**Full Stack Development with MERN**

**Project Documentation format**

**1. Introduction**

**• Project Title** : [“EDUTUTOR AI : Personalized Learning with Generative AI and LMS Integration”]

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**2. Project Overview**

• Purpose: Briefly describe the purpose and goals of the project.

• Features: Highlight key features and functionalities.

**3. Architecture**

• Frontend: Describe the frontend architecture using React.

• Backend: Outline the backend architecture using Node.js and Express.js.

• Database: Detail the database schema and interactions with MongoDB.

**4. Setup Instructions**

• Prerequisites: List software dependencies (e.g., Node.js, MongoDB).

• Installation: Step-by-step guide to clone, install dependencies, and set up the

environment variables.

**5. Folder Structure**

• Client: Describe the structure of the React frontend.

• Server: Explain the organization of the Node.js backend.

**6. Running the Application**

• Provide commands to start the frontend and backend servers locally.

o Frontend: npm start in the client directory.

o Backend: npm start in the server directory.

**7. API Documentation**• Document all endpoints exposed by the backend.

• Include request methods, parameters, and example responses.

**8. Authentication**

• Explain how authentication and authorization are handled in the project.

• Include details about tokens, sessions, or any other methods used.

**9. User Interface**

• Provide screenshots or GIFs showcasing different UI features.

**10. Testing**

• Describe the testing strategy and tools used.

**11. Screenshots or DemoLINK:**[**https://drive.google.com/file/d/1nzrPyqQE4Y0Ufqp1jg79N8EzENww0heZ/view?usp=drive\_link**](https://drive.google.com/file/d/1nzrPyqQE4Y0Ufqp1jg79N8EzENww0heZ/view?usp=drive_link)

• Provide screenshots or a link to a demo to showcase the application.

**12. Known Issues**• Document any known bugs or issues that users or developers should be aware of.

**13. Future Enhancements**

• Outline potential future features or improvements that could be made to