TOOHAK Plan Report: Iteration 1

User Information	
User 1 NAME: Kardia Tran EMAIL: kardia.tran1@gmail.com	**User 2** NAME: Emily Mo EMAIL: emily.mo95@gmail.com

Questions

Do you think Toohak provides an engaging experience for all users? What aspects enhance or hinder player interaction?

User 1: I do believe that Kahoot has the ability to provide an engaging experience for all users. It has an accessible interface and a very fun ability to present information for those who are playing. However, it may not present the best educational experience. The timer may inhibit those who are playing to learn from it, however, with the timer it does create a higher stakes environment which is more engaging. Overall, Kahoot provides a relatively engaging and enjoyable experience to all users.

User 2: Yes - I enjoy seeing the ranking at various parts of the quiz to see how I'm tracking as I am a competitive player. The speed to answer element also motivates audiences to stay alert and engaged for maximum points. On the other hand, I think Kahoot could improve its engagement through motivational aspects such as adding a leaderboard with points and adding account based activity so these leaderboard points can be saved.

Are there any accessibility features you think are necessary or could be improved?

User 1: It is difficult to say as the whole premise of the platform is to play in a competitive environment to test knowledge. To make it more accessible, it could be worthwhile to remove the timer aspect from the question page and even add a text to speech function so that everyone can understand the question. This may improve the accessibility and make it more educational. However, overall the accessibility of the platform is quite high.

User 2: I like how it caters for colour blindness because the symbols/icons are in each answer so you don't rely solely on the colour to distinguish between the answers.

If this doesn't exist already, a feature that allows people with vision impairment to play at the same pace as others would be really helpful. Alt text should be used where questions display images.

What do you like best about current quiz platforms that you use?

User 1: The best thing about the current quiz platform, ANKI, that I use is the ability for it to perform active recall in a spaced manner. The frequency of the cards appearing varies and I believe that this is very effective in making sure I can learn and remember the content. On Quizlet, I think that the games that are provided can be really engaging and helpful in understanding the content in a time pressured environment.

User 2: I like Kahoot because it's really fun for audiences of all ages and can be used easily (without need to explain how the platform works). I also use Mentimeter (which has good quiz and polling functionality).

What's the most frustrating issue you've encountered on a quiz platform

User 1: On quiz platforms, it can be irritating when you have to input an answer that may be open ended or contain a list of answers and the platform rejects your answer because you didn't put the exact answer needed including punctuation, or the order of your answer isn't exactly the same. That can be frustrating as it repeats, I may stop learning the content and just learn how to answer the question as needed rather than actively recalling.

User 2: When there's a technical glitch and as a result, I miss the opportunity to answer a question or accidentally exits me from the entire quiz.

<u>User Stories</u>

Epic Story 1: As a quiz creator or player, I want to be able to customise quiz settings, appearance, and difficulty levels so that the experience can be tailored to different audiences and learning styles.

US1: As a quiz creator, I want to customise the time limit for each question so that I can adjust the difficulty level for different players.

User acceptance criteria:

- The system must allow different time settings based on difficulty, such as shorter time for easier questions or longer time for complex or multi-step questions.
- When 80% of the timer has elapsed, a prompt must appear asking the player if they need more time - Players can choose to receive additional time (at a small point deduction) or to continue with normal timing.
- If a player requests more time, the system must extend the timer by a predefined amount while reducing the maximum possible score for that question.
- Prevent excessive extensions by limiting each player to one extension per question.
- If a player ignores the prompt, the timer continues normally without an extension.

Primary Actor: Quiz Creator

Scope: Quiz creation and customisation

Priority:

Preconditions:

1. The quiz creator must have an account and be logged into the platform.
2. The quiz creation interface must be accessible.

Success End Condition:

- The quiz creator successfully customises settings such as question timer, difficulty level, appearance (e.g., themes, colours), and question format, allowing for a more dynamic customisation that caters towards difficulty level

Failed End Condition:

- The quiz settings fail to save or the customisation options do not apply as expected.

Trigger: The quiz creator selects the "Create a Quiz" or "Edit Quiz Settings" option.

US2: As a visually impaired player, I want alt text descriptions for images used in questions so that I can understand the visual content through screen readers.

User Acceptance Criteria:

- Every image used in a quiz question must have an alt text description.
- When a quiz creator uploads an image, they must be prompted to enter alt text.
- If no alt text is provided, the system must display a warning and suggest adding one.
- When a visually impaired player takes the quiz, their screen reader must detect and read the alt text aloud

Primary Actor: Visually Impaired user

Scope: Accessibility features

Priority:

Preconditions:

1. The quiz contains images as part of the questions or answers.
2. The platform supports screen reader compatibility.
3. The quiz creator has provided alt text descriptions for images.

Success End Condition:

- The player can use a screen reader to hear a descriptive alt text for the image.
- A larger image or the alt text descriptions are displayed on their personal screen.

Failed End Condition:

- The alt text is missing, incorrect, or not read properly by the screen reader.

Trigger: The quiz displays a question with an image, prompting the screen reader to read the alt text.

Epic Story 2: As a quiz player, I want a stable and user-friendly quiz platform with flexible input handling and methods of recovery from disconnections.

US3: As a user, I want open-ended answer recognition to be more flexible with minor variations (e.g., punctuation, word order) so that my response is accepted even if it's not an exact match.

User Acceptance Criteria:

- The system must allow minor variations in open-ended answers, such as punctuation, varying, capitalisations and spelling differences.
- The system must recognise different word orders if they do not alter the core meaning of the response.
- The system should ignore unnecessary spaces and special characters if they do not change the meaning of the response.
- If a user's response is marked incorrect but is close to the expected answer, they should receive a prompt to review their response.

Primary Actor: Player

Scope: Answer validation system

Priority:

Preconditions:

1. The quiz contains open-ended questions requiring text input.

2. The platform has a system for recognising and evaluating text-based answers.
3. The platform allows for minor variations in answers, such as punctuation differences or word order flexibility.

Success End Condition:

- The system correctly identifies and accepts valid responses with minor variations, ensuring that players are not penalised for small formatting differences.

Failed End Condition:

- The system incorrectly rejects valid answers due to minor punctuation, spacing, or word order differences.

Trigger: The user submits an open-ended answer.

US4: As a user, I want a way to recover from unexpected disconnections or glitches, so that I can continue participating without unfairly missing questions.

User Acceptance Criteria:

- The system must automatically detects when a user disconnects due to a technical issue.
- If a user misses a question due to disconnection, they should be allowed to attempt a recovery question at the end of the quiz.
- The system must save all answered questions so that users do not have to reattempt previously completed ones.
- The system must log disconnections so that hosts can review any disruptions to prevent abuse.

Primary Actor: Player

Scope: User experience and system reliability

Priority:

Preconditions:

1. User is actively participating in a quiz.
2. The system lacks a built-in recovery mechanism.
3. The issue directly affects user progress.

Success End Condition:

- The system is able to provide an optional recovery round towards the end of the quiz to provide a chance to answer any unanswered questions.

Failed End Condition:

- The system is unable to reconnect the user to the quiz entirely or is unable to provide an option to answer any missed questions at the end.

Trigger: There is a technical glitch, and the system fails to load a question and forces the user to miss it.

Epic Story 3:

As a student, I want kahoot to focus on improving interactivity, engagement and educational value by addressing elements like timers, feedback mechanisms and game-based learning features.

US5: As a student, I want the quiz timer to provide helpful learning opportunities rather than just adding pressure so that I can still feel engaged with the material while also being challenged.

User Acceptance Criteria:

- The quiz timer must provide hints or contextual clues at predefined time intervals(50% of time remains).
- Hints should be customizable by quiz creators.
- If a student waits for a hint before answering, they should still receive points but at a slightly reduced rate to balance competition and learning.
- The system must ensure that hints do not fully reveal the correct answer, but rather guide students toward it.
- If the quiz timer runs out, the student should receive a brief explanation of the correct answer before moving to the next question.
- The hint system must be non-intrusive, meaning that it does not distract students who prefer to answer quickly without hints.

Primary Actor: Student

Scope: User learning experience

Priority:

Preconditions:

1. Quiz system is active and functional.
2. Scoring and game balance considerations.
3. User is engaged in the quiz and each question.

Success End Condition:

- The system will provide hints as the timer counts down.

Failed End Condition:

- The system will fail to provide hints which fails to provide a better user experience.

Trigger: The quiz may be too difficult for some users, and they may not be able to engage as well when faced with this difficulty, affecting their learning experience.

US6: As a user, I want to be able to make an account to save my progress and leaderboard points, so I can track my ranking across multiple quiz sessions against other students in my class.

User Acceptance Criteria:

- Users must be able to create an account using an email and password .
- Upon creating an account, users must have a profile dashboard where they can view their saved quiz progress, scores, and leaderboard rankings.
- The system must store and track quiz performance data across multiple sessions for each user.
- Users must be able to view their historical rankings and performance trends over time.
- The leaderboard should display a class-based ranking system, allowing users to compare their scores within their assigned class or group.
- Users must have the option to make their leaderboard ranking private if they do not want their scores to be visible to others.

Primary Actor: Student

Scope: User registration and leaderboard system

Priority:

Preconditions:

1. Quiz is active and functional.
2. Has to be a "student class" for the account to be registered to and to compare rankings.

Success End Condition:

- Students are able to gain points from quizzes in class and these will be saved across a period of time (year) for them to compare ranks with other students for motivation.

Failed End Condition:

- Students are unable to have a leaderboard system and will lack the motivation to engage in quiz learning in class.

Trigger: Students may lack motivation to engage with quizzes throughout their learning experience and may need an incentive to remain engaged with always participating in quizzes.

Validation:

User1:

I like the idea of having a customisable time limit for quizzes. This dynamic approach to extend time at a point loss caters to more levels of difficulty within the quiz and is more user friendly. Integrating an open-ended answer system is so useful catering to a wider audience as not everyone is going to think the same and provide the exact same answer, so there should be a margin for error allowed within answers. A hint system enhances the user's learning experience, it is an engaging way to keep user's focused and motivated on the quiz.

User2:

I like the user friendly approach of providing alt text descriptions and options to read the question text aloud. This is a more inclusive interface for a wider audience. Having a system that allows for the ability to reattempt any unanswered questions after disconnecting reinforces the fairness of the quiz even after factors out of the user's control. Improving interactivity and engagement can really be enhanced through an account system, saving user's progress to compare against other similar students and users.