

Domain: DSA in C++

Project 4: Quiz System with Scoring using Stacks and HashMaps in C++

Project Title: Quiz System with Scoring (Stacks & HashMaps) – Handle user answers and scoring.

Project Objective:

The objective of this project is to design and implement a quiz system where questions are stored and presented to users, answers are evaluated, and scores are calculated efficiently. The system will use HashMaps (unordered_map) to store questions and correct answers, and Stacks to manage user responses and support features like reviewing or undoing the last answer.

Technologies to Use:

- Language: C++
- Platform: VS Code

Tasks Breakdown:

1. Define a Question structure/class to hold question, options, and correct answer.
2. Store questions and answers in a HashMap for quick access.
3. Implement a Stack to store user answers for review/undo functionality.
4. Display questions one by one with multiple-choice options.
5. Accept and validate user input (answer selection).
6. Push user's answers onto the stack.
7. Compare user answers with correct answers from the HashMap.
8. Maintain a running score counter.
9. Allow user to undo last answer using stack operations.
10. Display final score after all questions are answered.
11. Show review summary of questions, user answers, and correct answers.
12. Handle invalid inputs and edge cases gracefully.

Submission:

Submit the project folder in ZIP file.

Submit the .cpp source file and executable file.

The ZIP will include all files that were used to create the project and Project Report PDF file