

A project report on

Quiz Master : Online quizing application

Submitted by

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Declaration Statement

I am working on a Project Title “**Quiz Master : Online quizing application**”. I extend my appreciation to IIT Madras, for providing the necessary resources that enabled me to conduct my project.

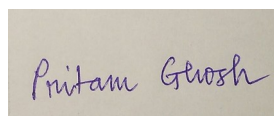
I hereby assert that the data presented and assessed in this project report is genuine and precise to the utmost extent of my knowledge and capabilities.

Additionally, I affirm that all procedures employed for the purpose of building this project have been duly explained in this report. The outcomes and inferences derived from this project are an accurate depiction of the findings acquired through thorough analytical procedures.

I am dedicated to adhering to the information of academic honesty and integrity, and I am receptive to any additional examination or validation of the data contained in this project report.

I understand that the execution of this project is intended for individual completion and is not to be undertaken collectively. I thus affirm that I am not engaged in any form of collaboration with other individuals, and that all the work undertaken has been solely conducted by me. In the event that plagiarism is detected in the report at any stage of the project's completion, I am fully aware and prepared to accept disciplinary measures imposed by the relevant authority.

Signature of Candidate:



Name: Pritam Ghosh

Date: 30/03/2025

Executive Summary :

Quiz Master is a multi-user web application designed to help students prepare for exams through structured quizzes. The platform consists of two roles: **Admin** and **Users**. The **Admin** has full control over the system, managing subjects, chapters, and quizzes, while **Users** can register, select subjects, attempt quizzes, and view their scores.

The application is built using **Flask** for the backend, **Jinja2 templating, HTML, CSS, and Bootstrap** for the frontend, and **SQLite** as the database. Key functionalities include **user authentication, quiz creation and management.**

The **Admin Dashboard** enables subject and quiz management, while the **User Dashboard** allows students to attempt quizzes with recorded scores. The project ensures **a programmatically created database**, supporting structured data flow. Optional enhancements include **chart visualizations, frontend validations, and secure authentication mechanisms.**

This project provides an efficient and scalable platform for exam preparation, integrating **interactive learning and performance tracking.** The structured development approach ensures modularity, usability, and extensibility for future improvements.

Problem Statement :

- Students often struggle with **exam preparation** due to a lack of structured and interactive quiz-based learning platforms. There is a need for an **efficient system** to help them assess their understanding of different subjects.
- Existing quiz systems lack **centralized management** for multiple courses. A dedicated **Admin** is required to create and organize subjects, chapters, and quizzes efficiently.
- A **user-friendly, multi-user** web application is needed to enable students to **attempt quizzes, track progress, and improve their learning** while allowing administrators to manage content seamlessly.

Problem Solving Approach :

To address the challenges of structured exam preparation, **Quiz Master - V1** is designed as a **multi-user web application** with a well-defined admin-user hierarchy. The **Admin (Quiz Master)** has complete control over content

creation, allowing for the **management of subjects, chapters, and quizzes**, ensuring an organized and streamlined learning experience.

The application is developed using **Flask** for the backend, **Jinja2 templating, HTML, CSS, and Bootstrap** for the frontend, and **SQLite** as the database. A **user authentication system** enables students to register, log in, and attempt quizzes, while their scores are recorded and displayed in a structured manner.

The **Admin Dashboard** provides tools to create, edit, and delete subjects, chapters, and quizzes, ensuring efficient content management. The **User Dashboard** allows students to select subjects, attempt quizzes, and track their progress through recorded scores and history.

Outcome :

The **Quiz Master** application will provide a **structured, interactive, and user-friendly** platform for students to prepare for exams. The system will enable **admins** to efficiently manage subjects, chapters, and quizzes, ensuring organized content delivery. **Users** will be able to register, log in, select subjects, attempt quizzes, and track their progress with recorded scores. The platform will feature a **responsive UI, a well-defined role-based system, and structured data storage**. With optional features like **API integration and visual analytics**, the application will enhance the learning experience while maintaining scalability, efficiency, and ease of use for all users.

Video Link :

<https://drive.google.com/file/d/16-l4Y6b6xOMn3zAgrKyTkHdqX06pCtU2/view?usp=sharing>