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Kacharam, Shamshabad, Hyderabad-501218, Telangana, India
**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING (AI&ML)**
**II B. TECH II SEMESTER**
**MINI-PROJECT**

| BATCH 2023-27 | MINI-PROJECT WORK PHASE-I | ACADEMIC YEAR 2024-25 |
|---|---|---|

**Batch Id** : 23CSMCP-40

**Title of the Project** : Online Quiz Platform Application

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**Mini – Project Abstract**

**Title:**

Online Quiz Platform Application

**Background:**

With the increasing demand for digital learning and assessment tools, online quiz platforms have become essential for education, corporate training, and competitive exams. Traditional quiz systems often lack adaptability, real-time feedback, and personalized learning insights. Machine learning enhances online quiz platforms by analyzing user performance, predicting difficulty levels, and providing adaptive question recommendations. This approach improves user engagement and ensures a more effective learning experience.

**Objective:**

This project aims to develop an intelligent online quiz platform that improves user engagement with personalized assessments and real-time performance analysis. This particular platform seeks to improve learning outcomes through the ability to adapt question difficulty based on user performance while providing constructive feedback.

**Proposed Methodology:**

The online quiz platform will be developed using Java for backend processing, JavaScript for dynamic user interactions, and HTML/CSS for a responsive user interface. A relational database will be used to store user responses, quiz questions, and performance data. Machine learning models for adaptive question selection and performance analysis will be implemented using Java-based ML libraries. The system will analyze user responses, accuracy, and response time to adjust quiz difficulty dynamically. Evaluation metrics will include accuracy, response time, and user engagement levels to ensure an optimized learning experience.

**Expected Outcome:**

The online quiz platform will therefore be personalized and adaptive, which should enhance user engagement and learning outcomes. The system will be a dynamically configurable one that will help to generate quizzes that will provide a balanced experience for the user by adapting with the equation's difficulty per performance. The platform will be capable of providing real-time performance insights so that users can monitor their progress and identify areas for improvement. Database management and interactive web technologies are thoughtfully integrated to develop a robust and scalable application, fitting for educational as well as corporate training settings.

**Significance:**

The application of an online quiz platform is very useful for education, corporate training, and preparation of competitive examinations in providing an interactive and adaptive assessment system. It uses technology to personalize the learning experience, which keeps users engaged, facilitates better retention of knowledge, and smoothens evaluation. Now, automation assessments with real-time performance analytics and scalable solutions for skill development and knowledge testing are beneficial for educators, students, and organizations.

**Keywords:**

Online Quiz, Adaptive Learning, Performance Analysis, Web Application, Database Management, User Engagement.

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