Quantified Student

Project plan



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Spis treści

[1. Version History 2](#_Toc130202990)

[2. Overview 2](#_Toc130202991)

[3. Microservices Architecture 2](#_Toc130202992)

[4. Level 1: System Context diagram 3](#_Toc130202993)

[5. Level 2: Container diagram 4](#_Toc130202994)

[6. Level 3: Component diagram 5](#_Toc130202995)

[7. Level 4: UML 6](#_Toc130202996)

[8. Architecture of Microservices 7](#_Toc130202997)

[8.1. Microservice 1 7](#_Toc130202998)

[8.2. Microservice 2 7](#_Toc130202999)

[9. Definitions, Acronyms, and Abbreviations 8](#_Toc130203000)

# Version History

|  |  |  |  |
| --- | --- | --- | --- |
| Version | Date | Author | Comment |
| 0.1 | 14-03-2023 | G. Malisz | First iteration of this document, some architecture components will have to be updated |

# Overview

During the stand-ups and meetings of the team, there needed to be more clarity about the

responsibilities of each part of the system. The goal of this document is to create a clear and

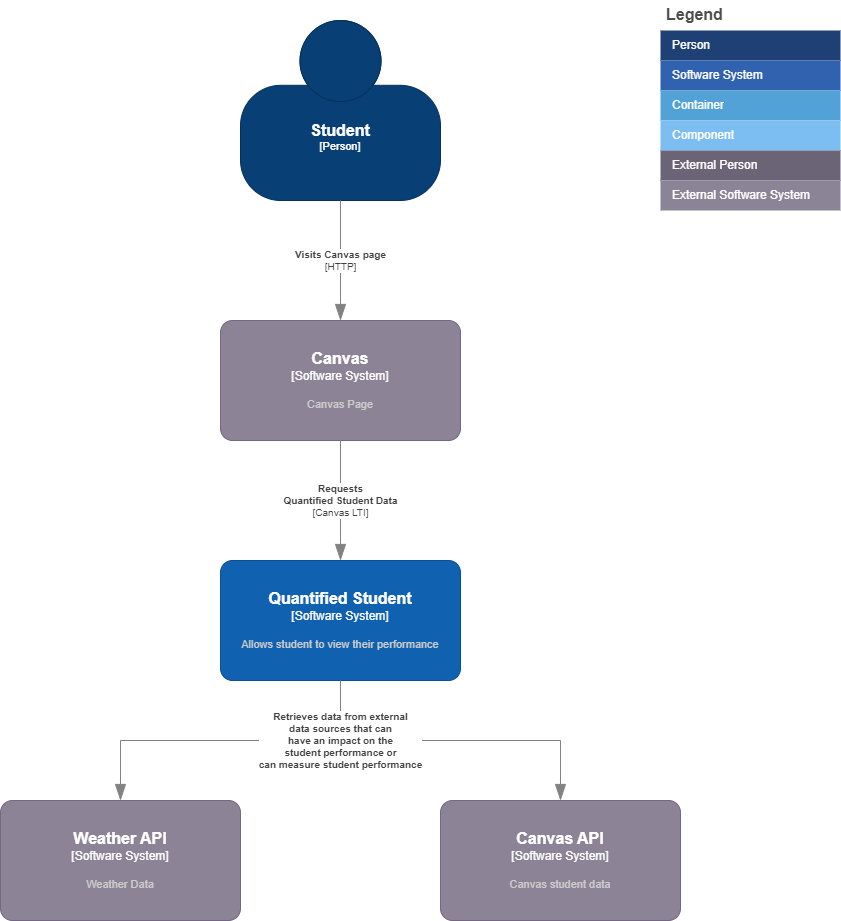
concise overview of the Quantified Student system. This document functions as compendium of Quantified Student system, where every part of the system is presented in abstract way with usage of C4 model.

# Microservices Architecture

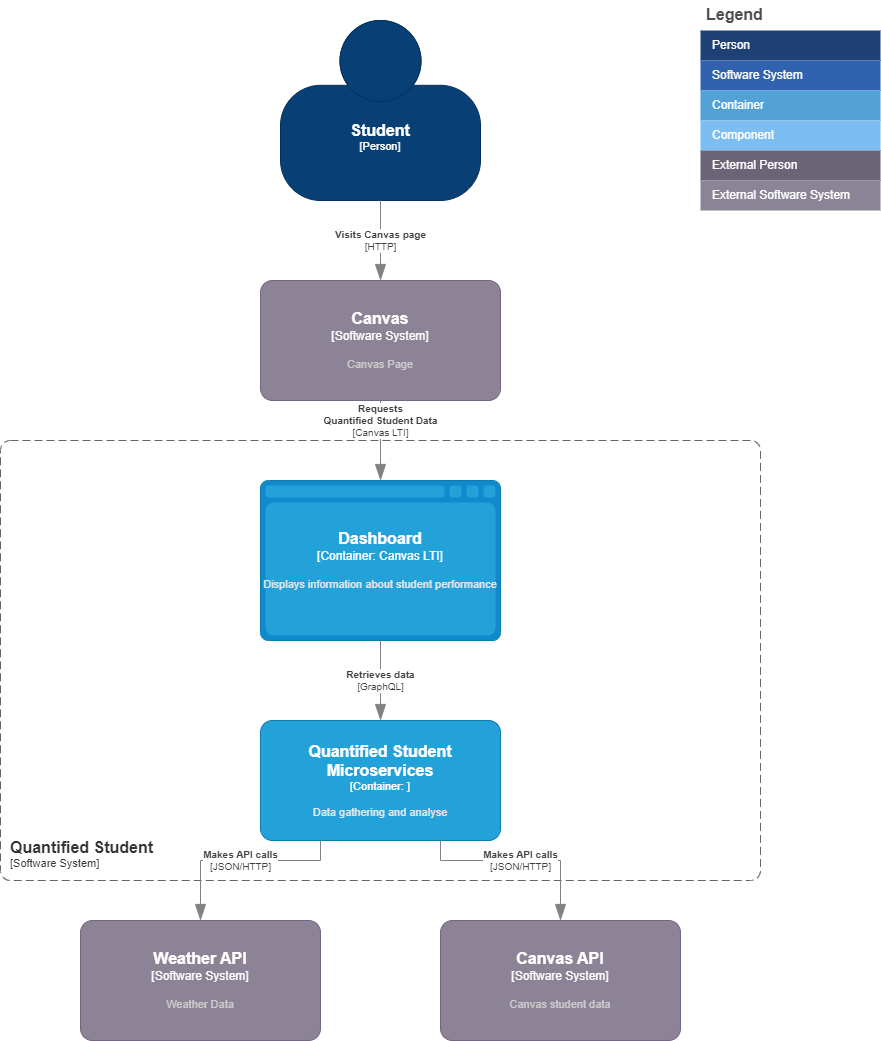
QS group has decided on Microservices Architecture, because:

* Quantified Student System in its final form is supposed to aggregate data sources, which provide useful information about students. This feature combined with analysis this data in future can cause some performance issues. Microservices architecture can help solve those problem by dividing application to smaller components that can be updated and scaled separately, without affecting availability of the whole application.
* Quantified Student System also consists of older sub-projects and incorporating them into one system can be done easier with usage of microservices architecture. This architecture allows for combining different technologies, which is useful while working with projects that are built independently.
* Microservices architecture will also allow group members to improve their knowledge in the field of software architectures, by allowing them to learn and use new architecture.

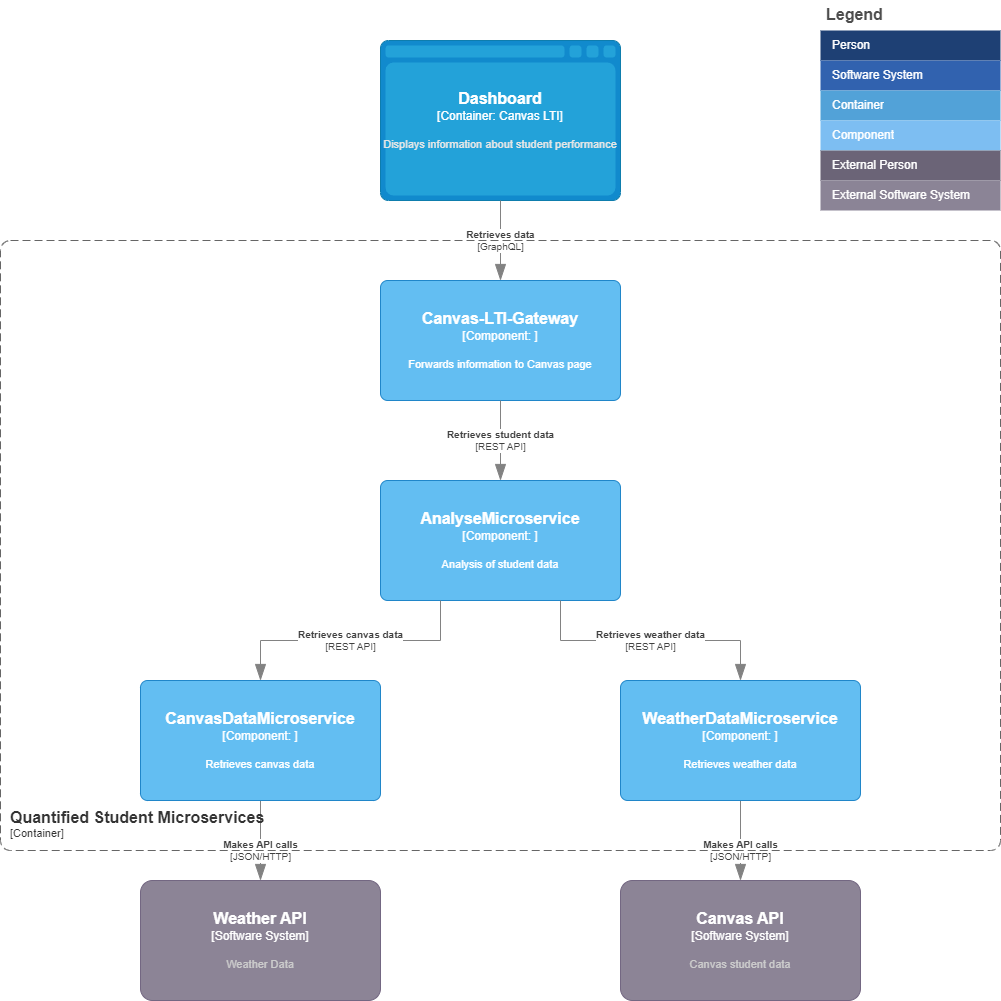
# Level 1: System Context diagram



# Level 2: Container diagram



# Level 3: Component diagram



# Level 4: UML

# Architecture of Microservices

## Microservice 1

Architecture of microservice

## Microservice 2

# 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 |