User Stories & Manual Testing

*Each user story is listed in bold with a list of tests performed in bullet points below*

# Login

**The login screen can be modified to use a custom colour scheme and logo**

* Change the logo.svg file and view the login page. The logo has changed
* Change the $body-bg and $primary colours. The background and login button have changed to match

**Users cannot register for accounts**

* Asserted no Register button on Auth0 login page
* Asserted no social / oauth2 login buttons on Auth0 login page

**Session state should be maintained**

* Logged in then visited several pages. Asserted that I was not prompted to re-enter login credentials

**User should be able to logout**

* Logged in then clicked Logout. Navigated to <http://localhost:3000/list> and saw a Login page, confirming that I was logged out

# Restricted Permission

*Performed all tests below by first logging in as a user with the Restricted role*

**User can click on a quiz to view the questions. Must not be able to see the answers for the questions.**

* Could see a list of quizzes
* Clicked the view button for a quiz and could see the questions for that quiz. Could not see any answers

**User cannot create, edit or delete quizzes or questions. The user should not be able to see any controls/buttons that suggest they would be able to create/edit/delete.**

* Asserted there is no Create/Add button on the list page
* Asserted there are no Edit or Delete buttons for quizzes on the list page
* When viewing a quiz, asserted there is no Create/Add Question button
* When viewing a quiz, asserted the questions do not have Edit or Delete buttons

# View Permission

*Performed all tests below by first logging in as a user with the View role*

**User can click on a quiz to view the questions. Must be able to see the answers for the questions.**

* Clicked the View button for a quiz and was able to see the questions for the quiz and the answers for each question

**User cannot create, edit or delete quizzes or questions. The user should not be able to see any controls/buttons that suggest they would be able to create/edit/delete.**

* Asserted there is no Create/Add button on the list page
* Asserted there are no Edit or Delete buttons for quizzes on the list page
* When viewing a quiz, asserted there is no Create/Add Question button
* When viewing a quiz, asserted the questions do not have Edit or Delete buttons

# Edit Permission

*Performed all tests in this section by first logging in as a user with the View role*

**User can view quizzes and should see associated questions and answers**

* Tested by logging in as an Edit user. Click the View button for a quiz that has some questions. The answers for the questions are visible

**User should be able to add quiz**

* Asserted there is a Create Quiz button on the list page.
* Clicking Create Quiz navigates to a form to create a quiz
* Can fill in and submit the form. After doing so, the created quiz is visible on the list page
* After creating a quiz, refreshed the browser to clear any React state. Asserted the created quiz was still visible

**User should be able to change title of quiz**

* Asserted there is an Edit button beneath the title when editing a quiz
* After clicking the Edit button, an input becomes visible to enter a title. Can type a new title into this and click Save. The new title is visible on the page immediately.
* After creating a quiz, refreshed the browser to clear any React state. Asserted the updated title was still visible

**User should be able to delete quizzes**

* Can see a Delete button next to each quiz
* After clicking the button, the quiz disappears
* After deleting a quiz, refreshed the browser to clear any React state. Asserted the deleted quiz did not reappear

**User should be able to add a question**

* When editing a quiz, asserted that a Create Question button is visible
* The Create Question button does navigate to a form to create a question
* Filling out and submitting the form does navigate back to the associated quiz. The created question is visible
* Refreshed the browser to clear any React state. Asserted the created question is still visible

**User should be able to delete questions**

* Can see a Delete button next to each question when editing a quiz
* After clicking the button, the question disappears
* After deleting a question, refreshed the browser to clear any React state. Asserted the deleted question did not reappear

**User should be able to edit questions**

* When editing a quiz, asserted that an Edit button is visible for each question
* The Edit button does navigate to a form to edit the question
* Filling out and submitting the form does navigate back to the associated quiz. The updates are visible
* Refreshed the browser to clear any React state. Asserted the updates are visible

# Quizzes

**Users should see a list of existing quizzes when they log in**

* Can see a list of quizzes when logged in
* Assert they match the number of rows in the Quizzes table in the database

**List of quizzes should be searchable**

* Typed some text into the search bar and pressed enter. Asserted that the list of quizzes were filtered correctly
* Removed the text from the search bar and pressed enter. Asserted that the full list reappeared

**Should not be able to save a quiz with a blank title**

* Tried creating a quiz with a blank title. The quiz did not create and the form displayed a negative validation message
* Tried updating the title of an existing quiz and setting it to blank text. The edit fields stayed on screen and displayed a negative validation message

# Questions

**Adding a question re-indexes the other questions for the quiz**

* Edit a quiz with 5 questions. Assert that all of the questions appear in numerical order
* Add a new question with an index of 3. Assert that the created question is 3rd in the list of questions, and that the questions that were previously numbered 3-5 and now numbered 4-6

**Deleting a question re-indexes the other questions for the quiz**

* Edit a quiz with 3 questions. Delete question number 2. Assert that the questions are now numbered 1 and 2

**Questions must have at least 3 answers**

* Attempt to save a question with 2 answers. Assert that the form does not submit and negative validation is displayed indicating that more answers need to be entered

**Question text should be editable**

* Edit a question and change the text. After submitting, the updated question text is visible when viewing the quiz
* The updates are still visible after refreshing the browser

**Questions must have some correct answers**

* Attempted to save a question where every answer was marked as incorrect. Asserted that the question did not save and negative validation was displayed indicating that at least one answer must be correct

**Questions must have some incorrect answers**

* Attempted to save a question where every answer was marked as correct. Asserted that the question did not save and negative validation was displayed indicating that at least one answer must be incorrect

**Question text must not be blank**

* Attempted to save a question with a blank title. Asserted that the question did not save and negative validation was displayed indicating that the question text cannot be blank

# API

**The API endpoints must respond with a 401 if no access token is provided**

* Sent a GET request to /question/id without an access token and got a 401 response
* Sent a POST request to /question without an access token and got a 401 response
* Sent a PATCH request to /question/id without an access token and got a 401 response
* Sent a DELETE request to /question/id without an access token and got a 401 response
* Sent a GET request to /quiz without an access token and got a 401 response
* Sent a GET request to /quiz/id without an access token and got a 401 response
* Sent a GET request to /quiz/summary/id without an access token and got a 401 response
* Sent a POST request to /quiz without an access token and got a 401 response
* Sent a PATCH request to /quiz/id without an access token and got a 401 response
* Sent a DELETE request to /quiz/id without an access token and got a 401 response

**The API endpoints return a 403 if the relevant permission is not contained within the access token**

* Retrieved an access token for a user with only the read:question permission. Sent a GET request to /question/id and got a 403 response
* Retrieved an access token for a user with only the read:answer permission. Sent a GET request to /question/id and got a 403 response
* Retrieved an access token for a user with only the read:question permission. Sent a POST request to /question and got a 403 response
* Retrieved an access token for a user with only the create:answer permission. Sent a POST request to /question and got a 403 response
* Retrieved an access token for a user with only the read:question permission. Sent a PATCH request to /question/id and got a 403 response
* Retrieved an access token for a user with only the update:answer permission. Sent a PATCH request to /question/id and got a 403 response
* Retrieved an access token for a user without only the delete:answer permission. Sent a DELETE request to /question/id and got a 403 response
* Retrieved an access token for a user with only the read:quiz permission. Sent a GET request to /quiz and got a 403 response
* Retrieved an access token for a user with only the read:question permission. Sent a GET request to /quiz and got a 403 response
* Retrieved an access token for a user with only read:quiz and read:question permissions. Sent a GET request to /quiz/id and got a 403 response
* Retrieved an access token for a user with only read:quiz and read:answer permissions. Sent a GET request to /quiz/id and got a 403 response
* Retrieved an access token for a user with only read:question and read:answer permissions. Sent a GET request to /quiz/id and got a 403 response
* Retrieved an access token for a user with only the read:quiz permission. Sent a GET request to /quiz/summary/id and got a 403 response
* Retrieved an access token for a user with only the read:question permission. Sent a GET request to /quiz/summary/id and got a 403 response
* Retrieved an access token for a user with no permissions. Sent a POST request to /quiz and got a 403 response
* Retrieved an access token for a user with no permissions. Sent a PATCH request to /quiz/id and got a 403 response
* Retrieved an access token for a user with no permissions. Sent a DELETE request to /quiz/id and got a 403 response