

University of Groningen
Software Engineering

QUESTIONNAIRE MANAGEMENT INTERFACE

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1. Introduction

Our goal for our project is to build a front-end for our questionnaire engine, that enables users to define their questionnaires using drag-and-drop interface. We do not have to deal with the back-end because the company we are working with has already implemented the back-end system. The main users of this application are professors and researchers, who need questionnaires for their research. Currently, to make a questionnaire the users of the system have to edit JSON files which is not user friendly at all here is an example of a demo questionnaire (**NOTE**): this is only 1 out of 30 more lines which is quite confusing and clearly not scalable.

```
[{"id":"v1","type":"radio","show_otherwise":false,"title":"Voorbeeld van een"}]
```

Therefore, the main goal is to develop responsive and user-friendly interface for editing questions in the questionnaire.

2. Requirements

Functional Requirements:

Functional requirements of our project are better described by the following user stories.
The most crucial requirements are the following:

As a **professor**

- I want to log-in (authenticate), so that I can view/manage my questionnaires.
- I want to logout.
- I want to save/manage questionnaires.

There are several minor goals to be done:

- As a user, I want to create an account.
- I want to "deploy" my questionnaire (send questionnaire for people to fill-in) [by e-mail], so that I can receive responses.
- As a (registered-)user, I want to "cancel deployment" of my questionnaire, so that it is not available for receiving responses.
- As a (registered-)user, I want to "re-deploy" my existing questionnaire, so that it is available for receiving responses again.
- As a (registered-)user, I want to update my questionnaire, so that people can respond to the latest version of my questionnaire.
- As a (registered-)user, I want to delete my questionnaire, so that it is not available for filling and "deployment".
- As a (registered-)user, I want to retrieve statistics about my existing questionnaire, so I can use it to make progress in my research.
- As a (registered-)user, I want to filter statistics about my existing questionnaire, so I can use it to view progress and changes over a given filter for my research.
- As a participant (can be both anonymous and registered-user), I want to fill-in and submit a response to a questionnaire, so that I can provide my views/opinions.

Non functional Requirements:

Usability:

Users must be able to access the questionnaires as an "authorized" user.

Reliability:

The system should be able to save the data every x minutes to make sure if the system crashes the data can be reloaded/

Performance:

The system must be able to support at least several hundred people filling in the questionnaires all at the same time.

Security:

Use Reseachable's JWT token system to encrypt user data

Supportablility:

The User of a questionnaire should be able to edit an existing questionnaire. However, no modifications of the existing system should be required

3. Meeting #1 Recap 24.02.2020

3.1 General Information

Back-end of the Questionnaire is written in Ruby (**Ruby on Rails** framework). The code is open-source and can be found via the link <https://github.com/compsy/u-can-act>.

3.2 Main Goals

The goal for the students is to build a front-end for our questionnaire engine, that enables users to define their questionnaires using drag-and-drop interface. Apart from that, the interface should provide users with the ability to design and create questionnaire protocol schemas. The platform should run as a separate service and should interact with the backend using its Restful API.

1. Authentication
2. Drag and drop questionnaire interface
3. Post questions

3.2.1 Authentication

Use JWT to authenticate the user (<https://jwt.io/introduction/>). There are two databases PostgreSQL (for storing personal credentials) and MongoDB (for storing questions). Therefore, credentials should be stored in PostgreSQL database (<https://www.postgresql.org/>).

3.2.2 Drag and drop questionnaire interface

Implement a draggable question interface, where you can select from a wide choice of predefined question types: <https://github.com/compsy/u-can-act#questionnaire-syntax>

3.2.3 Questionnaire interface

Interface should allow to list, delete and edit questions.

4. Meeting #2 Recap 11.03.2020

4.1 Main Goals

Drag and drop questionnaire interface was prioritized. Moreover, we discussed that interface should consist of several parts: toolbox and edit area.

4.2 Toolbox

Toolbox is a left centered object with two main functionalities:

- Allows to view different types of questions.
- Allows to drag the question to **Edit Area**.

4.3 Edit Area

Edit Area has several functionalities:

- Allows to drop chosen question.
- Allows to scroll down to view questionnaire.
- Allows editing the question.
- Permuting (reordering) questions use drag functionality.

4.4 Workload

- **Toolbox** with all question types: Robert, Hleb, Mahir.
- Dragging types to the **Edit Area**: Robert, Hleb, Mahir, Ou.
- Rendering a template of the type in the editor upon release: Krishan and Ou.
- Editing questions: Ou.

5. Useful Links

1. Github Backend link [<https://github.com/compsy/u-can-act>]
2. React Drag and Drop repository [<https://github.com/react-dnd/react-dnd>]
3. Swagger is an open-source software framework backed by a large ecosystem of tools that helps developers design, build, document, and consume RESTful web services [<https://swagger.io/>]
4. Docker is a set of platform as a service (PaaS) products that uses OS-level virtualization to deliver software in packages called containers [<https://www.docker.com/>]
5. React front-end framework [<https://react-bootstrap.github.io/>]

6. Group meeting recap

6.1 27th February

- We created a separate board (Trello link is in general) for the authentication part.
- Our goal for this block is to guarantee to satisfy the three user stories on overleaf or Trello.
- Our first sprint will officially end on the 12th of march where the goal is to be able to create an account and connect the details to the database
- All of us will be working on this to see how we can assess everyone's current react skills and see how our accurate the first planning poker number were according to how we rated it
- Mahir, Hleb and Robert (3/5 members) will be on a holiday from the 4th - 9th March
- This weekend everyone will practice and then meet up to discuss questions on the 3rd of March, and maybe send a question or two to be cleared out

6.2 12th March

This meeting was after the meeting with Frank Blauuw.

- We decided, that we should elaborate more on Requirements Document.
- We divided the workload:
 - **Toolbox** with all question types: Robert, Hleb, Mahir.
 - Dragging types to the **Edit Area**: Robert, Hleb, Mahir, Ou.
 - Rendering a template of the type in the editor upon release: Krishan and Ou.
 - Editing questions: Ou.

6.3 23rd March

This is a small meeting done online to get updates from each other regarding the current sprint

- Due to most of us heading home because of the Corona virus, some time was needed to adjust to the new workplace. This resulted in most of the group not being able to make much progress. Because of this, an extension of one week was asked to Frank, which was accepted.

- Krishan and Ou were both refactoring parts of the code unknowingly from each other. As a whole group we decided to keep Trello more up to date from now on to prevent such events from happening.
- Research in a more preferred drag and drop framework will be done **draggable** (shopify.github.io/draggable/).
- It is decided to use icons in the toolbox representing each question type, and when they're (in progress of being) dragged to the editor view, the icon will transition into a template representing the question type. This template is the one also eventually rendered in the editor view.

Also, on this day, we updated with Frank our current progress via Slack.

7. User Stories

7.1 Authentication

- As a (registered-)user, I want to log-in (authenticate), so that I can view/manage my questionnaires. **Poker: 8**
- As a (registered-)user, I want to logout. **Poker: 5**
- As a user, I want to create an account. **Poker: 8**

7.2 Questions

1. I want to save/manage questionnaires.
2. As a (registered-)user, I want to "deploy" my questionnaire (send questionnaire for people to fill-in) [by e-mail], so that I can receive responses.
3. As a (registered-)user, I want to "cancel deployment" of my questionnaire, so that it is not available for receiving responses.
4. As a (registered-)user, I want to "re-deploy" my existing questionnaire, so that it is available for receiving responses again.
5. As a (registered-)user, I want to update my questionnaire, so that people can respond to the latest version of my questionnaire.
6. As a (registered-)user, I want to delete my questionnaire, so that it is not available for filling and "deployment".
7. As a (registered-)user, I want to retrieve statistics about my existing questionnaire, so I can use it to make progress in my research.
8. As a (registered-)user, I want to filter statistics about my existing questionnaire, so I can use it to view progress and changes over a given filter for my research.
9. As a participant (can be both anonymous and registered-user), I want to fill-in and submit a response to a questionnaire, so that I can provide my views/opinions.

8. Contact

8.1 Frank Blauuw

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9. Changelog

Who	When	Which section	What
M. Hiro	February 20, 2020	The document	Created the document.
M. Hiro & H. Shmak.	February 24, 2020	User Stories section.	Completed the entire section
M. Hiro	February 24, 2020	Meeting # 1 Recap	Completed the entire section
M. Hiro & H. Shmak.	February 27, 2020	Functional & Non-functional requirements	Completed the entire section
H. Shmak	February 25, 2020	User Stories	Added planning poker points for sprint
M. Hiro	February 27, 2020	Group Meeting recap.	Completed the entire section
H. Shmak	March 11, 2020	Meeting # 2 Recap	Completed the entire section
M. Hiro	March 12, 2020	Group Meeting recap.	Completed the entire section
M. Hiro	March 23, 2020	Group Meeting recap.	Completed the entire section
M. Hiro	March 26, 2020	Contact Section.	Completed the entire section
H. Shmak	April 2, 2020	Useful Links	Completed the entire section