=) The MERN Stack-

The MERN stack is a popular full-stack development framework that enables developers to built robust, scalable web applications. It comprises four key technologies : MongoDB, Express.js, React.js & Node.js. Each technology play a specific role in stack, collectively providing a comprehensive framework for both frontend & backend development.

1) MongoDB -

MongoDB is a nosql database that stores data in flexible, json like documents. It is designed for scalability & performance, making it ideal for modern web application that require rapid development & iteration.

2) Express.js -

Express.js is a web application framework for node.js. It provides a robust set of features for web & mobile applications, including middleware to handle HTTP requests, routing & dynamic rendering.

3) React.js-

React.js is a javascript library for building user interfaces. Developed by Facebook, it allowed developers to create large web applications that can update & render efficiently in response to data changes. React components encapsulate their own state & logic, promoting reusability.

4) Node.js-

Node.js is a javascript runtime built on chrome's V8 javascript engine. It allows developers to run javascript on server side enabling the creating of scalable & efficient server-side applications.

=> **Roles of Each Tech in MERN Stack -**

1) MongoDB -

MongoDB serves as the database component of MERN stack. It stores application data in a flexible, JSON like format, which allows for easily data retrieval & manipulation.

2) Express.js -

Express js acts as the web server framework for Node.js, simplifying the process of building robust API & handling HTTP request. It manages routing, middleware & other backend logic.

3) React.js -

React.js handles the frontend development by providing a powerful library for building interactive & dynamic user interfaces. It allows developers to create reusable UI components & manage the applications state efficiently, ensuring a smooth user experience.

4) Node.js -

Node.js provides the runtime environment for executing javascript code on the server side. It enables the development of fast & scalable server-side applications, allowing developers to use javascript throughput the entire development stack.

Setting up a MERN Stack Application -

Prerequisites -

→ node.js & npm
→ mongodB
→ A code editor.

→ ## Setting up the Frontend -

npx create react-app client

cd client

npm install axios

→ ## Setting up the Backend -

mkdir mern-app

cd mern-app

npm init -y

npm install express mongoose cors dotenv

Start the application -

npm start