

# Requirements Specification

This document aims to analyse the requirements for 'Quiz Manager', to produce a requirements specification.

## Requirements Gathering

### Users and permissions

- Users need to be pre configured to the database.
- Passwords need to be stored securely.
- There should be three levels of user permissions: Edit, View & Restricted.
- Restricted users can view available quizzes and their questions.
- View users can do the same as Restricted users + view question answers.
- Edit users can do the same as View users +
  - Add a quiz
  - Delete a quiz
  - Add a question
  - Delete a question
  - Change a question
  - Add an answer
  - Delete an answer
  - Change an answer
- The website needs to maintain user session state once a user is logged in.
- A user can log out which will take them back to the login page.

### Assumptions

- Log out should also clear the user session.
- Session should be cleared after x amount of mins.
- Quiz information e.g name and description does not need to be editable.

### Quizzes

- A quiz has a title and a numbered sequence of questions.
- Each question is associated with a set of between 3 and 5 answers.
- Each answer is a text string, shown in UI as an uppercase character.

### Assumptions

- Lettering and numbering of questions and answers does not need to be tied to the data and can be dealt with client side. Indexing of primary keys in the db should be sufficient to keep things in some kind of order.

- Quizzes do not need a creation date, and the user responsible for updates does not need to be tracked.
- Due to questions being marked by letter a max number of 26 questions per quiz can be permitted.
- There is no minimum amount of questions required in a quiz.

## Viewing and Editing

- A user with Restricted permission can select a quiz from all available quizzes. Having selected the quiz, all the questions in that quiz can be viewed on the screen. If the quiz is too large to fit, the user should be able to scroll up and down to see it.

## Assumptions

- The user can see answers but not the correct answer.

## Requirements Prioritisation

### Priority one:

- All of the above.
- Good UX.

### Priority two:

- Good UI.
- Good Accessibility.

### Priority three:

- Profanity checks.

### Priority four:

- Quiz information e.g. Name and description is editable.

## Requirements Specification (P1 & P2 only)

Requirement	As a	I need	So that
OKR1	User that is not signed in.	To not be able to access any pages or functionality other than the login page.	The website's permission structure is enforced.
OKR2	Any user.	To be able to sign in.	I can be assigned a session.
OKR3	Any user.	The website to be intuitive.	I am able to perform actions with ease.

OKR4	Any user.	To see a list of quizzes when I log in.	I am able to perform my next action.
OKR5	Any user.	To be able to see all of a quiz's questions and answers, where questions are indexed by letter, and answers by number, when I select a quiz.	I can view questions.
OKR6	Any user.	My session to be cleared when I press log out.	I can log out successfully.
OKR7	Any user.	My session to be cleared after 10 mins.	I am not kept logged in indefinitely.
OKR8	Any user.	To be redirected to the login page if my session is cleared.	I can log in.
OKR9	Any user.	To be able to tab through the site.	I can use the website easily with a screen reader.
OKR10	Any user.	The website to use a high contrast theme.	I can see all content without strain.
OKR11	Restricted user.	To have an option to view questions.	I can see a quiz's questions.
OKR12	View or Edit user.	To have an option to view all correct answers when I select a quiz.	I can see a question's correct answers.
OKR13	Edit user.	To have an option to edit a quiz once selected.	I can edit the quiz.
OKR14	Edit user.	To be able to add a question to a quiz if there are less than 26 questions.	I can add a question without exceeding the question limit.
OKR15	Edit user.	To be able to delete a question.	I can delete a question.
OKR16	Edit user.	To be able to add an	I can add an answer

		answer if there are less than five answers.	without exceeding the answer limit.
OKR17	Edit user.	To be unable to delete a correct answer.	I cannot leave a question without a correct answer.
OKR18	Edit user.	To be able to delete an answer if there are 3 answers.	I cannot leave a question with under the minimum amount of answers.
OKR19	Edit user.	To be able to change the correct answer of a question.	I can change a question's correct answer.
OKR20	Edit user.	To be able to create a new quiz.	I can create a new quiz.
OKR21	Edit user.	To be able to delete a quiz.	I can delete a quiz.
OKR22	Edit user.	To not be able to use a quiz name that already exists when creating a quiz.	I do not create duplicate quizzes.
OKR23	Edit user	To be able to edit a question.	I can edit a question.
OKR24	Edit user	To be able to edit an answer.	I can edit an answer.