FSD LAB ASSIGNMENT- 7

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**Aim:** Develop a full stack web application using MERN stack to perform CRUD operations.

**Objectives:**

1. To develop full-stack web projects using the MERN stack.
2. To learn database connectivity using fetch api.
3. To perform insert, update, delete and search operations on the database.

**Theory:**

1. **What is MERN stack?**

The MERN stack is a popular and widely used technology stack in web development. It's an acronym that represents a set of technologies and tools used together to build dynamic and full-stack web applications. The MERN stack includes the following key components:-

* MongoDB
* Express.js
* React
* Node.js

1. **Use of Fetch api?**

The Fetch API is a modern JavaScript API for making network requests, such as fetching resources from a server. It provides a more flexible and powerful alternative to the older XMLHttpRequest. The Fetch API is designed to be simple and easy to use and is particularly well-suited for working with Promises and handling asynchronous operations. Here are some key use cases and features of the Fetch API:

* Making HTTP Requests
* Handling Response
* Sending Data with POST Requests
* Handling Requests
* Setting Request Headers

**FAQs**

1. **What makes MERN stack the fastest growing tech stack?**

The MERN stack has gained popularity and is considered one of the fastest-growing tech stacks for several reasons:-

* JavaScript Everywhere – One of the key advantages of the MERN stack is the use of JavaScript throughout the entire development stack. Developers can use JavaScript for both front-end (React) and back-end (Node.js) development, as well as for interacting with the MongoDB database using JavaScript-like queries. This unification simplifies the development process and reduces the learning curve for developers.
* Full-Stack Capabilities – The MERN stack is a full-stack solution, covering the front end (React), back end (Node.js and Express), and database (MongoDB). This makes it easy for developers to work on both the client and server sides of an application without the need for context switching between different programming languages or frameworks.
* React's Component-Based Architecture – React, a key component of the MERN stack, is known for its component-based architecture. This allows developers to create reusable UI components, making it easier to maintain and scale applications. React's virtual DOM also contributes to improved performance by minimizing the need for direct manipulation of the actual DOM.
* Node.js for Scalable and Fast Server-Side Development – Node.js is known for its event-driven, non-blocking I/O model, which makes it highly scalable and efficient for building server-side applications. It is well-suited for handling a large number of simultaneous connections, making it suitable for real-time applications and scalable web services.
* NoSQL Database (MongoDB) – MongoDB, being a NoSQL database, provides flexibility in storing data in JSON-like BSON format. This flexibility is advantageous in scenarios where the data structure is not fixed or evolves over time. MongoDB's scalability and ease of integration with Node.js also contribute to its popularity within the MERN stack.

**Help Link:**

<https://www.mongodb.com/languages/mern-stack-tutorial>

Github Link-

SCREENSHOTS ADDED BELOW!!



