**ELICITATION**

**Interview Questions:**
1. Please provide a brief description of yourself. How do you typically use quiz tools such as Kahoot/Toohak? What is your main purpose for using this platform, some examples include education, training, entertainment etc.
2. What are the highlighting features of the quiz program you currently use and what about these features improves your user experience?
3. Please name any frustrations you currently issue with the quiz platform you use and any improvements you'd like to see
4. What are your thoughts on the user interface and overall user experience when using quiz tools? Are there any aspects that you find confusing or difficult to navigate?

*James Wang - [j.wang1442@yahoo.com](mailto:j.wang1442@yahoo.com)*
1. An undergraduate Computer Science student - uses quizzes primarily for the sake of revision and review. Allows for a good knowledge retention throughout the duration of the semester. Typically creates his own quizzes throughout the term based on lecture notes and tests himself regularly, however does occasionally use other quizzes where fit.
2. Highlighting Features:
   a. Instant feedback on all quizzes and the ability to immediately review any mistakes made
   b. Accessibility on multiple devices, uses a phone, iPad and laptop remotely and can review anywhere e.g. On the train to university.
   c. Engaging nature of the quiz - finds it hard to concentrate on studying for blocks of time but the fast pace encourages him to do the quizzes more frequently
3. Would like to be able to create user profiles that save and store the data from every quiz a particular user has played. This way, he's able to review older mistakes and see trends over time ie. whether he's improving, strengths and weaknesses in particular topics
4. N/A - finds Kahoot really easy to navigate.

Proposed Solution: Create a user profile that stores all information about previous quizzes played by a particular user. Users should be able to access their answer, the correct answer and analytics about trends and improvements in the same quiz over time or statistics about a particular quiz.

*Priya Ponnus - [priya.ponnusam@gmail.com](mailto:priya.ponnusam@gmail.com)*
1. A high school teacher who occasionally plays Kahoots with her class as an engaging form of revision prior to upcoming class tests. Makes all of her own quizzes - tends to forgo playing Kahoots too often as it takes her quite a while to make one
2. Highlighting Features:
   a. Instant ability to see which of her students are doing well and grasping the content best and which need the most help
   b. Highly engaging for all her students and she can visibly see the eagerness for her students to participate in the quizzes
   c. Friendly competitiveness encourages students to push themselves while having fun. Additionally, their learning is furthered as they'are able to play the same quiz in their own time amongst themselves as she posts the quiz publicly
3. Improvements:

a. Would like to be able to transfer questions from other users. Given there are hundreds of other quizzes on the platform, she sees similarities between many other quizzes but can't use them as the irrelevant questions will hinder her students' progress, rendering the activity useless. If given the option to transfer questions, she'd definitely be more likely to create more quizzes and distribute these to her students.
b. Would like to be able to see how long students are spending on particular answers to se which topics they're struggling with the most, and cater her lesson plan towards this
c. Wants the ability to have short response options. These can either be 1 word answers that are true/false or longer short answer questions with the ability for the admin to have a look through and score certain questions.
d. Would like for students to be able to receive a copy of their answers or smth similar for future review
4. Interface is fine to use however if a student drops out due to internet issues etc. there's no way for them to re-enter the game, leaving them with nothing to do until the next quiz.

Proposed Solution: Ability to transfer quizzes from another user. Provide additional statistics about how long a user takes to answer a question to admins after the quiz has been completed. Implement various types of answers - true/false, multiple choice, short answer. Copies of answers are stored on user profiles.

*Ella Lopez - [amy.lopez1203@gmail.com](mailto:amy.lopez1203@gmail.com)* (Mum's email)
1. A primary school student who tends to play quizzes with her friends for fun. They typically play quizzes such as Guess the Flags or Disney-related quizzes
2. Highlighting Features:
   a. Fun way for her to play various games with her friends and kill time - they typically play during school lunch/recess and sometimes in class with the permission of their teacher
   b. She really likes the design of the platform
   c. Likes beating her friends and see them move up and down the leaderboard as the game goes on
3. Would like to be able to see the whole leaderboard because sometimes they play with more than 5 friends and they can only ever see top 5 during the game, or top 3 at the end of the game. Thinks it would be fun to see how everyone ranked. Also wants a customisable profile to which she can add a funny name/profile picture.

Proposed Solution: Have top 10 at the end of each question and a full leaderboard at the end of the quiz. Create profiles that contain customisable profile photos and names.

**ANALYSIS & SPECIFICATION - USER STORIES AND USE CASES**

USER STORIES AND ACCEPTANCE CRITERIA:

As a user, James wants to be able to access more information about all the quizzes he's played in the past for the sake of review and revision.
User Acceptance Criteria:
● Each user will have a profile which they can log in to each time they partake in a quiz
● Once a quiz has been completed by an admin, give the current user was a participant, a report will be made on the results of their quiz

- The report will outline the questions they got correct and incorrect, the answer they submitted, and the correct answer.
- The report will be accessed from their main profile page once the 'Past Quizzes' button has been clicked.

As a user, Priya wants to be able to easily create quizzes at a quicker pace by using questions created by other users to speed up the time required to create one.
User Acceptance Criteria:
- When viewing other quizzes, question by question, a small button reading 'duplicate question' will appear
- This button will enable another pop up window which allows users to select from a list of existing quizzes they own
- Once a quiz is selected the question is appended to the end of the quiz
- The correct/incorrect answer is automatically transferred over however the admin of the quiz will be able to edit the questions and answers as they see fit
- An error will be returned if she has no existing quizzes

As a user, Ella wants to be able to customise her user profile and see the ranks of all of her friends to make the game more fun to play.
- Users will be able to create a profile by submitting an email and a username.
- Locating the profile will allow them to view their existing profile picture and name
- A small button when the profile picture is hovered over will allow users to update their profile picture
- Similarly a button titled "Edit details" will allow users to change their names.

USE CASE:

Use Case (For Priya - transferring questions from other quizzes):
Step 1: User logs in to admin account
Step 2: Validity of the account is verified
Step 3: User locates a quiz created by another user
Step 4: User view questions in the quiz individually using the admin view function
Step 5: Once a desired question is found, user presses a button 'Duplicate Question' located on the screen
Step 6: Another pop u will prompt user to select between all of existing quizzes they own
Step 7: Toohak will verify that this is the desired quiz to move to
Step 8: The additional question will be appended to the end of the chosen quiz
Step 9: Question position can be moved if required.
Step 10: Admin will be able to update the question and associated answers if required
Step 11: Admin begins the quiz which will now include new question at the relevant position

**VALIDATION**

James - This implementation will impact his user experience greatly as he will now be able to continually revise any information required for his quizzes.

Priya - This implementation will help her to a certain extent as she will now be able to create quizzes much quicker however there are still further implementations such as changing the types of answers submittable which will further benefit her use of the website.

Ella - Likes that she'll be able to change the design of her profile as this will make the experience more enjoyable for her and her friends but would benefit more from the leaderboard feature being implemented.

**INTERFACE DESIGN**

HTTP ENDPOINTS FOR THE USER ROUTES -

*Create a user profile*

PARAMS: email, password, nameFirst, nameLast

```
app.post('/v1/admin/user/register', (req: Request, res: Response) => {
 const ret = adminUserRegister(req.body.email, req.body.password, req.body.nameFirst,
req.body.nameLast);
 return res.json(ret);
});
```

*Add/Update a profile picture*

PARAMS: playerId, token, imgUrl

```
app.put('/v1/admin/user/:playerId/profile', async (req: Request, res: Response, next) =>
{
 try {
   const ret = updateUserProfile(JSON.parse(req.params.playerId), req.header('token'),
req.body.imgUrl);
   return res.json(ret);
 } catch (err) {
   return next(err);
 }
});
```

*Edit Username*

PARAMS: token,  username

```
app.put('/v1/admin/quiz/:playerId/name', (req: Request, res: Response) => {
 const ret = adminUsernameUpdate(req.header('token'), req.body.username);
 return res.json(ret);
});
```

*Access statistics (answers incorrect/correct etc. ) about all quizzes played by a particular user*

PARAMS: userId

```
app.get ('/v1/user/:userId/statistic, (req: Request, res: Response) => {
 const ret = userStatistics (JSON.parse (req.params.userId));
  return res.json(ret);
});
```

## Duplicating a quiz question and transferring it to another quiz

PARAMS: questionId, token, userEmail, quizId

```
app.post ('/v1/admin/quiz/:questionId/transfer', (req: Request, res: Response) => {
 const ret = adminQuestionTransfer (JSON.parse (req.params.questionId),
req.header('token'), req.body.userEmail, req.body.quizId);
  return res.json(ret);
});
```

## *Display question leaderboard*

PARAMS: questionId, token

```
app.get('/v1/admin/question/:questionId/questionleaderboard', (req: Request, res:
Response) => {
 const ret = adminQuizQuestionLeaderboard(questionId, req.header('token'));
 return res.json(ret);
});
```

## *Display quiz leaderboard for all users*

PARAMS: quizId, token

```
app.get('/v1/admin/question/:quizId/listusers', (req: Request, res: Response) => {
 const ret = adminQuizListUsers(JSON.parse(quizId), req.header('token'));
 return res.json(ret);
});
```

**STATE DIAGRAM**

Add diagram to the repo for ease of viewing