CCP Project Proposal

Group Members:

Areefa Samar (CT-25062)

Zainab Kinza Sheikh (CT-25059)

Muzna Rizwan Zubairy (CTGA-23007)

Project Title:

"An Interactive Multi-Subject Quiz Game"

Introduction:

This project aims to design and develop an interactive quiz application that enables users to test their knowledge across multiple subjects. The game will feature multiple-choice questions (MCQs), a real-time scoring system, and lifelines to make the experience engaging and educational. The application will be designed to be simple, intuitive, and accessible for users of all ages.

Objectives:

- To develop a **user-friendly quiz system** with multiple-choice questions
- To provide quizzes across various subjects (Geography, General Knowledge, English, Mathematics, etc.) for user choice and engagement.
- To implement **real-time scoring** that motivates and tracks user performance.
- To integrate **lifelines/help options** (e.g., "Hint", "Skip") for interactive and exciting gameplay.
- To design the system in a **modular and scalable way**, enabling easy addition of new subjects and questions.

Scope:

- **Subjects**: Geography, General Knowledge, English, Mathematics (expandable to more subjects).
- **Question Types**: Multiple-choice with four options, one correct answer.
- **Players**: Single-player mode (future scope includes multiplayer support).

Features:

Feature	Description
User Selection	Choose a subject before starting the quiz from multiple options.
MCQ Questions	Each question shows four choices with only one correct answer.
Scoring System	Points for correct answers; cumulative score shown at the end.
Lifelines	"Hint" (show clue / remove options), "Skip" (no penalty for skipping).
Timer (Optional)	Countdown timer per question for added challenge.
Result Summary	Final score, correct/incorrect breakdown, and subject-wise results.
Question Bank	Questions stored in a file (questions.txt) for structured updates
Add Question (Bonus)	Users can append new questions directly into the file.
UI Enhancements	ASCII borders, clear headings, and polished user interface.
Modular Code	Organized functions for loading, displaying, scoring, and lifelines.

Technology Stack:

- **Programming Language**: C Language
- **IDE**: DevC++
- **Data Storage**: Notepad or Word Document for question banks.

Work Plan:

Phase	Activities	Duration
Phase 1: Planning	Set up file handling: create questions.txt, define struct Question, load questions, and test print.	Week 1
Phase 2: Design	Build core quiz flow: subject menu, ask questions, take input, and show basic score.	Week 2
Phase 3: Development	Expand fully: add 4 subjects, bigger question bank, input validation, and final score display. Add features: lifelines (hint/skip), result summary, and polish UI.	Week 3 & 4
Phase 4: Bonus & Testing	Add bonus features (timer, add-question option), Debug thoroughly: test subjects, lifelines, scoring, invalid inputs, and overall user experience.	Week 5
Phase 5: Submission	Finalize project: freeze code, prepare documentation, slides, demo video, and presentation.	Week 6

Expected Outcomes:

- A functional interactive quiz with multiple-choice questions.
- A user-friendly interface for subject selection.
- Real-time scoring and lifelines for engaging gameplay.
- A modular codebase supporting future expansion.

Conclusion:

This project demonstrates how a quiz game can combine multiple subjects to broaden knowledge and interest. With real-time scoring and lifelines, it keeps users engaged while testing accuracy. Its modular design allows easy expansion with new questions or subjects. Overall, it offers a fun yet effective way to support learning and knowledge retention.