Documentation

Project Documentation

Introduction:

This project is an interactive quiz application developed in Python 3, designed to assess users' general knowledge. It presents a series of questions and allows users to input their answers, providing immediate feedback on correctness.

Key Features:

- Randomization of questions to enhance variety
- Implementation of timers for each question to ensure time limits
- Interactive interface for user engagement
- Robust error handling for smoother user experience
- Utilization of multi-threading for efficient processing

Components and Functionalities:

Question and Answer:

The quiz operates using two distinct lists containing questions and their corresponding answers. These lists are shuffled to introduce randomness into the quiz and prevent predictability.

Displaying Question:

The display_question function dynamically updates the question label with the current question from the shuffled list. It also starts a timer thread to enforce the time limit for answering each question effectively.

Answer Validation:

Upon submission of an answer, the check_answer function validates the user's input against the correct response. If the answer is correct, a success message is displayed; otherwise, an incorrect response is presented.

Moving to the Next Question:

After answering a question or when the time limit is reached, the next_question function moves to the subsequent question if available. It displays a completion message upon answering all questions.

Setting up the Graphical User Interface:

The Tkinter library, compatible with Python 3, is leveraged to create the graphical user interface. This includes a window featuring question labels, an entry widget for user responses, navigation functionality for progressing to the next question, and an option to exit the quiz.

Exit Functionality:

The exit_quiz function facilitates the termination of the quiz by closing the Tkinter window, ensuring a seamless exit process for users.

Main Loop:

The main event loop, initiated by the root.mainloop() statement, ensures an interactive GUI experience by continuously processing user interactions and updating the display accordingly.

Contributors:

Acknowledgments go to Asmin, Sonia, and Saloni for their contributions to this project.

Notes:

- Developed as a programming assignment for the ICT105 Programming Principles course instructed by Jack Burton.

- The codebase is thoroughly documented to enhance comprehension and ease maintenance tasks.

- Contributions, including pull requests or issue reporting, are encouraged to improve the project further.

GitHub Repository:

The project's source code is hosted on GitHub, allowing for collaborative development and version control. Access the repository through the following link: [GitHub Repository](https://github.com/yourusername/yourrepository).

Conclusion:

This Python 3 script offers a straightforward yet comprehensive solution for conducting general knowledge quizzes. Through its use of threading, it ensures dynamic question presentation within time-constrained scenarios, fostering user engagement. Additionally, the randomization of questions adds an element of surprise, making each quiz session unique and engaging. Overall, it serves as a versatile tool for creating customizable quizzes using Python 3 and Tkinter.