

MAD I Project Report

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Description :

The Quiz Master - V1 project is a multi-user quiz practice site where an admin (quiz master) can manage quizzes, questions, subjects, chapters and users, while registered users can attempt quizzes and view their scores. The project ensures a structured approach to quiz management and evaluation.

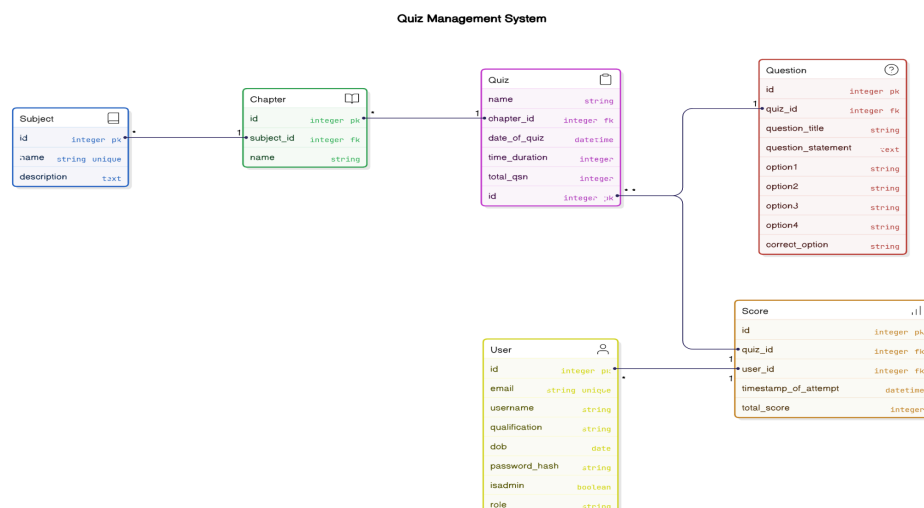
Technologies Used :

- Flask (Web framework for handling routes and backend logic)
- Flask-SQLAlchemy (ORM for database handling)
- Flask-Login (User authentication)
- Flask-Bcrypt (Password hashing for security)
- Jinja2 (Templating engine for rendering HTML)
- SQLite (Lightweight database for efficient data management)
- Bootstrap (Frontend styling)
- Matplotlib (For generating quiz-related statistics charts)

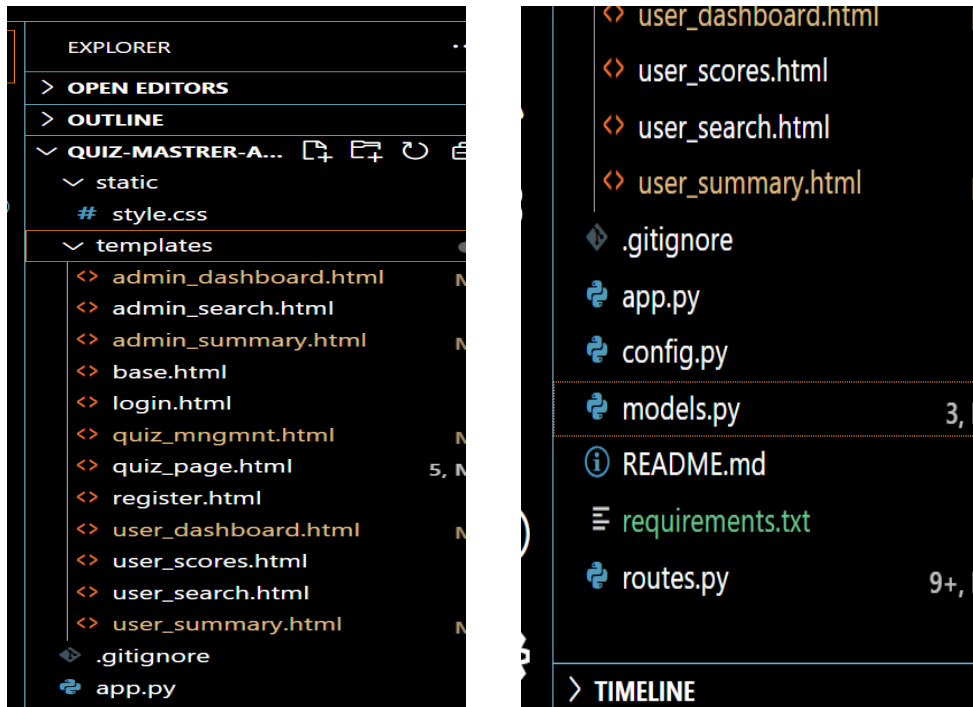
These technologies were chosen to ensure a secure, scalable, and well-structured web application.

DB Schema Design :

The design ensures relational integrity, prevents redundancy, and allows efficient retrieval of quiz and user data.



ARCHITECTURE DESIGN :



- The project follows an MVC (Model-View-Controller) pattern:
- Models: models.py (Defines database schema)
- Routes: routes.py (Handles request processing and rendering)
- Templates: templates/ (Jinja2 templates for rendering pages)
- Static: static/ (CSS and other static files)

Implemented Features:

Admin can manage subjects, quizzes, questions, and users can perform CRUD operations for subjects, chapters, quizzes, and questions ,Views quiz statistics with visualizations.

Users Register and log in securely , Attempts quizzes with a structured UI ,Views past scores and summary statistics.

User authentication & session management.

Video Link - [VID-20250329-WA0002.mp4](#)