PROJECT REPORT

QUIZVAULT

A PLATFORM FOR QUESTIONS AND PRACTICE

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Introduction

The **Online Quiz Management System** is a web-based application designed to streamline the process of conducting quizzes between teachers and students. The platform provides dedicated portals for both teachers and students, where teachers can create and manage exams, and students can participate in these exams and view results. The system ensures security, simplicity, and responsiveness across devices.

Objectives

- To digitize the quiz/exam management process.
- To allow teachers to efficiently create, update, and manage exams.
- To provide students with a user-friendly interface to take exams.
- To deliver immediate feedback/results after submission.
- To practice and demonstrate full-stack web development skills using Django.

Tools and Technologies Used

Category	Tools/Technologies
Language	Python, HTML, CSS, JavaScript
Framework	Django (Backend, Templating Engine)
Database	SQLite3
Styling	Bootstrap 4, Font Awesome, Custom CSS
Hosting	Localhost / Django Development Server
IDE	IntelliJ IDEA

System Architecture

- **User Interface (UI):** HTML, CSS, Bootstrap
- **Backend Server:** Django views, URL routing
- **Database:** SQLite3 (storing users, courses, questions, results)
- **User Roles:**

- **Admin:** Manages system-wide settings, user approval, course & quiz moderation.

  - **Teacher** (Create/Edit Exams)

  - **Student** (Take Exams, View Instruction)

Frontend Development

- Created using **HTML5, CSS3, and Bootstrap**.

- Separate login pages for students and teachers.

- Integrated **hero banners and background images** for better user experience.

- Responsive layout with clean typography and color palette.

- Applied modern UI components like cards, alerts, modals, and buttons.

- Used conditional rendering to display error/success messages.

Backend Development

- Built using **Django Framework**:

  - **Models:** Defined for User, Course, Question, Result.

  - **Views:** Handled user registration, login, exam flow, scoring logic.

  - **Admin Panel:** Used for basic course and user data management.

  - **Templating Engine:** Used Django template inheritance and tag rendering.

  - **Security:** Implemented CSRF protection and field validation.

Features

For Admin:

- Approve/reject teacher and student registrations.

- View and manage all users, courses, and results.

- Access dashboard summaries and statistics.
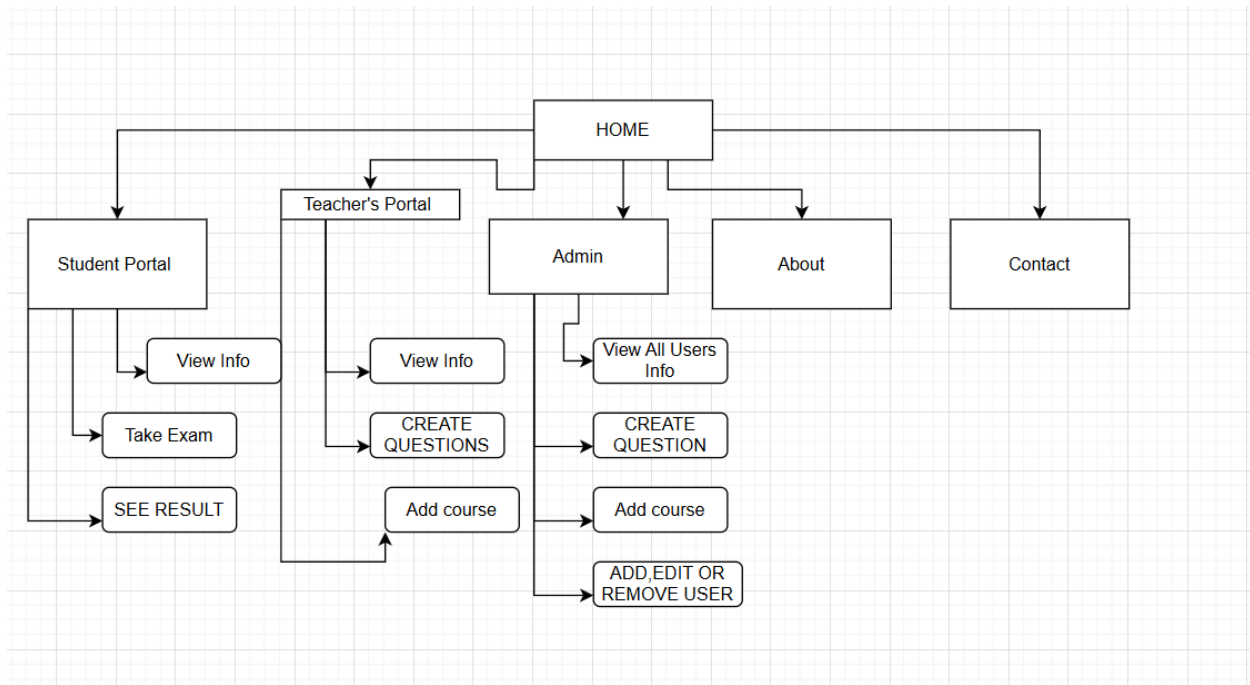
- Enable/disable any exam.

For Teachers:

- Login and manage profile.

- Add, update, and delete courses.

- Set number of questions, marks, time limits.
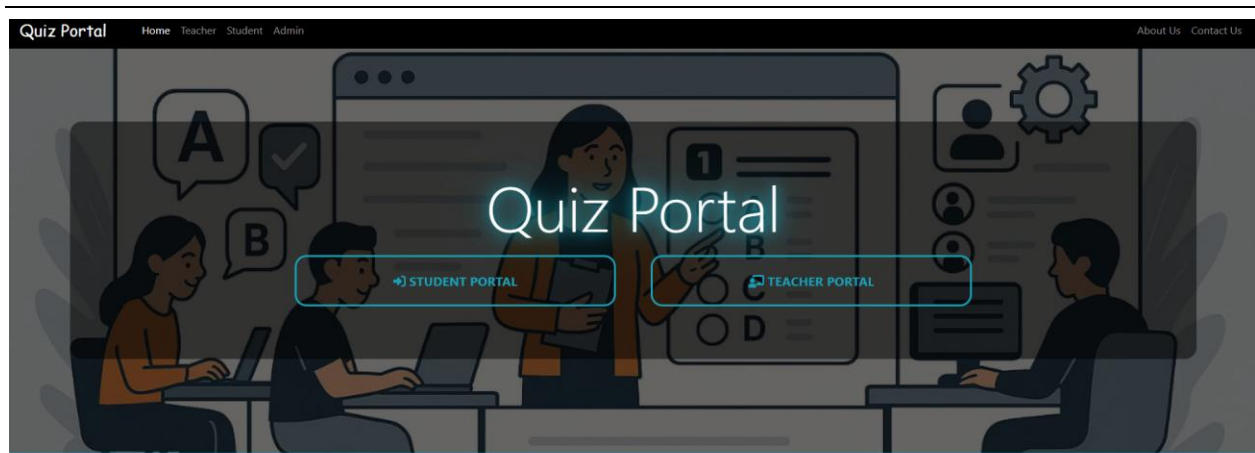
- Add questions to respective courses.

For Students:

- Sign up/login to platform.

- View upcoming exams.

- Read instructions and rules.

- Participate in quizzes with randomized questions.
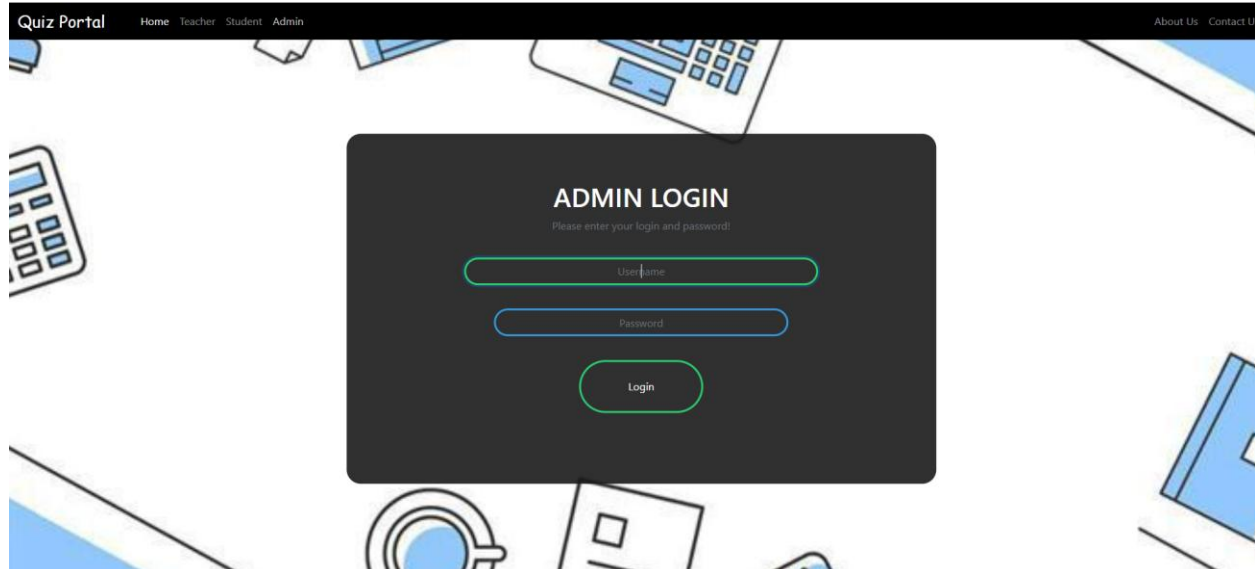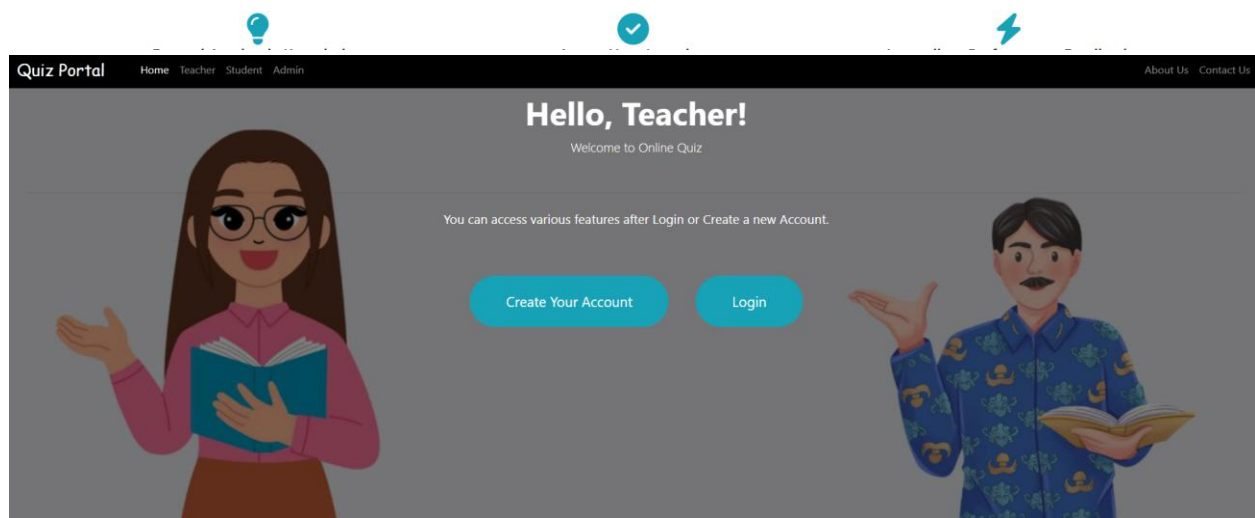
- View instant results after submission.

Flowchart

Screenshot

Conclusion

This project helped us understand the practical implementation of web technologies and the Django framework. We gained hands-on experience in system design, full-stack development, authentication, and role-based data management. The Online Quiz Management System is a scalable, modular, and effective tool for academic assessments and can be deployed in real-world institutions.