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SYNOPSIS

**ON**

**Google Docs Clone in MERN Stack**

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**Title of the Project:**

Google Docs Clone using MERN Stack

**Objective:**

The main objective of this project is to develop a collaborative document editing platform inspired by Google Docs using the MERN (MongoDB, Express.js, React, Node.js) stack. The project aims to address the need for a feature-rich and real-time collaborative document editing experience for user.

**Scope:**

This project will cover the development of a web-based application that allows users to create, edit, and collaborate on documents in real-time. It will include user authentication, document creation and editing features, real-time collaboration, version control,sharing and permissions management, offline support, and responsive design. The project will not cover advanced features such as AI-powered suggestions or extensive customization options.

**Methodology:**

We will utilize the MERN stack for building both the frontend and backend of the application. MongoDB will be used as the database to store user data and document content. Express.js will handle HTTP requests and serve as the backend framework. React.js will be used for building the user interface components on the frontend, while Node.js will power the server-side logic.

**Proposed System:**

The proposed system will be a web-based application where users can sign up or log in to create, edit, and collaborate on documents in real-time. Users will have access to a rich text editor for formatting text, inserting images, and more. The system will also include features such as version history, comments, and discussions to enhance collaboration.

**Features:**

1. User Authentication
2. Document Creation and Editing
3. Real-time Collaboration
4. Version Control
5. Sharing and Permissions
6. Offline Support
7. Responsive Design

**Implementation Plan:**

1. Set up development environment and project structure - 1 week
2. Implement user authentication and basic document editing functionality - 2 weeks
3. Integrate real-time collaboration using Socket.IO - 3 weeks
4. Implement additional features and refine user interface - 4 weeks
5. Testing, debugging, and deployment - 2 weeks

**Team Members:**

* Project Manager/Lead Developer: [Garvit Varshney]
* Backend Developer: [Garvit Varshney, Vinay Pal, Prashant Kumar]
* Frontend Developer: [Vinay Pal, Prashant Kumar, Garvit Varshney]

**Resources Required:**

* Development IDE (e.g., Visual Studio Code)
* MongoDB database
* Node.js runtime environment
* React.js Frontend library
* Socket.IO
* Tailwind CSS for frontend design

**References:**

* MongoDB Documentation: [[MongoDB Documentation](https://www.mongodb.com/docs/)]
* Express.js Documentation: [[Express - Node.js web application framework (expressjs.com)](https://expressjs.com/)]
* React Documentation: [[React](https://react.dev/)]
* Node.js Documentation: [[Node.js — Introduction to Node.js (nodejs.org)](https://nodejs.org/en/learn/getting-started/introduction-to-nodejs)]

**Expected Outcomes:**

We expect to deliver a fully functional web application that replicates the core features of Google Docs, allowing users to collaborate on documents in real-time. The outcome will be a working software application deployed to a cloud platform.

**Project Supervisor:**

**[Mr. AKASH KUMAR CHOUDHARY]**

**Conclusion:**

The Google Docs Clone project aims to provide a collaborative document editing platform using modern web technologies. By leveraging the MERN stack and incorporating features such as real-time collaboration and rich text editing, we aim to deliver a robust solution that enhances productivity and teamwork among users.