What is Programming?

- Programming is the process of writing a certain amount of code that tells what to do and how to do the computer.
- Programming is important to perform a particular type of task efficiently, fast and in cheap price.
- Some Common examples of programming languages are: C, C++, Python, Ruby, Java , Javascript etc.

What is HTML?

- HTML stands for Hypertext(links between different parts of the document) Markup Language
- HTML is a scripting language that includes different tags to create web pages.

OR

- HTML is code that is used to design webpages and the contents involved in that webpage.

OR

- HTML is a Markup language that is used to create documents on the World Wide Web incorporating text, graphics, sound, video, and hyperlinks
- It is a Markup language because it does not involve any kind of logical operations, Calculations, etc.
- HTML is used in web development in order to make the structure/layout of the webpage.

History of HTML?

- HTML was developed by physicist Tim Berners Lee in 1980 who was a contractor at CERN which was used by researchers to share documents. Tim Berners Lee wrote the HTML and server software in the 1990s. HTML was built in 1990 but was not officially launched. It was officially launched in 1995.

Versions	Date
HTML	1991
HTML+	1993
HTML 2.0	1995
HTML 3.2	1997
HTML 4.01	1999
XHTML 1.0	2000
HTML 5	2012
XHTML 5	2013

Why XHTML is not used?

- XML(extensible markup language) is a markup language where all documents must be marked up correctly (be "well-formed").

- XHTML was developed to make HTML more extensible and flexible to work with other data formats (such as XML). In addition, browsers ignore errors in HTML pages and try to display the website even if it has some errors in the markup. So XHTML comes with a much stricter error handling.

BASIC STRUCTURE OF HTML DOCUMENT

```
<!DOCTYPE HTML>
<HTML>
  <HEAD>
      <TITLE> PAGE TITLE </TITLE>
  </HEAD>
<BODY>
          ---BODY PART---
</BODY>
</HTML>
```

Type of document and help web browser to display web page correctly

It contains title of page and meta description of any webpage

It contains actual content seen in webpage

How to open text editor in windows(Notepad)?

Step 1:

- Go to the Start menu.
- Type notepad and press Enter.

Step 2:

- Press the Windows logo + R key.
- Type notepad and click on the Ok button

How to save HTML file?

1. Choose File>Save As and choose HTML from the drop-down list.
2. Give the filename an extension of .html, specify the file location, and click save.
3. Open the HTML file in a web browser to examine the converted file.

How to Open HTML file?

1. Right Click on the file
2. And click on Open to open the HTML file.

OR

Double-click on the file to open the HTML file.

HTML DOCTYPE <!DOCTYPE html>

- The declaration is not an HTML tag. It is "information" to the browser about what document type to expect.
- We use <! DOCTYPE HTML> to tell the browser that we are sending an html file to the browser.
- It aware the browser that the file is an HTML file.

What are Elements and Attributes in HTML?

Elements:

- The HTML element is everything from the start tag to the end tag.

  <tagname>Content goes here...</tagname>

- Examples of some HTML elements:
  - <h1>My First Heading</h1>
  - My first paragraph.

Nested Elements:

- HTML elements can be nested (this means that elements can contain other elements).
- All HTML documents consist of nested HTML elements.
- The following example contains four HTML elements(<html>,<body>,<h1> and <p>)

Example:

```
<!DOCTYPE html>
<html>
<body>
<h1>My First Heading</h1>
<p>My first paragraph.</p>
</body>
</html>
```

Attributes:

- All HTML elements can have attributes.
- Attributes provide additional information about elements.
- Attributes are always specified in the start tag.
- Attributes usually come in name/value pairs like: name="value".

Examples:

- The <a> tag defines a hyperlink. The href attribute specifies the URL of the page the link goes to:

  Google

- The <img> tag is used to embed an image in an HTML page. The src attribute specifies the path to the image to be displayed:

  <img src="img_dinesh.jpeg">

What are Tags and Types of Tags?

Tags:

- The basic formulae used to write HTML code are called tags.
- Without Tag, we cannot write HTML.
- The text character which is enclosed in a left angle bracket (<) and a right angle bracket(>) is called an HTML tag.

<tag name>text</tag name>

Types of Tag:

- ❖ Paired Tag
- ❖ Unpaired Tag/Single Tag/Empty Tag

❖ Paired Tag:

The tag which has both a closing and opening tag is called paired tag.

OR

The tag which contains both starting and finishing tag is called paired tag.

For examples: <html>….</html>, <head>…..<head>, …. , <form>….</form>,etc.

❖ Unpaired Tag:

The tag which does not have both a closing and opening tag is called unpaired tag.

OR

The tag which does not contain both starting and finishing tag is called paired tag.

For examples:
, <img>, <hr>,etc

❖Differences between Block level and Inline Elements:

Block Level Element	Inline Element
Begins a new line of text	Does not begin a new line of text.
Its width extend beyond the inner content	Its width only extendsas far as the inner content.
You can set the width and height values.	You can't set width and height values.
Can Contain text, data , inline elements, or other block level elements. e.g. <p>, ,<h1>, , etc.	Can Contain text, data or other inline elements e.g. <a>,,<img>,<b>,<i>,etc.

❖Div Element:

The div (division) element is a generic block-level element, most often used to divide page content into blocks. A block element is a page element that starts a new line and has a width equal to the entire page or the parent container.

You'll very often see divs used to group related paragraphs, images, headings, and links. For example, a three-paragraph article may be enclosed in a div, and a navigation menu containing links might be enclosed in another div. Using divs this way makes it easier to identify different sections of a page and apply styling to them with CSS.

❖Span Element:

The span element is a **generic inline element**, typically used to apply styling to a portion of inline content. An inline element does not start a new line and only takes up as much space on the page as its content. Span tags are used on small segments of text, links, images, and other HTML elements that appear inline with the surrounding content.