**Quiz Game Design Document**

Design Choices:

1. **Modularity:** The code is organized into functions for each logical task (asking a question, running the quiz). This enhances readability and allows for easier maintenance and customization.
2. **Randomization:** Questions are shuffled to make each quiz unique and engaging. The **random.shuffle** function is utilized for this purpose.
3. **User Input Validation:** Robust input validation ensures that user responses are handled gracefully, preventing potential errors and enhancing user experience.
4. **Feedback Mechanism:** Immediate feedback on user responses adds interactivity and helps users understand correct answers.
5. **Scoring System:** A simple scoring mechanism tracks correct answers, providing a final score at the end of the quiz.
6. **Customization:** Questions, options, and correct answers are defined as lists, allowing easy modification for customization without altering the code structure.

Features:

1. **Dynamic Questions:** The quiz adapts to different questions and randomizes their order, providing a varied user experience.
2. **Input Validation:** The program checks for valid user input, ensuring the user enters a number within the correct range.
3. **User-Friendly Feedback:** Clear and concise feedback messages assist users in understanding their performance.

Challenges:

1. **User Input Handling:** Ensuring robust validation while maintaining user-friendliness was a challenge. The code addresses potential errors and provides informative messages.
2. **Randomization:** Achieving effective randomization without repeating questions required careful implementation to maintain fairness and variety.
3. **Code Readability:** Balancing modularity and simplicity was crucial. Careful use of functions and comments ensures the code remains understandable.

This quiz game is designed to be flexible, user-friendly, and easily customizable. The use of functions, input validation, and dynamic features contribute to an engaging and enjoyable quiz experience.