

Assignment

Introduction to Web Development

1. Explain the main components of client-server architecture and their functions.

Client: Initiates requests for services or resources from the server.

User Interface: Provides the interface for user interaction.

Client Side Logic: Performs inputs validation and prepares requests for the server.

Server: Provides services or resources in response to client requests.

Business Logic: Executes application-specific task and processes.

Data Storage: Manages and stores data required by the application.

Server Side Logic: Handles authentication, authorization and other server-specification operations.

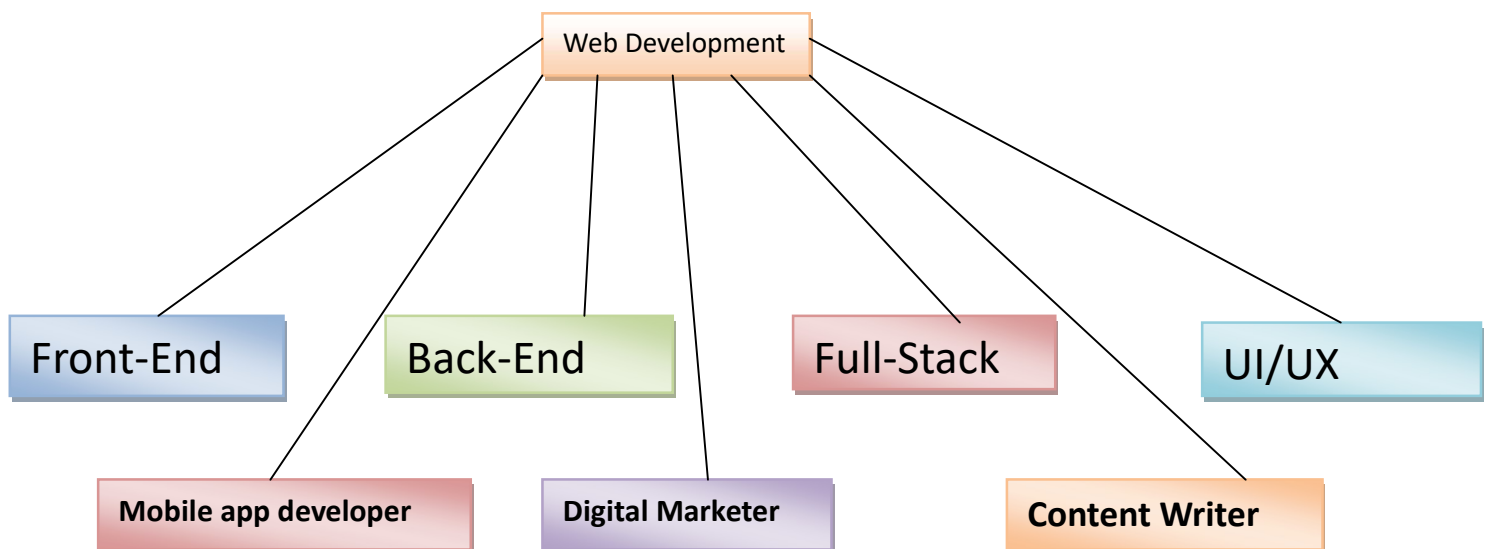
Function's of Client Server Architecture:

Client	Server
User interface	Business Logic
Input validation	Data Management
Request Generation	Request Processing
Response Handling	Security & Access Control

2. Discuss the various career paths available after completing a web development course.

Completing a web development course open us a wide range of career paths like:

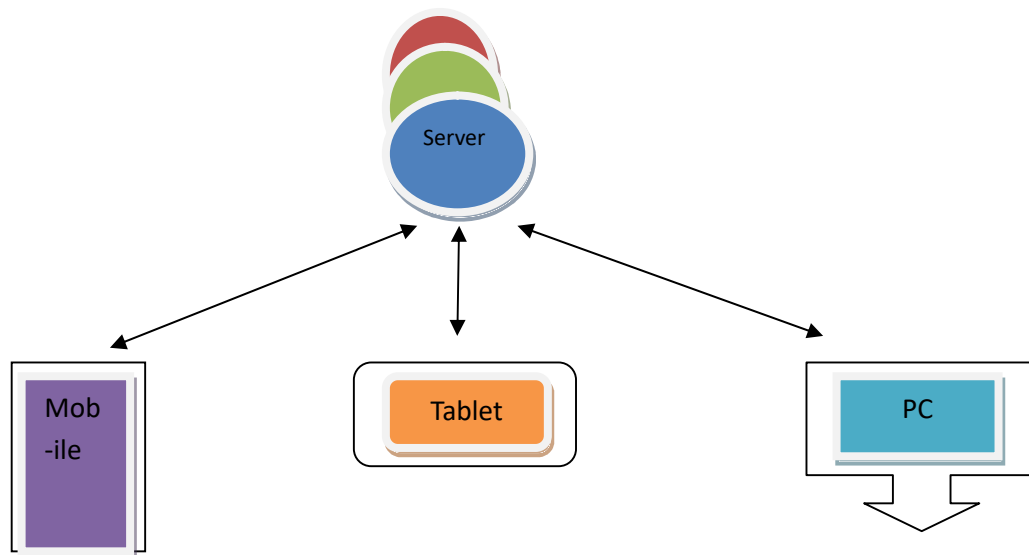
- Front-End Developer
- Back-End Developer
- Full-Stack Developer
- UI/UX Designer
- Mobile App Developer
- Digital Marketer
- Content Writer



3. Describe the role of web browser's developer tools in web development.

The role of web browser's developer tools in web development:

- Inspecting HTML/CSS
- Debugging JavaScript
- Network Monitoring
- Performance Profiling
- Security Analysis



4. What are the advantages of using a Version Control System like GIT in a development project?

Version Control System: It is a category of software tools that helps in recording changes made to files by keeping a track of modifications done in the code.

Advantage of version control system:

- Enhance the project development speed by providing efficient collaboration.
- Employees or contributors of errors and conflicts mean while project development through traceability to every small change.
- For each different contributor to the project, a different working copy is maintained and not merged to the main file unless the working copy is validated.
- A repository, Copy of work, Working in a group etc.

5. Compare and contrast a text editor and an IDE, highlighting their key features and uses.

A text editor: A text editor is a software application used for creating and editing plain text files.

IDE: IDE stands for Integrated Development Environment is a comprehensive software suite that combines multiple tools require for software development into a single platform.

Key Features:

A Text Editor	IDE
➤ Code Editor	➤ Code Assistance
➤ Build Automation	➤ Debugging
➤ Debugging Tools	➤ Version control Integration
➤ Language Support	➤ Build Automation
➤ UI Design	➤ Project Management

Uses:

A Text Editor	IDE
➤ Markup Language	➤ Software Development
➤ Quick tasks	➤ Complex Projects
➤ General Editing	➤ Multiple Languages
➤ Learning easy to use	➤ Collaboration