Quiz master

This document will be about a multiple-choice questionnaires system. It will allow users to view, answer, edit, delete questionnaires.

# Design

## Requirements

### Initial requirements

* can add multiple choices per questionnaire
* can add multiple questions per questionnaire
* can take the questionnaire test
* levels of access
  + 1 – answer questionnaires
  + 2 – level 1 permissions + view answers of questionnaires
  + 3 – level 2 permissions + CRUD of questionnaires
* The ability to login to access the site
* Code should follow best practices
* The website should be easily rebranded
* Users’ passwords to be hashed
* A user can logout
* Each question is associated with a set of between 3 and 5 answers

### Implied requirements

* Levels of access
  + 4 – level 3 permissions + ability to manage users (CRUD)
  + 3 – also can assign users to questionnaires
  + 2 – also can view users score history
  + 1 – also can view own score history
* Have welcome page
* Have subjects for questionnaires (for example maths)
* Have draft and published questionnaires
* Have a consistent theme
* Work with PCs, tablets, and phones
* Can assign questionnaire to user

## User interface

I made wireframe designs to visualise how the site will look

Home page

Graphical user interface, website

Description automatically generated with medium confidence

A user can go to the login page and read about the site on this page. This will be the first page a user sees

Login screenA picture containing background pattern

Description automatically generated

Users can login and register from this page. If they wished to register they will have the lowest permissions by default. If they require a more access they should contact the admin

The main template (guide)

Graphical user interface, chart

Description automatically generated

This is the template of how each page will look. The footer will contain a trademark and the logo.

Questionnaires

Chart

Description automatically generated

This is where users can see all the questionnaires. Depending on the access level users will be able to edit, assign or start questionnaires

Edit questionnaire modal

Graphical user interface, application, website

Description automatically generated

This modal will popup when the edit button from the questionnaire screen is pressed. Here you will be able to change the title, change the status and categories of the questionnaire. Once the user is finished editing the questionnaire, they can save their changes. If a user wants to change the questions, they can press the “modify questions” button

Edit questionnaire questions

Graphical user interface

Description automatically generated

Here users can do all the actions they could do on the edit questionnaire screen and modify questions. They can change the answers to a question, add and remove options, remove questions, and delete the questionnaire.

Assigning users to questionnaire

Graphical user interface

Description automatically generated

This modal pop up when the user clicks the “assign” button. Here users can search for students to assign to the questionnaire and save it.

Answering questions

Graphical user interface

Description automatically generated

This is where user will take the questionnaires. User can select an option for each question and once they are done, they can submit their answers

Users

Graphical user interface, chart, funnel chart

Description automatically generated

Users can change access levels and ban users as well as remove them from the site.

Phone / tablet view

Table

Description automatically generated

The nav bar will have a collapsible menu. This is where the links will be. The links / actions will be stack on top of the content instead of being on the side. The main content will be at the bottom.

## Use cases

As a student I want to the ability to complete questionnaires that are assigned to me and see how well I did so that I can see my strongest and weakest areas in relevant subjects.

As a visitor I want the ability to view the correct answers so that I can ensure that the options that are marked as correct are correct.

As a teacher I want to be able to make/delete a questionnaire for specific people so that I can help relevant students improve their grade and remove out of date questionnaires.

As an admin I want to be able to change people’s access level and the ability to ban/remove so that the relevant people have the right access and people are banned/remove if they leave or act inappropriately.

## Database Schema

### Matrix

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | student | visitor | teacher | admin |
| questionnaires | R | R | CRUD | CRUD |
| Answers |  | R | CRUD | CRUD |
| Score | R (self) | R (all) | R (all) | CRUD |
| Users | C | R | R | RUD |

To make create new users, users must register on the login page

### Database design

Graphical user interface, application

Description automatically generated

User – table will hold the user’s information

User\_status – determines whether a user is banned, live, deleted

User\_type – what access level they have (student, teacher, admin)

Question\_header\_assignee – who is assigned to what questionnaire

Question\_header – the questionnaire information such as title, category

Question\_category – holds the description of category

User\_question\_header – attempts for each questionnaire against a user

Question\_line – each question against the questionnaire

Question\_status – whether a question/questionnaire is published/deleted

# Construction

1. Got pictures / libraries
2. Made includes files and error pages
3. Made home page
4. Made database with tables
5. Made login page and verify script
6. Questionnaire/index and xhr page
7. Creating questionnaire functionality
8. Questionnaire/edit\_questionnaire page
9. Users/index and xhr page
10. Change password
11. Manage / view user page
12. Sharee modal and actions
13. Questionnaire /Show\_questionnaire page
14. Added the alpha numbers with question options
15. Added readonly to questionnaire/edit\_page
16. Added symbols beside text
17. Error modals
18. Implemented ajax wrapper function
19. Questionnaire/results page
20. Added favicons
21. Made a Guide (readme.md)

# Testing

Had an issue when making the read-only version of questionnaire/edit\_questionniare page where it would disable all input/buttons /select

Graphical user interface, application

Description automatically generated

Text

Description automatically generated

To fix it I changed the scope of the actions to only effect the questionnaire

Graphical user interface, text, application, email

Description automatically generatedText

Description automatically generated

Now other inputs on the page can edited

Had issue pulling through first and last name as full name



I added the ‘concat’ function to merge to columns into one



Now it pulls through the first name and last name as one column

Was not updating the alpha number properly

A picture containing text

Description automatically generated

A picture containing text

Description automatically generated

Text

Description automatically generated

Fixed it by making and ‘options’ variable then updating it by using find

Text

Description automatically generated

A picture containing text

Description automatically generated

Application

Description automatically generated with low confidence

Now it pulls it updates when option is removed

Does not save when it should be able to save

Graphical user interface, text, application

Description automatically generated

Graphical user interface, text, application, email

Description automatically generated

Text

Description automatically generated

Changed it so it looks for the first correct answer instead of a false correct answer

Graphical user interface, application

Description automatically generated

Graphical user interface, text, application

Description automatically generatedText

Description automatically generated

Now it will give the correct message and redirect them to the questionnaire page

If there is no content to a page, it doesn’t look right

Text

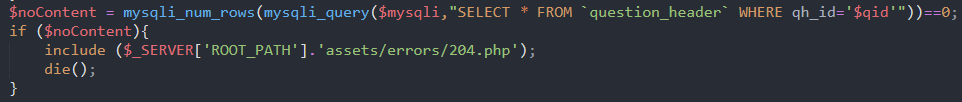
Description automatically generated with medium confidence

Added a 204 no content page

A picture containing graphical user interface

Description automatically generated

Text

Description automatically generated

Now when there is no content on the page it will show up with the 204 page.

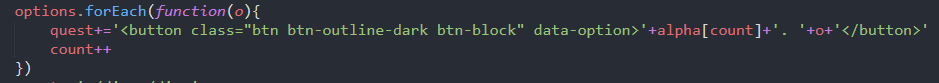
It will not save the user’s answers when they are finished

Graphical user interface, text, application, email

Description automatically generated

Text

Description automatically generated



I changed the layout of it as it looked clearer this way

Graphical user interface, text, application, email

Description automatically generated

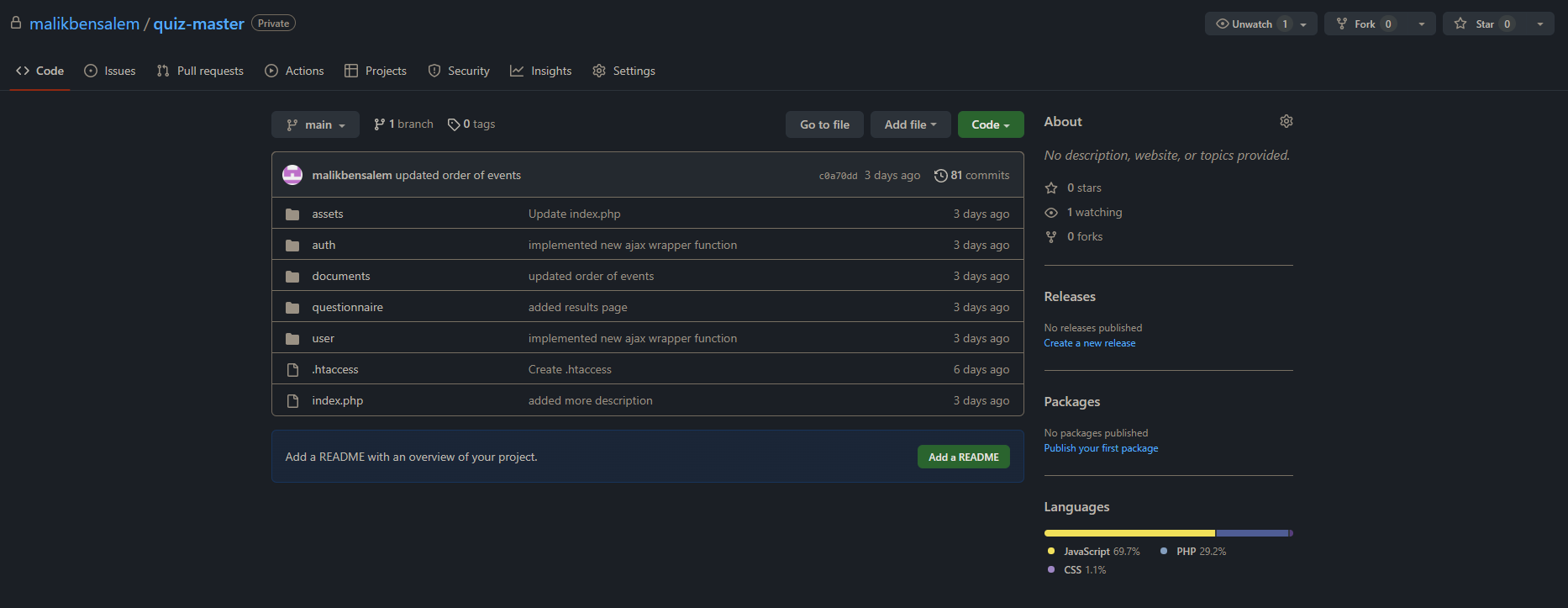
Text

Description automatically generated

As it the text was outside the button now it, it will no longer read the alpha number.

# Document

I used GitHub as my version control. The link is https://github.com/malikbensalem/quiz-master.



## Limitations

* Cannot change email address due to it being linked to the password hash
* Each question is associated with a set of between 3 and 5 answers

## Improvements

* Reset password via email upon login
* Have user exceptions to levels of access
* Time limit on the questionnaires
* Have an email sent out whenever to the user that has been assigned a questionnaire

## User guide

Please find readme.md file for user guide.