PROJECT SYNOPSIS REPORT

ON

QUIZ APPLICATION

SUBMITTED

TO

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

FOR

INTEGRATED PROJECT (22CS038)

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Problem Statement:

Many existing online quiz applications suffer from poor user experience, limited interactivity, and scalability issues, making it challenging for educators to create and manage quizzes effectively. This project aims to develop a full-stack quiz application using React for the front-end and Spring Boot for the back-end, addressing these challenges by providing an intuitive interface, real-time feedback, robust performance under high user loads, efficient quiz management tools, and strong security measures. The goal is to create an engaging and effective platform for both quiz creators and participants, enhancing the overall online learning experience.

Title:

QUIZ APPLICATION

Objectives:

- Allow users to participate in quizzes seamlessly.
- Utilize React for a dynamic user interface.
- Implement Spring Boot for robust server-side functionality.
- Focus on a user-friendly and engaging interface.
- Offer real-time feedback on quiz performance

Key Learnings:

- Full-stack Java development.
- WebSocket integration.
- JWT authentication.
- Database schema design and CRUD operations.
- Collaborative Git workflows.

Tech-Stack:

- Frontend: React.
- Backend: Spring-boot.
- Database: MySQL.
- Real-time: WebSocket.
- Auth: JWT.

Phases:

1. **Phase 1 (Setup)**: Backend API, MySQL, JWT auth.
2. **Phase 2 (Core Features)**: Real-time Results, frontend UI.

Check Points: {Questions}

a. Does the project statement result in a product? If yes, what type of product?

b. If it is a product, can a prototype be made?

c. Does the project statement use multiple concepts to achieve the outcome? (yes/no)

d. Does it have enough for our team members to do sufficient amount of work? (yes / no)

Checkpoints {Answers}

a. Product: Quiz Application.

b. Prototype: Quiz App.

c. Yes: Combines Spring-boot, Web-Sockets, REST APIs.

d. Yes: 3 members with distinct roles.

Technical Nodes:

Subject	Technical Nodes
Frontend	React
Backend	Spring-boot
Database	MySQL
Real-time	WebSocket

Prerequisites:

- JavaScript, REST APIs, Spring-boot.

References:

1. React Documentation: https://reactjs.org
2. WebSocket Docs: https://websocket.org/
3. MySQL Docs: https://www.mysql.com/