LAB WORK – 9

On the basis of required validations map the different test cases to handle all possible critical cases which may arise during the life cycle of the software

1. User Registration and Authentication:

a. Positive Test Cases:

- Verify successful user registration with valid details.

- Ensure users can log in with valid credentials.

2. Quiz Creation and Configuration:

a. Positive Test Cases:

- Ensure quizzes can be configured with different question types, difficulty levels, and time limits.

b. Negative Test Cases:

- Verify the system handles errors gracefully when creating a quiz with incomplete information.

3. Quiz Taking:

a. Positive Test Cases:

- Ensure users can start and complete quizzes successfully.

- Validate that the timer functions correctly during quiz attempts.

b. Negative Test Cases:

- Check if the system handles interruptions (e.g., network issues) during a quiz.

- Verify that users cannot submit quizzes after the time limit has expired.

4. Question Types and Validation:

a. Positive Test Cases:

- Confirm that each question type (multiple choice, true/false, etc.) functions correctly.

- Verify that correct answers are accepted, and incorrect answers are rejected.

b. Negative Test Cases:

- Attempt to submit incomplete answers and ensure the system prompts for completion.

- Validate that the system handles unexpected inputs appropriately.

5. Scoring and Results:

a. Positive Test Cases:

- Confirm accurate scoring for correct answers.

- Verify that users receive immediate feedback on quiz completion.

b. Negative Test Cases:

- Test scoring for partially correct answers.
- Ensure the system handles errors gracefully and does not crash during result processing.

6. Security and Privacy:

a. Positive Test Cases:

- Verify that user data is securely stored and transmitted.
- Confirm that only authorized users have access to sensitive information.

b. Negative Test Cases:

- Attempt unauthorized access to user data.
- Test for potential security vulnerabilities, such as SQL injection or cross-site scripting.

7. Cross-browser and Cross-device Compatibility:

a. Positive Test Cases:

- Ensure the application works well on different browsers (Chrome, Firefox, Safari, etc.).
- Confirm usability on various devices (desktop, tablet, mobile).

b. Negative Test Cases:

- Identify and address issues related to browser-specific incompatibilities.
- Check for responsiveness issues on different screen sizes.

8. Performance and Scalability:

a. Positive Test Cases:

- Test the application's response time under normal usage conditions.

b. Negative Test Cases:

- Simulate heavy traffic to identify performance bottlenecks.
- Ensure the application gracefully degrades under extreme load conditions.

9. Accessibility:

a. Positive Test Cases:

- Confirm that the application adheres to accessibility standards (WCAG).
- Test with screen readers and ensure a positive user experience for individuals with disabilities.

b. Negative Test Cases:

- Identify and address accessibility issues, such as missing alt text for images.
- Ensure that the application is navigable using keyboard controls.

These test cases cover a range of critical scenarios throughout the lifecycle of an online quiz application, from user registration to quiz completion and system maintenance. It's essential to continuously update and expand the test cases based on the evolving requirements and features of the application.