**Quiz UI**  
**Description:** This game task for environment knowledge quiz. Users are required to answer five questions, and if they answer wrong, the system will display the correct answer. Users can earn points based on the number of correct answers and the leaderboard will be updated.

**User Story (if applicable):**  
*"As a player, I want to take a quiz about sustainability, so that I can learn and earn rewards."*

**1. Acceptance Criteria**

Define what needs to be met for this item to be considered **complete**.

✅ After the user starts the quiz, the screen displays one question at a time.

✅ The user must select one option in each question and submit an answer.

✅ When the user clicks on an option, the answer status is immediately displayed: if the answer is correct, the correct answer shows a green check mark; if the answer is wrong, the selected answer will show a red cross and the correct answer will show a green check mark.

✅ When the answer feedback is displayed, the “Next question” button appears. Users click to enter the next question.

✅ After the user completes the quiz, the system calculates and displays the score, and displays the points.

✅ After completing the quiz, the system updates the leaderboard.

**2. Requirements & Specifications**

Provide clear **functional** and **non-functional** details.

* **Functional:**

1. Questions display and interaction:

For each quiz, five questions are randomly selected from the database.

After the user clicks “Start Quiz”, the first question is taken.

Question format: [Question + 4 Choices].

After the user selects the answer: if the answer is correct, the option becomes a green check mark, and other options remain unchanged; if the answer is wrong, the wrong option becomes a red cross, and the correct one is bright a green check mark; the “Next question” button appears and the user clicks to proceed to the next question.

After the user completing 5 questions, enter the settlement page.

1. Result calculation:

For every correct answer, the user can get 5 points (Full score of 25 points).

After all the answers are completed, the total number of points obtained is displayed.

After users know the score on the settlement page, they can click the “Back” button to return to the home page.

1. Data submission:

POST /api/submit\_quiz

Send {user\_id, quiz\_id, score, timestamp}

1. Leaderboard update:

Get /leaderboard/quiz

* **Non-functional:**

Problem loading time <1 second.

UI adapts to the mobile terminal.

The answer state feedback animation is smooth and should not be stuck.

**Optional:** Include wireframes or process flow diagrams.

**3. Dependencies & Constraints**

* Question bank API gets questions.
* Database storage score.
* Leaderboard API gets ranking data.

**4. GWT**

Provide Given-Then-When for main cases and edge cases.

* **Given**: Describes the initial state and preconditions before the test begins
* **When**: Describes the actions taken by a user during the test
* **Then**: Describes the outcome that results from the actions taken in the "when" clause