Quantified Student

Project plan



Created by N.Geilen

Updated by G. Malisz & J.Maas

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# Version History

| Version | Date | Author | Comment |
| --- | --- | --- | --- |
| 0.1 | 06-04–2022 | N.Geilen | Start document |
| 0.2 | 14-04-2022 | N.Geilen | Changes after feedback stakeholder and group members |
| 0.3 | 26-04-2022 | J.Maas | Improve introduction |
| 0.4 | 27-02-2023 | G. Malisz | Changes for the new team and semester |

# Introduction

The Quantified Student (QS for short) project focuses on helping students with their development and optimizing their performance with the help of collected data. The collected data will be shown in a dashboard where the student can see it. After which, the student can conclude where and how to improve their workflow. For example, the system can show when it is the best time to work for the student.

# Stakeholders

Our stakeholder for this project is Eric Slaats.

# Team

|  |  |  |
| --- | --- | --- |
| Name | Email | Role |
| Grzegorz Malisz | g.malisz@student.fontys.nl |  |
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| Thijmen Brand | thijmen.brand@student.fontys.nl |  |

# Goal

## Project Goal

Quantified Student has the goal to help students optimize their performance. We want to achieve this with the help of data gathering, data analysis and presentation of that data to the student.

## Semester Goal

The goal of this project for this semester is to analyse and connect available API’s and data sources to Canvas. The data will be presented in a visual way to the end-user on a dashboard that is integrated into Canvas. More information about structure of project in the *QS architecture.pdf* file. This semester goal is supposed to limit the scope of the project and finally deliver tangible solution.

# Sub-projects

## DataAnalyseMicroservice

The DataAnalyseMicroservice will be the brains of the QS project. It will receive all the data from all connected data sources and will analyse it.

The most important things for the DataAnalyseMicroservice are the following.

* **Scalability**: The DataAnalyseMicroservice will have multiple data sources that will provide data. It needs to be easy to add new data sources.
* **Security**: Due to the highly sensitive data, the connected sources can generate, it is necessary to adhere to modern security standards.
* **Privacy**: Due to the highly sensitive data and personal data, the connected sources can generate, it is necessary to follow the [GDPR](https://gdpr.eu/). **The data from a student will not be shared with Fontys or teachers/coaches or other third parties and services.**

## Data sources

QS will use multiple different data sources to gather data. The base of these data sources will consist of the following.

* Canvas
  + Canvas holds all the information about a student's assignments and grades. This data is an indicator of how good the student is doing
* Open Data
  + Open data is a broad source of public information. This can be weather information or public transit delays.

This sub-project will research and determine all kinds of data sources and their usefulness.

## Dashboard

The web application that will visualize the data is going to be integrated into Canvas. This application will be placed inside canvas with the help of the LTI Canvas interaction. The dashboard will need to have the same three main points as the DataAnalyseMicroservice. Mainly, the scalability of the dashboard is important so that new data sources could be visually presented.

**Detailed information about structure/architecture of project in the *QS architecture.pdf* file**

# Team agreement

Within the team, we have agreed to the following:

* Stand-ups are on location at Strijp-TQ every Monday at 10:00.
* Kanban board on GitHub
* Crating README.md files for projects, that operates as description of the most important information about project, such as:
  + Information what technologies project utilises e.g. Type Script, GraphQL,
  + Step by step instruction how to run the project,
  + Dependencies of the project
  + Purpose of the project
  + Expected results from the project

# Deliverables

Quantified Student application that is going to gather, process and display data.

# Definitions, Acronyms, and Abbreviations

|  |  |
| --- | --- |
| Abbreviation | Meaning |
| TBD | To be discussed |
| QS | Quantified Student |
| LTI | The integration technique that we will use to add an application to Canvas |
| DataAnalyseMicroservice | Main part of QS that is gathering and processing data |
| Microservice | Small independent services that communicates with Application |