MEA(R)N PROJECT

Project Title:

Wingit (Microblogging Platforms)

Team Members:

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**Microblogging Platform Using MERN Stack - Project Documentation**

**1. Introduction**

Purpose:

The purpose of this project is to design and develop a fully functional microblogging web application using the MERN stack (MongoDB, Express.js, React.js, Node.js). The project aims to provide users with a seamless platform to share posts, interact with others, and build communities, offering a practical experience in full-stack development.

Background:

Microblogging platforms like Twitter enable users to express their thoughts concisely. This project will focus on implementing similar features, such as user authentication, post creation, comments, likes, and profile management, while utilizing modern web technologies.

Scope:

- Development of a scalable backend using Node.js and Express.js.

- Responsive and dynamic frontend built with React.js.

- Integration with MongoDB for efficient data storage and retrieval.

- Implementation of features like user authentication, posts, likes, comments, and notifications.

- Deployment of the application to a cloud platform for accessibility.

**2. Problem Statement**

Problem:

The lack of simple and intuitive platforms for microblogging that focus on performance, scalability, and a modern user experience.

Importance:

This project highlights the integration of advanced technologies to create an engaging and scalable solution, providing insights into practical development and deployment processes.

**3. Objectives**

1. Develop a secure and interactive web application using the MERN stack.

2. Provide features such as post creation, comments, likes, and user profiles.

3. Implement secure user authentication and authorization.

4. Enable real-time notifications and updates.

5. Deploy the application to a cloud platform for public access.

**4. Methodology**

1. Data Collection:

- Analyze features of popular microblogging platforms.

- Identify user needs and expectations.

2. Tools/Technologies:

* MongoDB: Database for storing user and post data.
* Express.js: Backend framework for routing and API creation.
* React.js: Frontend framework for dynamic user interface.
* Node.js: Runtime environment for server-side scripting.
* Tools: JWT for authentication, bcrypt for password encryption, and AWS/GCP for deployment.

3. Implementation Process:

1. Set up the development environment.

2. Design database schemas for users, posts, and comments.

3. Build RESTful APIs for CRUD operations.

4. Develop a responsive frontend using React.js.

5. Integrate frontend and backend.

6. Test the application for functionality, security, and performance.

7. Deploy the final version to a cloud platform.

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Project Plan

Milestones:

1. Completion of database schema design and backend APIs.

2. Development of a responsive user interface.

3. Integration and functional testing.

4. Deployment to a live server.

6. Expected Deliverables

* Fully functional web application hosted on a cloud platform.
* Source code repository (GitHub).
* Project report with implementation details and code explanations.
* -Presentation slides summarizing features and outcomes.

7. Evaluation Criteria

* Quality of design and architecture: 20%.
* Functionality and implementation: 40%.
* Report documentation and code comments: 20%.
* Presentation and demonstration: 20%.

8. Submission Guidelines

* Report Format:PDF
* Code Submission: GitHub repository link with clear README instructions.
* Presentation: PDF or PowerPoint slides.
* Deadline: [Insert Date].
* Mode of Submission: Email/Online Portal.

9. References

* MongoDB Documentation: https://www.mongodb.com/docs/
* Express.js Documentation: https://expressjs.com/
* React.js Documentation: https://react.dev/
* Node.js Documentation: https://nodejs.org/
* JWT Authentication: https://jwt.io/