



Sensor Data Visualization

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PROBLEM

The Koios project is a software platform for researchers to collect and analyze survey data.

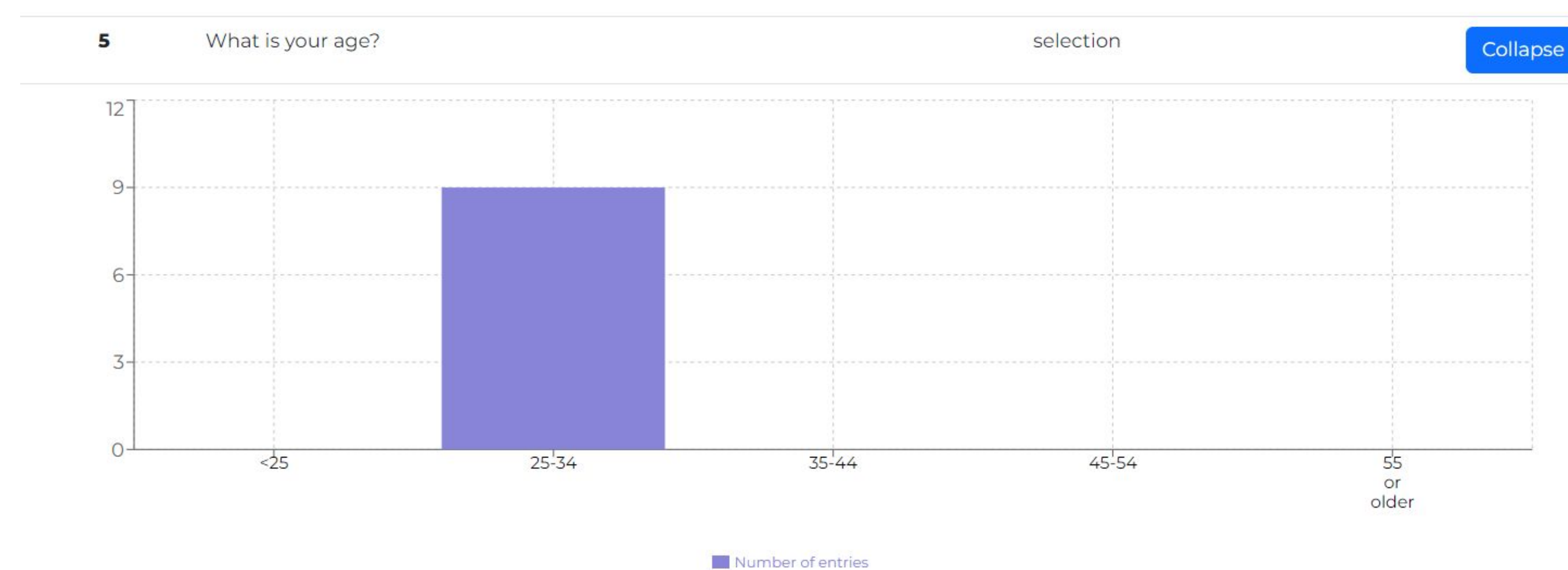
CURRENT SYSTEM

Whereas an existing system of Koios used outdated web frameworks, our work involved creating a new web stack from the bottom up involving Spring Boot/Axios for the backend, and React JS/Bootstrap for the frontend. With the renewal of the codebase comes extra readability and modularity of the source code, which is important as research methods change over time.

REQUIREMENTS

- Installing a MySQL daemon to host the Koios database.
- Install Java, Node Package Manager and the corresponding spring boot and NPM dependencies
- Learning how to use React to write frontend code.
- Learning how to use Spring in IntelliJ to write frontend code.

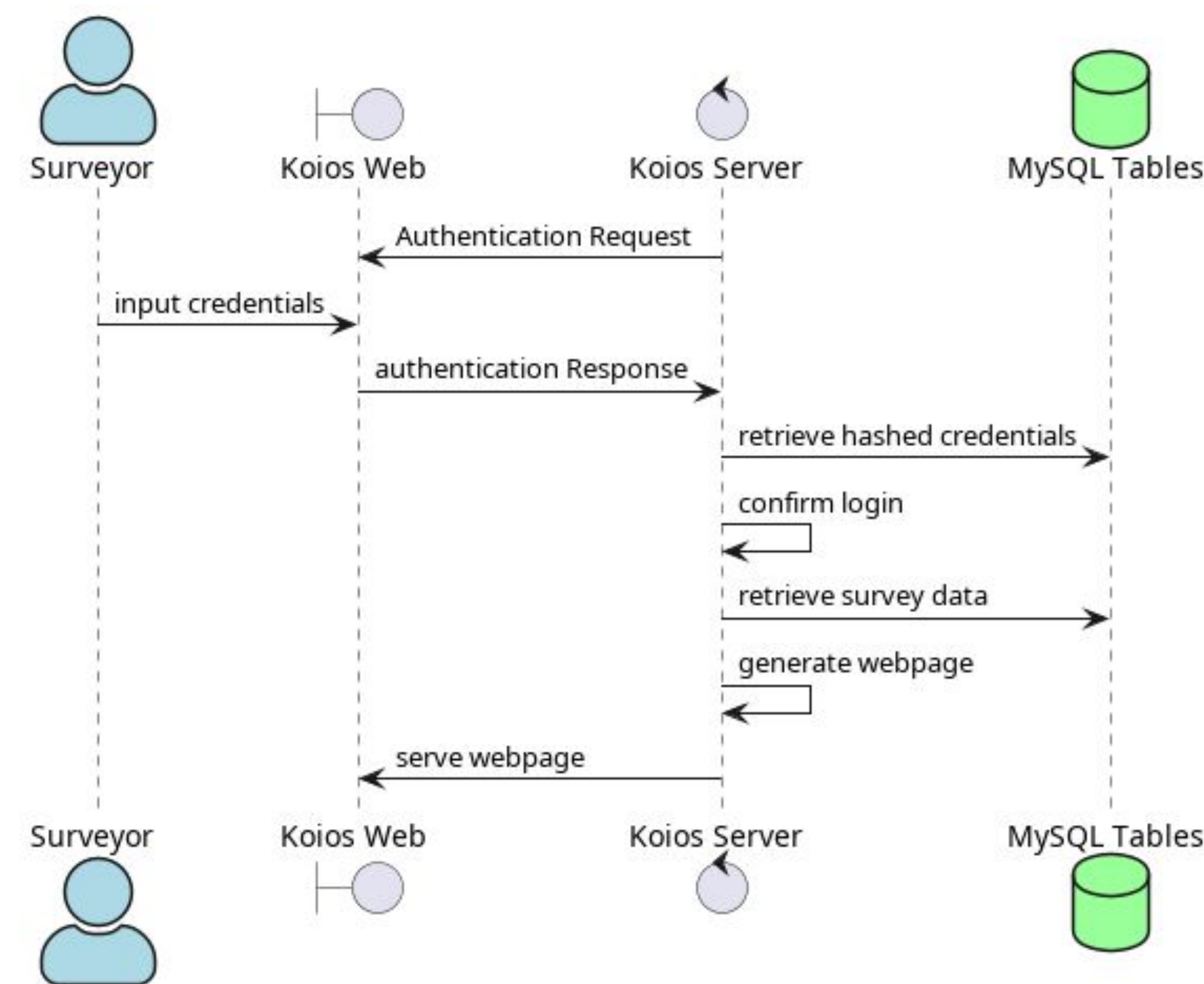
SCREENSHOTS



IMPLEMENTATION

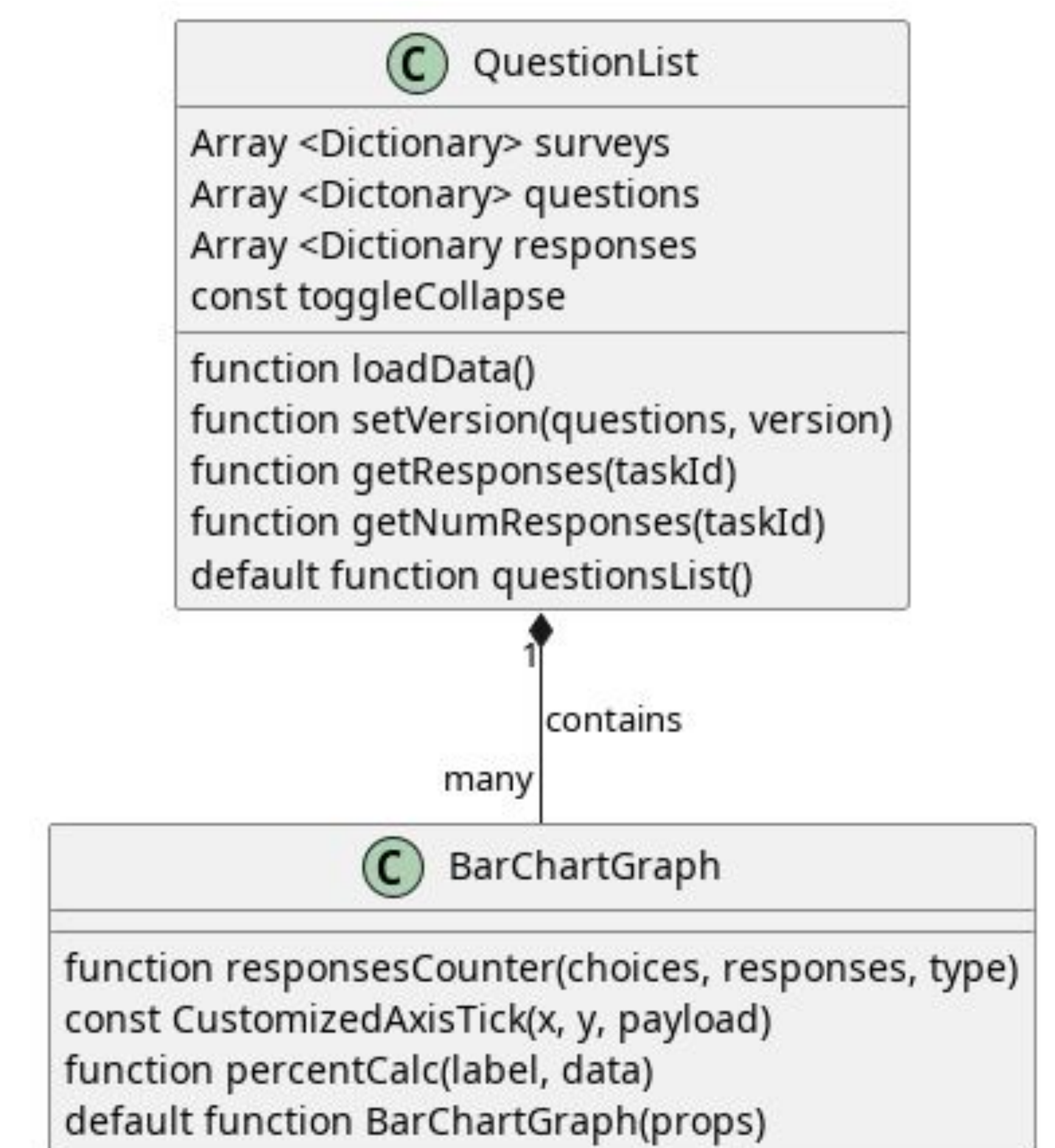
- A git repo is used to create and store all the project documents and updates.
- ReactJS/Bootstrap/Recharts is used to display the front end of the code.
- Spring Framework is used to create the backend.
- IntelliJ/Eclipse can be used to serve a testing environment for the back end of the code.
- Postman is used to test HTTP GET queries
- MySQL is used to grab queries from the database.

SYSTEM DESIGN



SUMMARY

The new Koios platform allows for a greater degree of customization for researchers to visualize questionnaire data. The webpage is responsive, and therefore is more accessible to devices of different screen shapes and sizes. Security is enforced through the use of user id and hashed password mappings.



REFERENCES

<https://spring.io/guides/tutorials/rest/>
<https://legacy.reactjs.org/docs/react-api.html>

ACKNOWLEDGEMENT

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