Assignment no :- 01

Topics covered :-
- IP
- web technology + terminology
- html
- websev

Date of performance :- 29-07-22

Evaluation Criteria	Marks (out of 3)	Date	Signature of Instructor
Punctuality	03	09-08-22 09/8/22	
Problem solving technique	03		
Attainment level (out of 3)	03		

Assingment No :- 01

Q.1) What is IP? with the help of example.

"Ip addess is a unique address that identifies a device on the internet or local network."

Ip stand for "Internet Protocol" which is sth set of rule governing the format of data sent via the internet or local network. IP addesses provide a way of doing so and form an essential part of how the internet works.

- IP addess :-
  - IP addess is short for internet protocol add (IP) address
  - An IP address is an identifier for a computer or device on a TCP/IP network.
  - Networks using th TCP/IP protocol route message based on th IP addess of th destination.

IP addresses are expressed as a set of four numbers - an example address might be 192.158.1.38. Each number in the set can range from 0 to 255, range 0.0.0.0 to 255.255.255.255

Version/ Type of IP	IP addess class :
• IPV4 • IPV6	Class A, B, C, D & E

- Types of Website IP Address

① Dedicated IP address

② Shared IP address

Q.2) Explain what is web technology & its application.

"The method by which computers communicate with each other through the use of markup language and multimedia package is know as web technology."

Web terminologies :-

- Client :- Any computer on the network that equiest services from another computer on the network
- Server :- Any computer that request from client computers, process & sends the output
- Web page :- Any page that is hosted on the internet
- Web site :- Collection of web page that is hosted on the internet
- Web Development :- The process of creating, modifying web page.
- Web Browser :- A program that receives information from the web Eg. IE, Chrome, Mozilla, etc.

- Application :-

1) Realtime web analytic
2) Digital Advertising
3) E-Commerce
4) Publishing
5) Backend Service & managing
6) project management & collection.
7) Realtime monitoring service.

.3) What are the essential web technology terminology in it and Explain.

- Web technology :- "The Method by which computer communicate with each other through the use of markup language & multimedia package is know as web technology."

- Essential web technology are as followed :.

- HTML :- HTML is stand for hypertext markup language. This is the most used for structuring and presenting content on the world wide web.

- CSS :- CSS is stand for Cascading Style sheets let designers change the look of web page. Css framework such as Bootstrap or Tailwind Css can speed page development.

- Javascript :- Javascript is a scripting language that is used along with HTML and CSS as the three core componets of the world wide web. Javascript has the Hell class functions and is used in most website.

- Browsers : web applications should be browser independent
  eg. - Google
  - Safari
  - Firefox.

· **Frameworks** :- Frameworks take care of repetitive development tasks or make programming task easier to do. A few server-side frameworks include

- Node.JS
- .NET
- Django
- Spring
- Angular.JS

· **DataBase** :- Database can be relational like SQL or non-relational like MongoDB The following are the most used databases

- MongoDB
- Oracle
- SQL Server
- MySql etc

· **WebServers** : Web server allow communication traffic between the client and the server. The most used server include :-

- Apache Web server
- IIS Web server

· **Protocols** :- Protocols standardize how data interact amongst computers HTTPS is the Protocol between a browser and a website.

Q.47 Describe what is html ? make one webpage using html tag.

· HTML :- HTML is an acronym which stand for HyperText Markup Language which is used for creating web pages any web application. Let's see what is meant by Hypertext Markup Lanaguage, any web page.

· Hyper text :- HyperText simply means "Text within Text". A text has a link within it, a hypertext.

· Markup language :- A markup lanaguage is a computer lanaguage that is used to apply layout any formatting convention to text document.

· Web page :- A web page is a document which is commonly written in HTML and translated by a web browser

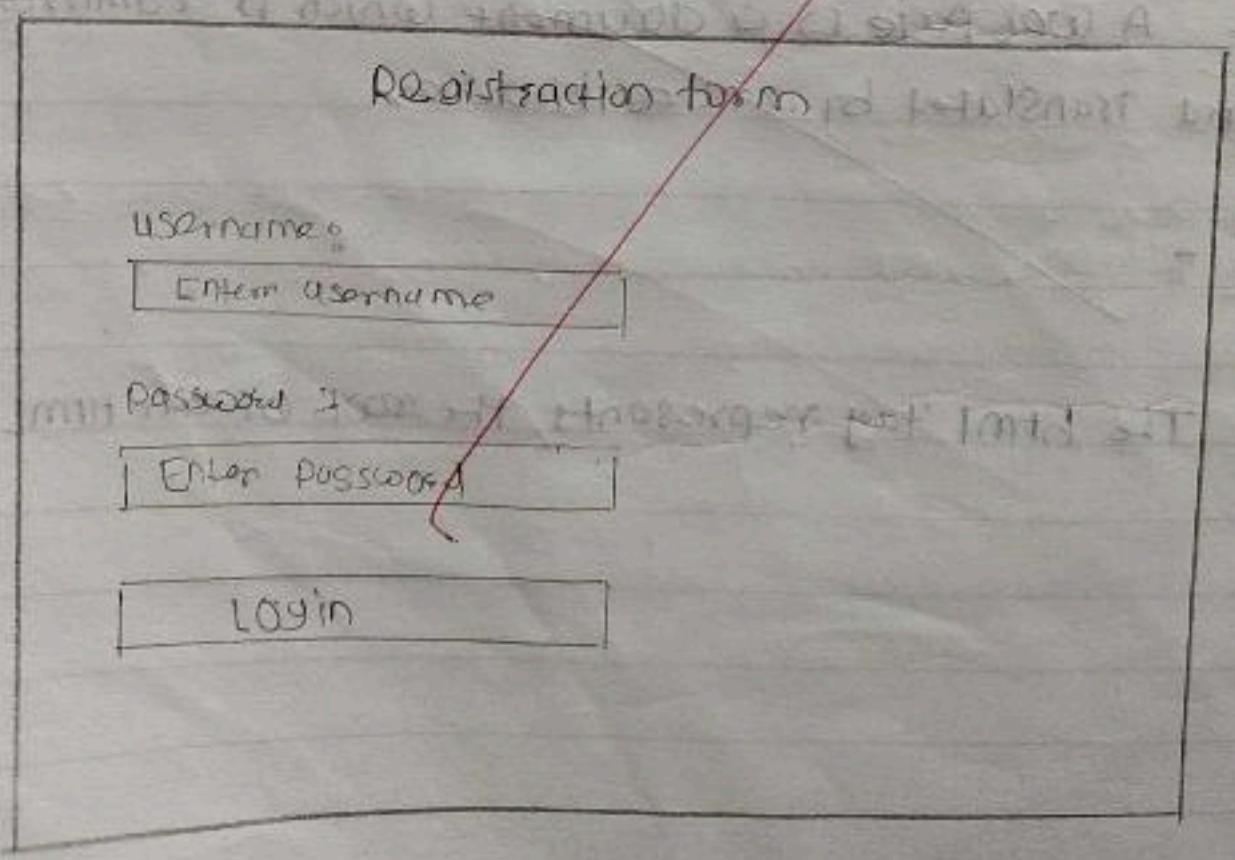
· ~~WEBPAGE~~ :-
<HTML>

· TAG :- The html tag represents the root of an HTML document.

• webpage:

```
<!DOCTYPE html>
<html>
<meta name ="viewport" content="width= device-width, initial-scale
<title> Login page </title>
<body>
<center> <h1> Registeration form </h1> </center>
<form>
<div class ="container">
<label> Username : </label>
<input type ="text" placeholder = "Enter Username" name ="Username
<label> Password : </label>
<input type ="password" placeholder ="Enter username" name ="Password
<button type = "submit"> login </button>
</div>
</form>
</body>
</html>
```

Output



Q.5) Explain what is web server? write down step of how our webpage is stored under a webserver.

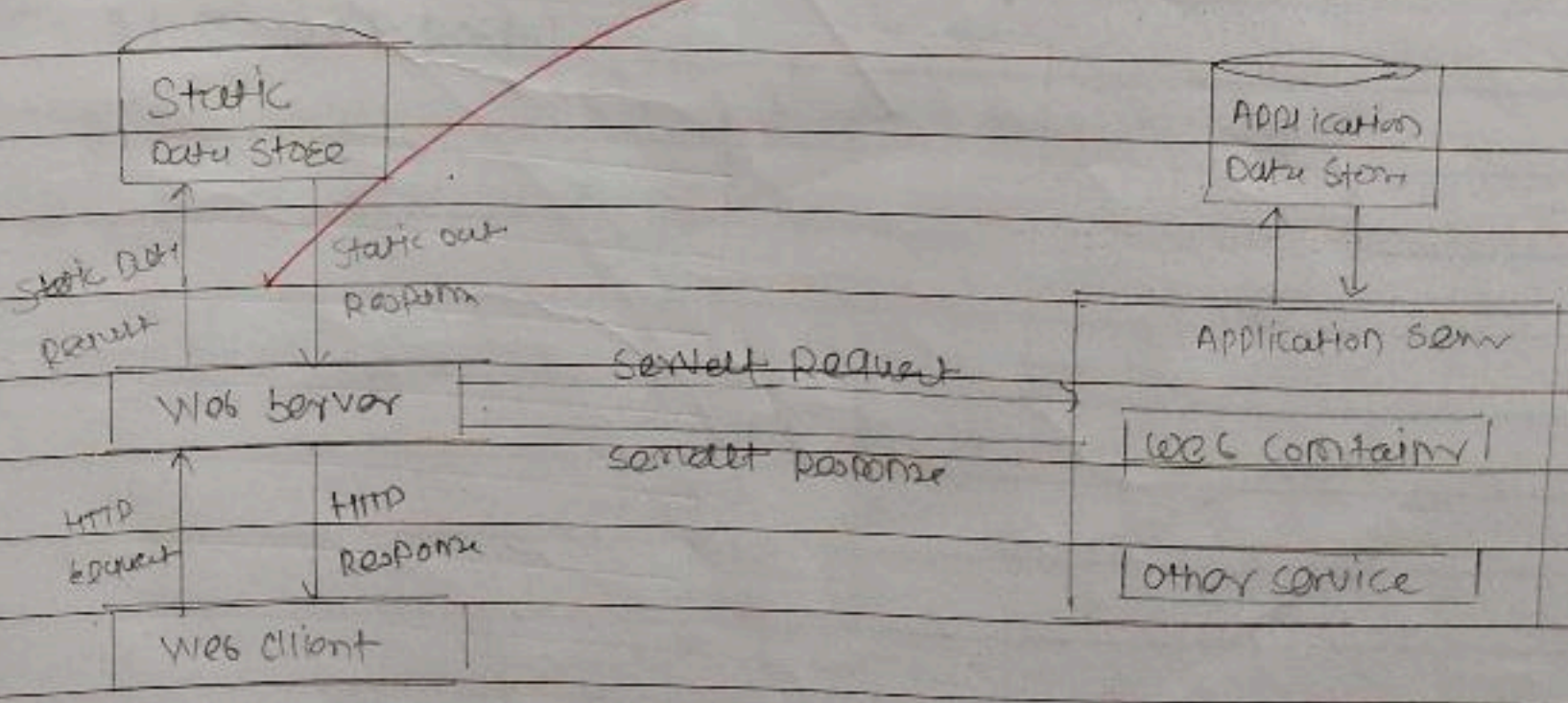
- **Web Server :-**

Web server is a computer where the web content is stored. Basically web server is used to host the website but there exists other web servers also such as gaming, storage, FTP, email etc.

- **Web server working :-**

Web server respond to the client request in either of the following two ways:

- Sending the file to the client associated with the request URL.
- Generating response by invoking a script and communicating with database



Example :-

1) Apache
2) Fox Serv
3) Nginx

- Web server software is associated through the domain name of website and ensure the domain name of website and ensuring the delivery of the site's content to the requesting user.
- The software side is also comprised of server components, with at least an HTTP server. The HTTP server is able to understand HTTP and URL's. As hardware, a web server is computer that store web server is computer that store web server slw and other file related to a website, such as HTML documents images & Javascript file.

Q.6] Write down the application and web protocol which is working on web technology.

Ans:- Web Portal :

"A web portal is a specially designed website that brings information to search engines, together, in a uniform way."

• Application

1) Removal of back office administration
2) Scale IT licensing option
3) improved decision making
4) self-serve protocol, Better user experience

Example :-

1) Vendor portals
2) Government portal
3) Student portal.

Q.7) Write down the Discription of following

1) API :-

- API is a software-to-software interface, not a user interface
- Application programming interface
- With API, applications talk to each other without any knowledge or intervention

2) Gateway :-

- A gateway is a network node that forms a passage between two networks operating with different transmission protocol
- Gateway is located at the boundary of a network and manages all data that inflows or outflows from that network
- A gateway operates as protocol converter, providing compatibility between the different protocol used in the two different network.

3) Protocols

- Protocol meaning is that set of mutually accepts and implemen rule at both ends of the communications channel for the proper exchange of information
- Protocols' are developed by industry wide organizations : All data of of protocols are stored in binary information

List of protocol

- TCP/IP
- ARP
- HTTP/HTTPS
- DNS
- DHCP
- FTP

4) HTTP :- The Hypertext Transfer protocol (HTTP) is an application-protocol for distributed, collaboration, hypermedia information systems. This is the foundation for data communication for data communication for the world wide web (i.e. internet) since 1990. it used for other purpose as well as using extensions of its request methods, error codes, and headers.

5) DNS

: DNS stands for Domain Name system.

· DNS is a directory service that provides a mapping between the name of a host on the network & its numerical address.

· DNS is required for the functioning of the internet.

· DNS is service that translate the domain name IP's address. This allow user of networks to utilize user-friendly name when looking for other hosts instead of remembering the IP address.

· For example, Suppose the FTP site at Edusoft has an IP address of 132.147.66.50 most people would not reach this site by specifying ftp.Edusoft.com

(Q. 8) What is XML ? Why we are using XML ? Write down the differences between HTML & XML.

- XML

- XML stands for Extensible Markup Language
- XML is a markup language much like HTML
- XML was designed to store and transport data
- XML was designed to be self-descriptive.
- XML is tag give a reader some idea what some of the data mean.
- XML is case sensitive

- Use

XML's primary function is to provide a "simple text-based format for representing structured information" according to the World Wide Web (W3C) the standards body for the web, including for the following:

- underlying data formats for applications
- technical documentation
- configuration options for application software
- transactions,

HTML	XML
① XHTML stands for Hypertext markup language.	① XML stands for extensible markup Language.
② HTML is a markup Language	② XML provides framework to define markup languages
③ HTML is static in nature	③ XML is dynamic in nature
④ HTML is not case sensitive	④ XML is case sensitive
⑤ Javascript code into the HTML document	⑤ Codes and mapping of text
⑥ HTML is designed to display the data	⑥ XML is used to store data.
⑦ tags are used for display	⑦ Tags are used to describe documents & data

Author