



Question Paper Generator

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Abstract: The Question Paper Generator is a web-based application developed using Python, Flask, SQLite, HTML, CSS, and Report Lab. The system automates the process of generating university-style question papers by selecting questions from a database based on the chosen subject and module. It reduces the manual effort involved in preparing examination papers and minimizes repetition of questions. The administrator can add, edit, update, and delete questions through an admin panel. The generated question paper is exported as a PDF with proper formatting, including college details, subject information, page numbers, and question numbering. The system improves efficiency, accuracy, and confidentiality in examination management.

INTRODUCTION

Preparing question papers manually is a time-consuming process that requires selecting questions, arranging them according to the syllabus, and formatting them correctly. Manual preparation can result in repeated questions, uneven distribution across modules, and formatting errors.

The Question Paper Generator is designed to automate this process. The system stores questions in a database organized by subject and module. Users select the subject and the number of questions, and the system generates a professional question paper automatically in PDF format.

The application provides an easy-to-use interface for administrators to manage the question bank efficiently.

OBJECTIVES

The main objectives are:

- To automate question paper generation.
- To reduce manual effort.
- To generate university-style PDF question papers.
- To maintain a centralized question bank.
- To provide CRUD operations (Create, Read, Update, Delete).
- To support multiple subjects.
- To reduce duplicate questions.

To improve examination paper preparation efficiency

LITERATURE SURVEY

Existing examination systems generally require manual question selection. Many institutions still prepare papers using word processors, making the process lengthy and prone to errors.

Recent web-based examination systems use databases to store questions and generate papers automatically. Python and Flask provide a lightweight and efficient platform for developing such applications. SQLite simplifies database management, while Report Lab enables high-quality PDF generation.

The proposed system combines these technologies to produce structured, printable question papers.

PROBLEM STATEMENT

Educational institutions spend considerable time preparing examination question papers. Manual preparation may lead to:

- Repetition of questions
- Human errors



- Improper module distribution
- Time-consuming formatting
- Difficulty maintaining a large question bank

The proposed system automates question paper generation while ensuring proper organization and easy management of questions.

SYSTEM ARCHITECTURE

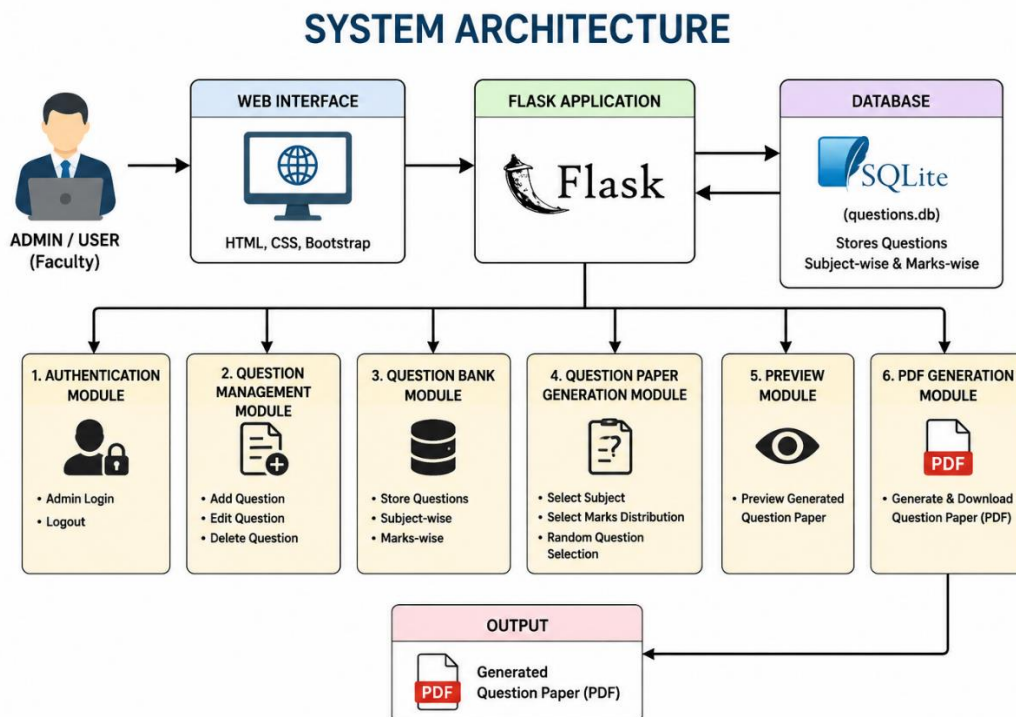


Figure: system architecture

MODULES

Module 1: Login Module

Provides authentication for administrators and restricts unauthorized access.

Module 2: Question Management Module

Allows administrators to:

- Add Questions
- Edit Questions
- Delete Questions
- View Questions

Module 3: Question Bank Module

Stores questions in SQLite database based on:

- Subject
- Marks Category
- Question Text

Module 4: Question Paper Generation Module

Randomly selects questions according to the required marks distribution and prepares the paper.

**Module 5: PDF Generation Module**

Generates a professional PDF containing:

- College Name
- Department Name
- Subject Details
- Instructions
- Questions
- Page Numbers

Module 6: Dashboard Module

Displays:

- Total Questions
- Subject-wise Question Count

Navigation to various modules

RESULTS

The Question Paper Generator System was successfully implemented and tested.

CONCLUSION

The Question Paper Generator System successfully automates the process of generating examination question papers. The system reduces faculty workload, improves efficiency, and eliminates manual errors. By maintaining a centralized question bank and providing automated PDF generation, the application offers a reliable solution for educational institutions. The project meets all the intended objectives and demonstrates the effective use of Python, Flask, SQLite, and Report Lab technologies.

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