

Computer Science Department

420-436-VA: System Development

Project title: Internship Management System

Deliverable #4

Date: July 5th, 2022

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Team name: Red Team

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Project Title: Internship Management System

Work submitted by:

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Date: 05/07/2022

- Our project is not using any ideas or codes from previous courses.

Organization:

Vanier College

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Client contact name:

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Executive overview

Our project is a web application that is indented to help Vanier College staff and students throughout the internship process. Our application will bring the students, the companies, and the internship coordinator together in one platform, in which each will be able to perform some operations.

We had several meetings with our client from which we determined the needs of our client and hence the scope of our project. After collecting the data from the client, we analyzed the data and filtered what is relevant to the scope of our project. We completed the main design steps of our project and in this deliverable, we worked on the user stories and the user stories map. We have identified three primary roles relevant to the system. First there is the student as a generic role; it represents any student using the system. Then there is the staff member who can be thought of as the system administrator; he has escalated privileges and can therefore deactivate a student account, create and manage company accounts. Finally, the company is a role with limited write access that can only modify the company information and add or remove internship posts. The system will purposely maintain a separation between roles and permissions.

We wrote the user stories using a table form which is more convenient and easier to read but as for the user stories map, we opted for Trello as it is user friendly, easy to learn and we could work on it synchronously together online. Hence, the project plan has been updated during our work in this deliverable, and we updated our work breakdown structure, WBS, and Gantt chart accordingly.

In conclusion, we believe our application would be a good addition to Vanier Internship system. It will facilitate the searching process for the interns, as well as for employers to find matching potential students for their internship openings.

Business problem

The system that Vanier College currently uses to manage its internships has some problems. They use a manual system in which Excel sheets are used to organize and store data. For instance, a spreadsheet for available internship opportunities, a spreadsheet for eligible students, and another one for students linked to companies in which they were accepted. In this case, data is entered manually on excel sheets.

The tool of communication used by students, college counselors and mentors, and companies, throughout the process, is personal e-mail and MIO on OMNIVOX platform.

Checking the college website, we find that it provides a web page in which companies can offer their job opportunities as well as internship openings. However, students cannot apply for companies through the college website using their Vanier account.

There is not a platform that brings them all together the students with all their data, the supervisors, and the companies.

Hence, several problems arise in the process:

- It is time consuming to use Excel sheets for storing data (like making lists of students looking for internships).
- It is hard for students to find internships through the college services and to apply for companies through the college website using their Vanier account.
- It is hard for the supervisors to manage the internships for the students, and the internships' offers.
- It is hard for companies that are offering internships to look for candidates from the college students. As they don't have access to prospective students that are looking for internships and their portfolios/projects.

That makes the whole process of applying for an internship harder to manage for the students, the counselors, and the companies. Our project that we are working on is to resolve these issues and to facilitate the process, at Vanier College, for all the three types of users.

Our solution to the problem

Our application will bring the students, the companies, and the internship coordinator together in one platform, in which each will be able to perform some operations. That is depicted below in figure 1. What each member can do on our web site is mentioned briefly in the following sections.

As for the **student**:

Students can make a profile in which they can add their personal information. They can make a portfolio in which they can upload their resumes, projects, and reference letters, so that they can present themselves. Students will be able to see the internships offered by the companies and apply.

As for the **companies**:

Partnered companies with Vanier, will have an account (login credentials). Responsible people from the companies will be able to add their internship posts (not jobs) including some information about the company, internship details, contact information, etc. Employers will have access to see students' portfolios. If they like a student portfolio they will be able to contact that student.

As for the **staff member**:

A Staff member from Vanier, could be the internship coordinator or the pedagogical counsellor, or both. Staff members will be able to see students' profiles, remove students if need be. They will add companies and will be able to see the company postings. A staff member will be able to modify/remove a post in coordination with the company responsible for it.

Now, with our application, the aforementioned problems will be improved significantly.

- Less time consuming.
- The data will not be centralized on one machine with the use of Database on Vanier's servers, which ensures persistency, integrity, and durability of the data.
- It will be easier for students to present themselves.

- It will be easier for students to find internships and to apply directly through our web application using their portfolios.
- Companies will be able to check students' portfolios and find students/interns matching their requirements.

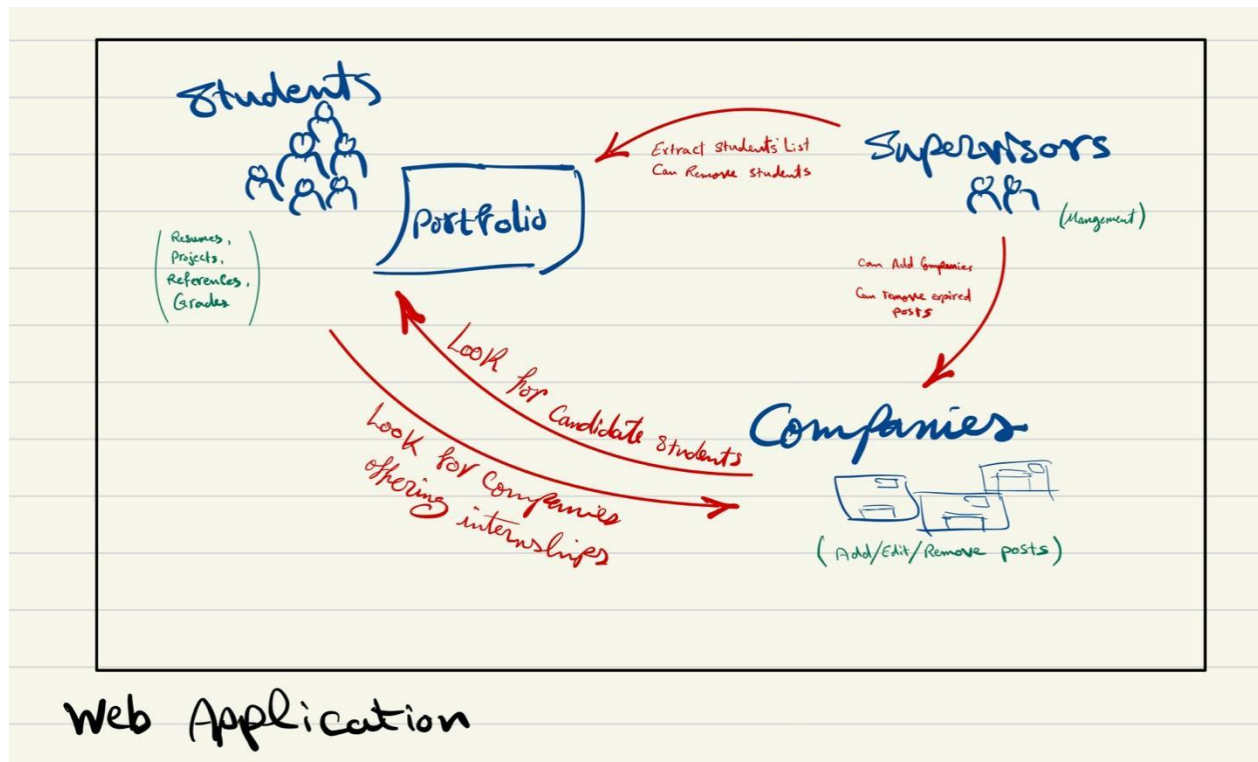


Figure 1: Information Diagram of our solution

Narrative description of the present information system

In this deliverable, we worked on the user stories and the user stories map. We have identified three primary roles relevant to the system. First there is the student as a generic role; it represents any student using the system. Then there is the staff member who can be thought of as the system administrator; he has escalated privileges and can therefore deactivate a student account, create and manage company accounts. Finally, the company is a role with limited write access that can only modify the company information and add or remove internship posts. The system will purposely maintain a separation between roles and permissions.

In the user stories, we subdivided three characters, describing their actions in the system. The list of user stories details what the user wants to do so that the user can do. Writing test criteria for each user story, making a user story map. We select user stories in the map and decide what will be implemented in the first version of the system.

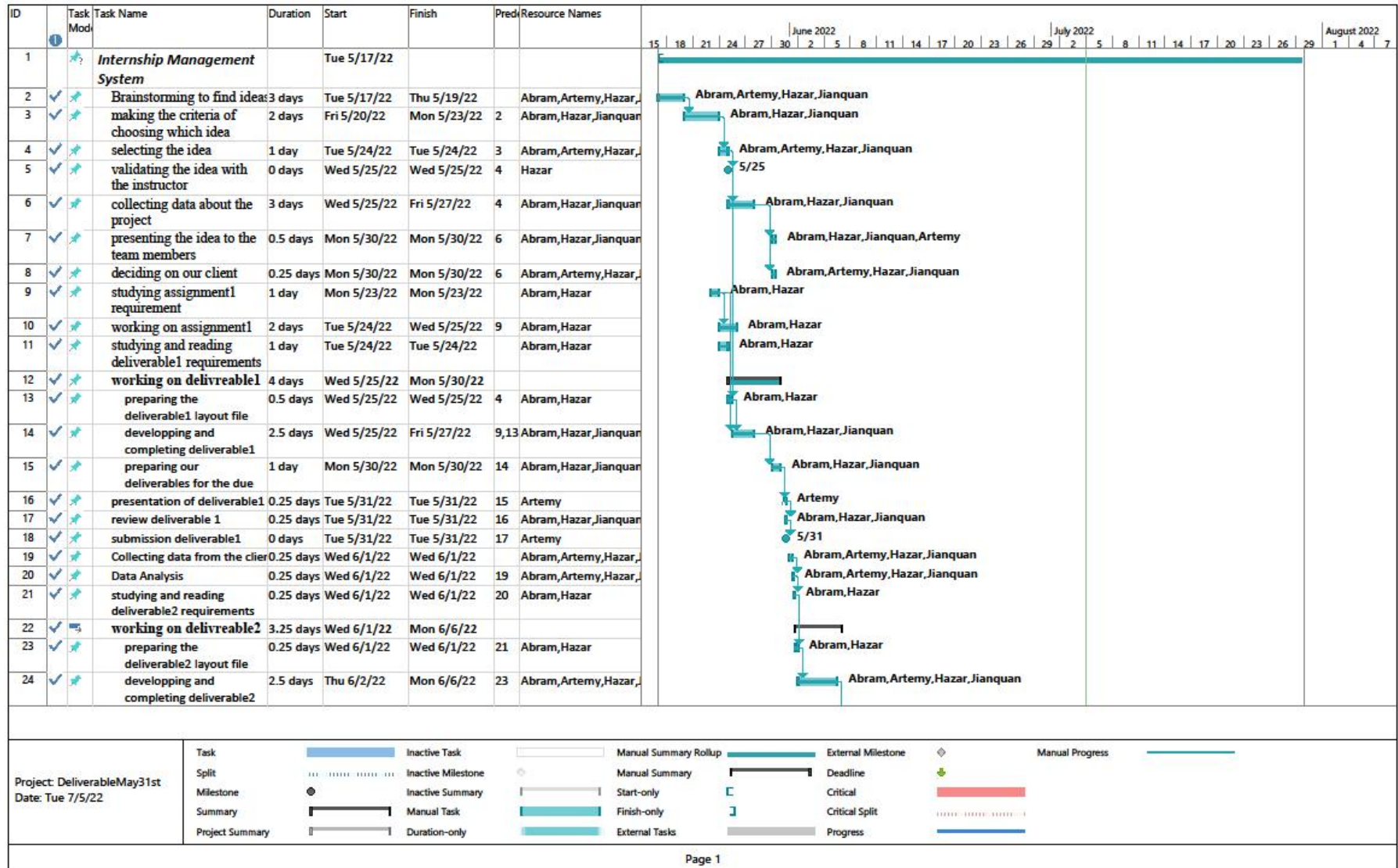
Staff member serves as system administrator. His/her work includes managing student account, checking the status of students applying for internships, view student details, can remove student's portfolio and can deactivate student account. Also, the staff member registers companies and create login credentials, manage company account, and manage internship post information. When he/she has any questions about the company and the internship information released by the company, he can contact the company. With the consent of the company, he may modify, deactivate company or internship post information. View inactive companies and send messages to those companies inviting them to post internships in the system again or get the feedback. Students use the system to apply for internships. He/she manages his own profile information, portfolio files, view company listings and job listings to apply for internship positions. Company users mainly manage company and internship information, view candidate students, select and contact desired students.

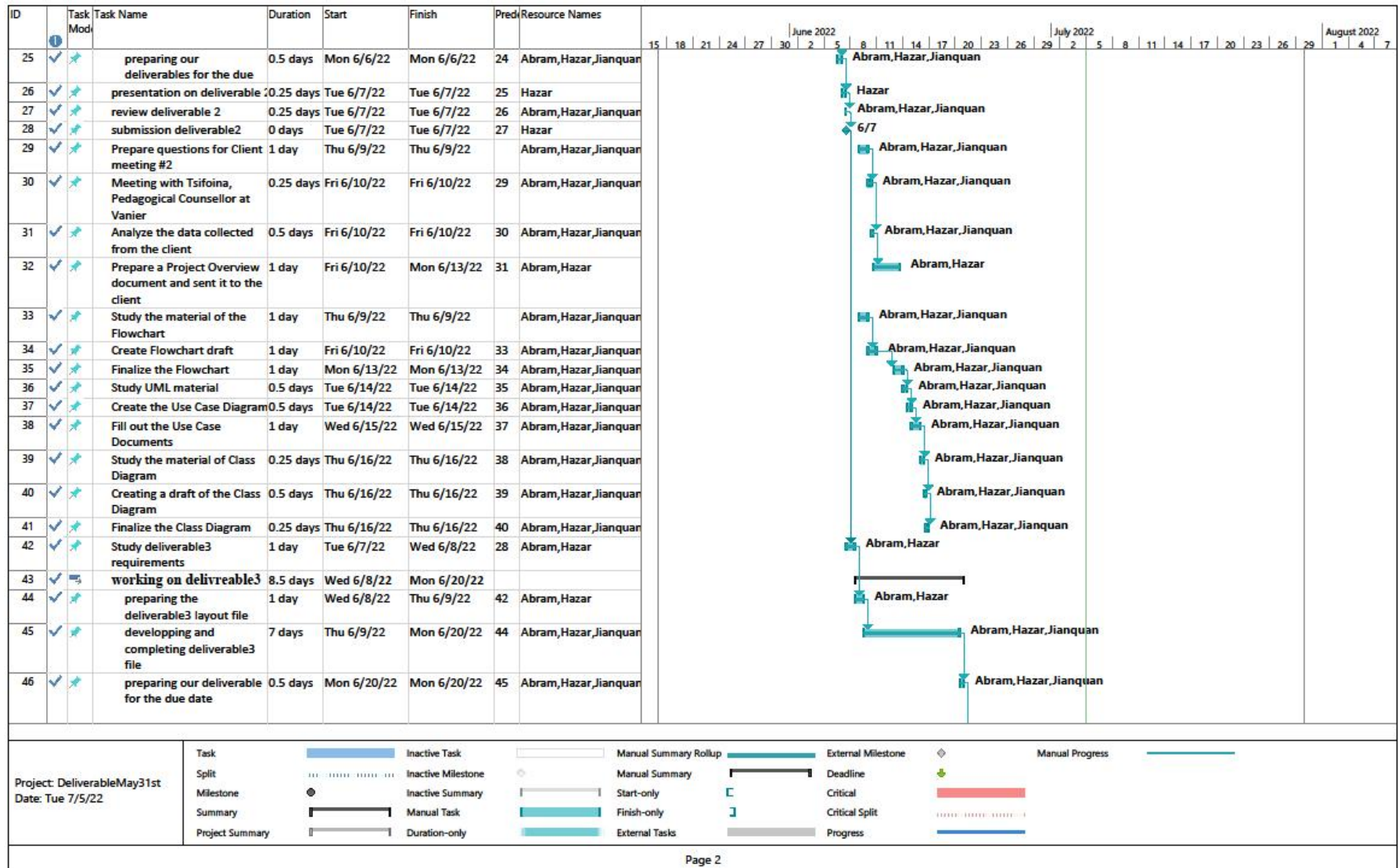
Areas of responsibility

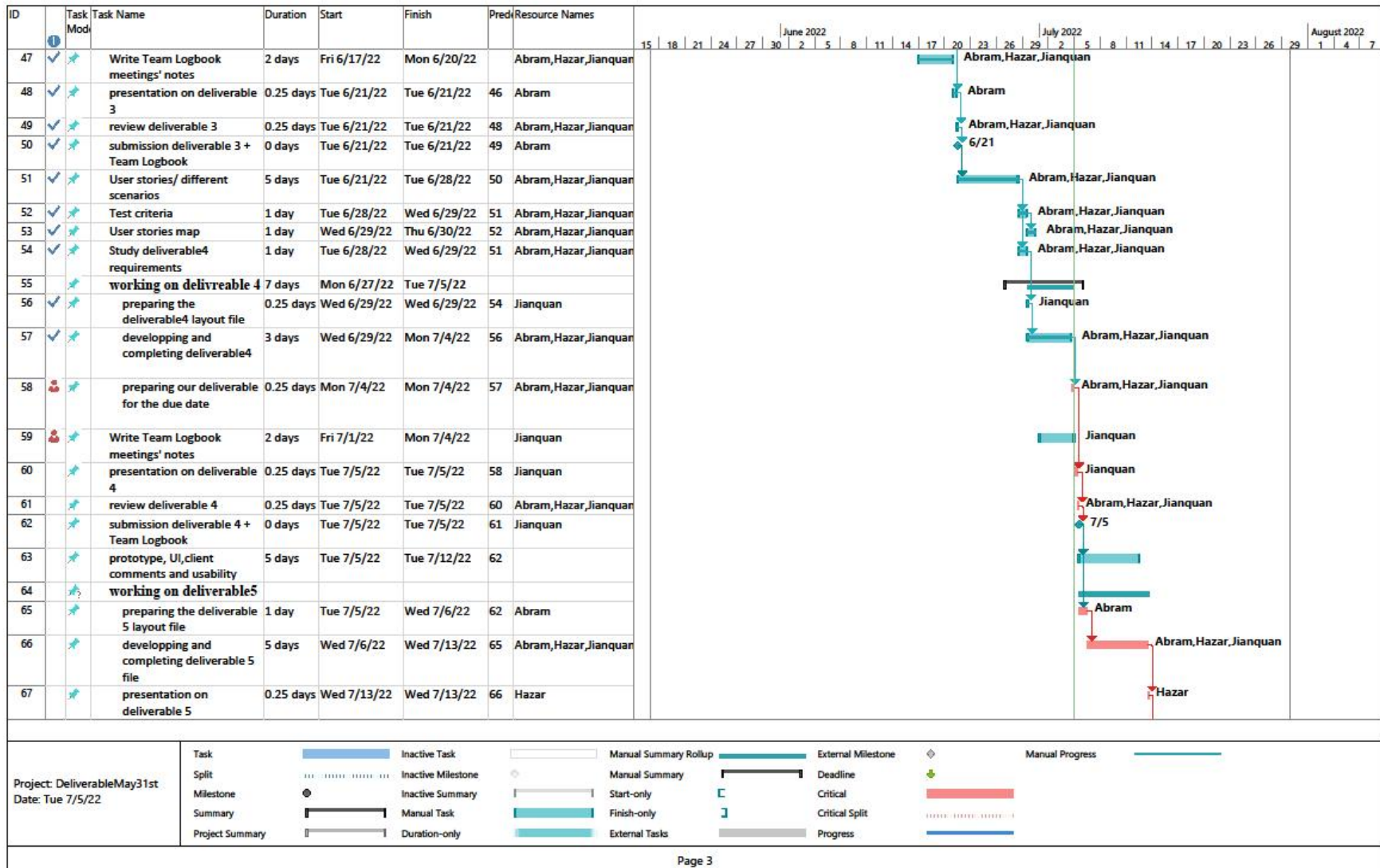
Task	Due Time	Resources	Status
Prepare Deliverable 4 document layout	27-Jun-22	All team members	done
Format Team Logbook and prepare the layout of the file	27-Jun-22	Liang	done
Select the software tool to use for the user story, Trello	28-Jun-22	All team members	done
Write the first version of User Stories	30-Jun-22	All team members	done
Complete all user stories content	29-Jul-22	All team members	done
Test Criteria	30-Jun-22	All team members	done
User stories map	1-Jul-22	All team members	done
Updating WBS/Gantt Chart	3-Jul-22	Hazar + Abram	done
Integrating all the previous tasks in the deliverable3 report file	4-Jul-22	Abram	
Bibliography and table of contents	4-Jul-22	Hazar + Abram	done
Finalize deliverable4 report	4-Jul-22	All team members	
Write Team Logbook meetings # 20-22	04-Jul-22	Liang	done
Finalize the Team Logbook	4-Jul-22	Liang	done
Presentation of deliverable4	6-Jul-22	Liang	done
Review deliverable4	6-Jul-22	All team members	done
Submission (Deliverable4 + Team LogBook)	6-Jul-22	Liang	done

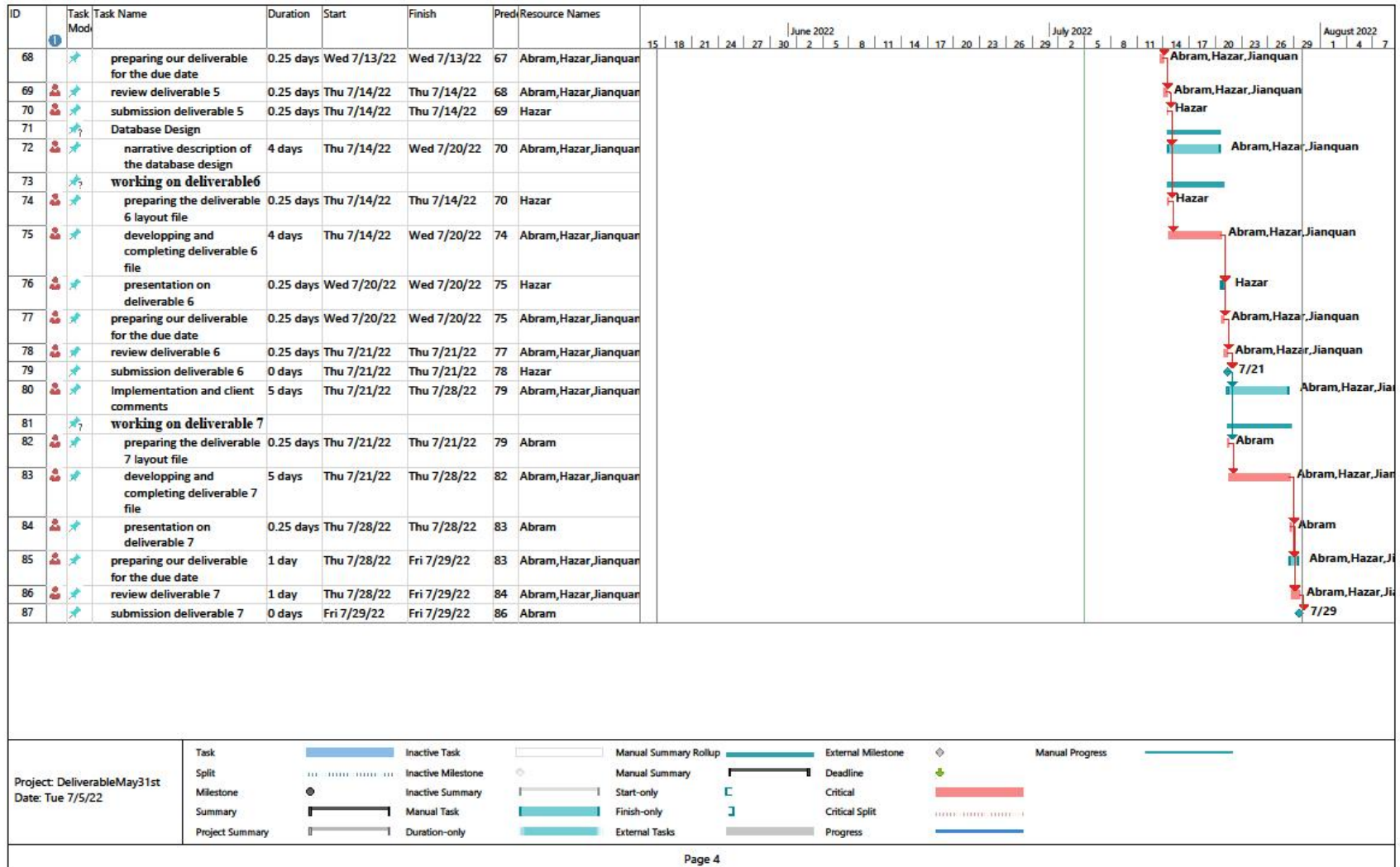
Project plan

Our project plan is updated according to the progress of the project and the new data collected and analyzed at this stage. In the next pages, the project work breakdown structure (WBS) and Gantt chart are presented.









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Mapping User Stories in Agile. (n.d.). <https://Www.Nngroup.Com/>. Retrieved June 28, 2022, from <https://www.nngroup.com/articles/user-story-mapping/>

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Appendices

Appendix 1 & 2 – User Stories and Story Test Criteria (Acceptance Tests)

User Stories				
ID	As a	I want to	So that	Test criteria
1	a student	log in	I can access my profile	You can see your student home page
2	a student	register	I can access the internship system web application	You will be able to log in successfully after registration
3	a student	create a profile	I can add my information	Profile is created successfully message, check the profile page to make sure your profile is created
4	a student	update my profile	I can keep my profile information up to date	A message showing update is successful / check the profile page to make sure changes are made correctly
5	a student	remove my account	my account will be deactivated on the system	Account is removed successfully message / User cannot log in again
6	a student	update my portfolio (CV, projects, references, ...etc.)	I can upload documents to my portfolio and keep my portfolio up to date to present myself to the companies	A message showing upload is successful / check the portfolio section in the profile page to make sure changes are made correctly
7	a student	remove my portfolio file(s)	I can remove file(s) from my portfolio	A message confirming the file(s) removal / User cannot see the deleted file(s) in the portfolio
8	a student	search the internship posts	I can see the available internship posts in my major	A list of internship posts is displayed

9	a student	see a post detail	I can decide if it suits me and apply for it	A message is displayed confirming application is sent
10	a student	display a list of the internship posts I applied for	I can have a list of my applications history	A list of internship posts applied for is displayed
11	a company representative	log in	I can access my account	You can see company home page
12	a company representative	update company information	I can keep the company information up to date	A message showing update is successful / check company profile page to make sure changes are made correctly
13	a company representative	add company posts	I can add internship posts the company is offering and provide the post details	A message showing addition is successful / check company post to make sure the post is added correctly with the required fields
14	a company representative	update company posts	I can edit/modify posts	A message showing update is successful / check company post to make sure changes are made correctly
15	a company representative	remove company post(s)	I can keep all the posts up to date and remove the ones that are not available anymore	A message showing deletion is successful / check company posts list to make sure the post(s) is(are) deleted
16	a company representative	check student portfolios	I can see prospective students	User can see the student's portfolio / in case of contact; user receives a confirmation message
17	a company representative	see a student portfolio detail	I can decide if the student portfolio meets my requirements and contact the student	User can see the student's portfolio / in case of contact; user receives a confirmation message

18	a company representative	have a list of the students that applied for each of my posts	I can keep a list of the students who have applied	A list of students who applied in each post is displayed
19	a staff member	login	I can access my profile	You can see your staff home page
20	a staff member	register	I can access the internship system web application	You will be able to log in successfully after registration
21	a staff member	update my account	I can modify my account information	A message showing modify is successful / check account page to make sure changes are made correctly
22	a staff member	register companies	I can add companies' login information	A message showing register is successful
23	a staff member	see a list of students	I can have a list of interns, and see student application status	A list of students is displayed, and application status
24	a staff member	see a student profile	I can see the student's information, portfolio, and applications' status	Student profile and portfolio information is displayed
25	a staff member	deactivate a student account and remove his portfolio	the student will not be able to log in and his portfolio files will be removed from database, and send a message explaining the reason for removal	A message showing deactivation is successful / check student(s) list to make sure the student(s) is(are) removed
26	a staff member	search the companies	I can see the available companies	A list of companies is displayed
27	a staff member	see a company information	I can make sure all information about the company is up to date	Company information is displayed
28	a staff member	deactivate a company's account (in agreement with the company /or upon the request of the company)	the company information will not be shown in the companies' list on the website and send a confirmation message to the company that the account is deactivated	A message showing deactivation is successful and the company will not be able to log in / check companies list to make sure the company is removed

29	a member	staff	see a list of the internship posts	I can display a list of posts by category	A list of internship posts is displayed
30	a member	staff	select an internship post	I can see the post details	Internship post details is displayed
31	a member	staff	remove an internship post (in agreement with the company /or upon the request of the company)	I can remove a post from the posts list and send a confirmation message	A message showing the removal is successful / check posts list to make sure the post is removed
32	a member	staff	see a list of companies that have been inactive for a long time	I can message these companies and ask if there are internship positions available	Message is sent successfully is displayed

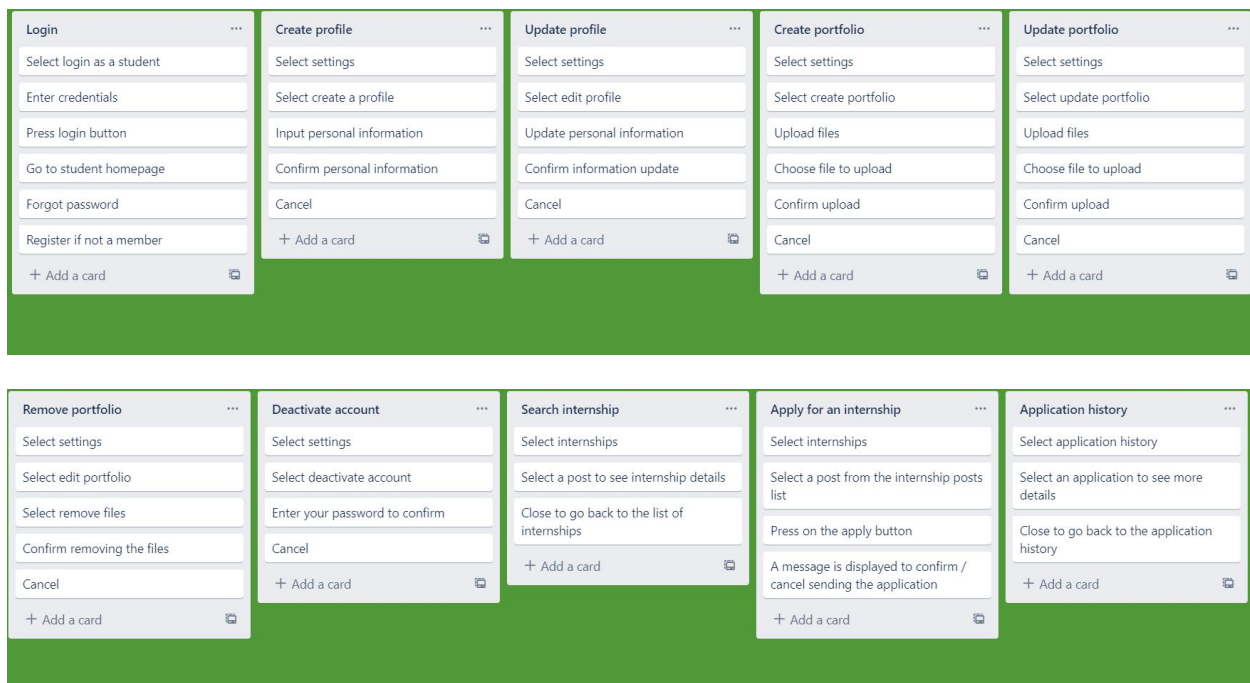
Appendix 3 - User Story Map

We chose Trello because:

- Convenient / user friendly
- Straight forward to learn
- We could work on it together online
- Free

Student

URL: <https://trello.com/b/iPoEKRfe/internshipsystemstudent>



Staff Member

URL: <https://trello.com/b/2kKc3FB7/internshipsystemstaff>

Login ... Select login as staff Enter credentials Press login button Go to staff homepage Forgot password Register if not a member + Add a card	Update my account ... Select settings Select update my account Update account information Confirm information update Cancel changes + Add a card	Register cooperate companies ... Select companies Select register a company Create username and password for the company Confirm and send an email to the company with login credentials/ Cancel + Add a card	Display company information ... Select companies Search a company Select see company information Select close to go back to the companies list + Add a card	Display internship post ... Select companies Select the company that owns the post Search posts Select a post to see post details Select close to go back to the posts list of that company + Add a card
Remove/deactivate an internship post (in agreement with the company /or upon the request of the company) ... Select companies Select the company that owns the post Search posts Select a post Select deactivate post Enter your password to confirm Cancel + Add a card	Deactivate a company's account (in agreement with the company /or upon the request of the company) ... Select companies Select the company Select deactivate account Enter your password to confirm Cancel + Add a card	Contact inactive companies ... Select companies Select inactive companies Select see a company Press on the "Contact Company" button Message these companies and ask if there are internship positions available Cancel + Add a card	Display student information ... Select students Search students by ID or name or status Select see student profile Select close to go back to the students list + Add a card	Deactivate a student account and remove his portfolio ... Select students Select a student profile Select deactivate account Enter your password to confirm Cancel + Add a card

Company

URL: <https://trello.com/b/XgAzInEF/internshipsystemcompany>

Login ... Select login as company Enter credentials Press login button Go to company homepage Forgot password + Add a card	Update company information ... Select settings Select update company information Update company information Confirm changes Cancel changes + Add a card	See internship post details ... Select a post to see post details Select close to go back to the posts list + Add a card	Add company posts ... Select add post Add internship details Confirm and post Cancel + Add a card	Update company posts ... Select post Select update post Update post information Confirm changes Cancel + Add a card
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Display students who applied ... Select a post to see post details Select see a list of the students who applied Close to go back to the post + Add a card	Remove company post(s) ... Select a post Select update post Select remove post Confirm remove Cancel + Add a card	See a list of student's portfolios ... Select student portfolios Select a student to see portfolio Select close to go back to the student portfolios list + Add a card	Contact a student ... Select student portfolios Select a student to see portfolio Select contact button to write a message to that student Write a message Press on send button Confirm / Cancel sending the message + Add a card
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