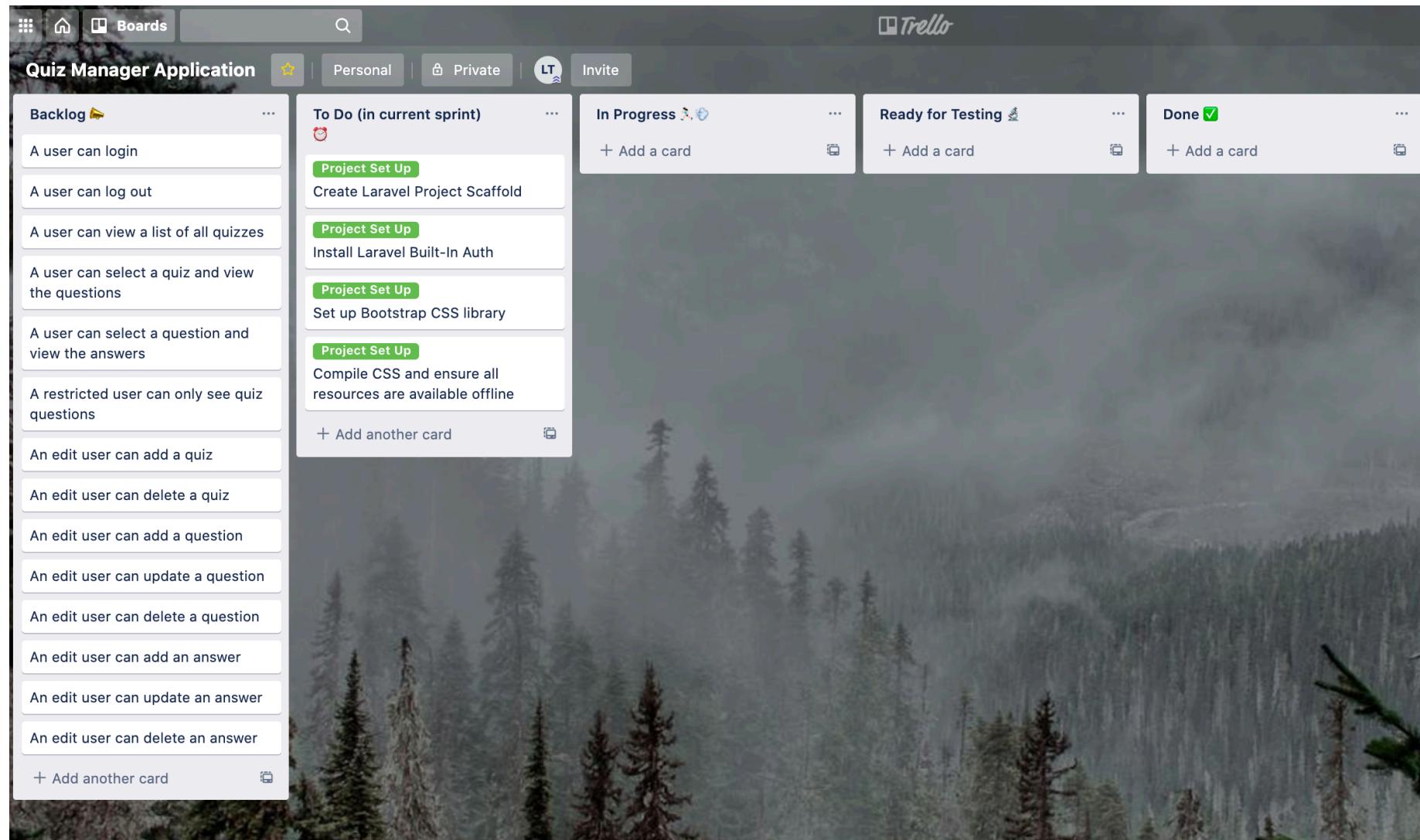


# Sprint Planning and Trello Board

08/09/20 - Day 1 set up a new Trello board and created initial slices (based on user stories/product features).



## 09/09/2020 - Day 2, Start of day (9am)

- Backlog grooming and sprint planning - pulling in tickets and prioritise what should be done in the current sprint.
- Trello board and tickets ready to be picked up. Breaking down user story into manageable and distinct tickets / tasks.
- When starting tickets, I move the top of the 'To Do' column into 'In Progress' and work through sequentially.

The Trello board is organized into five columns:

- Backlog**: Contains cards like "Project Set Up", "A user can login and log out", "A user can view all quizzes", and "A user can select a quiz and view the questions".
- To Do (in current sprint)**: Contains cards like "Create the Quiz Controller", "Add Unit Tests for quiz list", "Create a User model factory", "Set up a User seeder class and populate database with seed data", "Create the User Controller", "Add Unit Tests for login and logout code !", "Set up Quiz model class (Eloquent)", "Create the 'Quiz' table in database", "Create a Quiz model factory", "Create a Quiz model factory", and "Set up a Quiz seeder class and populate database with seed data".
- In Progress**: Contains cards like "Project Set Up", "Compile CSS and ensure all resources are available offline", and "+ Add another card".
- Ready for Testing**: Contains cards like "Create Laravel Project Scaffold", "Install Laravel Built-In Auth", and "+ Add another card".
- Done**: Contains cards like "Set up Bootstrap CSS library" and "+ Add a card".

Each card typically includes a title, a description, and a color-coded status indicator (green for 'Project Set Up', orange for 'A user can ...', purple for 'Set up ...', etc.).

## 09/09/2020 - Mid Sprint Review (~1pm)

Trello

Quiz Manager Application

Boards | Personal | Private | Invite

Project Sprints / Slicing

Backlog

To Do (in current sprint)

In Progress

Ready for Testing

Done

Project Set Up

A user can login and log out

A user can view all quizzes

A user can select a quiz and view the questions

A user can select a question and view the answers

MVP

A restricted user can only see quiz questions

An edit user can add a quiz

An edit user can delete a quiz

An edit user can add a question

An edit user can update a question

An edit user can delete a question

An edit user can add an answer

An edit user can update an answer

An edit user can delete an answer

+ Add another card

A user can view all quizzes

Create the Quiz Controller

A user can view all quizzes

Add Unit Tests for quiz list

+ Add another card

A user can view all quizzes

Set up Quiz model class (Eloquent)

A user can view all quizzes

Create a Quiz model factory

A user can view all quizzes

Create a Quiz model factory

A user can view all quizzes

Set up a Quiz seeder class and populate database with seed data

Project Set Up

Refactor generic Laravel scaffold elements - remove laravel favicon, update CSS stylesheets for consistency

Project Set Up

Sort out generic Laravel Homepage and redirects - remove hyperlinks, etc.

A user can login and log out

Spike: Investigate unnecessary Auth registration files. Can they be removed?

A user can login and log out

Download JQUERY library as a local resource - remove reference to CDN.

+ Add another card

A user can login and log out

Disable user registration on Auth

A user can login and log out

Create the 'User' table in database

A user can login and log out

Set up User model class (Eloquent)

A user can login and log out

Create a User factory

A user can login and log out

Set up a User seeder class and populate database with seed data

A user can login and log out

Create the User Controller

+ Add another card

Project Set Up

Create Laravel Project Scaffold

Project Set Up

Install Laravel Built-In Auth

Project Set Up

Set up Bootstrap CSS library

Project Set Up

Compile CSS and ensure all resources are available offline

Project Set Up

DB Config - set up mySQL and link to App

Project Set Up

Update the generic Laravel scaffold - update master layouts, update app\_name

+ Add another card

This Trello board tracks the progress of a Quiz Manager application. It uses a Kanban-style layout with six columns: Project Sprints / Slicing, Backlog, To Do (in current sprint), In Progress, Ready for Testing, and Done. The 'Done' column is highlighted with a green checkmark. The 'Project Sprints / Slicing' column lists various project setup tasks. The 'Backlog' column contains user stories for a quiz manager, including viewing quizzes, creating controllers, and setting up databases. The 'To Do' column lists specific tasks like creating models and factories. The 'In Progress' column contains more detailed tasks, some of which are marked with exclamation points. The 'Ready for Testing' column lists tasks for testing the user model and controller. The 'Done' column lists completed tasks such as setting up the Laravel project scaffold and installing built-in authentication. The background of the board features a photograph of a forest.

## 09/09/2020 - End of Sprint Review (6pm)

Trello

Quiz Manager Application

Boards | Personal | Private | Invite | LT | Butler | Show Menu

Project Sprints / Slicing

- Project Set Up
- A user can login and log out
- View all quizzes
- A user can select a quiz and view the questions
- View answers to a question
- A user can select a question and view the answers
- MVP
- A restricted user can only see quiz questions
- An edit user can add a quiz
- An edit user can delete a quiz
- An edit user can add a question
- An edit user can update a question
- An edit user can delete a question
- An edit user can add an answer
- An edit user can update an answer

Backlog

- View questions in a quiz
- Create the 'Question' table in database
- Set up Question model class (Eloquent)
- Set up a Question seeder class and populate database with seed data
- Create the Question Controller
- Create the Question List page in Blade HTML
- Create endpoint for the Question List route
- View questions in a quiz
- Add Unit Tests for Question List
- View answers to a question
- Update Quiz HTML to display a button for 'Show Answers'
- View answers to a question
- When button is selected, find the question's answers from DB and display on screen

To Do (in current sprint)

- View all quizzes
- Create an Enum for Question answer\_key
- Project Set Up
- Refactor generic Laravel scaffold elements - remove laravel favicon, update CSS stylesheets for consistency, remove navbar toggle
- A user can login and log out
- Download JQUERY library as a local resource - remove reference to CDN.

In Progress

- A user can login and log out
- Add Unit Tests for Quiz List !
- Project Set Up
- Fix generic Laravel Homepage and redirect URLs - remove random links.

Ready for Testing

- A user can login and log out
- Disable user registration on Auth
- A user can login and log out
- Create the 'User' table in database
- A user can login and log out
- Set up User model class (Eloquent)
- A user can login and log out
- Create a User factory
- A user can login and log out
- Set up a User seeder class and populate database with seed data
- A user can login and log out
- Create the User Controller
- View all quizzes
- Create the 'Quiz' table in database
- View all quizzes
- Set up Quiz model class (Eloquent)
- View all quizzes
- Create a Quiz model factory
- View all quizzes
- Set up a Quiz seeder class and populate database with seed data
- View all quizzes

Done

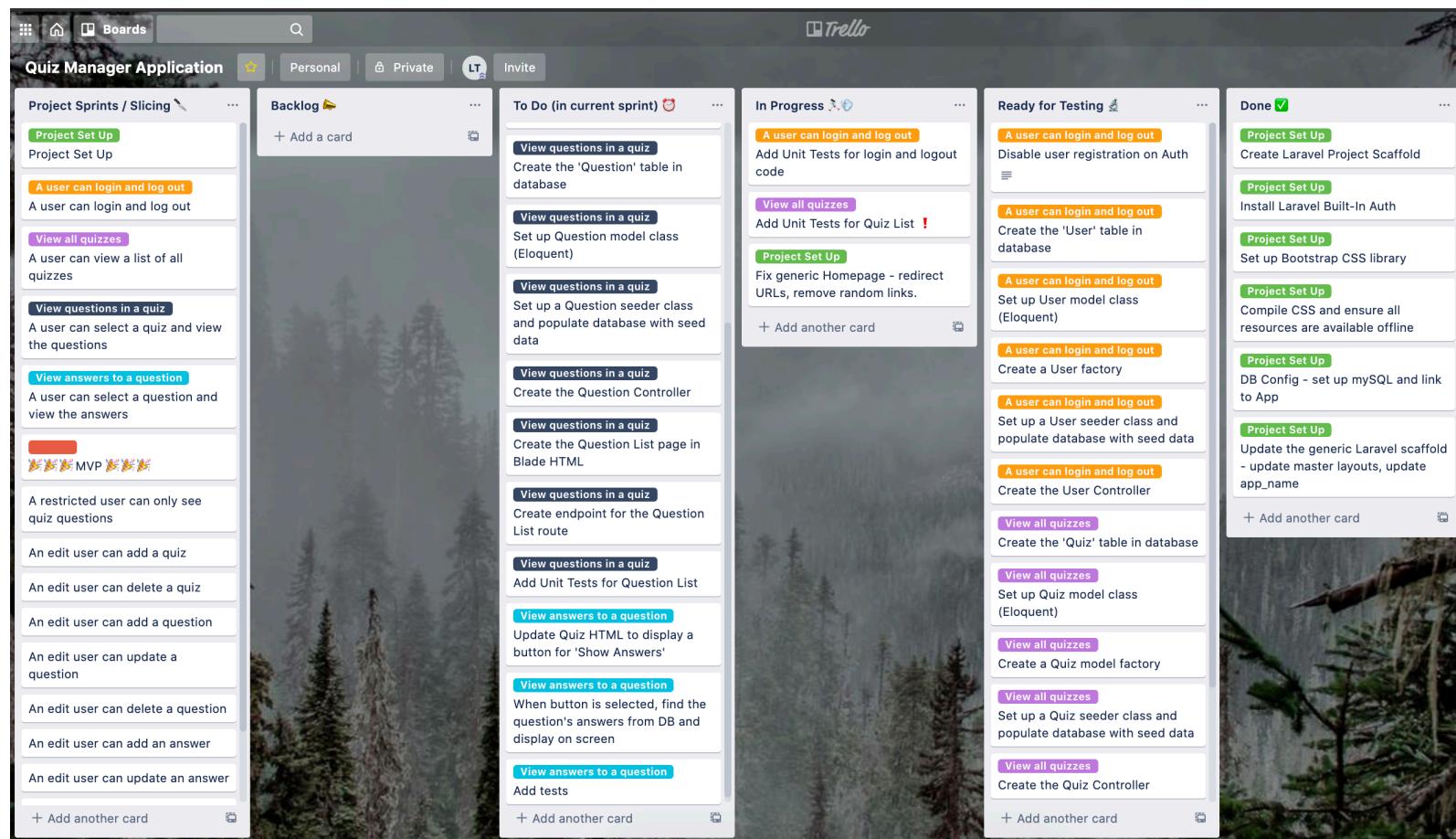
- Project Set Up
- Create Laravel Project Scaffold
- Project Set Up
- Install Laravel Built-In Auth
- Project Set Up
- Set up Bootstrap CSS library
- Project Set Up
- Compile CSS and ensure all resources are available offline
- Project Set Up
- DB Config - set up mySQL and link to App
- Project Set Up
- Update the generic Laravel scaffold - update master layouts, update app\_name

The Trello board displays a project management structure with the following columns and their contents:

- Project Sprints / Slicing:** Contains cards for 'Project Set Up', 'A user can login and log out', 'View all quizzes', 'A user can select a quiz and view the questions', 'View answers to a question', 'A user can select a question and view the answers', 'MVP', 'A restricted user can only see quiz questions', 'An edit user can add a quiz', 'An edit user can delete a quiz', 'An edit user can add a question', 'An edit user can update a question', 'An edit user can delete a question', 'An edit user can add an answer', and 'An edit user can update an answer'.
- Backlog:** Contains cards for 'View questions in a quiz', 'Create the 'Question' table in database', 'Set up Question model class (Eloquent)', 'Set up a Question seeder class and populate database with seed data', 'Create the Question Controller', 'Create the Question List page in Blade HTML', 'Create endpoint for the Question List route', 'View questions in a quiz', 'Add Unit Tests for Question List', 'View answers to a question', 'Update Quiz HTML to display a button for 'Show Answers'', and 'View answers to a question'.
- To Do (in current sprint):** Contains cards for 'View all quizzes', 'Create an Enum for Question answer\_key', 'Project Set Up', 'Refactor generic Laravel scaffold elements - remove laravel favicon, update CSS stylesheets for consistency, remove navbar toggle', and 'A user can login and log out'.
- In Progress:** Contains cards for 'A user can login and log out', 'Add Unit Tests for Quiz List !', 'Project Set Up', 'Fix generic Laravel Homepage and redirect URLs - remove random links.', and '+ Add another card'.
- Ready for Testing:** Contains cards for 'A user can login and log out', 'Disable user registration on Auth', 'A user can login and log out', 'Create the 'User' table in database', 'A user can login and log out', 'Set up User model class (Eloquent)', 'A user can login and log out', 'Create a User factory', 'A user can login and log out', 'Set up a User seeder class and populate database with seed data', 'A user can login and log out', 'Create the User Controller', 'View all quizzes', 'Create the 'Quiz' table in database', 'View all quizzes', 'Set up Quiz model class (Eloquent)', 'View all quizzes', 'Create a Quiz model factory', 'View all quizzes', 'Set up a Quiz seeder class and populate database with seed data', and 'View all quizzes'.
- Done:** Contains cards for 'Project Set Up', 'Create Laravel Project Scaffold', 'Project Set Up', 'Install Laravel Built-In Auth', 'Project Set Up', 'Set up Bootstrap CSS library', 'Project Set Up', 'Compile CSS and ensure all resources are available offline', 'Project Set Up', 'DB Config - set up mySQL and link to App', 'Project Set Up', 'Update the generic Laravel scaffold - update master layouts, update app\_name', and '+ Add another card'.

## 10/09/2020 - Day 3, Start of Day Sprint Review

- Sprint Planning Activities:
  - Review the board, reassess priorities, pull tickets from Backlog into the current Sprint and assess Sprint objectives.
- Sprint Goals & Objects = To complete all the features and user stories required in order to get to a **functional MVP** by end of sprint (tickets must be in Done column).



## 10/09/2020 - Day 3, End of the day

**Achievements** - so close to finishing all MVP tickets, only testing left. 🎉 Good progress in Quiz Manager development, on the end of the 2nd day.

The Trello board is organized into five columns:

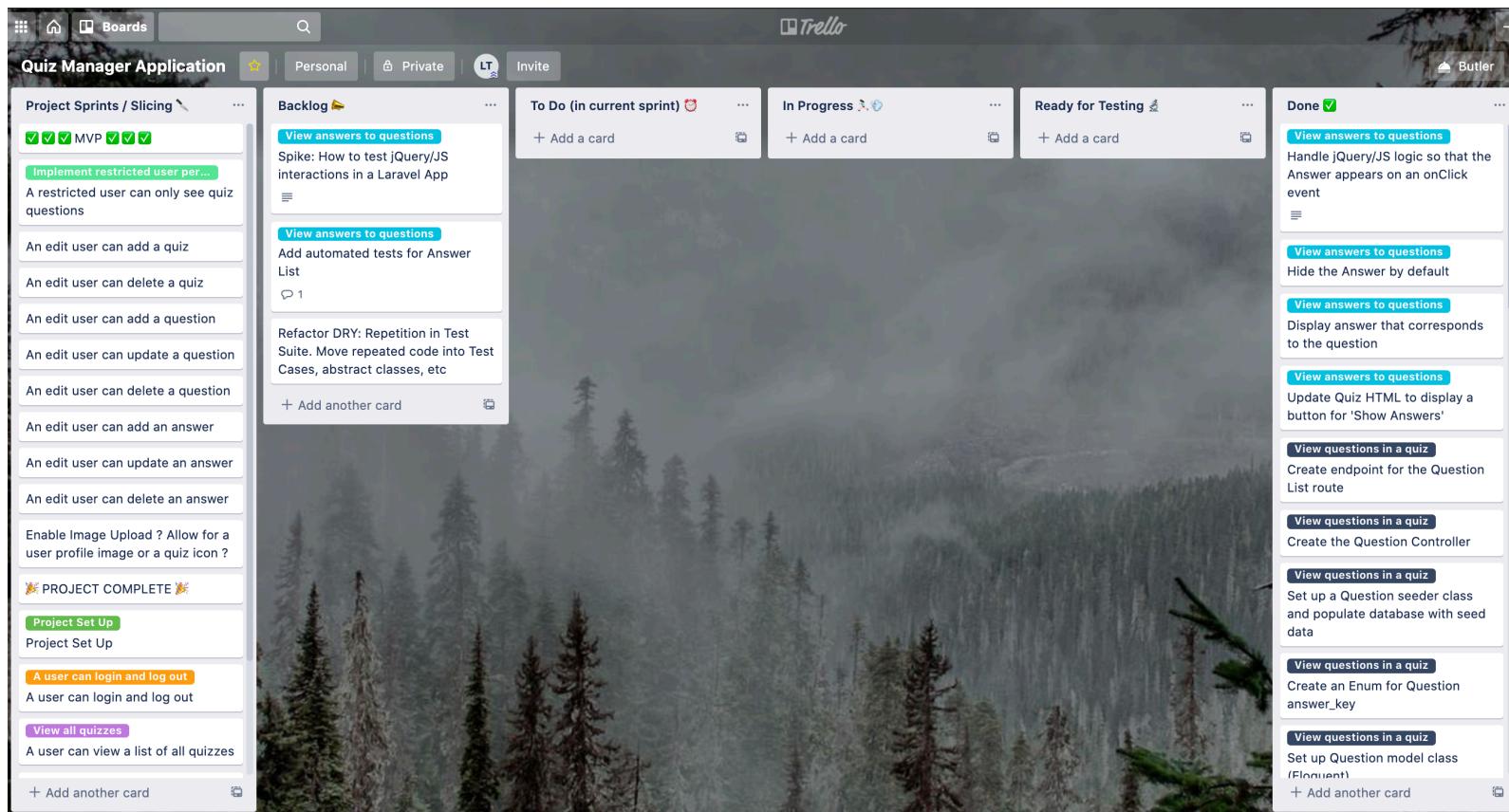
- Backlog:**
  - Refactor DRY: Repetition in Test Suite. Move repeated code into Test Cases, abstract classes, etc
- To Do (in current sprint):**
  - + Add a card
- In Progress:**
  - + View answers in a quiz
  - Add tests for Answer List
- Ready for Testing:**
  - + Add a card
- Done:**
  - Set up Question model class (Eloquent)
  - + View questions in a quiz
  - Create an Enum for Question answer\_key
  - + View questions in a quiz
  - Set up a Question seeder class and populate database with seed data
  - + View questions in a quiz
  - Create the Question Controller
  - + View questions in a quiz
  - Create endpoint for the Question List route
  - + View answers in a quiz
  - Update Quiz HTML to display a button for 'Show Answers'
  - + View answers in a quiz
  - Display answer that corresponds to the question
  - + View answers in a quiz
  - Hide the Answer by default
  - + View answers in a quiz
  - Handle jQuery/JS logic so that the Answer appears on an onClick event

On the far left, there is a sidebar with the following items:

- Project Sprints / Slicing
- + View answers in a quiz
- A user can view the answers
- ✓✓✓ MVP ✓✓✓
- A restricted user can only see quiz questions
- An edit user can add a quiz
- An edit user can delete a quiz
- An edit user can add a question
- An edit user can update a question
- An edit user can delete a question
- An edit user can add an answer
- An edit user can update an answer
- An edit user can delete an answer
- Enable Image Upload ? Allow for a user profile image or a quiz icon ?
- PROJECT COMPLETE 🎉
- Project Set Up
- Project Set Up
- A user can login and log out
- A user can login and log out
- + View all quizzes

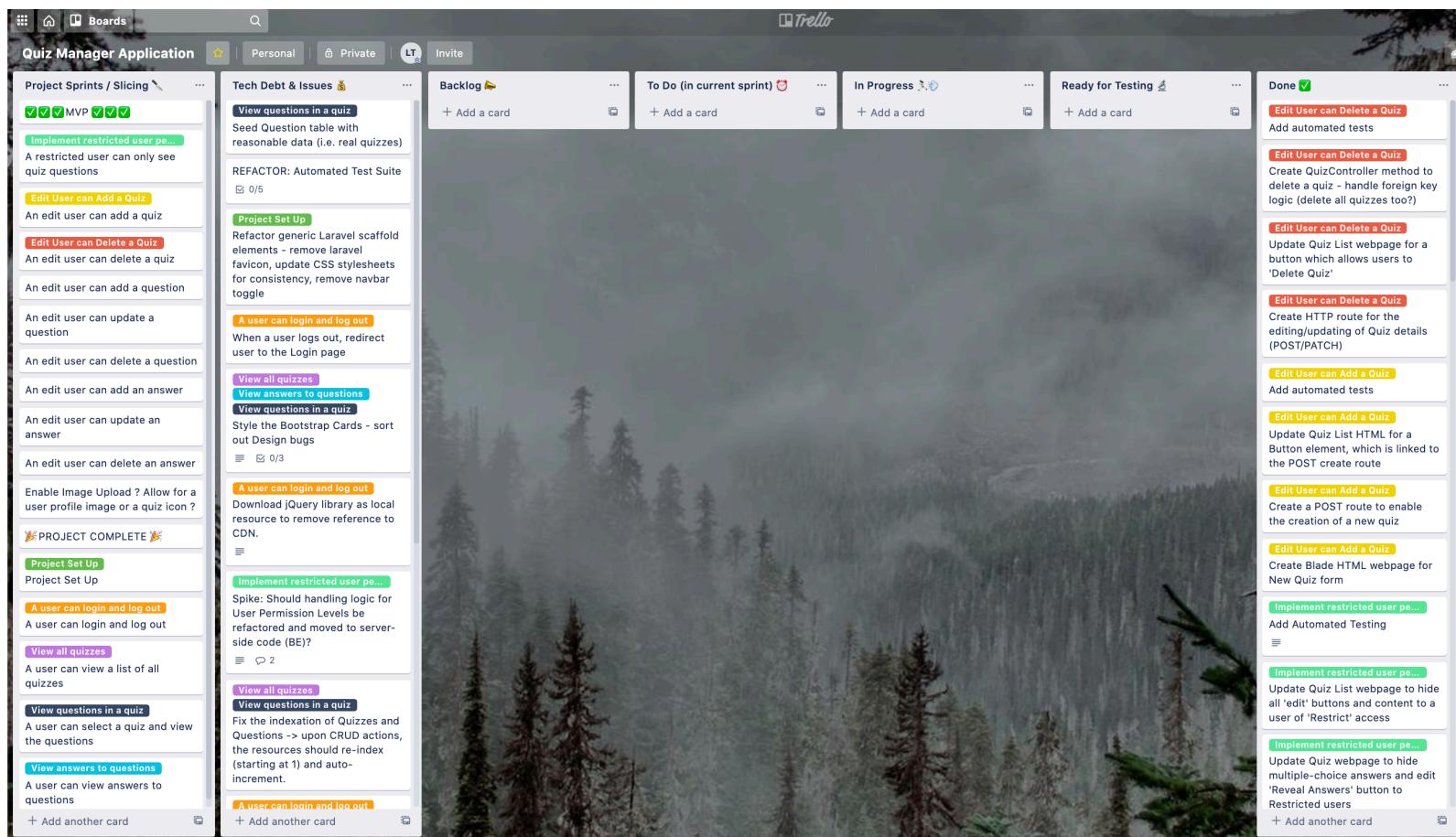
## 11/09/2020 - Day 4, Start of Day Sprint Review

- **Sprint Goals & Objects** = finish MVP tickets (mainly testing) and complete the next two slices of product feature work. Implement the user permission levels, users of restrict access should not have access to answers, and enable edit users to add and delete quizzes.
- Sprint Planning Activities:
  - Assess Sprint objectives, review the board, reassess priorities, and pull tickets from Backlog into the current Sprint



## 11/09/2020 - Day 4, End of Day Sprint Review

- Great progress in adding features to Quiz Manager. Close of the day - completed three further user stories, with nothing left in the middle columns.
- I have created a new column for 'Tech Debt & Issues'. I have periodically added tickets to this column during the core development of user features.
- The tickets in this column are a combination of technical debt tickets, such as refactoring, spikes/investigations into issues or finding out if there is a better option to do something, or bug fixes, non-critical bugs I have noticed in the development of an unrelated code feature (but moved on for the sake of progress). These are all listed in Backlog and there is a significant amount accumulating in the Backlog.

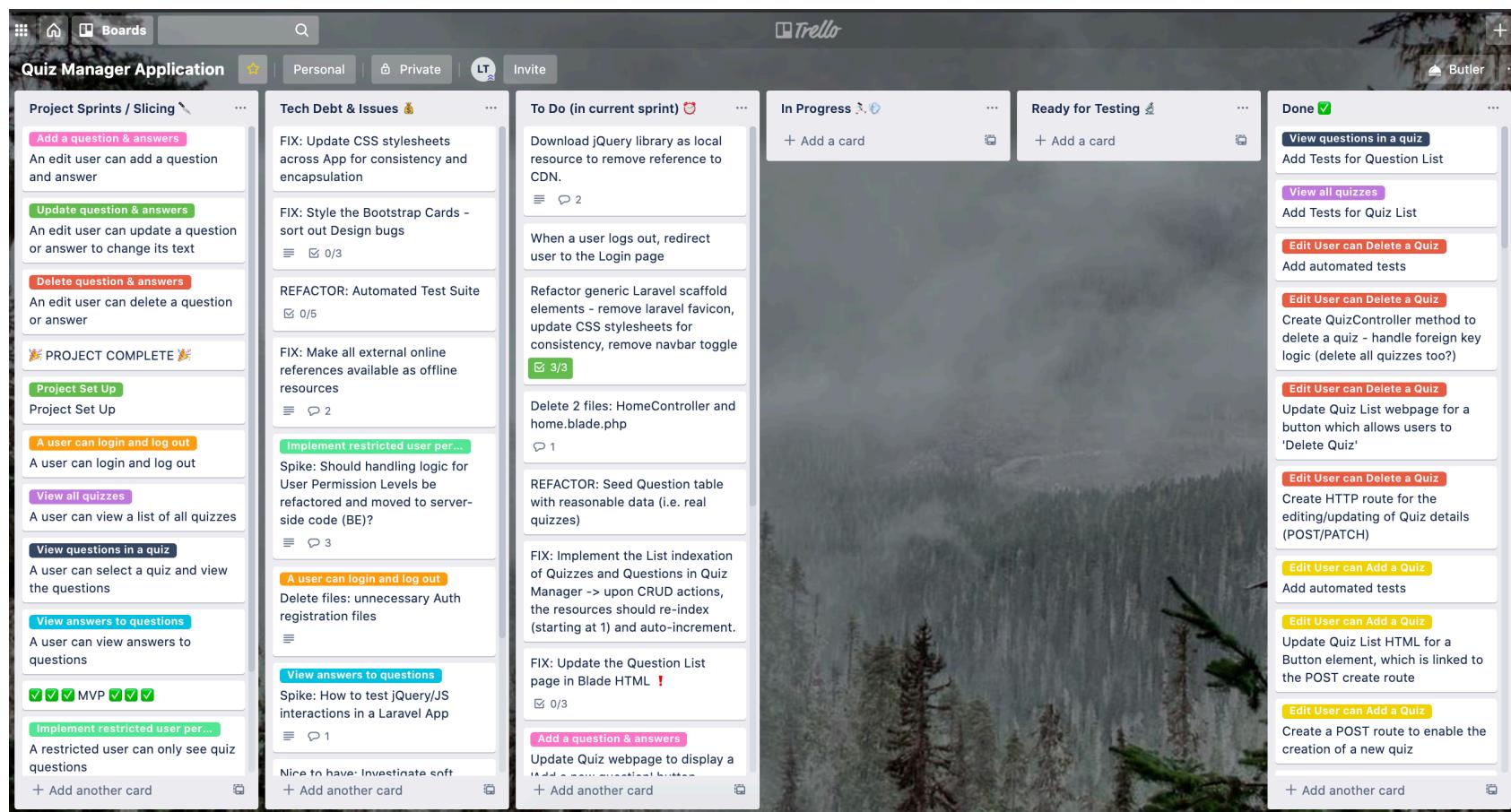


## Daily Retro, Day 4

Brain Dump	Proud Of
<ul style="list-style-type: none"><li>Eugh. There is a lot going on with the project. Lots of moving parts and pressure is building. Super easy to get derailed with one issue and spend an excessive amount of time debugging it. To get around this, I have tried to time box debugging wherever I can and assess its importance to the user story (i.e. either pause it or dump it). This has lead me to me having LOTS of items in the 'Tech Debt and Issues column' - I'll need to get around to these eventually and prioritise...</li></ul>	<ul style="list-style-type: none"><li>End of day 3 and I've completed a lot of the features. Some caveats with the tech debt items, but at its core, I'm very close to having a fully functional quiz manager. Last user stories to go are CRUD actions on questions and answers. Once I've finished these, I'm good to work on nice to have items - which is a great position to be in. The finishing line is in sight.</li><li></li></ul>
Could do better	Next on the plan
<ul style="list-style-type: none"><li>Addressing tech debt items. I have moved on from a lot of things. I need to re-prioritise and re-visit user stories to have the bigger picture in mind as to what the user requires and what is 'nice to have'</li><li>Figuring out what to do with Testing. I need a test approach - ie. all feature tests - but do I need unit or integration/browser tests? I have been adhoc with this, but I need a formal approach - should I also work with database or implement mocks. Lots to think about, and I'm leaving it to the last minute</li><li>Documentation - need to do a better job for a development diary. Make sure I document the journey - more than just a retro. Throughout the day. Make sure I don't miss this 'admin' check every hour</li></ul>	<ul style="list-style-type: none"><li>Revisit user stories and high level picture</li><li>Prioritise tech debt and issues based on this:</li><li>what is a blocker (ie. needs to be solved now); and what is nice to have?</li><li>Need to have a good planning session on the CRUD actions for questions/answers - I still have a few questions in my mind as to how this should/will be structured. Maybe need to do some research into the best way to handle the logic. Definitely need to confirm my wireframe designs, and list my assumptions - before getting into the code. This will save time in the medium term.</li></ul>

## 14/09/2020 - Day 5, Start of the Day

- Have had some fairly good progress getting to this point. This is a good time to catch up on a backlog of Tech Debt/To do list items I had created in my push for progress in product features.
- For sprint planning today, I went through the Tech Debt column and prioritised tickets from which were blocking issues and which are only nice to have. I pulled in the blocking tickets into the To Do column for today.
- Next on product features: a user can create questions and answers.
  - I went through user requirements doc and assumptions before planning. Created tickets for the feature and pulled into To Do.
- Sprint planning done, ready to go and get cracking into the code... there's lots to do.



## 14/09/2020 - Day 5, End of Day

The Trello board is organized into six columns:

- Project Sprints / Slicing**: Contains cards for 'Add a question & answers' (edit user can add), 'Delete question & answers' (edit user can delete), 'Edit/update question & answers' (edit user can update), and a 'PROJECT COMPLETE' section.
- Backlog**: Contains cards for 'Delete question & answers' (Create Question controller method to delete), 'Delete question & answers' (Create DELETE route to handle deletion), 'Edit question & answers' (Update Quiz page to display 'Delete Question' button), 'Edit/update question & answers' (Update Quiz page to display 'Edit Questions' buttons), 'Edit/update question & answers' (Create HTTP route for editing/updating of Question details), 'Edit/update question & answers' (Update Question controller to display the Edit Questions view), and 'Edit/update question & answers' (Create a HTML webpage for the 'Edit Questions' form).
- To Do (in current sprint)**: Contains cards for 'Add a question & answers' (Add functionality for a user to add multiple questions) and 'Add a question & answers' (Integrate the new questions form into the user flow of the new quiz form).
- In Progress**: Contains cards for 'Add a question & answers' (Add automated tests) and '+ Add another card'.
- Ready for Testing**: Contains cards for 'Add a question & answers' (Update QuestionController Store() method to receive the form submission and create a new question in the application and database), 'Add a question & answers' (Create a HTML webpage for the 'Add a new Question' form), 'Add a question & answers' (Add new POST route to handle the creation of a new question resource), 'Add a question & answers' (Update QuestionController Create() method to display the new question view), and 'Add a question & answers' (Update Quiz page to display a 'Add a new question' button on an existing quiz).
- Done**: Contains cards for 'FIX: Update the Question List page in Blade HTML!' (status 3/3), 'FIX: Implement the List indexation of Quizzes and Questions in Quiz Manager -> upon CRUD actions, the resources should re-index (starting at 1) and auto-increment.' (status 3/3), 'Refactor generic Laravel scaffold elements - remove laravel favicon, update CSS stylesheets for consistency, remove navbar toggle' (status 3/3), 'When a user logs out, redirect user to the Login page' (status 2/2), 'Download jQuery library as local resource to remove reference to CDN' (status 1/1), 'Delete files: unnecessary Auth registration views, controllers and routes' (status 1/1), 'Delete 2 files: HomeController and home.blade.php' (status 1/1), 'View questions in a quiz' (status 1/1), 'Add Tests for Question List' (status 1/1), and '+ Add another card'.

## Daily Retro, Day 5

Brain Dump	Proud Of
<ul style="list-style-type: none"><li>• Oh dear, that was a messy end of day 5 on the project. Got dragged down in what should have been an easy piece of work (make a HTTP POST request to create a question)...not sure what did it. Maybe it's tiredness? The issues should have been spotted earlier.</li><li>• As a result of the troubleshooting and hack, the design of the page isn't ideal in its current state. Though I have to move on to the remaining product features that need to be implemented.</li></ul>	<ul style="list-style-type: none"><li>• Getting a lot of Tech Debt and Issues column tickets done. Good prioritisation first thing at the start of Day 4 in terms of deciding what tickets were blocking and which were nice to have. I was efficient and decisive in pushing 'nice to have' tickets back.</li><li>• Progress in product features still - thanks for the buffer I had previously built up in the product, today's delay in adding the 'add a question' feature will hopefully not derail the project in itself. There is still (limited) time to implement the rest of the application.</li><li>• Re-visiting the requirements &amp; assumptions doc to ensure I am implementing the brief in the development phase.</li></ul>
Could do better	Next on the plan
<ul style="list-style-type: none"><li>• Debugging! Need to be systematic and planned about it.</li><li>• I should have moved on after 1hour (max) or taken a break away from my screen. Instead I debugged for 2-3 hours investigating possible causes/solutions. But that was not an efficient use of time. I should have time boxed and taken a break/moved on.</li><li>• </li></ul>	<ul style="list-style-type: none"><li>• Lots of decisions tomorrow for the last features - which are the least defined in my planning (need to revisit that).</li><li>• Adding the product features to enable the editing and deletion of Questions/Answers.</li><li>• Also need to start documentation as I approach the end of the project - I need to start writing up Testing Documentation tomorrow.</li><li>• Need to crack on and implement it. I already fear it might be a hack job and the design will likely suffer. But I would rather get the feature working, and return to it later to improve its design if I have time. Than get one of the two last features working really well, but the last feature doesn't get started... Trade-offs.</li></ul>

## 15/09/2020 - Day 6, Start of the Day

- Lots to do in the penultimate day of project. For today's sprint, the objective is to complete all remaining product features of Quiz Manager and start documentation.
- That includes the in progress 'add a question and its answers', as well as the not-started 'delete a question' and 'edit a question'. I had bad progress and a bit of a mind blocker on the tickets in 'in progress' so for the start of the day, I'm going to move these to the bottom of the To Do column.... So I can get a good start on the other features without getting bogged down in troubleshooting.

The Trello board is organized into six columns:

- Tech Debt & Issues**: Contains cards for adding custom user error messages, refactoring the Question table, updating CSS stylesheets, fixing external online references, and styling Bootstrap cards.
- Project Sprints / Slicing**: Contains cards for adding, deleting, and editing questions and answers, along with a 'PROJECT COMPLETE' card.
- To Do (in current sprint)**: Contains cards for deleting questions and answers, creating a DELETE route, integrating new questions, adding multiple questions, and creating a Question controller method.
- In Progress**: Contains cards for adding automated tests, integrating new questions into the flow, adding functionality for multiple questions, and creating a Question controller method.
- Ready for Testing**: Contains cards for adding questions and answers, creating a HTML webpage for the 'Add a new Question' form, adding a POST route, and displaying a new question view.
- Done**: Contains cards for updating the Question List page, implementing list indexation, refactoring generic Laravel scaffold elements, handling user logouts, downloading jQuery, deleting unnecessary files, and deleting specific files.

Each card includes a description, a due date, and a status indicator (e.g., a checkmark for completed tasks). The 'Done' column also shows progress counts (e.g., 3/3).

## 15/09/2020 - Day 6, Mid-Day Review

- As it's the last day of my coding in the project, I am keeping track of sprint planning closely. I would like to have a product cutoff at the end of the day (6pm), with no more changes to the project code after that point.

The Trello board is organized into four main columns:

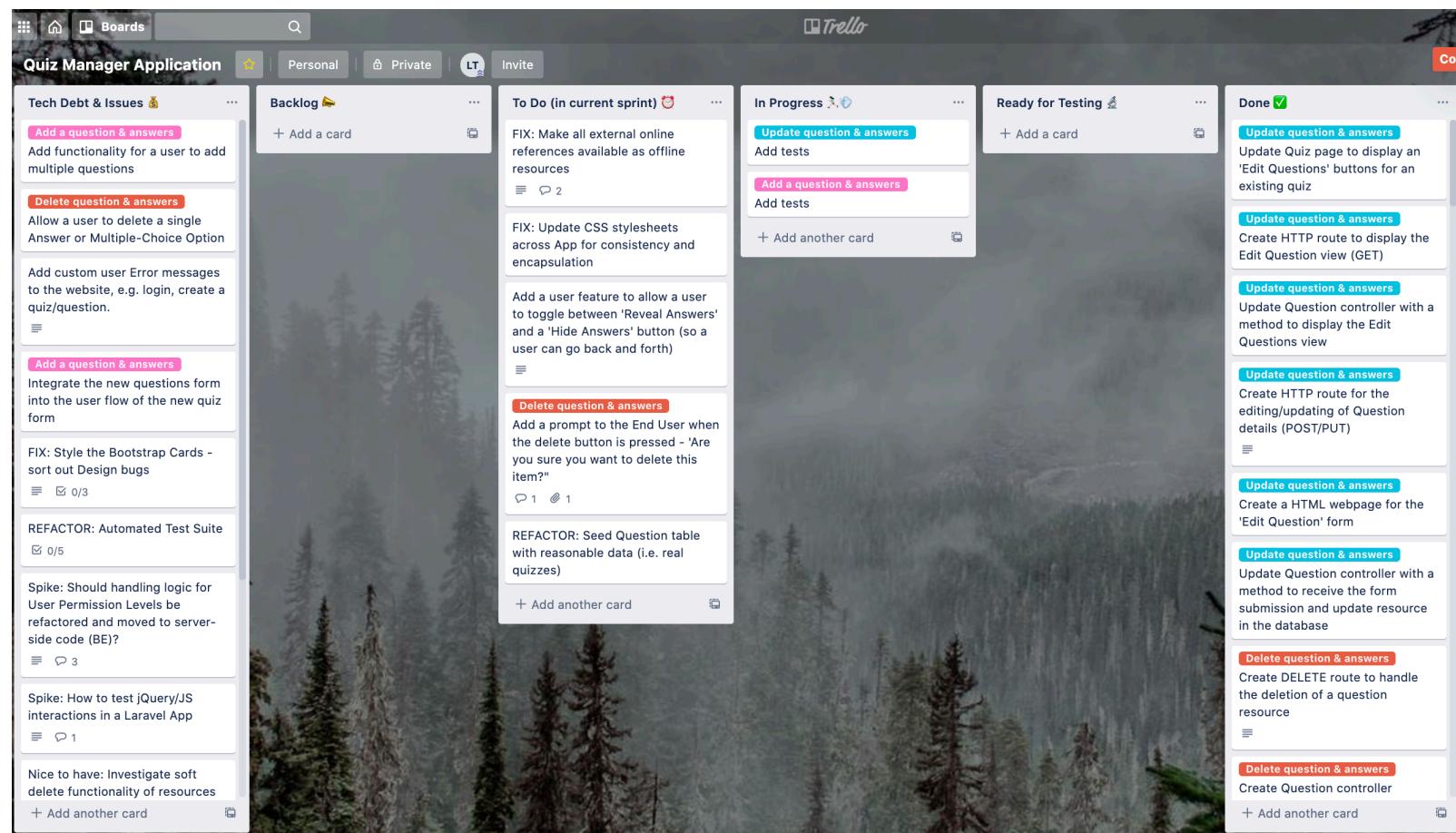
- To Do (in current sprint)**: Contains cards for adding question & answers, deleting question & answers, updating question & answers, and a 'PROJECT COMPLETE' card.
- In Progress**: Contains cards for adding a card, integrating new questions, and adding functionality for multiple questions.
- Ready for Testing**: Contains cards for adding a card and a delete question & answers card.
- Done**: Contains cards for updating question & answers, creating an HTTP route for edit question view, updating question controller, creating an HTTP route for editing/updating question details, creating a HTML webpage for edit question form, updating question controller with form submission, and creating a DELETE route for question deletion.

On the left side of the board, there is a sidebar with several lists:

- Tech Debt & Issues:
  - Use a Bootstrap Glyphicons for the Delete Question button (1 comment)
  - Add a user feature to allow a user to toggle between 'Reveal Answers' and a 'Hide Answers' button (so a user can go back and forth)
  - Add custom user Error messages to the website, e.g. login, create a quiz/question.
  - REFACTOR: Seed Question table with reasonable data (i.e. real quizzes)
  - FIX: Update CSS stylesheets across App for consistency and encapsulation
  - FIX: Make all external online references available as offline resources (2 comments)
  - FIX: Style the Bootstrap Cards - sort out Design bugs (0/3 comments)
  - REFACTOR: Automated Test Suite (0/5 comments)
  - Implement restricted user permission (Add another card)
- Project Sprints / Slicing:
  - Add a question & answers
  - Delete question & answers
  - Update question & answers
  - PROJECT COMPLETE
  - Project Set Up
  - A user can login and log out
  - A user can view a list of all quizzes
  - A user can select a quiz and view the questions
  - A user can view answers to questions
  - ✓✓✓ MVP ✓✓✓
  - A restricted user can only see quiz questions
  - An edit user can add a quiz
  - An edit user can delete a quiz
  - + Add another card

## 15/09/2020 - End-Day Review

- Completed all of the project features ✅ Exhausting but moved them all into the Done column.
- Issues with the Automated Testing side of certain features so they are still in progress 🤔 Think I will have to let these go and address the deficiencies in through extra Manual Testing...Not getting further with it and have time-boxed this a few times.
- I reviewed the Tech Debt & Issues column and prioritised. Moved a number of ticket into the To Do column, which I considered important to be completed for the final Application. These will be the final tickets I will complete on the development side of the project, before a code freeze.



## Daily Retro, Day 6

Brain Dump	Proud Of
<ul style="list-style-type: none"><li>Done - penultimate day. Happy with the progress, but I could have done better. Relieved to finally start documented the project, though slightly concerned as to what it will reveal.</li><li>Lack of documentation up to this point will definitely give me a headache on the last day and will make life a lot harder.</li><li>A lot of focus and final push will be needed to get it over the line 😅</li></ul>	<ul style="list-style-type: none"><li>Defined the last product features (which were the features I had planned the least in advance)</li><li>Completed the final product features (editing and deletion of Questions/Answers) to finish the Quiz Manager functionality </li><li>Lots of rush and pressure today, but I still completed the features and I'm happy with the UI design of the application.</li></ul>
Could do better	Next on the plan
<ul style="list-style-type: none"><li>There is an issue with my automated testing. I'm disappointed to have this still outstanding - I tried writing quite a few tests to cover certain features but tests were failing and I could not figure out why they were failing. It could be due to the use of an in-memory sqlite database. In hindsight on day one I should have set up a separate testing database. So I could be sure any db errors in tests were ones that I would also see in production. So it became difficult to see what was the actual error in the tests because they weren't errors I was seeing in manual testing....</li><li>Documentation - I need to get a crack on with documentation but I got stuck with trying to fix my tests.</li></ul>	<ul style="list-style-type: none"><li>Finish the last few clean up tickets on the Application - before starting a code freeze (no more changes to the code after that point). Clean up is mainly on refactoring and removing unnecessary files, etc.</li><li>Documentation - I need to write up all the documentation and pull together everything to get it ready for submission. This involves: planning, construction, testing and evaluation... lots of writing and organisation required on the final day....</li></ul>

## 16/09/2020 - Day 7, Start of the Final Day, sprint review

- Some quick wins implemented. But started the code freeze, to leave the code base as is. Focusing on documentation now....finished with the project coding. Most code tickets in the tech debt and backlog columns will have to be closed/left behind as there isn't enough time unfortunately to get around to working on these - which is a shame :(
- 99% a documentation day - lots to catch up on and document. Added the document deliverables outstanding as a Trello board tickets too, in order to keep track of what is there to-do.

