

## Module 8

### ASSIGNMENT-1

Ques1.>

Client:

Function: Initiates requests for services or resources from servers.

Components: Includes user interface, client application, local data storage.

Server:

Function: Processes client requests, manages data storage, and delivers services.

Components: Includes server application, centralized data storage, security mechanisms.

Communication Channels:

Function: Facilitates reliable communication between clients and servers.

Components: Protocols (e.g., HTTP, TCP/IP), middleware, APIs.

Network Infrastructure:

Function: Supports connectivity and data transmission between clients and servers.

Components: Hardware (e.g., routers, switches), internet, cloud services.

Security and Authentication:

Function: Ensures data integrity and protects resources from unauthorized access.

Components: Firewalls, encryption, access control mechanisms.

Ques2.>

There are many paths like full stack web developer , frontEnd developer , BackEnd developer

Ques3.>

The web developer tools are very important in web development in editing/testing small changes in HTML/CSS on the browser itself, debugging the code on the browser , adding some CSS styling for test , inspecting a web page to extract images, videos, dimensions of the elements , testing the responsiveness of the webpage on different dimension devices, etc.

Ques4.>

Some advantages of using version control system like GIT are

Collaborative environment: VCS provide a collaborative environment on in which many people can edit/view same code on VCS

Tracking the changes: In VCS there is a brief history of all the changes that are made on the code including who make the changes and when, so if there is any problem in new code we can easily rollback to old code

Backup: Many people use VCS to make backup of their code on internet so if they lose their code from their local host then in that case they can get it back from VCS

Ques5.>

Tool: Text editor mainly focuses on text editing like Notepad but whereas IDE provide development tool , debugging , compiling the code , project/file management like VScode, WebStorm

Complexity: IDE are more complex and rich in features whereas Text editor are not more complex

Customizations: IDE provide you to do many customizations from their plugins and Extensions whereas a text editor doesn't provide customizations other than text customization

UI: User interface of IDE are more interactive than text editors

