

Project 1 (Project Report) - BTP405

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Course: [System Development and Design]

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Goal of project: To create a secure, cloud-based Personal Health Record (PHR) system that allows the users to manage their health information in one place.

Development process:

Starting the development of this project, I made a new Jira project in which I would use agile methodologies to develop the overview of the project by going into the perspective of the user. This would involve making user stories and scenarios on why a PHR system would serve a purpose to a wide range of users. I also decided on what architecture style would be the best for a project like this in which I decided on a microservice style. A part of the agile methodology was also to develop a Vision statement in which I used Moore's vision template that would overlay the foundation of my application. After developing the base I made the corresponding personas that will add to the user stories for the different users. Then came the actual development of the application which would include multiple steps and the creation of different helper functions and HTTP methods using the built-in HTTP-package in Python.

Lessons Earned:

Some lessons I learned from this project are:

- How to build an API using python's built-in HTTP package
- Create helper functions to ease functionality
- Docker containers (how to container an application)
- Error management (fixing bugs)
- Creating an application using a microservice architecture
- Security management

Future work to be done on the system:

This PHR system isn't perfect and has a lot of work that can still be done to make it better and more efficient. Currently, the system does not have a user interface or frontend that will allow actual users to use the system. In the future, I can implement a frontend using React that will allow users to play with the system. The application is also not hosted on any platforms only containerized in a dockerfile. In the future, once the application is improved I can consider using cloud services to host the app. I also feel like I could implement more security features that would make the application more secure for less chances of data leakage.