2.2 - Constraints and Requirements

2.2.1 - Functions

The Interactive Quiz System provides the following key functions:

- **Create Quizzes**: Enables users to create new quizzes by adding various types of questions.

- **Edit Quizzes**: Allows users to modify existing quizzes, including updating quiz details and questions.

- **Delete Quizzes**: Permit users to remove existing quizzes from the system.

- **Add Questions**: Support the addition of new questions to quizzes, with multiple question types such as multiple choice and true/false.

- **Edit Questions**: Enable users to update the content of existing questions, ensuring quizzes remain accurate and relevant.

- **Take Quizzes**: Facilitate users in participating in quizzes by presenting questions and recording responses in a user-friendly interface.

- **Score Quizzes**: Automatically calculate and display scores immediately after quiz completion, providing immediate feedback on performance.

2.2.2 - Objectives

The design of the Interactive Quiz System aims to achieve the following objectives:

- **User-Friendly**: The system should provide an intuitive and easy-to-navigate interface to improve user interaction and satisfaction.

- **Efficient**: The system should ensure a smooth and seamless user experience without causing errors.

- **Responsive**: The system should offer real-time scoring and immediate feedback upon quiz completion.

- **Reliable**: The system should function correctly and consistently under normal usage conditions, maintaining data integrity and accuracy.

- **Maintainable**: The system should be designed with clean and modular code, facilitating easy maintenance and future enhancements.

- **Secure**: The system should store user data and quiz content securely to prevent unauthorized access and ensure data privacy.

2.2.3 - Constraints

The Interactive Quiz System must satisfy the following constraints:

- **Application Type**: The system must be a desktop application, focusing on providing interactive user experience.

- **Question Types**: The system must support multiple question types, including multiple choice and true/false.

- **Real-Time Scoring**: The system must provide real-time scoring upon quiz completion.

- **Compatibility**: The system must be compatible with Java 11 or later.

- **Timeline**: The project must be completed within a specified timeline, such as three months, to ensure timely delivery.