(1.) What is a Web Page?

Ans. A web page is a document which can be displayed in a web browser such as Firefox, Google Chrome, Opera, Microsoft Internet Explorer or Edge, or Apple's Safari. These are also often called just "pages."

=> A web page is a document most often written in HTML and also often including CSS and JavaScript. This document is accessed by entering its URL address into a browser.

=> A web page can embed a variety of different types of resources such as:

- style information — controlling a page's look-and-feel
- scripts — which add interactivity to the page
- media — images, sounds, and videos.

(2.) What are Websites?

Ans. A website is a collection of web pages that are linked together.

=> A website is a collection of linked web pages that share a unique domain name.

=> A website can be of two types: (i) Static Websites (ii) Dynamic Websites

(3.) What is Web Server?

Ans. A web server is software and hardware that uses HTTP (Hypertext Transfer Protocol) and other protocols to respond to clients requests made over the World Wide Web.

=>The purpose of a web-server is to receive requests from a web browser and to respond with the correct content for that request.

=> The physical components of a web server are called Hardware.

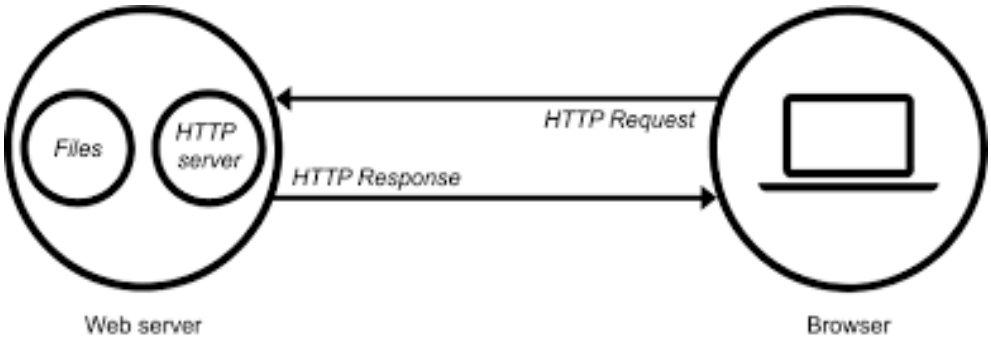
=> Servers are typically stored in a building called a data center.

(4.) What is a Web Browser?

Ans. A web browser is a software program or application that is used to explore, retrieve, and display the information available on the World Wide Web(WWW). This information may be in the form of pictures, web pages, videos, and other files that all are connected via hyperlinks and categorized with the help of URL (Uniform Resource Locator).

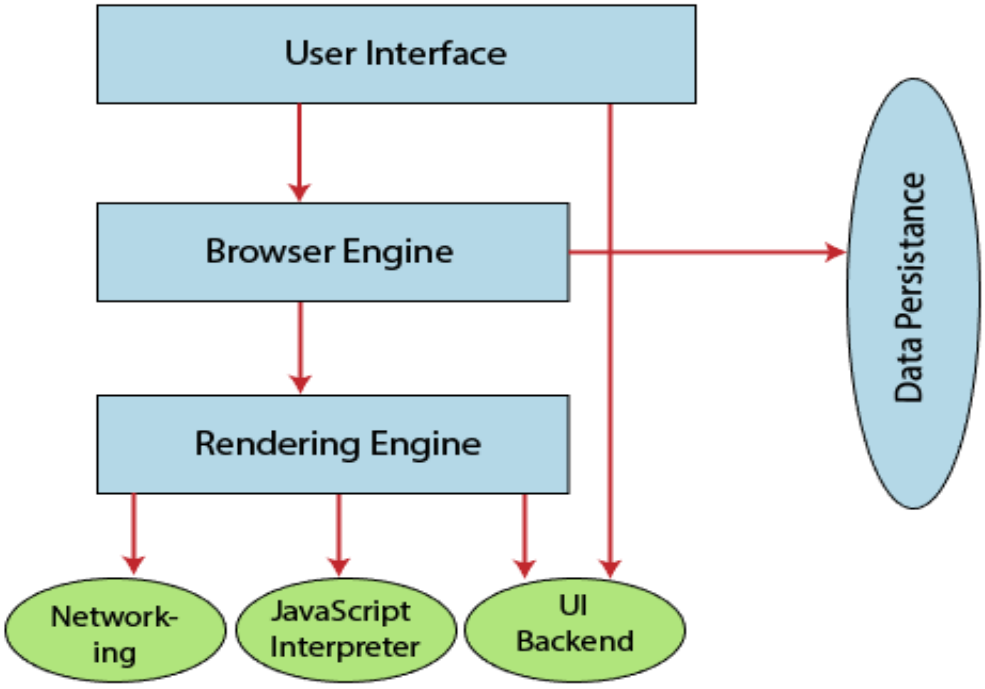
Example : Firefox, Netscape, Safari, Explorer, etc.

=> It works by sending a request to a web-server and then receiving a response containing the content that is to be displayed on the screen of your device.



=> Once the browser is open on your device, there is the address bar where you input the address of the website that you want to visit. The address is commonly known as the URL(Uniform Resource Locator). The URI contains the Protocol, HTTP and Domain name.

Component of a Web browser: The primary components of a browser are shown in the below image:



(5.) What is a Search Engine?

Ans. A web service that helps you find other web pages, such as Google, Bing, Yahoo, or DuckDuckGo.

=> Search engines are normally accessed through a web browser (e.g. you can perform search engine searches directly in the address bar of Firefox, Chrome, etc.) or through a web page

(6.) What is a BrowserEngine?

Ans. A browser engine is the core software component of a web browser that takes the HTML, CSS and JavaScript code of a web page and converts it into the visual layout and interactive elements that you can see on the screen.

=> Different web browsers use different browser engines such as Internet Explorer uses the Trident engine, Firefox uses the Gecko engine, Safari uses the Webkit engine, Opera uses the Presto engine, and Chrome uses the Blink engine.

(7.) What is a Web Application?

Ans. The applications which will provide services over the web are called web applications.

=> A web application (or web app) is application software that is accessed using a web browser. Web applications are delivered on the World Wide Web to users with an active network connection.

Example : gmail.com, facebook.com, etc.

=> Every web-application contains 2 main components -

(1) Front-End

(2) Back-End

(1.) Front-End : The front end is the part of the website users can see and interact with such as the graphical user interface (GUI) and the command line including the design, navigating menus, texts, images, videos, etc. The backend, on the contrary, is the part of the website users cannot see and interact with.

=> It represents what the user is seeing on the website.

=> We can develop Front-End content by using the following technologies: HTML, CSS, JavaScript JQuery, BootStrap, Tailwind, AngularJS and ReactJS etc.

=> JQuery, Bootstrap, Tailwind, AngularJS and ReactJS are advanced front-end technologies, which are developed by using HTML, CSS and JavaScript only.

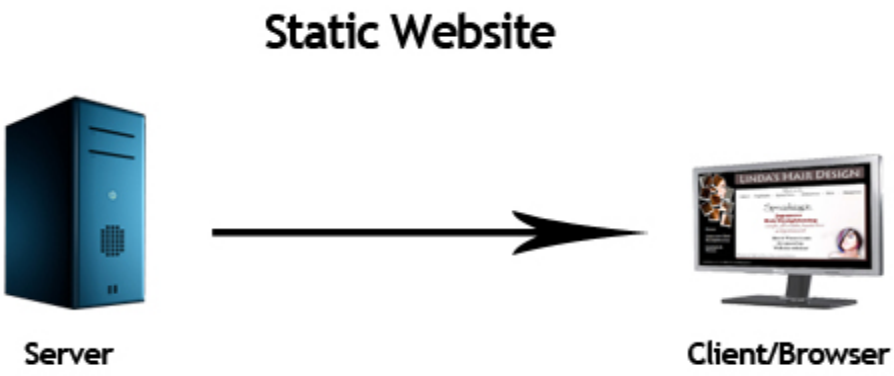
(2.) Back-End : The backend is the server side of the website. It stores and arranges data, and also makes sure everything on the client side of the website works fine. It is the part of the website that you cannot see and interact with.

=> It is the technology used to decide what to show to the end user on the Front-End.

=> Backend is responsible for generating the required response to the end user,which is displayed by the Front-End.

(8.) Static Websites : If the content of a website is not varied/changed from time to time and person to person then it is considered as a static website.

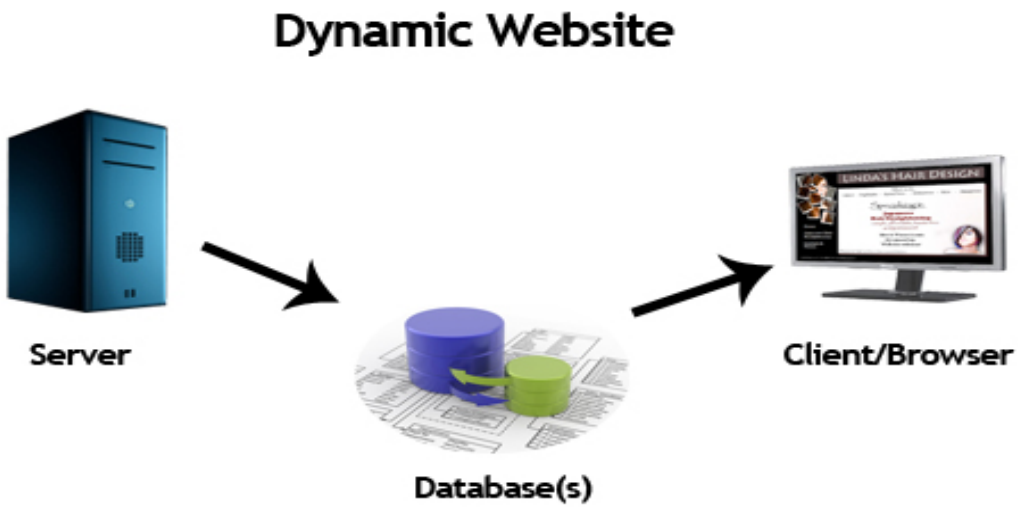
=> The codes are fixed for each page so the information contained in the page does not change and it looks like a printed page.



(9.) Dynamic Websites : If the content of a website is varied/changed from time to time and person to person then it is considered as a static website.

=> Dynamic website is a collection of dynamic web pages whose content changes dynamically.

=> Dynamic website uses client-side scripting or server-side scripting, or both to generate dynamic content.



(10.) UI vs UX designers : Both UI and UX designers play key roles in the product development lifecycle. Let's take a closer look at each.

(i) UI (User Interface) : UI refers to the screens, buttons, toggles, icons, and other visual elements that you interact with when using a website, app, or other electronic device.

=> UI designers create the graphical portions of mobile apps, websites, and devices—the elements that a user directly interacts with. Unlike UX, which can apply to just about any product or service, the term UI applies exclusively to digital products.

=> A UI designer seeks to make apps and websites both visually appealing and easy to navigate.

(ii) UX (User Experience) : UX refers to the entire interaction you have with a product, including how you feel about the interaction.

=> UX designers focus their work on the experience a user has with a product. The goal is to make products that are functional, accessible, and enjoyable to use. While the term UX often applies to digital products, it can also be applied to non-digital products and services.

UX vs. UI designers

UX designer	UI designer
Interaction designer	Visual designer
Charts the user pathway	Chooses color and typography
Plans information architecture	Plans visual aesthetic
Expert in wireframes, prototypes, and research	Expert in mockups, graphics, and layouts

(11.) Clients vs Servers :

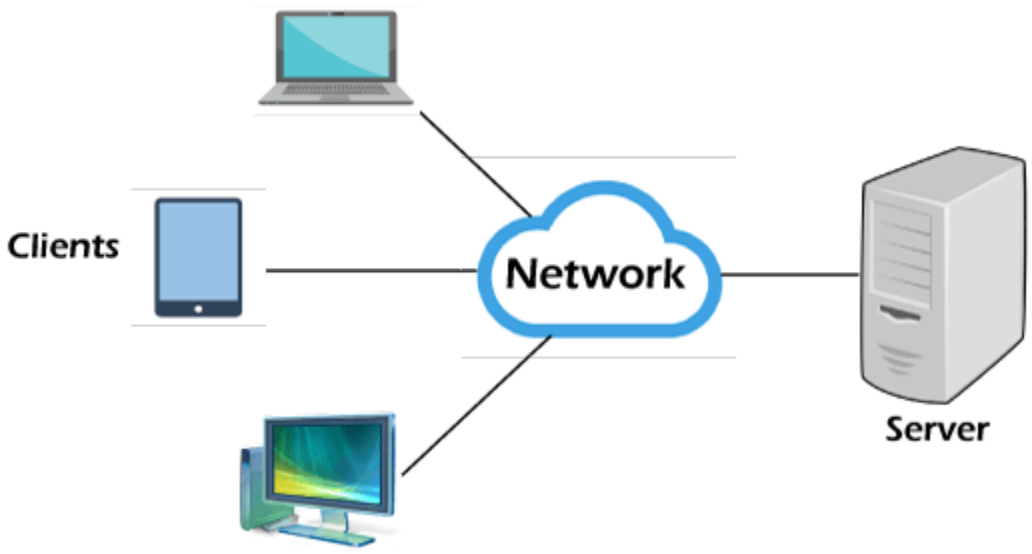
(i) Clients: A client is a user program that connects to a server to access a service.

=> A client program runs on the local machine, requesting service from the server.

=> A web browser, such as Firefox, is a client program that makes use of web server facilities.

=> A client device is a machine that the end-user uses to access the web. Examples of clients are smartphones, desktops, laptops, etc.

(ii) Servers : A server is a sample of software or hardware that serves a specific service to its clients.
=> Web servers, domain name servers, and mail servers are some of the example servers used by all network users.
=> A server is like a computer program, which is used to provide functionality to other programs. It can be any computerized process called by a client to distribute the work and share the resources.
=> It receives and responds to requests made over a network. Server receives the request from the client for a web document, and it sends the requested information to the client's computer.
=> A device can be both a client and a server at the same time, as an individual system has the ability to provide resources and use them from another system in one go. In a single machine, there can be multiple servers.
=> Server has high efficiency and performance. Simultaneous multiple-user login and request processing are supported in servers. Some of the complex tasks like fulfilling client requests, storing and processing large datasets, and data analysis are common for servers.



=> There can be various types of servers: web server, application server, database server, cloud server, file server, proxy server, mail server, and many more.