Getting started with the web

https://developer.mozilla.org/en-US/docs/Learn/Getting_started_with_the_web
https://www.w3schools.com/html/default.asp

What is HTML5?

https://developer.mozilla.org/en-US/docs/Web/HTML

- **HTML (Hypertext Markup Language)** is the most basic building block of the Web. It defines the meaning and structure of web content. Other technologies besides HTML are generally used to describe a web page's appearance/presentation **(CSS)** or functionality/behavior **(JavaScript).**
- **"Hypertext"** refers to links that connect web pages to one another, either within a single website or between websites. Links are a fundamental aspect of the Web.
- HTML uses "markup" to annotate text, images, and other content for display in a Web browser. HTML markup includes special "elements" such as
  <head>, <title>, <body>, <header>, <footer>, <article>, <section>, <p>, , , <img>, <aside>, <audio>, <canvas>, <datalist>, <details>, <embed>, <nav>, <output>, <progress>, <video>, <ul>, <ol>, <li> and many others.
- **An HTML element is set off from other text in a document by "tags"**, which consist of the element name surrounded by **"<" and ">".** The name of an element inside a tag is case insensitive. That is, it can be written in uppercase, lowercase, or a mixture. For example, the **<title> tag can be written as <Title>, <TITLE>,** or in any other way. However, the convention and recommended practice is to write tags in lowercase.

Basic Structure of a Web page.

```
<!DOCTYPE html>
<html>
<head>
<meta charset= "UTF-8">
<meta http-equiv="X-UA-Compatible"  content="IE=edge">
<meta name=" viewport" content=" width=device-width, initial-scale=1.0">
<title>Page Title</title>
<style>
</style>
</head>
<body>

<div class="walkPanda">here panda will be walking</div>
<div class="road">This is a road using dashed bottom border </p>

</body>
</html>
```

Structure Explained:

- The <!DOCTYPE html> declaration defines that this document is an HTML5 document
- The <html> element is the root element of an HTML page
- The <head> element contains meta information about the HTML page
- The <meta> tag defines metadata about an HTML document. Metadata is data (information) about data.
- <meta> tags always go inside the <head> element, and are typically used to specify character set, page description, keywords, author of the document, and viewport settings.
- Metadata will not be displayed on the page, but is machine parsable.
- Metadata is used by browsers (how to display content or reload page), search engines (keywords), and other web services.
- The <title> element specifies a title for the HTML page (which is shown in the browser's title bar or in the page's tab)
- The CSS internal styles are defined with in <style> …. </style> inside the <head> section of web page.
- The <body> element defines the document's body, and is a container for all the visible contents, such as headings, paragraphs, images, hyperlinks, tables, lists, etc.
- The element defines a division or a section in an HTML document.
- The tag is used as a container for HTML elements - which is then styled with CSS or manipulated with JavaScript.
- The tag is easily styled by using the class or id attribute. "walkPanda" and "road" is the name of class.

What is CSS3?

https://developer.mozilla.org/en-US/docs/Web/CSS

CSS (Cascading Style Sheets) is the code that styles web content. CSS basics walks through what you need to get started. We'll answer questions like: How do I make text red? How do I make content display at a certain location in the (webpage) layout? How do I decorate my webpage with background images and colors?

Like HTML, CSS is not a programming language. It's not a markup language either. CSS is a style sheet language. CSS is what you use to selectively style HTML elements. For example, this CSS selects paragraph text, setting the color to red:

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

How to add CSS?

There are three ways of inserting a style sheet:

- External CSS
- Internal CSS
- Inline CSS

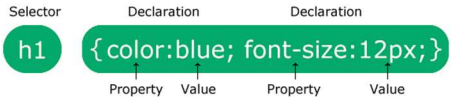
External : `<link rel="stylesheet" href="mystyle.css">`

Internal : `<style> .....</style>` inside the head section.

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

CSS Syntax

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.

In this example all <p> elements will be center-aligned, with a red text color:

```
p {
  color: red;
  text-align: center;
}
```

Example Explained

- p is a selector in CSS (it points to the HTML element you want to style: <p>).
- color is a property, and red is the property value
- text-align is a property, and center is the property value

Understanding CSS Properties.

https://www.w3schools.com/css/default.asp

CSS Property	Description	Example	

margin	Margins are used to create space around elements, outside of any defined borders. There are properties for setting the margin for each side of an element (top, right, bottom, and left).	p {
		margin-top: 100px;
		margin-bottom: 100px;
		margin-right: 150px;
		margin-left: 80px;
		}
			p {
			margin: 25px;
			}

padding	Padding is used to create space around an element's	div {
		padding-top: 50px;
		padding-right: 30px;
			div {
			padding: 25px;
			}

	content, inside of any defined borders.	padding-bottom: 50px; padding-left: 80px; }	

background-color	The background-color property specifies the background color of an element.	body {
		background-color: blue;
		}	

background	The background property is a shorthand property for:
	background-color
	background-image
	background-position
	background-size
	background-repeat
	background-origin
	background-clip
	background-attachment
		body {
		background: url("img_tree.gif")
		;
		}
			url: uniform resource locator
			background: url (images/panda.png);

background-position	The background-position property sets the starting position of a background image.	background-position: 0px;	**Tip:** By default, a background-image is placed at the top-left corner of an element, and repeated both vertically and horizontally.

border-bottom	Set the style of the bottom border for different elements:	h1 {
		border-bottom: 5px solid red;
		}
			h2 {
			border-bottom: 4px dashed blue;
			}

width
 	
height
	The width property sets the width of an element. The width of an element does not include padding, borders, or margins!
	
	The height property sets the height of an element. The height of an element does not include padding, borders, or margins!
		div {
		background: url (images/panda.png);
		width:250px;
		height:300px;
		}
			If height: auto; the element will automatically adjust its height to allow its content to be displayed correctly.
			
			If height is set to a numeric value (like pixels, (r) em, percentages) then if the content does not fit within the specified height, it will overflow.

animation-name	Specify a name for the @keyframes animation:	animation-name: example;	
animation-duration	The animation-duration property defines how long an animation should take to complete. If the animation-duration property is not specified, no animation will occur, because the default value is 0s (0 seconds).	animation-duration: 4s;	
animation-timing-function	Play an animation with the same speed from beginning to end:	#div1 {animation-timing-function: linear;} #div2 {animation-timing-function: ease;} #div3 {animation-timing-function: ease-in;} #div4 {animation-timing-	**linear:** The animation has the same speed from start to end **ease:** Default value. The animation has a slow start, then fast, before it ends slowly. **ease-in:** The animation has a slow start

		function: ease-out;} #div5 {animation-timing-function: ease-in-out;} #div6 {animation-timing-function: steps (12);}	**ease-out: T**he animation has a slow end. **ease-in-out:** The animation has both slow start and end. **steps:** Specifies the stepping. You can give start and end value.
animation-iteration-count	The animation-iteration-count property specifies the number of times an animation should run.	animation-iteration-count: 3;	The following example will run the animation 3 times before it stops.

@keyframes	When you specify CSS styles inside the @keyframes rule, the animation will gradually change from the current style to the new style at certain times.	/* The animation code */
		@keyframes example {
		from {background-color: red;}
		to {background-color: yellow;}
		}
		
		/* The element to apply the animation to */
		div {
		width: 100px;
		height: 100px;
		background-color: red;
		animation-name: example;
		animation-duration: 4s;
		}
			To get an animation to work, you must bind the animation to an element.
			
			The following example binds the "example" animation to the element. The animation will last for 4 seconds, and it will gradually change the background-color of the element from "red" to "yellow":

transform
 	
translate ()
	The transform property applies a 2D or 3D transformation to an element. This property allows you to rotate, scale, move, skew, etc., elements.
	
	Translate method moves an element from its current position (according to the parameters given for the X-axis and the Y-axis)
		Example
		@keyframes walk
		{
		0% {transform: translateX(-100px); }
		
		100% {transform: translateX(1200px);}
		}
			With the CSS transform property you can use the following 2D transformation methods:
			translate()
			rotate()
			scaleX()
			scaleY()
			scale()
			skewX()
			skewY()
			skew()
			matrix()

Web Page Vocabulary

1. Webpage
   A web page is a single document, generally written in HTML/XHTML, meant to be viewed in a web browser.
2. Website
   In simple terms, the website is a collection of webpages. The 'webpages' are online pages that you can view by using the internet and web service on a computer or smartphone.
3. Browser
   Browser refers to the program a website visitor is using to view the web site. Examples include Safari, Firefox, Google Chrome, Opera, and Internet Explorer.
4. Web Server
   A web server is a computer that has software installed and networking capabilities that allow it to host web sites and pages and make them available to internet users located elsewhere.

Resources:

https://www.sitesaga.com/what-is-a-website/
https://www.smashingmagazine.com/2009/05/web-design-industry-jargon-glossary-and-resources/