html => hypertext markup language
=> data presentation
=> UI designing (sign up, login, registration, search form…)
= static webpages

CSS => Cascading Style Sheets
=> used to change look & feel of webpage(html elements)

JS => JavaScript
=> its back-end for html/css (Front-end)
=> it provides logical support or client validations

Html/css/JavaScript static web site designing

Html/css/JavaScript+angular or reactJS front-end developer
UI/UX developer

advJava/spring/asp.net/python/php/nodejs back-end dev

Network: Collection of computers interlinked together is called network. First network name is **ARPANET** (Advanced Research Projects Agency Network). First protocol in IT industry is FTP (File Transfer Protocol).

Internet: Internet stands for international networking.
1990
The Internet is a network of connected computers. No company owns the Internet; it is a cooperative effort governed by a system of standards and rules. The purpose of connecting computers together, of course, is to share information.

Internet is a collection web application,
Web application is group of web pages
Web page is group components (means heading, para, image, button, tables, …)

A Brief History of the Web

The Web was born in a particle physics laboratory (CERN) in Geneva, Switzerland in 1989. There a computer specialist named **Tim Berners-Lee** first proposed a system of information management that used a "hypertext" process to link related documents over a network. He and his partner, **RobertCailliau**, created a prototype and released it for review. For the first several years, web pages were text-only. It's difficult to believe that in 1992, the world had only about 50 web servers.

Tim Berners Lee internet (1989-1990)

- Html (HyperText Markup Lang)
- http (hyper Text Transfer Protocol)
- W3C org

The World Wide Web Consortium

World Wide Web Consortium (called W3C) is the organization that oversees the development of web technologies. The group was founded in 1994 by TimBerners-Lee, the inventor of the Web, at the Massachusetts Institute of Technology (MIT).

Tim Berners-Lee (WWW/HTTP), Cerf & Kahn (TCP/IP), Baran, Davies, Kleinrock & Roberts (packet networking), Bob Metcalfe (Ethernet).

WHAT IS WEB APPLICATION?

Web applications are network enable applications. We can deploy any web applications in servers and we can access them over network using server ip address and application name.

In computing, a **web application** or **web app** is client–server software **application** which the client (or user interface) runs in a **web browser** and it contains web documents in the form electronic pages(web pages).

A web application typically contains fallowing three layers:

Presentation layer is a user interface (views) which are accessible from any web browser.

Business layer is a server-side program which is nothing but automation of business rules. Client layer will interact with business layer to persist data.

Data layer is database software where we can store client related data. Business layer will interact with data layer.

How the Web Works

1. When you connect to the web, you do so via an Internet Service Provider (ISP). You type a domain name or web address into your browser to visit a site; for example: google.com, oracle.com, microsoft.com.
2. Your computer contacts a network of servers called Domain Name System (DNS)servers. These act like phonebooks; they tell your computer the IP address associated with the requested domain name. An IP address is a number of up to 12 digits separated by periods / full stops. Every device connected to the web has a unique IP address; it is like the phone number for that computer.
3. The unique number that the DNS server returns to your computer allows your browser to contact the web server that hosts the website you're requested. A web server is a computer that is constantly connected to the web, and is setup specially to send web pages to users.
4. The web server then sends the page you requested back to your web browser.

Server

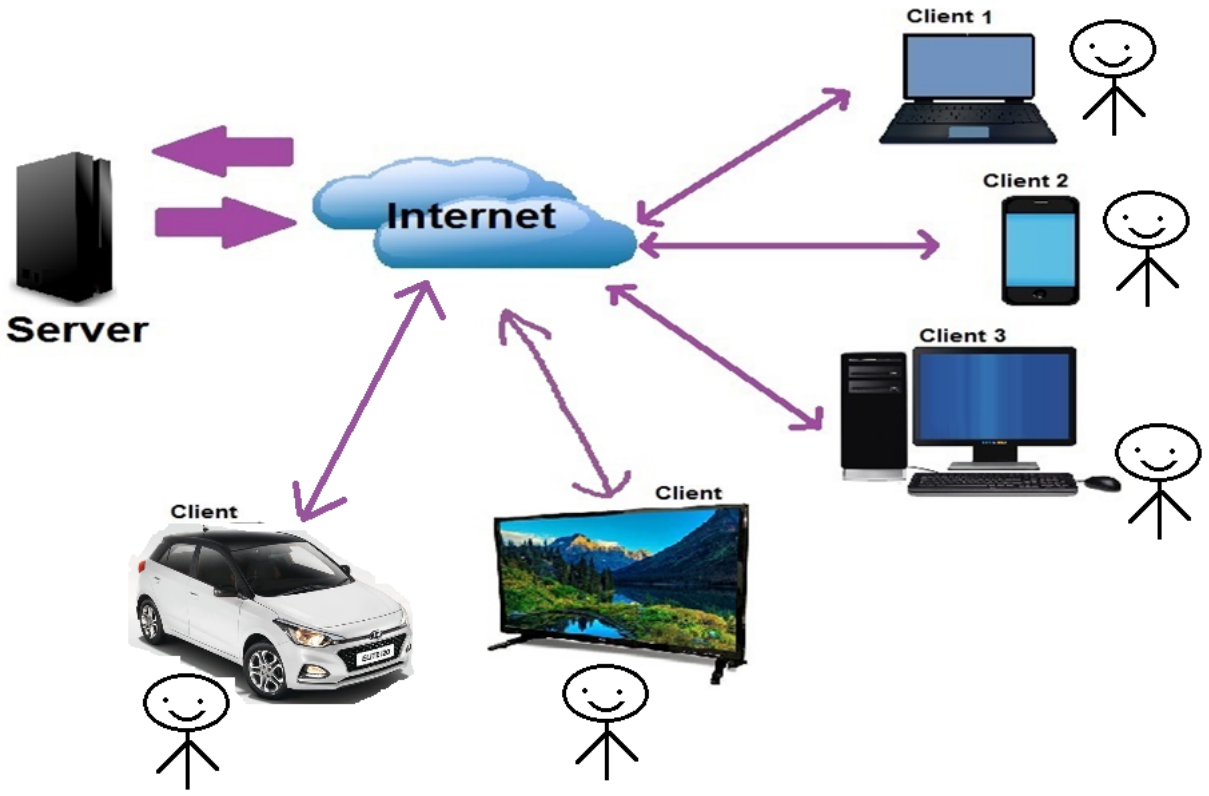
A **server** is a computer or system that provides resources, data, services, or programs to other machines, known as clients, over a network/inet.
In theory, whenever computers share resources with client machines, they are considered **servers.**
a **server** stores all the data associated with the websites that are hosted by it and shares that info with all computers and mobile devices (like yours) that need to access them.

Client

A client is a electronic device that connects to and uses the resources of a remote computer, or server.
Client maybe a desktop or a laptop or a tablet or a mobile phone or a TV etc.
The device which is used by the user is called as "Client".

User

The person who is working on/operating client machine is known as User or end-user.



Client:

It is a machine or device (desktop or laptop or tablet or mobile phone or TV etc), which can access the data from server machine.

The device which is used by the user is called as "Client", person who is working on client machine is known asUser.

What is web browser?

It is client-side lightweight software installed in client machine. It sends http request from client to server; it takes http response from server.

Browser provides navigation among web pages, and browsers executes html, css, JavaScript files and displays output to user.

List of Computer Browsers:

Internet Explorer(1995), Opera(1995), Mozilla Firefox(1998), Safari(2005), Google Chrome(2008) etc…

List of Mobile Browsers:
Mobile Safari (iOS), Android Browser (Android), BlackBerry Browser (RIM), Nokia Browser (Symbian), Opera Mobile and Mini (installed on any device), Internet Explorer Mobile (Windows Phone), Silk (Kindle Fire) etc…

Email: Electronic mail services. It is a free service to communicate with other internet users. Email is invented by **Shabeer Bhatia.** Sabeer Bhatia is an Indian entrepreneur who founded the webmail company Hotmail.com.
SMTP: Simple Mail Transfer Protocol. It takes care of delivering emails from one server to another.
MIME: Multipurpose Internet Mail Extensions. It exchanges different kinds of data.
Blog: It is daily updating website or webpage. Every post displayed in reverse chronological order.
Forum: It is an online discussion website to exchange resources each other.
Http: It is a transfer protocol to exchange hypertext documents in the world wide web.
Http(s): Secured transfer protocol to exchange hypertext documents with the help of SSL(ciphertext).
Ciphertext is encrypted text. Plaintext is what you have before encryption, and **ciphertext** is the encrypted result. The term cipher is sometimes used as a synonym for **ciphertext**, but it more properly **means** the method of encryption rather than the result.

HOW MANY TYPES OF WEB APPLICATIONS WE HAVE?
A webpage is an electronic page developed on HTML. It is classified into two types.

Static webpage: A user unable to interact directly with these web pages. Eg: HTML, CSS
Dynamic webpage: End-user can able to interact directly with these web pages. Eg: HTML, CSS &Javascript

Collection of web pages or web documents is called web application (website). These are classified into two types:

STATIC WEB APPS: The applications which can't able to handle business logic are known as static web apps. Static apps will contain only client layer. We can develop static web applications using HTML. To provide look and feel to these static pages we can use CSS. To handle client layer business logic we can use Javascript. We can't able to maintain end user interaction (state) using static web apps.

DYNAMIC WEB APPS: The applications which can able to handle business logic are known as dynamic web apps. These type of apps contains at least 2 layers client and business. If we need to store client data then these application contains data layer too. We can develop client layer using HTML, CSS &javascript and business layer using any one of the server programming language like .NET, JAVA/J2EE & PHP etc...We can store end user data using any database like mongo db, MS-SQL, MySql, Oracle etc.

What is HTML?

It is specially designed hypertext for web browsers, with meaningful tags or elements in simple English language.

HTML Intro

1. HTML was developed by “Tim-Berners-Lee”, released in 1993 and maintained by W3C Org.

2. HTML stands for “Hypertext Markup Language”.

3. Hypertext” means the text that can be transferred from the internet server to the internet client.

   "Markup Language" means which syntax will be in the form of tags or you simply "markup" a text document with tags that tell a Web browser how to structure it to display.

4. Technically, HTML is not a programming language, but rather a markup language.

5. HTML is used to design "**static web pages**", meaning HTML is used to create elements (such as headings, paragraphs, icons, menus, logos, images, textboxes, buttons etc) in the web pages.

a static webpage means that pages always showing the same information.

6. HTML is very easy to understand (no prerequisites).

7. HTML is “client side tech”. That means the html code executes on the client browser but not on the server.

web tech:

which sw are supporting to design web pages or providing API to dev web coding those sw are called as web tech.

>**client side tech** ex: html/css, js, jquery, BS ...

used for static web pages.

bw rec source code & trans after execution then produced the output.

>**server side tech** ex: servlet, jsp, asp.net, php, cgi, nodejs, cold fusion ...

dynamic web pages.

code trans, execute with in server only, and produced output, this output sent to the client machine.

8. HTML is supported by all the browsers such as Google Chrome, Mozilla Firefox, Microsoft Internet Explorer, Safari, Opera and other browsers.

9. HTML is used in all real time web sites today; html is the only language available in the world for designing Web Pages.
10. The file extension either "filename.html" or "filename.htm"
11. HTML is an interpreter-based language. That means the HTML code will be converted into machine language in +. Browser interprets HTML code.

Translators: converting high level code (human) into machine level code (MP/OS) is called translation. Who performs this operation are called translators.

12. HTML is not a case sensitive language that means you can write the html code in either uppercase or lower case.

Tag:

· A tag is a keyword, enclosed within "<" and ">" in HTML language.

· It is a special kind of text placed between the left angular brace and right angular brace(<tag_name>).

· Tag is a predefined program, program is instructions / command to the browser.

· Tag is used to display some specific output in the web page.

· browser did not identify the tag; it shows a blank or it prints as text.

· tags also represented as elements.

· tag has some attributes(properties), those are used to make some settings, information,...

types of tags:

in html we have **two** types tags, those are:

>**paired tags**

contains open tag and closing tag.

opening tag specifies starting point of operation/output, closing tag specifies ending point of operation/output.

Syn: **<tagname>**something**</tagname>**

ex: <html> ... </html>

<head> ... </head>

<body> … </body>

<script> ... </script>

<style> ... </style>

 …

note: paired tags also called as body-full tags

>**unpaired tags**

contains only an open tag.

VOID => ITS not RETURNING ANY VALUE

Syn: <tagname> or <tagname/>

ex:
 <img/><input/>

<hr>

<link>

note: Unpaired tags also called as body-less tags

<u>Note:</u> html is a collection of tags(elements) and attributes.

<u>comment lines</u>

comment lines are used to provide some description about our program.

comments are not executed by browser.

Syn:

<!-- comments -->

heading tags

These tags are used to print data/text in heading format.

html provides 6 heading tags, those are h1, h2, h3, h4, h5, h6.

These 6 tags are used to display headings in different sizes.

six tags are paired tags and block level elements.

Syn:

<h1> text </h1>

<h2> text </h2>

<h3> text </h3>

<h4> text </h4>

<h5> text </h5>

<h6> text </h6>

Note: inside the body section we can repeat any tag and no.of times.

demo.html

```
<!DOCTYPE html>
<html lang="en">
  <head>
  </head>
  <body>
    Welcome to The Web World&#128525;
  </body>
</html>
```

example1

```
<!-- examples on heading -->
<!DOCTYPE html>
<html lang="en">
  <head> </head>
  <body>
        <h1>Hypertext Markup Language</h1>
        <h2>Hypertext Markup Language</h2>
        <h3>Hypertext Markup Language</h3>
        <h4>Hypertext Markup Language</h4>
        <h5>Hypertext Markup Language</h5>
        <h6>Hypertext Markup Language</h6>
        <h2>Cascading Style Sheets</h2>
       <h4>JavaScript</h4>
  </body>
</html>
```