INTRODUCTION

TO

WEB DESIGN

I
Getting Started
with HTML

1.1 What is HTML?

- HTML stands for Hyper Text Markup Language.
- HTML is the standard markup language for creating Web pages.
- HTML describes the structure of a Web page.
- HTML consists of a series of elements.
- HTML elements tell the browser how to display the content.
- HTML elements label pieces of content such as "this is a heading", "this is a paragraph", "this is a link", etc.

➢ A New Structure

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

    <h1>My First Heading</h1>
    <p>My first paragraph.</p>

</body>
</html>
```

1.2 Define HTML Markup

- HTML (Hypertext Markup Language) is a text-based approach to describing how content contained within an HTML file is structured. This markup tells a web browser how to display text, images and other forms of multimedia on a webpage.
- Each individual piece markup code (which would fall between "<" and ">" characters) is referred to as an element, though many people also refer to it as a tag. Some elements come in pairs that indicate when some display effect is to begin and when it is to end.
- HTML is a formal recommendation by the World Wide Web Consortium (W3C) and is generally adhered to by all major web browsers, including both desktop and mobile web browsers. HTML5 is the latest version of the specification.

➢ Pros and cons of HTML

o Pros of using HTML include:

- Is widely adopted with a large amount of resources available.
- Is natively run on every browser.
- Is relatively easy to learn.
- Has a clean and consistent source code.
- Is open source and free to use.
- Can be integrated with other backend programming languages such as PHP.

o A few cons to consider are:

- Does not have very dynamic functionality and is mainly used for static web pages.
- All components must be created separately even if they use similar elements.
- Browser behavior can be unpredictable. For example, older browsers may not be compatible with newer features.

HTML is a text file containing specific syntax, file and naming conventions that show the computer and the web server that it is in HTML and should be read as such. By applying these HTML conventions to a text file in virtually any text editor, a user can write and design a basic webpage, and then upload it to the internet.

HTML is a powerful coding language for creating websites. It is combined with CSS while designing and constructing websites. Therefore, it should go without saying that learning HTML is a necessary first step if you want to succeed in the field of Web development.

1.3 Basic structure of HTML Document

HTML is a language of the web. It's used to design the web pages or we can say structure the page layouts of a website. HTML stands for HYPERTEXT MARKUP LANGUAGE, as its full form suggests it's not any programming language, a markup language. So, while the execution of HTML code we can't face any such error. In real HTML code wasn't compiled or interpreted because HTML code was rendered by the browser. Which is similar to the compilation of a program. Html content is parched through the browser to display the content of HTML.
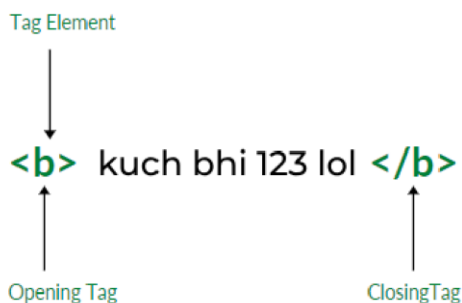
➢ **Html Documents Structure**

Html used predefined tags and attributes to tell the browser how to display content, means in which format, style, font size, and images to display. Html is a case insensitive language. Case insensitive means there is no difference in upper case and lower case (capital and small letters) both treated as the same, for r example 'D' and 'd' both are the same here.

➢ **There are generally two types of tags in HTML:**

- **Paired Tags:** These tags come in pairs. That is they have both Opening (< >) and Closing (</ >) tags.
- **Empty Tags:** These tags do not require to be closed.

Below is an example of a (<b>) tag in HTML, which tells the browser to bold the text inside it.

Tags: Tags are individuals of html structure, we have to open and close any tag with a forward slash like this <h1> </h1>. There are some variations with the tag some of them are self-closing tag which isn't required to close and some are empty tag where we can add any attributes in it.

Attributes: Attributes are additional properties of html tags that define the property of any html tags. i.e. width, height, controls, loops, input, and autoplay. These attributes also help us to store information in meta tags by using name, content, and type attributes.

Html documents structured mentioned below:

 ➢ **An HTML Document is mainly divided into two parts:**

- **HEAD :** This contains the information about the HTML document. For Example, the Title of the page, version of HTML, Meta Data, etc.
- **BODY :** This contains everything you want to display on the Web Page.

```
<!DOCTYPE html>  ←——— Tells version of HTML
<html>  ←——— HTML Root Element

<head>  ←——— Used to contain  page HTML metadata
    <title>Page Title</title>  ←——— Title of HTML page
</head>

<body>  ←——— Hold content of HTML
    <h2>Heading Content</h2>
    <p>Paragraph Content</p>
</body>

</html>
```

<!DOCTYPE html>

- The most basic of HTML conventions is the inclusion of a document type declaration at the beginning of the text file. This always comes first in the document, because it is the piece that affirmatively informs a computer that this is an HTML file. The document header typically looks like this: <!DOCTYPE html>. It should always be written that way, without any content inside it or breaking it up. Any content that comes before this declaration will not be recognized as HTML by a computer.
- Doctypes are not just used for HTML, they can apply to the creation of any document that uses SGML (Standard Generalized Markup Language). SGML is a standard for specifying a specific markup language being used. HTML is one of several markup languages that SGML and doctype declarations apply to.

\<html\>…\</html\>

- \<html\> is a **root element** of html. It's a biggest and main element in complete html language, all the tags, elements and attributes enclosed in it or we can say wrap unit, which is used to structure a web page. \<html\> tag is parent tag of \<head\> and \<body\> tag , other tags enclosed within \<head \> and \<body\>. In \<html \> tag we use "lang" attributes to define languages of html page such as **\<html lang="en"\>** here en represents English language.
- Some of them are: es = Spanish, zh-Hans = Chinese, fr= french and el= Greek etc.

\<head\>

- Head tag contains metadata, title, page CSS etc. Data stored in the \<head\> tag is not displayed to the user, it is just written for reference purposes and as a watermark of the owner.
- Note: for better understanding refer above code of html.
- **\<title\> :** To store website name or content to be displayed.
- **\<link\> :** To add/ link CSS (Cascading Style Sheet) file.
- **\<meta\> :**
  1. to store data about Website, Organization , Creator/Owner
  2. for responsive website via attributes
  3. to tell compatibility of html with browser
- **\<script\> :** To add JavaScript file.

\<body\>

- A body tag is used to enclose all the data which a web page has from texts to links. All the content that you see rendered in the browser is contained within this element.
  Following tags and elements used in the body.
- 1 . \<h1\> ,\<h2\> ,\<h3\> to \<h6\>
  2. \<p\>
  3. \<div\> and \<span\>
  4. \<b\>, \<i\> and\<u\>
  5. \<li\>,\<ul\>and\<ol\>.
  6. \<img\> , \<audio\> , \<video\> and \<iframe\>
  7. \<table\>, \<th\> , \<thead\> and \<tr\>.
  8. \<form\>
  9. \<label\> and \<input\> others……….
  To learn more about an HTML Document structure, please visit:

1.4 Modifying the background of an HTML webpage

➢ Adding Background Color

Setting the background color of a web page or an element on the web page, enable us to create unique layouts for the web page.

To set the background color in HTML, use the style attribute,
with the **CSS property 'background-color' inside the body tag of the HTML document.**

HTML5 do not support the <body> tag bgcolor attribute, so the CSS style is used to add background color. The bgcolor attribute deprecated in HTML5. i.e. `<body bgcolor=green>`

We can change the background color by overriding the property with the other property.
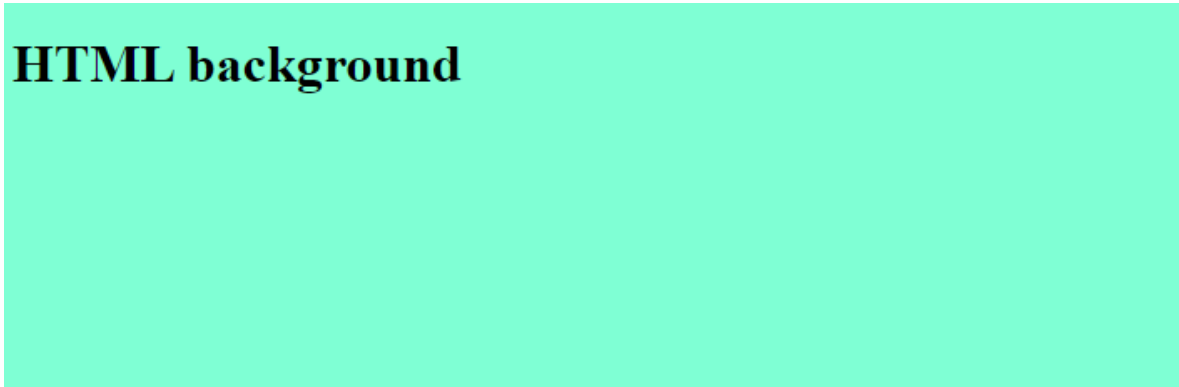
➢ Syntax:

```
<body style="background-color:aquamarine;">
```

➢ Example:

```
<!DOCTYPE html>
<html>
        <body style="background-color:aquamarine;">
        <h1>HTML Background</h1>
</body>
</html>
```

➢ Output:

HTML background

➢ We can specify the background color with RGB value or hexadecimal.

RGB value indicates its red, green, and blue color intensity. Each intensity value is on a scale of 0 to 255, or in hexadecimal from 00 to FF

```
background-color: rgb(20,30, 1);
```

```
background-color: #ff0257;
```

➤ Adding Background Image Specifying Metadata

Put the background image in the HTML folder if you want to use it.

To set the background image in HTML, use the style attribute,
with the **CSS property 'background-image' inside the body tag of the HTML document.**

Use a higher-resolution image as your background if you aren't too concerned about making sure your website will function well on older devices with slower internet connections. To make any text on top of the background image easier to read, choose a simple image with subtle, repetitive patterns.

Use direct **link** of image or **path** of downloaded image you want to show on page

➤ Syntax:

```
<body style="background-image: url('link/path');">
```

➤ Example:

```
<!DOCTYPE html>
<html>
<body style="background-image: url('https://tinyurl.com/2p82kxx6');">
      <h1>HTML Image Background</h1>
</body>
</html>
```

➤ Output:

➢ **We can also use background attribute to change the background image:**

```
<Body background="link/path">
```

```
<Body background="filename.extension"> or <Body background="url">
```

If our image is located in another directory, be sure to enter its correct path so that the browser can easily read it, as explained in the block below.

```
<Body background="/home/Dhruv/Desktop/images/image.jpg">
```

If our image is available online, we can also add it using the URL provided in the block below.

```
<Body background="https://images.com/35100165.jpeg">
```

You can pass the path of an image as a value of background attribute to set the image of your HTML page or table.

```
<tag background="Path_of_an_image">
```

Note: The Background attribute is not supported in HTML5. Use the syntax of CSS: