Snapshot Week <9> of Group <Path5>

Snapshot 4.1

Project: ATSYS_Shortest Path Algorithm for Material Transportation

Members:

Shize Liu_a1844323 Yuze Li_a1848890 Ruoyu Xiong_a1847649 Yuchen Peng_a1824982 Yuejun Zhao_a1829813 Shijie Zhang_a1809881

Product Backlog and Task Board	2, 3
Sprint Backlog and User Stories	4
Definition of Done	5
Summary of Changes	5

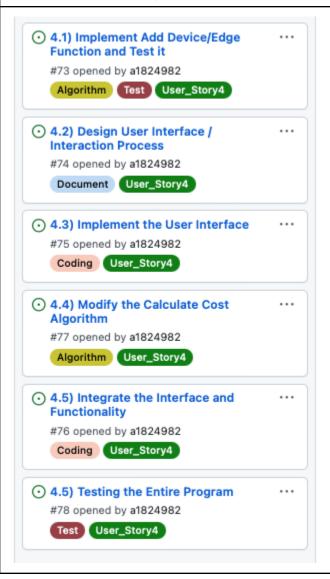
Product Backlog and Task Board

Product Backlog

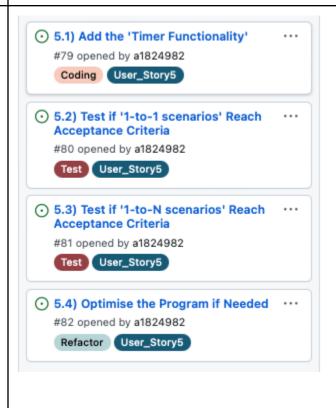
User Story 1	User Story 2	User Story 3
As a user, I want to store devices in the system so that I can add/remove/update them.	As a user, I want to get the shortest path between 2 given devices so that material transportation will be efficient.	As a user I want to mark devices to exclude, so that shortest paths can be identified avoiding them.
User Story 4	User Story 5	
As a user, I want to get 5 shortest paths given a single source and multiple destinations, so that material distribution will be efficient.	As a user, I want the execution time of each operation to be optimised as possible and visualise the output (the 5 shortest paths) as a table or as a console output ordered by the path cost, so that user experience aspect will be improved.	

Task Board

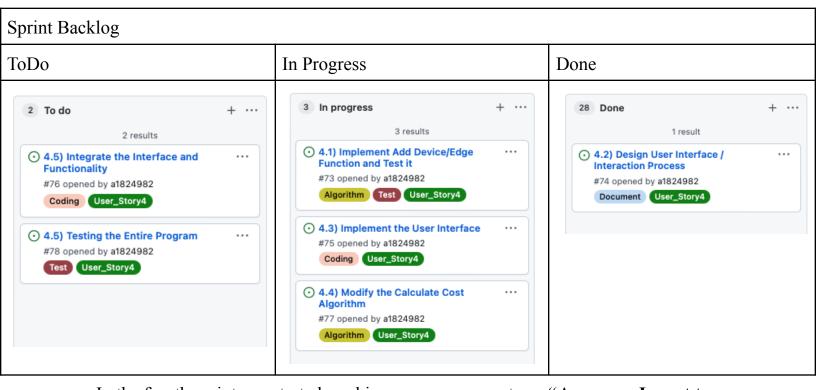
Tasks For User Story 4



Tasks For User Story 5



Sprint Backlog and User Stories



In the fourth sprint, we started working on a new user story: "As a user, I want to get 5 shortest paths given a single source and multiple destinations, so that material distribution will be efficient". In this user story, users not only want to find out the distance from one starting point to a single destination but also the cost from one starting point to multiple destinations. This will increase the efficiency of material transportation. Additionally, users have provided the expected output. We need to modify our current algorithm to calculate any overlap in the paths in '1 to N' scenarios and add a user-friendly interface for users to perform desired operations and display the requested results.

Definition of Done

- A coding task is considered to be completed when the code has been written in accordance with the coding standards outlined in the initial report, tested (both unit and integration) refactored as needed, successfully passed peer review and obtained approval from all members of the team.
- A non-coding task task is considered to be completed when it has been brainstormed, discussed, documented, reviewed and agreed upon by the team in a meeting to ensure everyone is aligned and informed about the task. Additionally, any specific problems that arose during the Sprint should be reported to the team in detail and converted to an issue on the GitHub task board.

Summary of Changes

During this week's snapshot, several changes, updates and decisions have been made. These changes mainly focus on: 1) realizing the functionality of computing the path from one source to multiple destinations with the lowest cost 2)designing and implementing a user-friendly interface for users to perform required operation easily. Highlights include:

- 1. **Broke** two new user stories down into several small tasks.
- 2. Carefully designed a new user interface to streamline all the operations.
- 3. **Successfully connected** python scripts with Neo4j database.
- 4. **Updated** the algorithm to calculate the shortest path, testing will be done next week.
- 5. **Updated** everything on Github Taskboard.

Overall, these are the main updates made between the previous snapshot.