

PROJECT ANALYSIS —

Quiz Game

Project Overview

C++ Console Application

 C++ Programming

 Console UI

 Interactive Game



Mini Project
Educational Application

 February 2026

Table of Contents



Project Overview



Code Structure



Core Functionality



User Interface



Scoring System



Code Analysis



Key Features



Future Enhancements

— PROJECT OVERVIEW

Quiz Game

Application Type

Console-Based Interactive Quiz

KEY FUNCTIONS

? Multiple-Choice Questions

📈 Real-time Score Tracking

💬 Instant Feedback System



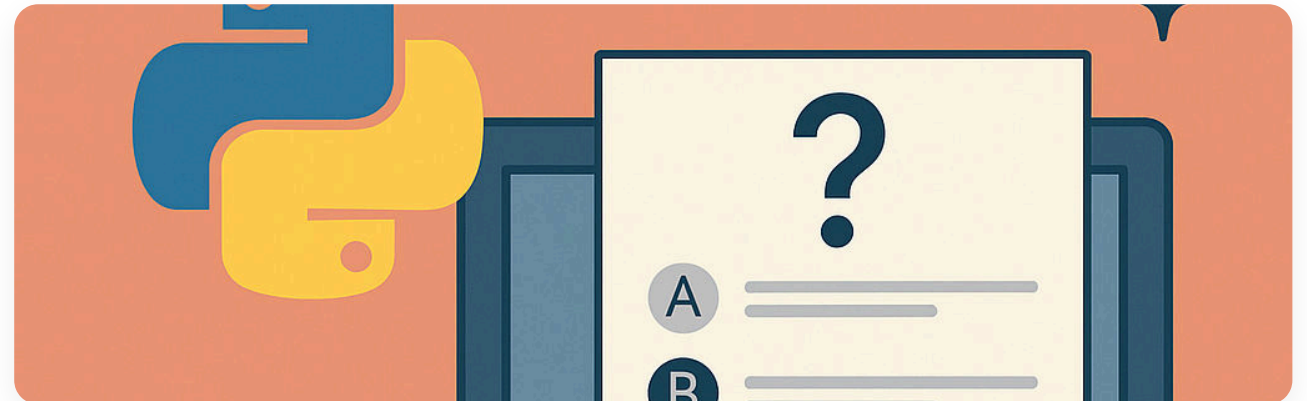
OBJECTIVE Educational Tool

Test user knowledge across various subjects including geography, programming, and technology concepts.



SCOPE Current Implementation

Features 3 sample questions with 4 options each, totaling 30 possible points, providing a complete quiz experience.



Data Structures & Functions

CORE DATA STRUCTURE

struct Question

```
string question // Question text  
string options[4] // A, B, C, D choices  
char correctAnswer // 'A', 'B', 'C', 'D'  
int points // Question value
```

Design Philosophy

Modular structure with clear separation between data (Question struct) and logic (startQuiz function).

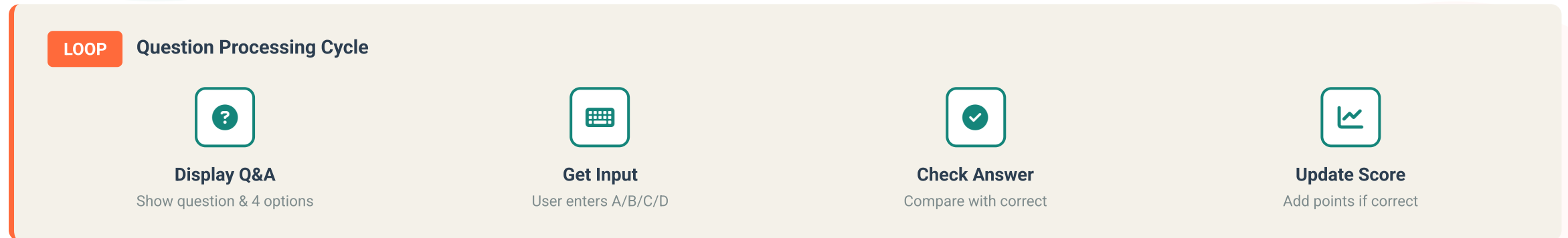
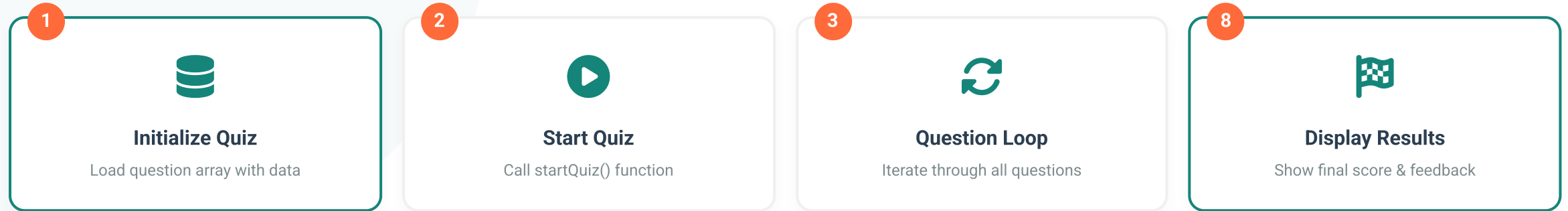
FUNCTION DEFINITIONS

```
void startQuiz(Question q[], int size) {  
    int score = 0;  
    for (int i = 0; i < size; i++) {  
        // Display question & options  
        if (userAnswer == correct) {  
            score += points;  
        }  
    }  
}
```

 **startQuiz()**
Main game logic loop

 **main()**
Initialize & start quiz

Program Flow



Console-Based Experience



WELCOME SCREEN

Program starts with greeting message



QUESTION DISPLAY

Shows question number, text & 4 options



INPUT PROMPT

User enters A/B/C/D choice



INSTANT FEEDBACK

Shows Correct/Wrong immediately



FINAL RESULTS

Score display with performance message

```
Quiz Game Console

===== Welcome to the Quiz Game =====

Question 1: What is the capital of India? (10 pts)

A. Mumbai
B. New Delhi
C. Kolkata
D. Chennai

Enter your answer (A/B/C/D):

Correct!

Question 2: Which language is used for system programming? (10 pts)

A. Python
B. Java
C. C++
D. HTML

Enter your answer (A/B/C/D):

Wrong! Correct answer is C

Your final score: 10 / 30 Great job!
```

Score Calculation & Feedback

SCORING MECHANISM

+

Points per Question

Variable (10 pts each)

↺↻

Accumulation

Score += points (if correct)

📊

Total Calculation

Sum of all questions

PERFORMANCE FEEDBACK

≥ 20 pts

"Great job!"

< 20 pts

"Better luck next time."

🏆

Final Score Display

20

/

30

Great job!

💡

Scoring Logic

score

starts at 0, increments only for correct answers. Total possible = sum of all question points.

Roadmap for Improvement



CORE

Random Question Order

Shuffle questions dynamically to enhance replayability and prevent memorization.



Question Bank Expansion

Expand question database with hundreds of questions across multiple categories.



Difficulty Levels

Implement easy, medium, and hard difficulty tiers with adaptive scoring.



Time Limits

Add countdown timers per question to increase challenge and excitement.



Persistent Score Tracking

Store high scores and progress using file I/O for long-term statistics.



GUI Implementation

Develop graphical user interface using Qt, SFML, or web technologies.

