Interim Report - CA-2 (Python Project - CSM 216)

BACHELOR OF TECHNOLOGY

in

SCIENCE AND ENGINEERING – DATA SCIENCE WITH MACHINE LEARNING

School of Computer Science and Engineering

Lovely Professional University

Phagwara, Punjab (India)

Title Page

Project Title: Python Project

Course Code: CSM 216

Manish Chandra

Registration No: 12313196

Section: K23UP

Roll No: 43

Acknowledgment

I am grateful to my instructor and peers for their support and guidance in developing this project. Their input has been instrumental in shaping the design and structure of the project, particularly regarding the interactive elements and design flow.

Table of Contents

Introduction

The **Quiz Game** is an interactive Python-based quiz application designed to provide a fun and engaging way to test general knowledge. The project aims to create a user-friendly interface using the **Tkinter** library and incorporates features such as score tracking, dynamic question handling, and result display at the end of the quiz.

Objectives and Scope of the Project

The primary objective of this project is to develop a **quiz game** with the following features:

- Display a question, accept the user's answer, and provide feedback.
- Track the score dynamically and show the total score at the end of the quiz.
- Allow the user to exit the quiz at any time and display the score achieved up to that point.
- Ensure that questions are randomly selected, and no question is repeated during the quiz session.

The project uses the **Tkinter** library for GUI creation and handles the main logic of the quiz in a modular way using separate files for questions and result handling.

- The application covers multiple-choice questions on a variety of topics, utilizing Python’s random library to select questions.

Application Tools

- Programming Language: Python

- **IDE(s):** PyCharm

- **Libraries/Packages:**

  - **Tkinter:** For creating the graphical user interface (GUI).

  - **PIL (Pillow):** To handle background images.

  - **Random:** To randomize question selection.

- **Version Control:** Git (optional)

- **Other Tools:** None

Project Design

The project consists of three main components:

1. **Main Game Logic (main.py)**: This file handles the core game mechanics such as question display, user input for answers, score tracking, and handling user interactions like starting the quiz and exiting.
2. **Questions (questions.py)**: Contains the question set and logic to get random questions for each quiz session. It also ensures that questions are shuffled and managed for the current session.
3. **Results (result.py)**: Responsible for displaying the quiz result after the user finishes or exits the quiz, showing the total score achieved.

Workflow:

- The game starts with an introductory screen, and the user can start the quiz.
- Random questions are shown one after the other.
- After answering each question, feedback is given, and the score is updated.
- The user can exit the quiz at any time, and the final score is shown.

Conclusion

The quiz game successfully meets the project's requirements. It provides an interactive and engaging experience for users, tracking their score and allowing them to exit and view results at any time. The modular structure of the project, with separate files for questions, main game logic, and results, ensures maintainability and extensibility.