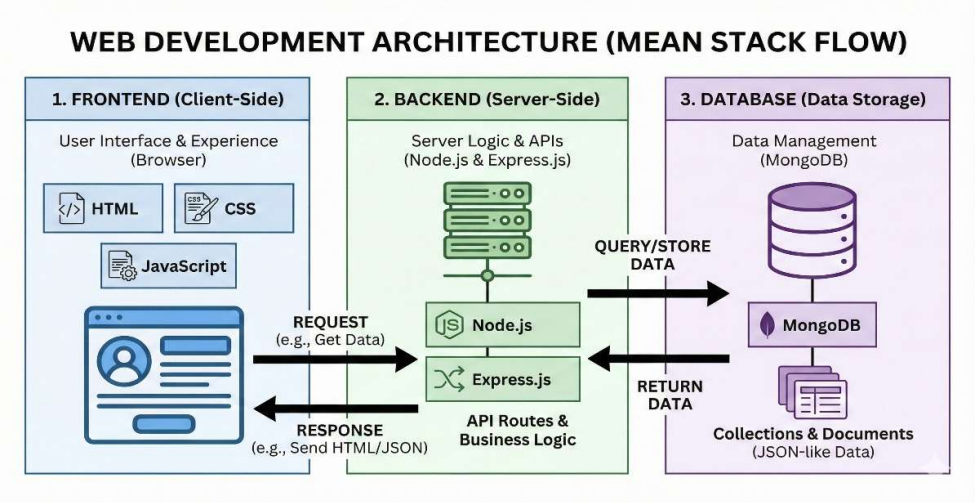
MEAN Stack Assignment -1

Q1. What is Web Development?

Ans :- Web Development is the process of designing, building, and maintaining websites and web-based applications that run on the internet. It involves creating web pages that are visually attractive, functional, secure, and easy to use. Web development ensures that users can access information, submit data, and interact with applications through a web browser.



Web development generally consists of three major components:

1. Frontend Development:

This part focuses on the user interface and user experience. It includes everything that users see and interact with on their screen, such as layouts, buttons, forms, and navigation menus. Technologies like HTML, CSS, and JavaScript are commonly used.

2. Backend Development:

Backend development handles the server-side logic of a website. It processes user requests, performs calculations, applies business rules, and communicates with the database. Technologies such as Node.js, PHP, and Python are used for backend development.

3. Database Management:

The database is responsible for storing and managing application data such as user details, login credentials, and records. Databases ensure data can be stored securely and retrieved efficiently.

Example:

- Login page and buttons → Frontend
- Login verification logic → Backend
- Saving user details → Database

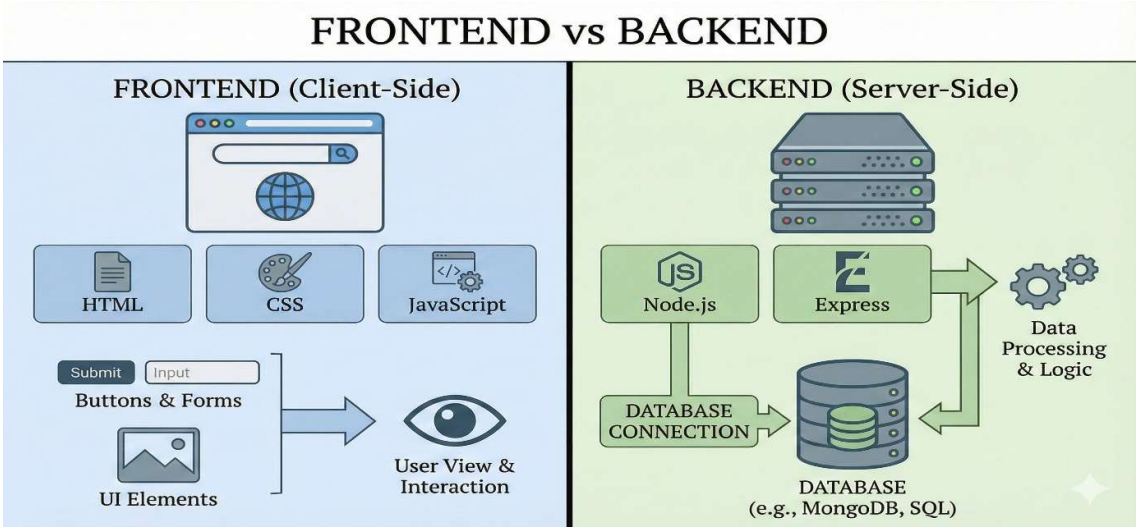
Q2. Difference between Frontend and Backend

Ans :-

Frontend	Backend
Visible to the user	Works behind the scenes
Runs in the browser	Runs on the server
HTML, CSS, JavaScript	Node.js, PHP, Python
Focuses on UI/UX design	Focuses on data processing

Example:

- Designing the login form → Frontend
- Checking username and password → Backend



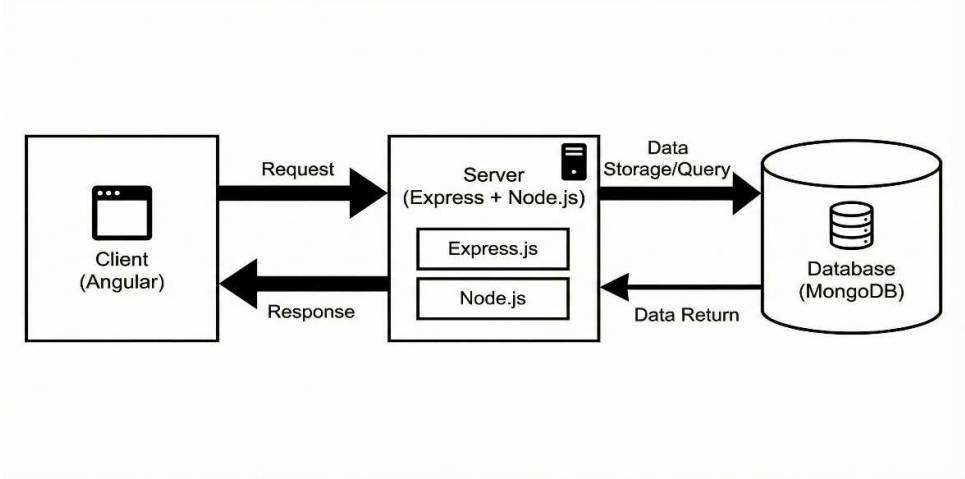
Q3. Client–Server Communication

Ans :-

Client	Server
Sends request to the server	Receives and processes the request
Runs in the browser	Runs on a remote machine
Sends URL or form data	Applies application logic
Waits for response	Sends response back

Steps:

- Client sends a request (HTTP).
- Server processes the request.
- Server sends a response (HTML / JSON / Data).
- Client displays the result to the user.

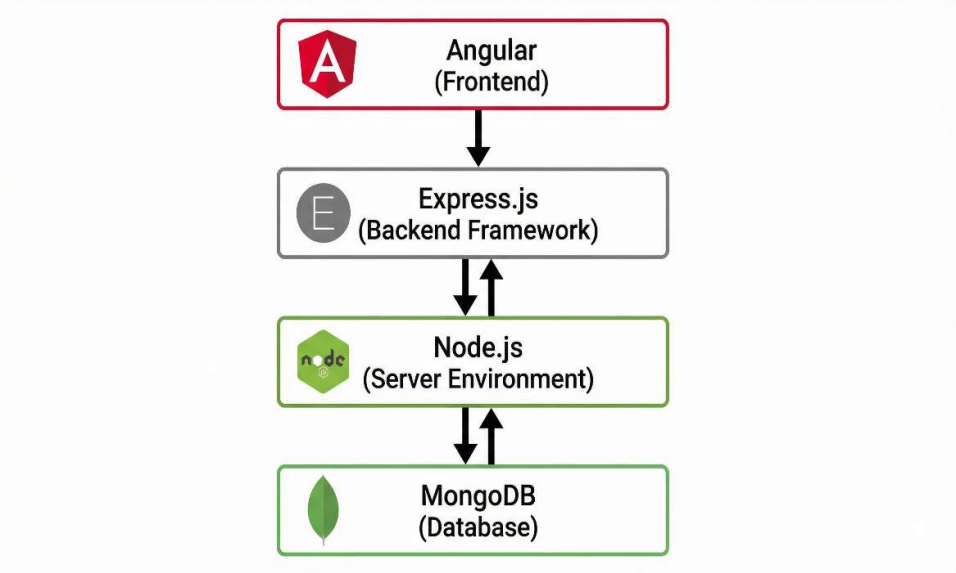


Q4. What is MEAN Stack?

Ans :-

Letter	Technology	Description
M	MongoDB	NoSQL database used to store application data
E	Express.js	Backend framework for handling requests and routes
A	Angular	Frontend framework for building user interfaces
N	Node.js	Server-side runtime environment

MEAN Stack is a full-stack JavaScript technology used to develop modern web applications. It allows developers to use JavaScript for both frontend and backend development, which makes the development process simple and efficient.



Key Point:

Using a single programming language (JavaScript) across the entire stack makes development faster, scalable, and easier to manage.

Q5. Install Angular CLI using npm

Ans :- Angular CLI is a command-line tool that helps developers create, build, and manage Angular applications efficiently.

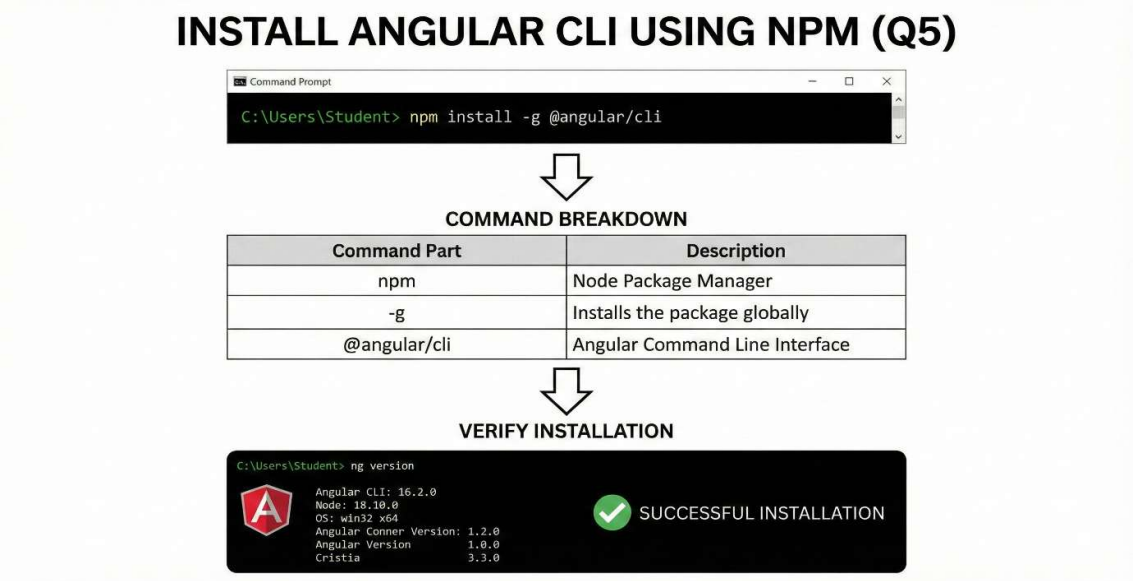
To install Angular CLI, use the following command in the terminal or command prompt:

- npm install -g @angular/cli

Command Part	Description
npm	Node Package Manager
-g	Installs the package globally
@angular/cli	Angular Command Line Interface

To verify the installation, use the following command:

- ng version

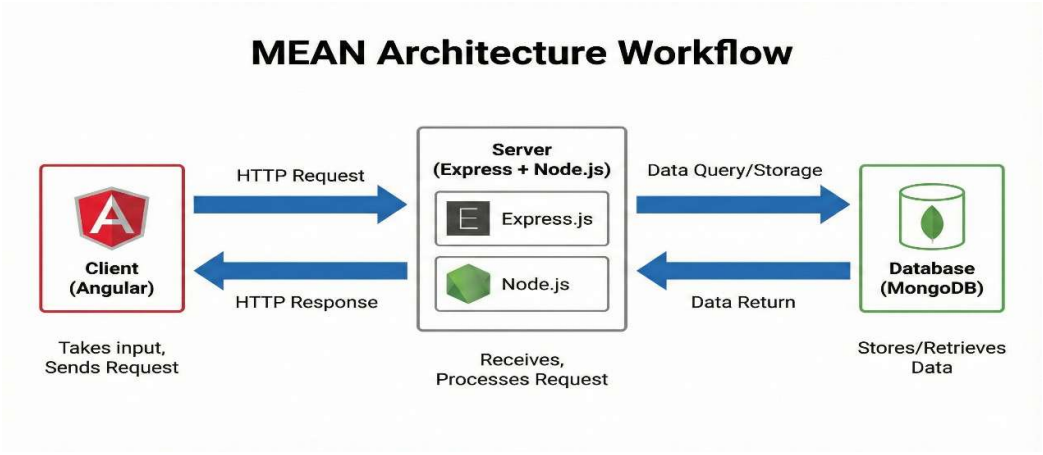


Q6. MEAN Architecture Workflow

Ans :- The MEAN architecture defines how data flows between the client, server, and database in a MEAN Stack web application.

Workflow Explanation:

- Angular (Client) takes input from the user and sends a request.
- Express.js with Node.js (Server) receives and processes the request.
- MongoDB (Database) stores and retrieves application data.



- The processed response is sent back to the client.