



Report 1.0

FITFORGE ALLOCATION SYSTEM

T039 | P062

30/6/2024

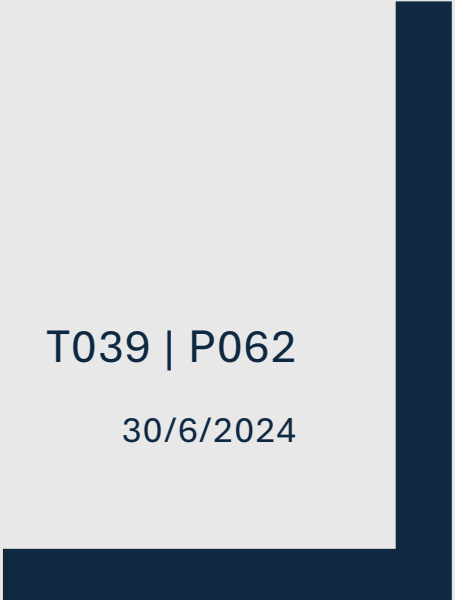


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Abstract

This report is the initial outline of the first development phase. Over the next five weeks, we intend to begin development of a fully functional system, based on the research and prototype developed in the previous semester. This week, we have begun by setting up an initial project structure, and begun development on the major components, by planning with diagrams and basic implementations that will be reviewed at the end of the week, in order to setup a foundation to develop our system in a procedural and documented fashion.

Overall Goals

This phase of development aims to produce a fully functional system, with testing performed and feedback document prepared, so that the current unit coordinator of IFB398 can perform a test run of our program, using the real allocation data for the upcoming semester students.

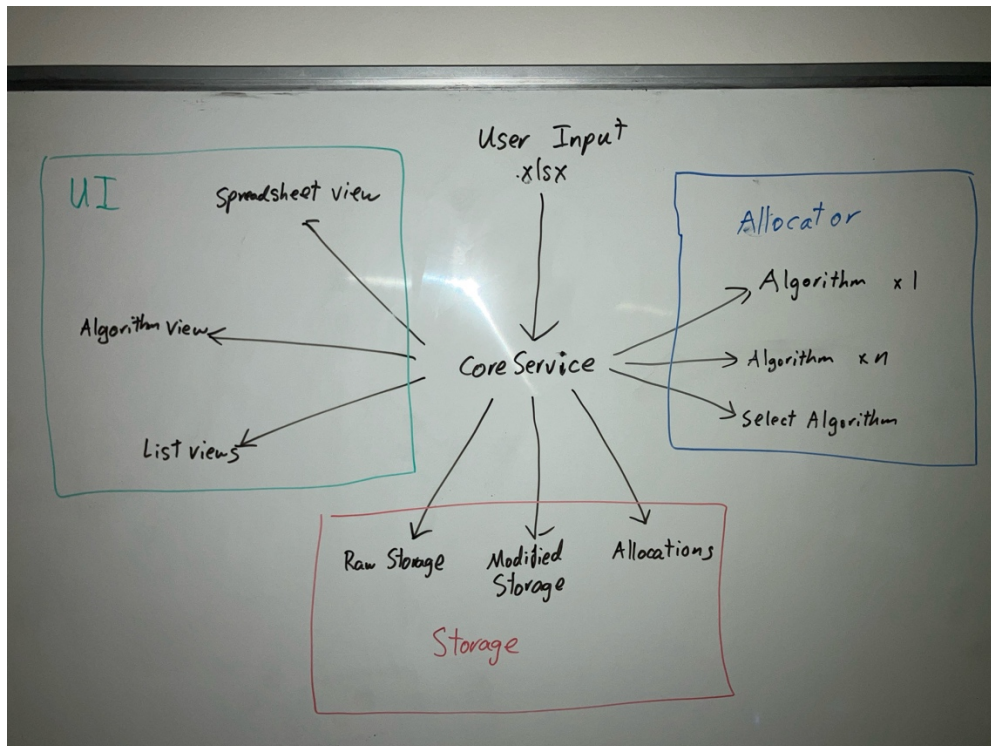
Our focus is not on high quality design or UI, but rather functional UX, and the ability to test a variety of options in viewing the available data. In addition, we will be expanding the algorithms we researched and implemented last semester to provide more functionality and enabling the system to have more variety for the user to experiment with when manipulating the student data.

We plan to take a measured approach with our development, ensuring that each component is implemented in a logical and modular sense, both to allow us to detail and document how the system was developed for future maintainers to review, but also to justify choices made in development for the unit coordinator to review.

Finally, we will be performing testing on sample randomly generated datasets in the format we expect to be working with. This will allow us to gain an understanding of the flow of the program and identify any changes we believe would improve the user experience before commencing official testing with the unit coordinator and data this semester.

State of the Project

Currently, our project is at a fresh start, with a new repository and codebase being generated, as a better option than using the unoptimized and badly planned codebase used for our prototype system. We have developed a core functionality, guided by a rough plan for how it should work, outlined in the diagram below.



This structure, by defining and implementing the basics of our CoreService class properly will allow us to develop the UI and algorithms separately. One of the major problems we encountered with the development of the prototype was the co-dependency between the data, algorithms and UI to properly test and implement features. By implementing a CoreService class using a React Context, we can provide functionality as needed, and reduce the requirements on each component, making the development easier.

In addition to the model design, we have begun fresh medium fidelity layouts which should guide our UI development. These were designed by considering the user stories we have already written from last semester. The purpose of this medium fidelity is to provide a guide for this first week of development, so that the base components and layout can be implemented, providing a guide for the future more complex elements to be formed.



Finally, have also formulated a full release plan for the next five weeks, detailing three sprints that will lead us to completing the current phase with our goals met. This will break down our work into easier components and allow the iterative nature of the project to allow for changes in the future.

Goals for this Week

Given that we have the initial structure of the React web app setup, with Tailwind and Typescript functional, able to load excel files, read the data and run algorithms, with the CoreService class functional, we are able to move into the beginning of implementation.

This week will be sprint 0 of the initial development phase, wherein we will ensure the project is fully functional. Through this week, we will aim to accomplish the following goals:

- Implement the second algorithm, and ensure they can both be called
- Implement a functioning toolbar to allow for the view to be switched
- Implement a second menu bar for system functionality
- Design the ability to save and load states.
- Develop medium fidelity designs for the more detailed views we have discussed.

As a team we will be beginning the coding of the system, each taking one section we are confident in developing and have focused on over the previous semester in our best attempt to match the sprint for this week. Using React components, we will be attempting to functionally design our program such that it follows a logical and modular flow, to complete the five listed goals for the week. These will allow us to achieve the sprint for this week, and meet the standards needed to begin the planned work for the next.

Sprint 0 - Setup	
Week 1 – 1 st July to 7 th July	End Goals
<ul style="list-style-type: none">• Setup development environment• Code basic project structure• Prepare report and document structure• Implement determined functionality• Review user stories	<ul style="list-style-type: none">• Project functionally implemented enough for individual development• Functionality of prototype redesigned• Report 1.0 written