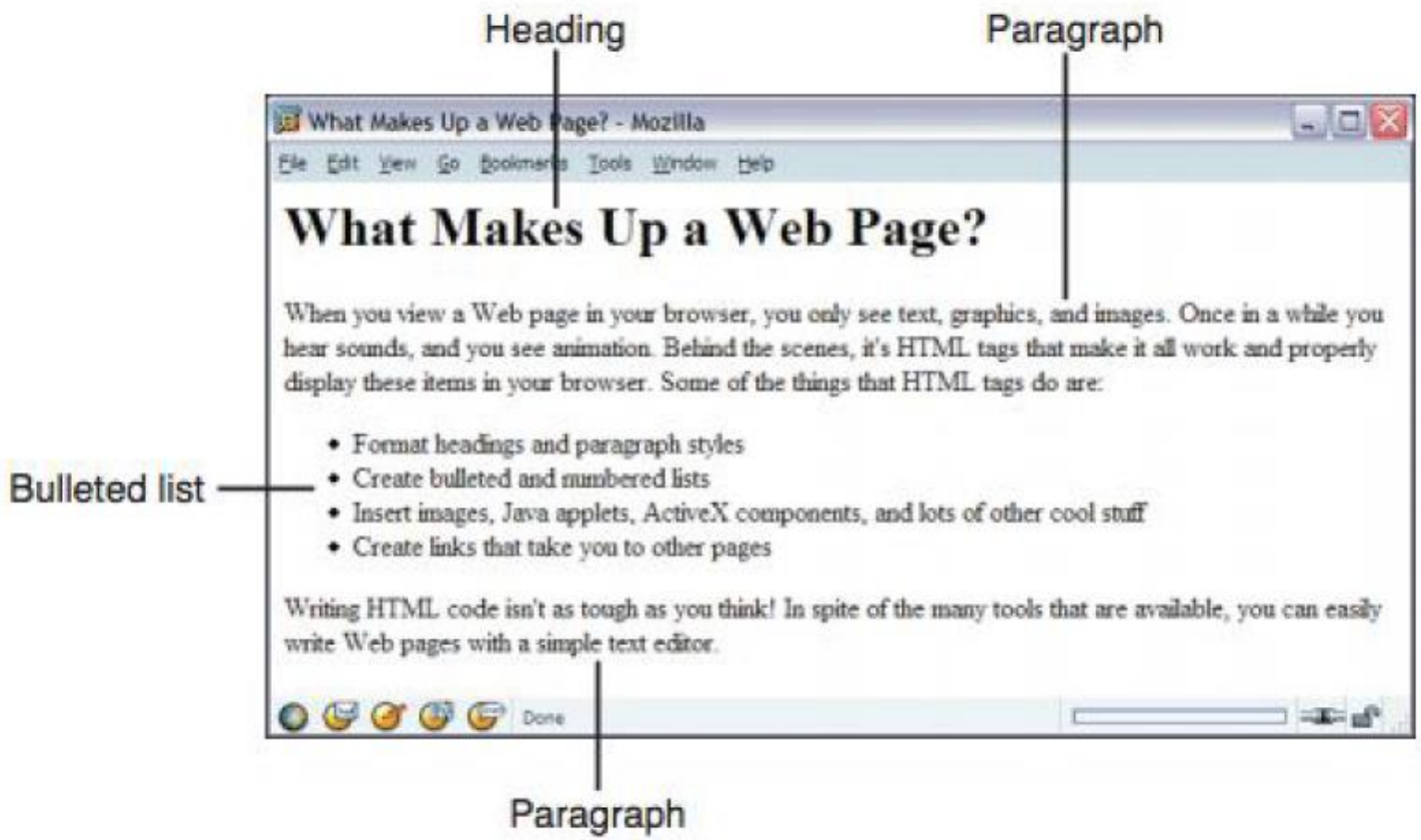
Introduction to HTML

HTML
tags

What is HTML?

- *Hyper Text Markup Language*, or HTML, is the basic code that makes up the foundation of every website on the World Wide Web
- It is used for marking up text and other page content, and for defining how a web page is structured.
- It is however not responsible for how the element is styled. This will be done by CSS.

A HTML without CSS



What is CSS?

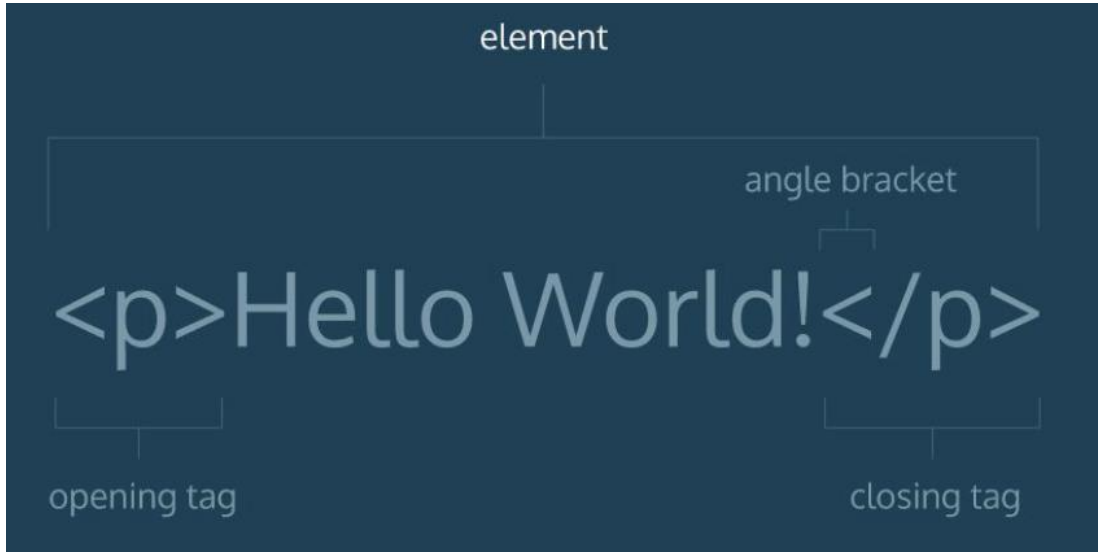
- CSS, stands for *Cascading Style Sheet* is a document to describe how HTML elements are to be displayed on screen, paper, or in other media.
- It is used to define the style for your web pages, including the design, layout and variations in display for different devices and screen sizes.
- With the introduction of CSS, the style definitions are normally saved in external .css files. The look of an entire website by changing just one file!

HTML
(no CSS)

HTML + CSS

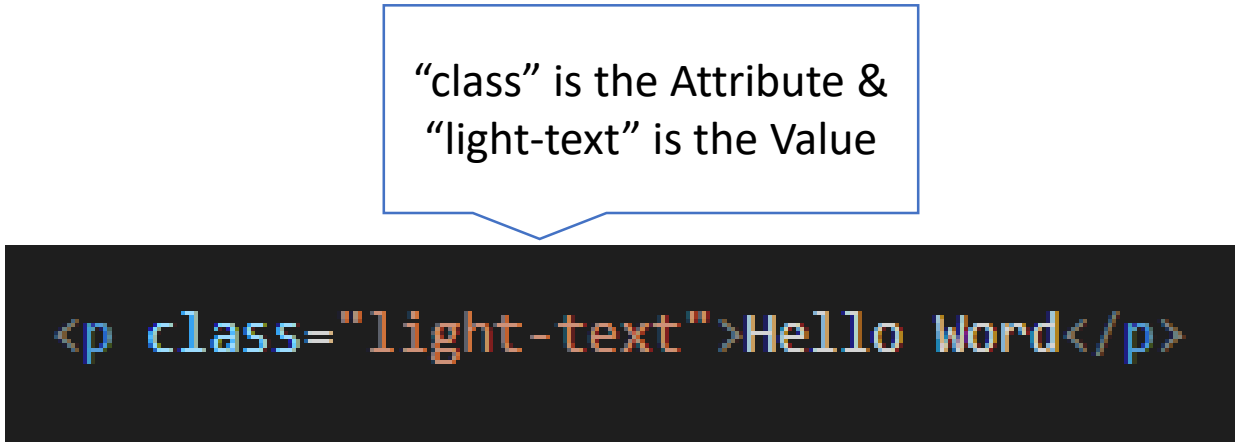
HTML Tag Structure

- HTML tags determine how page content is organized and formatted.
- It consists of words or abbreviations surrounded by angle brackets, < >.
- Normally come **in pairs** like and
- The first tag in a pair is the **start tag,** the second tag is the **end tag**



Attributes and Values

- You can assign specific attributes to each HTML tag to customize its behavior.
- Most attributes work by setting a numeric or descriptive value.



Avoiding syntax error

- Important to proofread your code!
- Make sure your tags have brackets, your closing tags include a slash, and your attribute values are surrounded by quotation marks.
- Multiple HTML tags should be properly nested, meaning your closing tags should be in the reverse order of the opening tags.
- To help make your HTML readable, consider using new lines to type code instead of running everything together on one long line. Doing so will not affect how your page is displayed, because Web browsers ignore extra white space.

Let’s Code

Try It: Your first code!


```
<!DOCTYPE html>
<html lang="en">
<head>
        <meta charset="utf-8"/>
        <title>Hello, world</title>
</head>
<body>
        <h1>Hello, World</h1>
</body>
<html>
```

Structure Tags

Tags	Function
<!DOCTYPE>	Indicates the version and type of HTML used; may include a URL reference to a DTD
<html> </html>	Indicates the start and end of an HTML document
<head> </head>	Indicates the start and end of a section of the document used for the title and other document header information
<meta />	Indicates hidden information about the Web page
<title></title>	Specifies a title for the document. You may see the title on your browser.
<body></body>	Specifies the visible page content. Between these elements are where you will start to code your website.

Basic HTML Tags

Tags	Function
<h?></h?>	Indicates the start and end of the text section called a heading; sizes range from through.
	Indicates the start and end of a new paragraph;
<hr />	Inserts a horizontal rule
 	Inserts a line break at the point where the tag appears
	To emphasize & bold the text.
 ---------- 	Listing
<a>	Link

Try it: Heading

<h1>This is a Main Heading</h1>

<h2>This is a Level 2 Heading</h2>

<h3>This is a Level 3 Heading</h3>

<h4>This is a Level 4 Heading</h4>

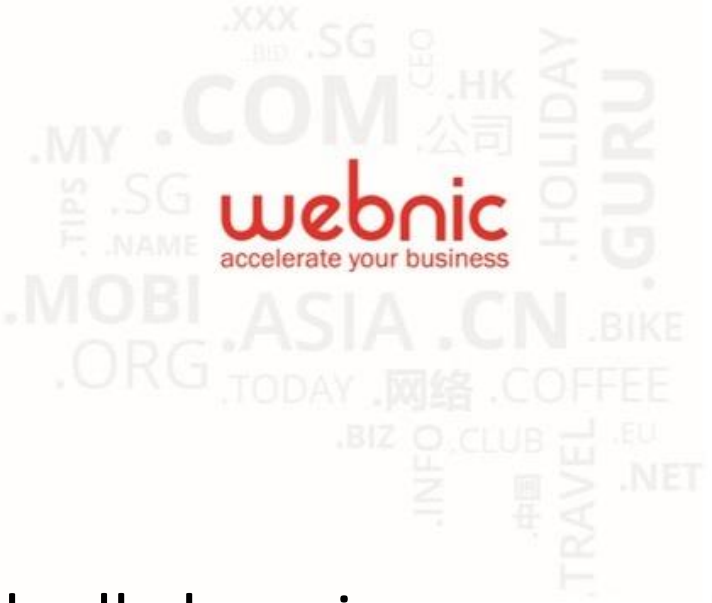
<h5>This is a Level 5 Heading</h5>

<h6>This is a Level 6 Heading</h6>

Paragraph

- We may use paragraph tags to start new paragraphs in an HTML document.
- In a word processing program, you press Enter or Return to separate blocks of text.
- Web browsers do not read these line breaks. Instead, you must insert a <p> tag in your HTML any time you want to start a new paragraph in your Web page.

Try it: Paragraph




```
<body>
<p>Hello and welcome to my site!
This is my first test so please make allowances; I'm gradually learning
how it works.</p>
<p>For the time being it's a bit empty, but come back in 2 or 3 days
once
I've learned a few more things and I can assure you that you'll be
surprised!</p>
</body>
```

Listing

- Ordered listing

```
<ol>
    <li>Limes</li>
    <li>Tortillas</li>
    <li>Chicken</li>
</ol>
```

- Unordered listing

```
<ul>
    <li>Limes</li>
    <li>Tortillas</li>
    <li>Chicken</li>
</ul>
```

Link

- We use anchor tag **<a>** to create a link in HTML.
- We will need two things:
  - The name of the file (or the URL) to which you want to link
  - The text that will serve as the clickable link

Try it : Link


```
<a href="http://www.webnic.cc">Visit our website</a>
```

Link target attribute

- **target** attribute when being specified to a link will open the link in new window.
- You specify the **target** attribute to be _blank, this will be useful if you provide links to an entirely different website.

Adding Image

- You can add images to your Web page to lend visual interest or illustrate a topic.
- Img element is special because it does not have a closing tag, it only has an opening tag. This is because the **<img>** element is a *self-closing* element.

Image attributes

Attribute	Function
alt	Alternative text to display when an image is being loaded • Useful for screen readers to translate information on a computer screen into audio output • Should be a brief representation of the purpose of the image
height	Defines the height of the image, measured in pixels
src	Defines the URL of the image to be loaded
width	Defines the width of the image, measured in pixels

HTML Exercise: Describe your city

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France

Lille

Lille known as *Rijsel* is a city in northern France, in French Flanders. On the Deûle River, near France's border with Belgium, it is the capital of the **Hauts-de-France region** and the prefecture of the Nord department.

As of 2009, Lille had a population of 226,827 within its administrative limits and an urban population of 1,015,744, making it the fourth largest urban area in France after Paris, Lyon and Marseille.

More Info

Introduction to CSS

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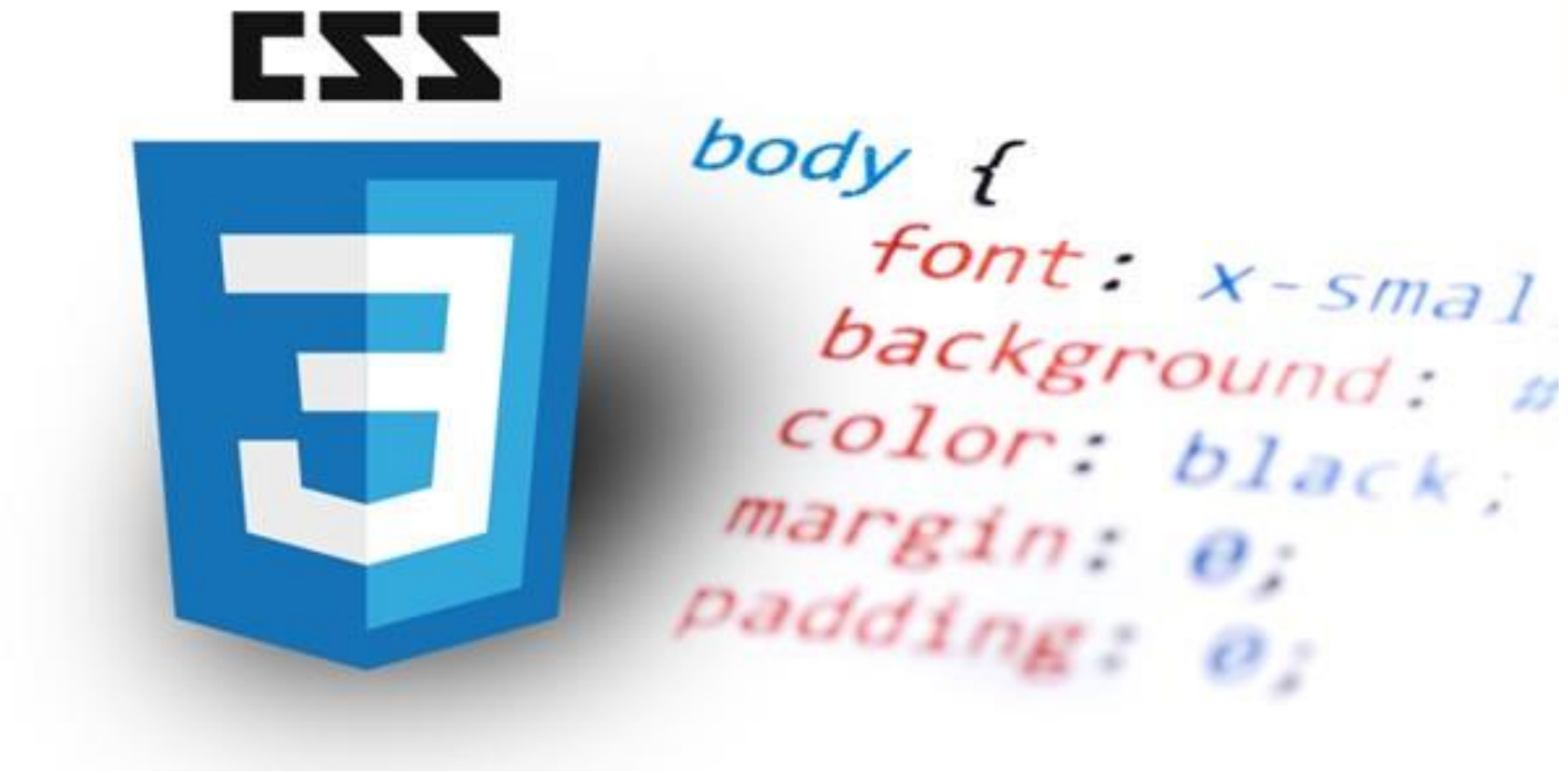


Integrating CSS file

- There are 3 ways to include CSS inside your HTML file:
  - In a file with .CSS extension.
  - Inside the HTML header directly.
  - Directly in the tag of the HTML file via style attribute.

Embedding CSS files

- You may create a separate file CSS file that contains all your stylesheet declaration.
- You use link element to create a link between the HTML file and CSS file, this should be declared in between <head> elements.

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

<style> element

- <style> element allows you to write CSS code between its opening and closing tags.
- To use the <style> element, it must be placed inside of the head.

```
<head>
<style>
    h2 {
        font-family: Arial;
    }
</style>
</head>
```

Inline styling

- You can also integrate the style directly in the tag in question.
- In the example below, the tag p will be in blue color.

```
<p style="color: blue;">Hello and welcome to my website!</p>
```

Downside of inline/inpage style element

- Creating a large HTML file that is difficult to read and maintain.
- Unable to maintain a clear distinction between web page structure (HTML) and web page styling (CSS).
- Repetitive work require.

CSS Rule

Declaring CSS Rule

- We specify the following on our CSS rules:
- Selector – the element/class you'd like to style.
- Property - the property you'd like to style of that element (i.e., size, color, etc.).
- Value - the value of the property (i.e., 18px for size, Blue for color, etc.).
- The definition needs to be terminated with a semi-colon.

Multiple Element Selectors

- If you want to have same styles to multiple elements, you can group and select multiple elements at once so that you can save time styling a shared property

```
h1, h2, p {
        color: Green;
}
```

Color in CSS

- In CSS, there are two aspects of color style that can be customized:
  - color - this property styles an element's foreground color.
  - background-color - this property styles an element's background color.

```
h1 {
    color: Red;
    background-color: Blue;
}
```

Text Formatting

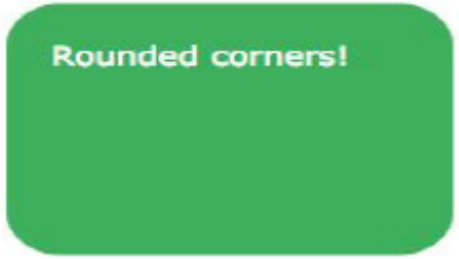
- We are going to say all the different configurations that can be done on a text. These are some of the properties can be configured:
  - Font-size: px, em
  - Font-family: Impact, "Arial Black", Arial, Verdana, sans-serif
  - Text-decoration : underline, line-through, overline, blink, none
  - font-style: italic, normal
  - font-weight: bold, normal
  - Text-align: left, center, right, justify

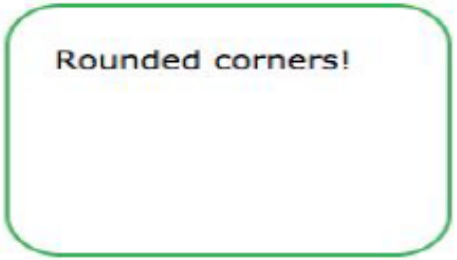
Border

- Properties: width, style, color
- Styles: https://www.w3schools.com/CSSref/playit.asp?filename=playcss_border-style&preval=none
- Sample Property:
  - Border: 1px solid blue;

Rounded Borders

- Property: border-radius
- Sample: border-radius: 10px






```
#rcorners1 {
border-radius: 25px;
background: #73AD21;
padding: 20px;
width: 200px;
height: 150px;
}
```

```
#rcorners2 {
border-radius: 25px;
border: 2px solid #73AD21;
padding: 20px;
width: 200px;
height: 150px;
}
```

Table

- Structure
  - <table>: Element to create a table.
  - <thead>: Represent header section of the table
  - <td> : Represent header of the table
  - <tbody>: Represent body section of the table
  - <tr> : Indicating the start of each row.
  - <td> : Represent cell of the table .

HTML CSS Exercise

- The nice and great foods/drinks from your city
- Lit 10 foods/drinks in the table
- Table need to include:
  - Name
    - bold
  - Type
    - Text align at center
  - Location
    - Change text color
    - Link to the google map
    - Underline when mouse over
    - Change text color again when mouse over
- Style the entire page nicer

Introduction to Git & GitHUB

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What is GIT?

- Git is the software that manages changes to your files.
- By tracking these changes, you will be able to recall specific versions of those files later.
- Using a version control system means that if you break your app, you can hopefully recover easily by reverting to previous versions of the code.
- Git can handle small projects with one developer and large projects with hundreds of developers.

Install Git

1. Go to https://git-scm.com/downloads
2. Download Git installer, open the installer to start installing it.
3. Whenever being prompt, tick on Install git with CLI as below.

Creating and Saving project in GIT

1. Create a new Folder, inside the new folder Create an HTML file with Hello World, an image and a tagline.
2. Open Command Prompt or Terminal. Open your project folder using CMD or Terminal
   a) Use use cd (folder name) to change directory
   b) Use dir command to list all the files or folders in the directory
3. Once inside your project folder, type **git init.** This will initialize your directory as a git project.
4. Type **git add .** to add all your files into a commit list. You may also specify the file by replacing . with the file name, eg: git add index.html
5. Type **git commit -m "First commit"** to commit your change.

What is Github

- Github is a website that hosts code online.
- It will be there that you hosts your source code of the project.
- Your uploaded code is opened to everyone once you uploaded it to Github, however, there is a paid version that enables you to have private repository.
- If you are in need of private repository, you may check Bitbucket or self host Gitlab (More advanced stuff)

Creating and pushing to Github

- Create a new repository in github.
- You will fill in the information, project name and project description inside the page.
- Follow the instruction given by Github and add it inside your project repository.
- Push the code to Github using **git push origin master** command.

Important Git command

Command	Description
git init	Creating a git repository in the folder.
git add .	Add all files into commit list
git commit -m “<commit message>”	Commit/Save the change that you have done.
git push origin master	Push the change to server.