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OF WOLLONGONG
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School of Computer Science & Information Technology

CSIT-22-S4-24 - Automatic Project Assignment

Final Report
[18/02/2023]

Group No.: FYP-22-S4-32

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16/12/2022	Finalisation of Progress Report	All	Everyone	1.4
15/01/2023	Updates of Diaries, Functionalities and Diagrams	All	Everyone	1.5

16/02/2023	Finalisation of Final Report	All	Everyone	1.6
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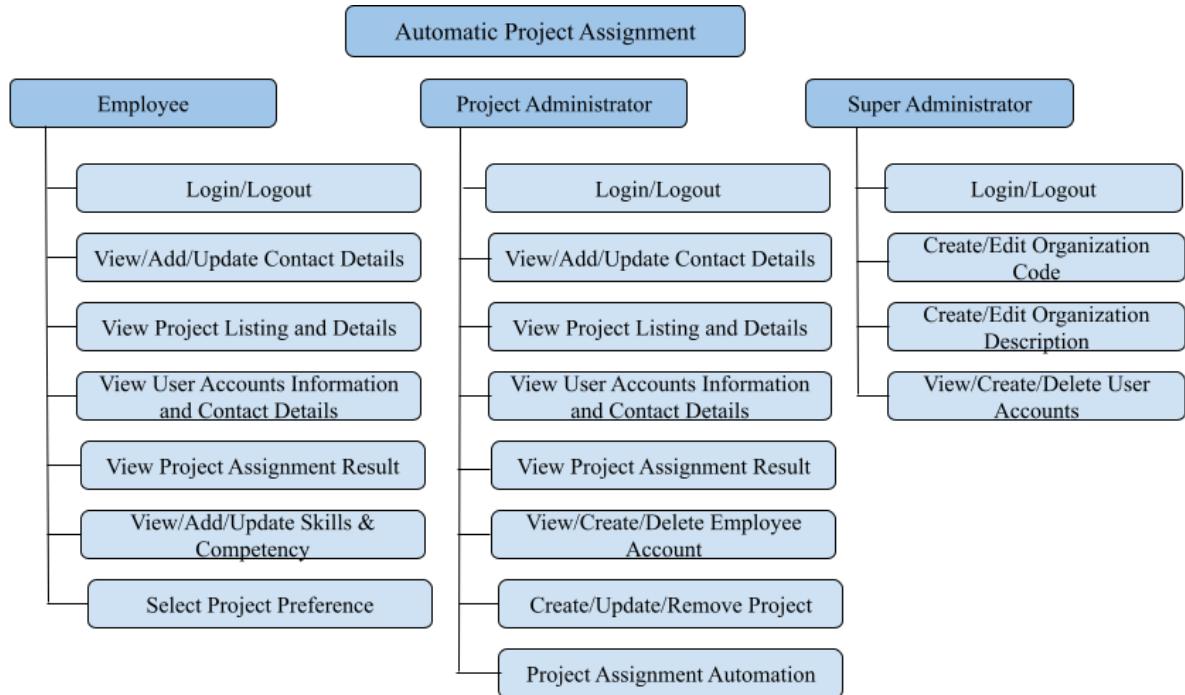
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Report Overview

This document provides an overview of our progress of the Technical design and implementation of our web Application.



Product Introduction

Our application introduces an alternative through our algorithms to automate assigning projects to users based on their preferences and project specifications.

With our application, there would be no need for physical documentation of any sort ; it will be all done within our system, where all the information is readily stored and available.

Our application also introduces a more streamlined process as compared to the traditional way of manual allocation , which not only reduces the production of human error but also time spent.

Product Objective

Our objective is to have a single system that handles the processes related to the management of the automatic project assignments. These include:

1. A single system to keep the details of all employees, project details, project assignment details and statistics of all projects assigned based on the criteria for every round of project assignment.
2. An all in one interface with methods to add/modify/delete single/multiple employee user accounts and projects.
3. Allowing employees to indicate their preference on the projects that they wish to take up based on availability and the employee's skills and competency, where their first choice is always prioritised if possible, followed by their second, then third and so on and so forth if applicable.
4. Automatic creation of IT project groups based on the choices made by the employees.

Target Audience

- IT Companies
- Project Managers
- Project Coordinators
- Project Engineers

System Requirements/Environment

Web Browser	Any Javascript-enabled Web Browser
Web Server Frontend	Netlify
Web Server Backend	Heroku
Database	MongoDB Atlas
Revision Control	GitHub

Market Research

Existing Products



1.1 Microsoft Excel

Microsoft Excel is a spreadsheet developed by Microsoft , it features calculation or computation capabilities, graphing tools, pivot tables, and a macro programming language called Visual Basic for Applications (VBA)

Selling Point

Allows users to format, organise and calculate data in a spreadsheet. By organising data using filters can make information easier to view as data is added or changed.



1.2 Redmine

Redmine is a free and open source, web-based project management and issue tracking tool. It allows users to manage multiple projects and associated subprojects.

Selling Point

It is cross-platform and cross-database and supports 49 languages, the application also runs on both self-hosted and cloud interfaces giving users a freedom of choice.

Has a high level of data privacy protection provided by Redmine tools.



1.3 Smartsheet

Smartsheet is a software as a service offering for collaboration and work management. It is used to assign tasks, track project progress, manage calendars, share documents, and manage other work, using a tabular user interface.

Selling Point

Smartsheet has "a relatively simple" user interface, and it combines some of the functionality of Microsoft Project, Excel, Access and SharePoint.



1.4 Basecamp

Basecamp is a web-based project management tool launched in 2004 and is essentially project management's greatest hits — all simplified, refined, and integrated into an organised, easy-to-use platform. Its primary features are to-do lists, milestone management, forum-like messaging, file sharing, and time tracking.

Selling Point

All the tools, communication and documents related to a project are segregated in one place, which makes it easy for team members to collaborate on a project.

Support/Help system is always humans and never bots ; providing a more personalised and premium customer service experience.

Our Product

Based on our research regarding existing software in the market, although certain software may possess features and functionalities that our product lack ; they are not able to fully provide what our FYP topic requires, which is our main selling point , the automated project assignment function.

Which is why there is a need to develop a system catered to our FYP topic , in order for it to be possibly scaled in the future.

	Excel	Redmine	Smartsheet	Basecamp	Our Product
Project Automation	No	No	No	No	Yes
Team Assignation	Yes	No	Yes	Yes	Yes
Progress Tracking	No	Yes	Yes	Yes	Yes?
Access Control	No	Yes	Yes	Yes	Yes
Import Documents	No	Yes	Yes	Yes	Yes
Chatbot/ Customer Service Support	No	Yes	Yes	Yes	No
Multiple Languages/ Multiple Databases Support	Yes , No	Yes , Yes	Yes , No	No , Yes	No , No
Real-time Update	No	Yes	Yes	Yes	Yes
Calendar Tracking (e.g Gantt Chart)	No	Yes	Yes	Yes	No

Product Functionalities

Proposed List of Features

Role	Features	Description
Employee	Login/Logout	Employees will be able to safely access in and out of their accounts.
	Change and reset password	Employees will be able to safely and easily change/reset their account password .
	Navigate project list	Employees will be able to navigate through the full project list with their respective description.
	Select and save Project Preference	Employees will be able to select their top choices and save these choices before submission. This allows employees to deliberate over their selection before submission.
	Manage and edit profile details	Employees will be able to manage and edit their profile details according to their preferences.
	View Assignment Results	Employees will be able to see their assigned projects.
	Add/View/Edit Skills & Competencies	Employees will be able to add/view/edit their skill & competencies level to allow the system to manage their skill levels
Project Admin	Login/Logout	Admin will be able to safely access in and out of their

		accounts.
	Change and reset password	Admin will be able to safely and easily change/reset their account password .
	Navigate project list	Admin will be able to navigate through the full project list with their respective description.
	View/Create/Remove/Update project and descriptions	Admin will be able to create/remove/update/view new and existing projects alongside their descriptions.
	Set project requirements	Admin will be able to set project requirements before the automation process. Requirements like employee's competency/enrollment limit will be set using this feature.
	Add & Remove User Accounts	Admin will be able to add and remove new employees or project admins using this feature
	Add/Delete/View/Edit Skills	Admin will be able to add/delete/view and edit skills within the system
	Set Assignment Criteria	Admin will be to set assignment criteria before the automation process , (e.g project threshold)
	View user profiles	

		Admin will be able to view selected employee profiles and project admins
	Initiating project allocation	Admin will be able to set project allocation based on various settings like project threshold . After selecting the intended prefixes , the admin can choose to start the automating process.
	View and update profile details	Admin will be able to view and update their profile details
	Create Project Assignment	Admin will be able to create different project assignments consisting of different number of employees and projects
	View Assignment Overview Statistics	Admin will be able to view the overview statistic after the automation process
	Search for User Accounts	Admin will be able to search for particular user accounts excluding S.Admins
Super Admin	Login/Logout	S.Admin will be able to safely access in and out of their accounts.
	Change and reset password	S.Admin will be able to safely and easily change/reset their account password . Security code will be sent to email linked to the account in the event of a reset.
	Create/Delete Organization	S.Admin will be able to create/delete an organization with their details and such.

	Manage User Accounts	S.Admin will be able to manage user accounts by their type/organization etc.
	Create/Delete/View/Update User accounts	S. Admin will be able to manage all user accounts and delete or edit if needed.
	View and update profile details	S. Admin will be able to view and update their profile details
	Search for User Accounts	S.Admin will be able to search for every existing account

Automatic Assignment Algorithm

Introduction

Even though the automatic assignment algorithm has not been implemented in the source code as of the current time frame, the foundation for the algorithm has been laid out to ensure that a proper understanding of the requirements and workflow of the algorithm has been met.

Below are the number of scenarios that we have plotted out that we will face during the automatic assignment process, and as we strive to not only assure that the employees get their allocated preferences, but also uphold the quality of work produced by the company, we must ensure that the employees assigned to their relevant projects are competent in their skillset.

Therefore, the algorithm sequence will be to prioritise both competency and preference firstly, followed by competency and preference subsequently to attempt to maximise the desired output for both results (Total number of people that got allocated their preferences successfully and How many skills requirements are fulfilled by the assigned people).

Assignment Sequence Order Priority: 1,3,5,2,4,6,8,9,10,7,11

Scenario 1:

Project is the Employee's **FIRST** choice and the Employee has all the relevant skills and competency level is adequate.

E.g. Project 1 skills = {[C++, Beginner], [MongoDB, Intermediate]} and Employee skills = {[C++, Beginner], [MongoDB, Intermediate]}

- Priority Level:
- Pseudo-code example:

for each project:

```

assigned_employees = 0
{ threshold } = project
{ skillName: projectSkill, competency:projectCompetency } = project.skills
for each first_choice_employee:
    { skillName: userSkill, competency: userCompetency } = employee.skills
    if (projectSkill = userSkill && projectCompetency >= userCompetency):
        assign project to employee
        assigned_employees ++
        if (threshold = assigned_employees):
            break

```

Scenario 2:

Project is Employee's SECOND or THIRD choice and Employee has all the relevant skills and competency level is adequate.

E.g. Project 2 skills = {[C++, Beginner], [MongoDB, Intermediate]} and Employee skills = {[C++, Beginner], [MongoDB, Intermediate]}

- Priority Level:
- Pseudo-code example:

for each project:

```

{ skillName: projectSkill, competency: projectCompetency } = project.skills
if assigned_employees < threshold
    for each second_choice_employee:
        {skillName: userSkill, competency: userCompetency} = employee.skills
        If (projectSkill = userSkill && projectCompetency = userCompetency):
            assign project to employee
            assigned_employees ++
if assigned_employees < threshold
    for each third_choice_employee:
        { skillName: userSkill, competency: userCompetency } = employee.skills
        If (projectSkill = userSkill && projectCompetency >= userCompetency):
            if (threshold = assigned_employees):
                break
            else:
                assign project to employee
                assigned_employees ++

```

Scenario 3:

Project is the Employee's FIRST choice and Employee has all the relevant skills but competency level is lower than required.

E.g. Project 1 skills = {[C++, Beginner], [MongoDB, Intermediate]} and Employee skills = {[C++, Beginner], [MongoDB, Beginner]}

- Priority Level:
- Pseudo-code:

assigned_employees = 0

for each project:

{ threshold } = project

{ skillName: projectSkill, competency:projectCompetency } = project.skills

for each first_choice_employee:

{ skillName: userSkill, competency: userCompetency } = employee.skills

If (projectSkill = userSkill && userCompetency < projectCompetency):

 if (threshold = assigned_employees):

 break

 else:

 assign project to employee

 assigned_employees ++

Scenario 4:

Project is Employee's SECOND or THIRD choice and Employee has all the relevant skills but competency level is lower than required.

E.g. Project 2 skills = {[C++, Beginner], [MongoDB, Intermediate]} and Employee skills = {[C++, Beginner], [MongoDB, Beginner]}

- Priority Level:
- Pseudo-code

For each project:

```
{ threshold } = project
{ skillName: projectSkill, competency:projectCompetency } = project.skills
for each second_choice_employee:
    { skillName: userSkill, competency: userCompetency } = employee.skills
    If (projectSkill = userSkill && projectCompetency >= userCompetency):
        if (threshold = assigned_employees):
            break
        else:
            assign project to employee
            assigned_employees ++
```

for each third_choice_employee:

```
{ skillName: userSkill, competency: userCompetency } = employee.skills
If (projectSkill = userSkill && projectCompetency >= userCompetency):
    if (threshold = assigned_employees):
        break
    else:
        assign project to employee
        assigned_employees ++
```

Scenario 5:

Project is Employee's **FIRST choice** and Employee has **certain relevant skills** ($\geq 50\%$ of skills needed)

E.g Project 1 skills = {[C++, Intermediate], [MongoDB, Beginner], [ReactJS, Intermediate]} and Employee skills = {[C++, Intermediate], [MongoDB, Beginner]}

- Priority Level:
- Pseudo-code:

assigned_employees = 0

for each project:

{ threshold } = project

{ skillName: projectSkill, competency:projectCompetency } = project.skills

for each **first_choice_employee**:

{ skillName: userSkill, competency: userCompetency } = employee.skills

relevant_skills = matching skills between userSkill and projectSkill

If (relevant_skills $\geq 50\%$ of projectSkills):

If (competency of relevant_skills matches):

 assign project to employee

 assigned_employees ++

 if (threshold = assigned_employees):

 break

Scenario 6:

Project is Employee's **SECOND or THIRD choice** and Employee has **certain relevant skills** ($\geq 50\%$ of skills needed)

E.g Project 1 skills = {[C++, Intermediate], [MongoDB, Beginner], [ReactJS, Intermediate]} and Employee skills = {[C++, Intermediate], [MongoDB, Beginner]}

- Priority Level:
- Pseudo-code

For each project:

```
{ threshold } = project
```

```
{ skillName: projectSkill, competency: projectCompetency } = project.skills
```

for each **second_choice_employee**:

```
{ skillName: userSkill, competency: userCompetency } = employee.skills
```

```
Relevant_skills = matching skills between userSkill and projectSkill
```

```
if (relevant_skill  $\geq 50\%$  && projectCompetency == userCompetency):
```

```
    if (threshold = assigned_employees):
```

```
        break
```

```
    else:
```

```
        assign project to employee
```

```
        assigned_employees ++
```

for each **third_choice_employee**:

```
{ skillName: userSkill, competency: userCompetency } = employee.skills
```

```
Relevant_skills = matching skills between userSkill and projectSkill
```

```
if (relevant_skill  $\geq 50\%$  && projectCompetency == userCompetency):
```

```
    if (threshold = assigned_employees):
```

```
        break
```

```
    else:
```

```
        assign project to employee
```

```
        assigned_employees ++
```

Scenario 7:

Project is Employee's **FIRST** or **SECOND** or **THIRD** choice and Employee **severely lacks relevant skills** (< 50% of skills needed)

E.g Project 1 skills = {[C++, Intermediate], [MongoDB, Beginner], [ReactJS, Intermediate]} and Employee skills = {[C++, Intermediate]}

- Priority Level:
- Pseudo-code:

assigned_employees = 0

for each project:

{ threshold } = project

{ skillName: projectSkill, competency: projectCompetency } = project.skills

for each **first_choice_employee**:

{ skillName: userSkill, competency: userCompetency } = employee.skills

relevant_skills = matching skills between userSkill and projectSkill

If (relevant_skills < 50% of projectSkills):

 If (competency of relevant_skills matches):

 assign project to employee

 assigned_employees ++

 if (threshold = assigned_employees):

 break

for each **second_choice_employee**:

{ skillName: userSkill, competency: userCompetency } = employee.skills

relevant_skills = matching skills between userSkill and projectSkill

If (relevant_skills < 50% of projectSkills):

 If (competency of relevant_skills matches):

 assign project to employee

 assigned_employees ++

 if (threshold = assigned_employees):

 break

for each **third_choice_employee**:

{ skillName: userSkill, competency: userCompetency } = employee.skills

relevant_skills = matching skills between userSkill and projectSkill

If (relevant_skills < 50% of projectSkills):

 If (competency of relevant_skills matches):

 assign project to employee

 assigned_employees ++

 if (threshold = assigned_employees):

 break

Scenario 8:

Project is **not the Employee's choice** but the Employee has all the relevant skills and competency level is adequate.

- Pseudo-code:

```
assigned_employees = 0
```

```
for each project:
```

```
{ threshold } = project
```

```
{ skillName: projectSkill, competency:projectCompetency } = project.skills
```

```
for each employee:
```

```
{ skillName: userSkill, competency: userCompetency } = employee.skills
```

```
if (projectSkill = userSkill && projectCompetency >= userCompetency):
```

```
    assign project to employee
```

```
    assigned_employees ++
```

```
    if (threshold = assigned_employees):
```

```
        break
```

Scenario 9:

Project is **not the Employee's choice** but the Employee has all the relevant skills but competency level is lower than required.

- Pseudo-code:

```
assigned_employees = 0
```

```
for each project:
```

```
{ threshold } = project
```

```
{ skillName: projectSkill, competency:projectCompetency } = project.skills
```

```
for each employee:
```

```
{ skillName: userSkill, competency: userCompetency } = employee.skills
```

```
if (projectSkill = userSkill && projectCompetency < userCompetency):
```

```
    assign project to employee
```

```
    assigned_employees ++
```

```
    if (threshold = assigned_employees):
```

```
        break
```

Scenario 10:

Project is **not Employee's choice** but Employee **has certain relevant skills** ($\geq 50\%$ of skills needed)

- Pseudo-code:

```
assigned_employees = 0
```

```
for each project:
```

```
    { threshold } = project
```

```
    { skillName: projectSkill, competency:projectCompetency } = project.skills
```

```
    for each employee:
```

```
        { skillName: userSkill, competency: userCompetency } = employee.skills
```

```
        relevant_skills = matching skills between userSkill and projectSkill
```

```
        If (relevant_skills  $\geq 50\%$  of projectSkills):
```

```
            If (competency of relevant_skills matches):
```

```
                assign project to employee
```

```
                assigned_employees ++
```

```
                if (threshold = assigned_employees):
```

```
                    break
```

Scenario 11:

Project is **not Employee's choice** and Employee **severely lacks relevant skills** ($< 50\%$ of skills needed)

Pseudo-code:

```
assigned_employees = 0
```

```
for each project:
```

```
    { threshold } = project
```

```
    { skillName: projectSkill, competency:projectCompetency } = project.skills
```

```
    for each employee:
```

```
        { skillName: userSkill, competency: userCompetency } = employee.skills
```

```
        relevant_skills = matching skills between userSkill and projectSkill
```

```
        If (relevant_skills < 50% of projectSkills):
```

```
            If (competency of relevant_skills matches):
```

```
                assign project to employee
```

```
                assigned_employees ++
```

```
                if (threshold = assigned_employees):
```

```
                    break
```

Sprint 0

Progress Report	Date : 8 October 2022
Project Name	Automatic Project Assignment
Team	FYP-22-S4-32
Sprint Duration	8 October 2022 – 21 October 2022
Work completed during this sprint	
Researching of FYP topic Creation of Communication Channels Creation of Initial User Stories Decided on basic framework for the team Creation of various software accounts (e.g Taiga , Figma) Do-up of certain diagrams Do-up of Mock Project Proposal	
Work planned for next sprint	
Adding/Removing User Stories according to requirements Update Taiga Do-up Of Project Requirements Document Set-up Application Website Set-up of Programming Tools Begin Login/Logout Function for User Accounts Prepare Test Plan Create Wireframes for Sprint 1	
What is going well	
Everyone is eager to contribute and open to share ideas Team showed a decent understanding of project's objective	
Setbacks faced	
Given that this is our first FYP , the team faced unfamiliarity regarding certain tools,software and diagrams.	
Suggestions	
Roles are to be assigned to each team member's strength and weaknesses	

Sprint 1

Progress Report	Date : 22 October 2022
Project Name	Automatic Project Assignment
Team	FYP-22-S4-32
Sprint Duration	22 October 2022 – 4 November 2022
Work completed during this sprint	
Adding/Removing User Stories according to requirements Refining User Stories Update Taiga Do-up Of Project Requirements Document Set-up Application Website Set-up of Programming Tools (e.g GitHub) Create Wireframes for Sprint 1 Begin Login/Logout Function for User Accounts Prepare Test Plan	
Work planned for next sprint	
Submission of Project Requirements Document Prepare Project Progress Report Improve and refine Certain diagrams (e.g Activity Diagrams) Refining User Stories Do-up of Wireframe for Sprint 2 Begin fault-testing code and prepare test-cases Begin Coding for Employee Contact Details & Skills Competency Function Begin Coding for Project Admin Contact Details Function Begin Coding for Super Admin Create/View/Delete User Account Function	
What is going well	
All planned tasks were completed on time Doubts and queries for first submission were cleared through supervisor's meeting	
Setbacks faced	
Team struggled with deciding what User stories could qualify as an additional features Team was slightly unfamiliar with programming Unable to find a competitor who provides a similar functionality to our FYP topic Unsure what should be added into Proposal to qualify for additional marks	
Suggestions	

Schedule interview with Supervisor to collect more input
Further research and documentation regarding FYP topic
Team should hold brainstorming session to better decide on User Stories

Use Case Description

Use case: Login as Project Admin	Taiga ID: #3
Stakeholders and goals: Project Admin - Login	
Description: The Project Admin login to the system	
Actors: Project Admin	
Pre-condition: User is Admin and has not logged into the system	
Post-condition: User is logged into the system as Admin	
Trigger: The Project Admin wants to login to the system	
Normal flow: <ol style="list-style-type: none">1. The user visits the website2. The user enters their Username and Password3. The user clicks on the login button4. The system authenticates the information provided5. The system brings the user to the homepage	
Sub-flows: None	
Alternative/Exceptional flows: 4.a The system prompts the user for invalid login credentials	

Use case: Log out as Project Admin	Taiga ID: #4
Stakeholders and goals: Project Admin - Log out	
Description: The Project Admin logs out of the system	
Actors: Project Admin	
Pre-condition: User is Admin and has logged into the system as Admin	
Post-condition: User is logged out the system	
Trigger: The Project Admin wants to log out of the system	
Normal flow:	<ol style="list-style-type: none">1. The user clicks on the log out button2. The system verifies the log out request3. The system brings the user back to the homepage
Sub-flows: None	
Alternative/Exceptional flows: None	

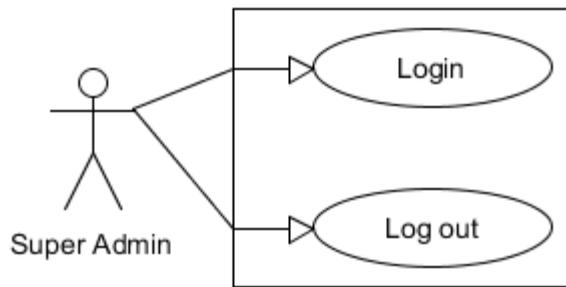
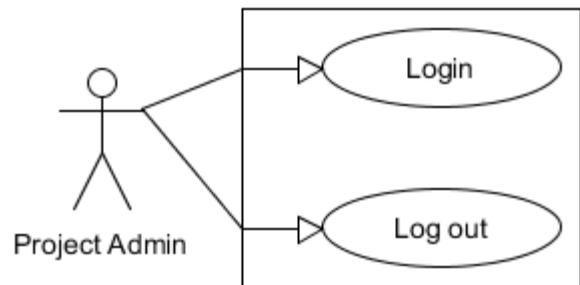
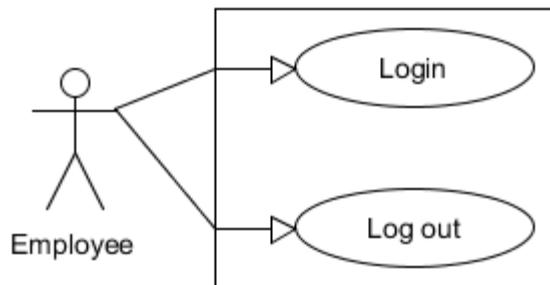
Use case: Login as Employee	Taiga ID: #21
Stakeholders and goals: Employee - Login	
Description: The Employee login to the system	
Actors: Employee	
Pre-condition: User is Employee and has not logged into the system	
Post-condition: User is logged into the system as Employee	
Trigger: The Employee wants to login to the system	
Normal flow:	<ol style="list-style-type: none"> 1. The user visits the website 2. The user enters their Username and Password 3. The user clicks on the login button 4. The system authenticates the information provided 5. The system brings the user to the homepage
Sub-flows: None	
Alternative/Exceptional flows:	<p>4.a The system prompts the user for invalid login credentials</p>

Use case: Log out as Employee	Taiga ID: #22
Stakeholders and goals: Employee - Log out	
Description: The Employee logs out of the system	
Actors: Employee	
Pre-condition: User is Employee and has logged into the system as Employee.	
Post-condition: User is logged out of the system.	
Trigger: The Employee wants to log out of the system	
Normal flow: <ol style="list-style-type: none">1. The user clicks on the log out button2. The system verifies the log out request3. The system brings the user back to the login page	
Sub-flows: None	
Alternative/Exceptional flows: None	

Use case: Login as Super Admin	Taiga ID: #38
Stakeholders and goals: Super Admin - Login	
Description: The Super Admin login to the system	
Actors: Super Admin	
Pre-condition: User is Super Admin and has not logged into the system	
Post-condition: User is logged into the system as Super Admin	
Trigger: The Super Admin wants to login to the system	
<p>Normal flow:</p> <ol style="list-style-type: none"> 1. The user visits the website 2. The user enters their Username and Password 3. The user clicks on the login button 4. The system authenticates the information provided 5. The system brings the user to the homepage 	
Sub-flows: None	
<p>Alternative/Exceptional flows:</p> <p>4.a The system fails to authenticate the information provided, rejects the login attempt then prompts the user that the login attempt failed</p>	

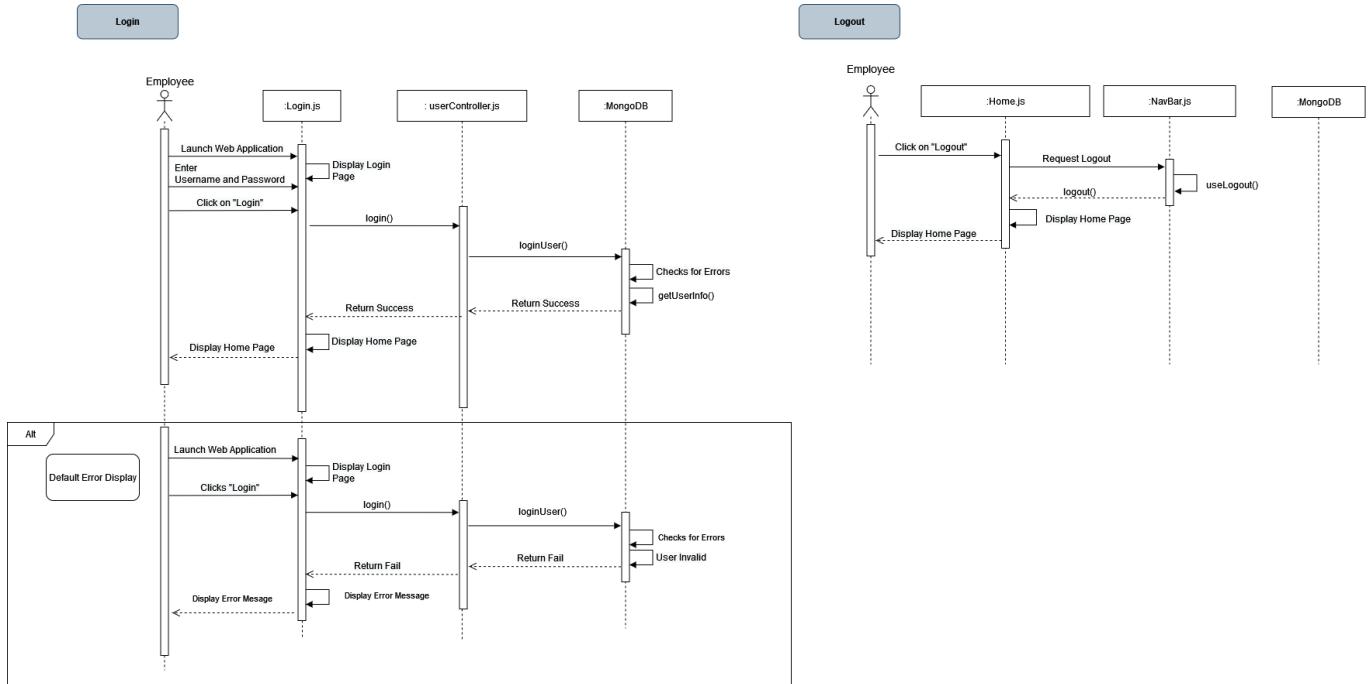
Use case: Log out as Super Admin	Taiga ID: #39
Stakeholders and goals: Super Admin - Log out	
Description: The Super Admin logs out of the system	
Actors: Super Admin	
Pre-condition: User is Super Admin and has logged into the system as Super Admin	
Post-condition: User is logged out the system	
Trigger: The Super Admin wants to log out of the system	
Normal flow:	
1. The user clicks on the log out button 2. The system verifies the log out request 3. The system brings the user back to the homepage	
Sub-flows: None	
Alternative/Exceptional flows: None	

Use Case Diagrams

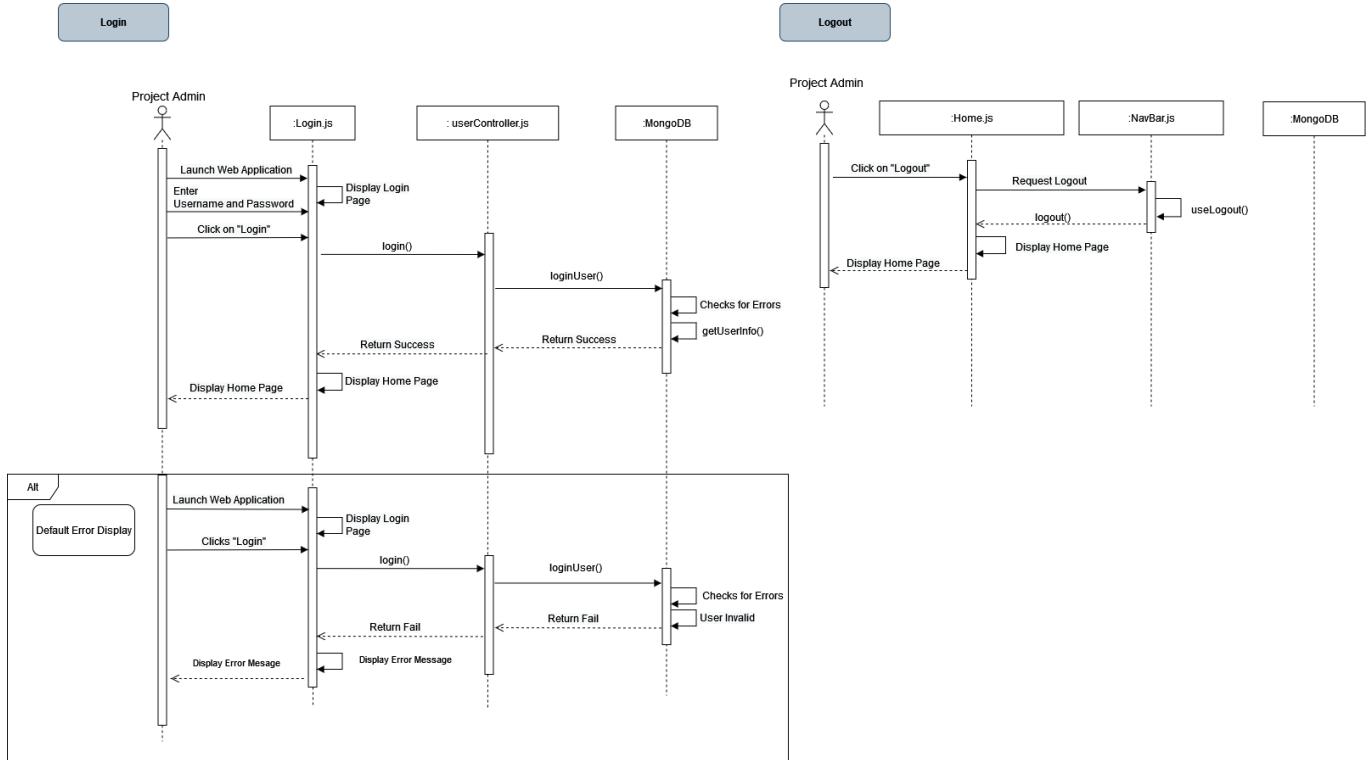


Sequence Diagrams

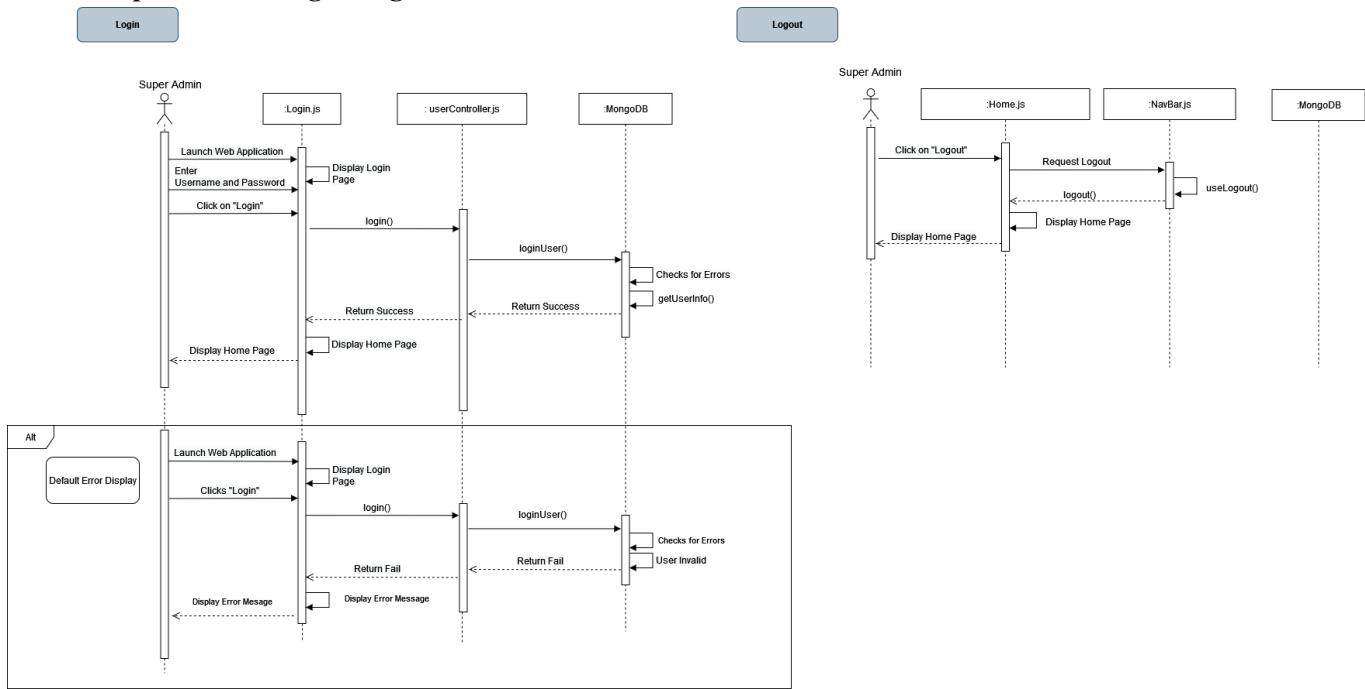
- Employee Login/Logout



- Project Admin Login/Logout



● Super Admin Login/Logout



User Interface Design (Wireframes)

- Login Page

Automatic Project Assignment

Login

The wireframe shows a login form titled "Login". It contains two input fields: "Username" with the value "admin@admin.com" and "Password" with the value "*****". Below the fields is a blue "Login" button.

On this page, users will be required to login into the application with their username and password registered by admins, in order to begin using our application's functionalities.

Sprint overview

The screenshot shows a project management interface with a dark-themed header bar. The header includes icons for projects, a search bar, and notifications. Below the header is a progress bar indicating 100% completion with 24 total points, 24 completed points, 0 open tasks, 54 closed tasks, and 0 cocaine doses. The main area is a Kanban board titled "Sprint 1" (21 Oct 2022 to 04 Nov 2022). The board has columns: NEW, IN PROGRESS, READY FOR TEST, CLOSED, and NEEDS INFO. A "Filters" dropdown and a search bar are at the top of the board. On the far left is a vertical sidebar with icons for search, filters, and other project details. At the bottom of the board are buttons for "SPRINT ISSUES" and "Tags".

User Story	NEW	IN PROGRESS	READY FOR TEST	CLOSED	NEEDS INFO
#3 As a Project Admin, I want + * to be able to login into the system so that I can...				3 icons: 1 green, 1 red, 1 yellow	
#4 As a Project Admin, I want + * to be able to log out of the system so that I can...				3 icons: 1 green, 1 red, 1 yellow	
#21 As an Employee, I want + * to be able to login into the system so that I ca...				3 icons: 1 green, 1 red, 1 yellow	
#22 As an Employee, I want + * to be able to log out of the system so that I ca...				3 icons: 1 green, 1 red, 1 yellow	
#38 As a Super Admin, I want + * to be able to login into the system so that I ca...				3 icons: 1 green, 1 red, 1 yellow	
#39 As a Super Admin, I want + * to be able to logout of the system, so that I ca...				3 icons: 1 green, 1 red, 1 yellow	
Storyless tasks	+ * 3				

Sprint 2

Progress Report	Date : 5 November 2022
Project Name	Automatic Project Assignment
Team	FYP-22-S4-32
Sprint Duration	5 November 2022 – 18 November 2022
Work completed during this sprint	
Submission of Project Requirements Document Prepare Project Progress Report Improve and refine Certain diagrams (e.g Activity Diagrams) Refining User Stories Do-up of Wireframe for Sprint 2 Begin Coding for Employee Contact Details & Skills Competency Function Begin Coding for Project Admin Contact Details Function Begin Coding for Super Admin Create/View/Delete User Account Function Begin fault-testing code and prepare test-cases	
Work planned for next sprint	
Do-up of Project Progress Report Do-up of essential Diagrams Refining User Stories Do-up of Wireframe for Sprint 3 Begin Coding for Project Admin Create/Delete/Update Project Listing Function Begin Coding for Project Admin Project Listing Parameters Function Begin Coding for Employee View Skills and Competency Function Continuation of fault-testing code and do-up of test cases	
What is going well	
Planned tasks were completed on time	
Setbacks faced	
None	
Suggestions	
Spend more effort on documentation	

Use Case Description

Use case: View account information as Project Admin	Taiga ID: #6
Stakeholders and goals: Project Admin - View account information	
Description: The Project Admin views their account information	
Actors: Project Admin	
Pre-condition: User is Admin and has logged into the system as Admin.	
Post-condition: User views their account information	
Trigger: The Project Admin wants to view their contact information	
Normal flow: <ol style="list-style-type: none">1. The user clicks on their profile icon2. The system brings the user to their profile page3. The user views their account information	
Sub-flows: None	
Alternative/Exceptional flows: None	

Use case: Update account information as Project Admin	Taiga ID: #7
Stakeholders and goals: Project Admin - Update account information	
Description: The Project Admin updates their account information	
Actors: Project Admin	
Pre-condition: User is Admin and has logged into the system as Admin.	
Post-condition: User updated their account information	
Trigger: The Project Admin wants to update their contact information	
<p>Normal flow:</p> <ol style="list-style-type: none"> 1. The user clicks on their profile icon 2. The system brings the user to their profile page 3. The user clicks on edit button 4. The user updates their information and clicks on the submit button 5. The system verifies the request from the user 6. The system saves the information and prompts the user that the contact info is updated 	
Sub-flows: None	
Alternative/Exceptional flows:	
5.a The system fails to verify the request from the user, information was not saved and the system prompts the user that the save attempt was a failure	

Use case: Add contact details as Employee	Taiga ID: #23
Stakeholders and goals: Employee - Add contact details	
Description: The Employee adds their contact information into the system	
Actors: Employee	
Pre-condition: User is logged in as Employee	
Post-condition: Employee added their contact information	
Trigger: The Employee wants to add their contact information into the system	
<p>Normal flow:</p> <ol style="list-style-type: none"> 1. The user clicks on their profile 2. The system brings the user to their profile page 3. The user clicks on edit button 4. The user adds in their contact information and clicks the submit button 5. The system verifies the request from the user 6. The system saves the information and prompts the user that the contact info updated 	
Sub-flows: None	
Alternative/Exceptional flows:	
6.a The system fails to verify the request from the user, information was not saved and the system prompts the user that the save attempt was a failure	

Use case: View account information as Employee	Taiga ID: #24
Stakeholders and goals: Employee - View account information	
Description: The Employee views their account information	
Actors: Employee	
Pre-condition: User is Employee and has logged into the system as Employee	
Post-condition: User views their account information	
Trigger: The Employee wants to view their contact information	
Normal flow: <ol style="list-style-type: none">1. The user clicks on their profile icon2. The system brings the user to their profile page3. The user views their account information	
Sub-flows: None	
Alternative/Exceptional flows: None	

Use case: Update account information as Employee	Taiga ID: #25
Stakeholders and goals: Employee - Update account information	
Description: The Employee updates their account information	
Actors: Employee	
Pre-condition: User is Employee and has logged into the system as Employee	
Post-condition: User updated their account information	
Trigger: The Employee wants to update their contact information	
<p>Normal flow:</p> <ol style="list-style-type: none"> 1. The user clicks on their profile icon 2. The system brings the user to their profile page 3. The user clicks on edit button 4. The user updates their information and clicks on the submit button 5. The system verifies the request from the user 6. The system saves the information and prompts the user that the contact info is updated 	
Sub-flows: None	
<p>Alternative/Exceptional flows:</p> <p>6.a The system fails to verify the request from the user, information was not saved and the system prompts the user that the save attempt was a failure</p>	

Use case: Add skills and competency details as Employee	Taiga ID: #26
Stakeholders and goals: Employee - Add skills and competency details	
Description: The Employee add their skills and competency details into the system	
Actors: Employee	
Pre-condition: User is Employee and has logged into the system as Employee	
Post-condition: User added their skills and competency details into the system	
Trigger: The Employee wants to add their skills and competency details	
<p>Normal flow:</p> <ol style="list-style-type: none"> 1. The user clicks on their profile icon 2. The system brings the user to their profile page 3. The user clicks on Skills from the side panel 4. The system brings the user to their skills page 5. The user clicks on edit skills button 6. The user adds their skills and competency details and clicks on the submit button 7. The system verifies the request from the user and saves the information 	
Sub-flows: None	
Alternative/Exceptional flows:	
7.a The system fails to verify the request from the user, information was not saved and the system prompts the user that the save attempt was a failure	

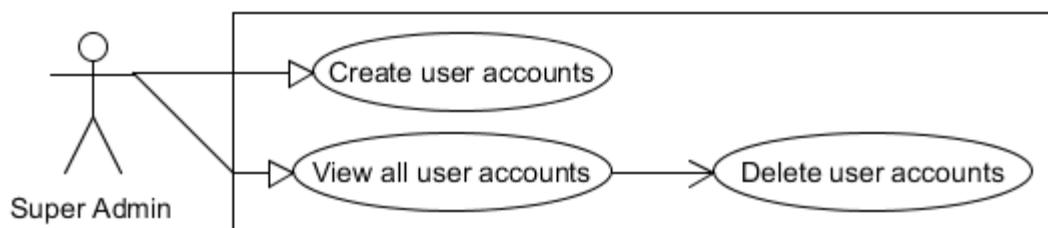
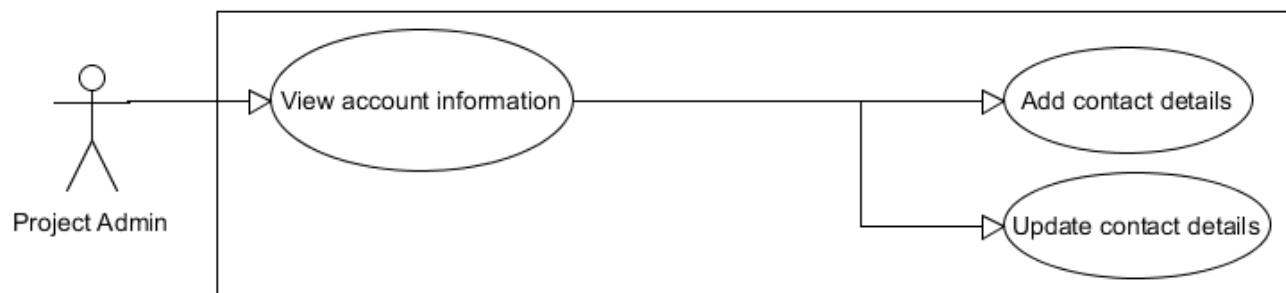
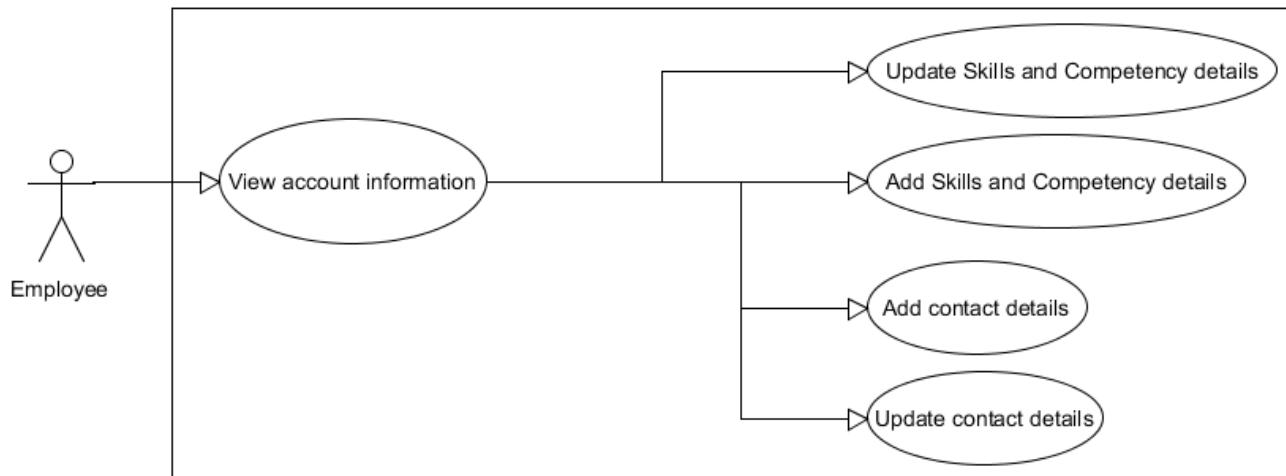
Use case: Update skills and competency details as Employee	Taiga ID: #28
Stakeholders and goals: Employee - Update skills and competency details	
Description: The Employee updates their skills and competency details	
Actors: Employee	
Pre-condition: User is Employee and has logged into the system as Employee	
Post-condition: User updated their skills and competency details	
Trigger: The Employee wants to update their skills and competency details	
<p>Normal flow:</p> <ol style="list-style-type: none"> 1. The user clicks on their profile icon 2. The system brings the user to their profile page 3. The user clicks on Skills from the side panel 4. The system brings the user to their skills page 5. The user clicks on edit skills button 6. The user updates their skills and competency details and clicks on the submit button 7. The system verifies the request from the user and saves the information 	
Sub-flows: None	
Alternative/Exceptional flows:	
6.a The system fails to verify the request from the user, information was not saved and the system prompts the user that the save attempt was a failure	

Use case: Create user account as Super Admin	Taiga ID: #43
Stakeholders and goals: Super Admin - Create user account	
Description: The Super Admin creates user account for chosen Organisation	
Actors: Super Admin	
Pre-condition: User is logged in as Super Admin and the chosen Organization exists	
Post-condition: User has created the user account	
Trigger: The Super Admin wants to create a user account	
Normal flow:	
1. The user clicks on Create Account 2. The system brings the user to the sign up page 3. The user enters the relevant information and clicks on the sign up button 4. The system verifies the users' request 5. The prompts the user that the creation was successful	
Sub-flows: None	
Alternative/Exceptional flows: 8.a The system fails to verify the request from the user and prompts the user that an error has occurred	

Use case: View user account as Super Admin	Taiga ID: #44
Stakeholders and goals: Super Admin - View user account	
Description: The Super Admin view user account for chosen Organisation	
Actors: Super Admin	
Pre-condition: User is logged in as Super Admin and the chosen Organization exists	
Post-condition: User has viewed the user account for the chosen Organisation	
Trigger: The Super Admin wants to view the user account for the chosen Organisation	
Normal flow: 1. The user clicks on All users 2. The system brings the user to the all users page	
Sub-flows: None	
Alternative/Exceptional flows: None	

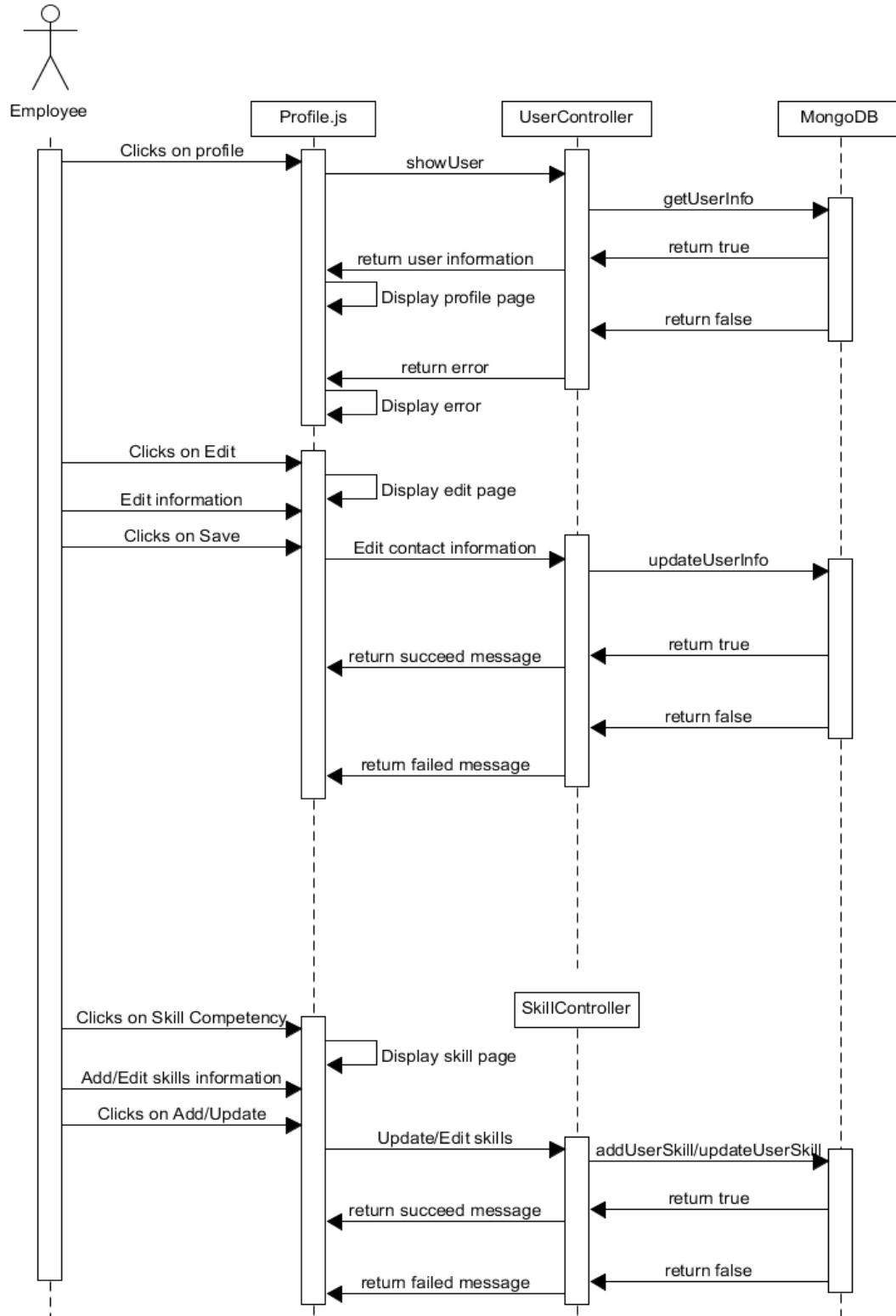
Use case: Delete user account as Super Admin	Taiga ID: #115
Stakeholders and goals: Super Admin - Delete user account	
Description: The Super Admin deletes user account for chosen Organisation	
Actors: Super Admin	
Pre-condition: User is logged in as Super Admin and the chosen user account exists	
Post-condition: User has deleted the user account for the chosen Organisation	
Trigger: The Super Admin wants to delete user account for the chosen Organisation	
<p>Normal flow:</p> <ol style="list-style-type: none"> 1. The user clicks on All users 2. The system brings the user to the all users page 3. The user click on the Manage Users on the side panel 4. The user clicks on the delete icon for the desired user 5. The system prompts a confirmation from the user 6. The user clicks on the ok button 7. The system verifies the request from the user 8. The system deletes the selected user. 	
Sub-flows: None	
<p>Alternative/Exceptional flows:</p> <p>6.a The user clicks on the cancel button and nothing happens</p> <p>7.a The system fails to verify the request from the user and prompts the user that the deletion was a failure</p>	

Use Case Diagrams

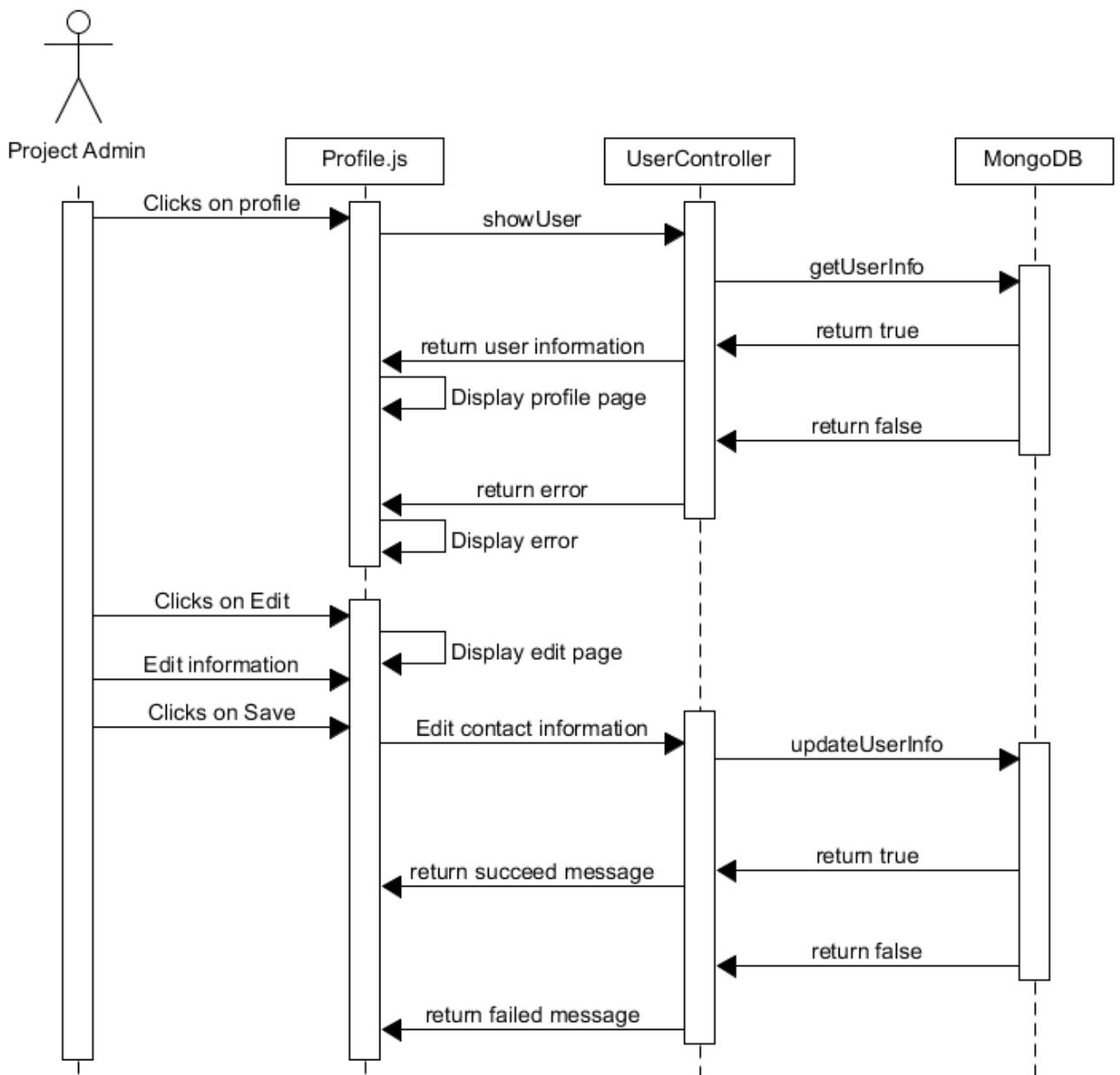


Sequence Diagrams

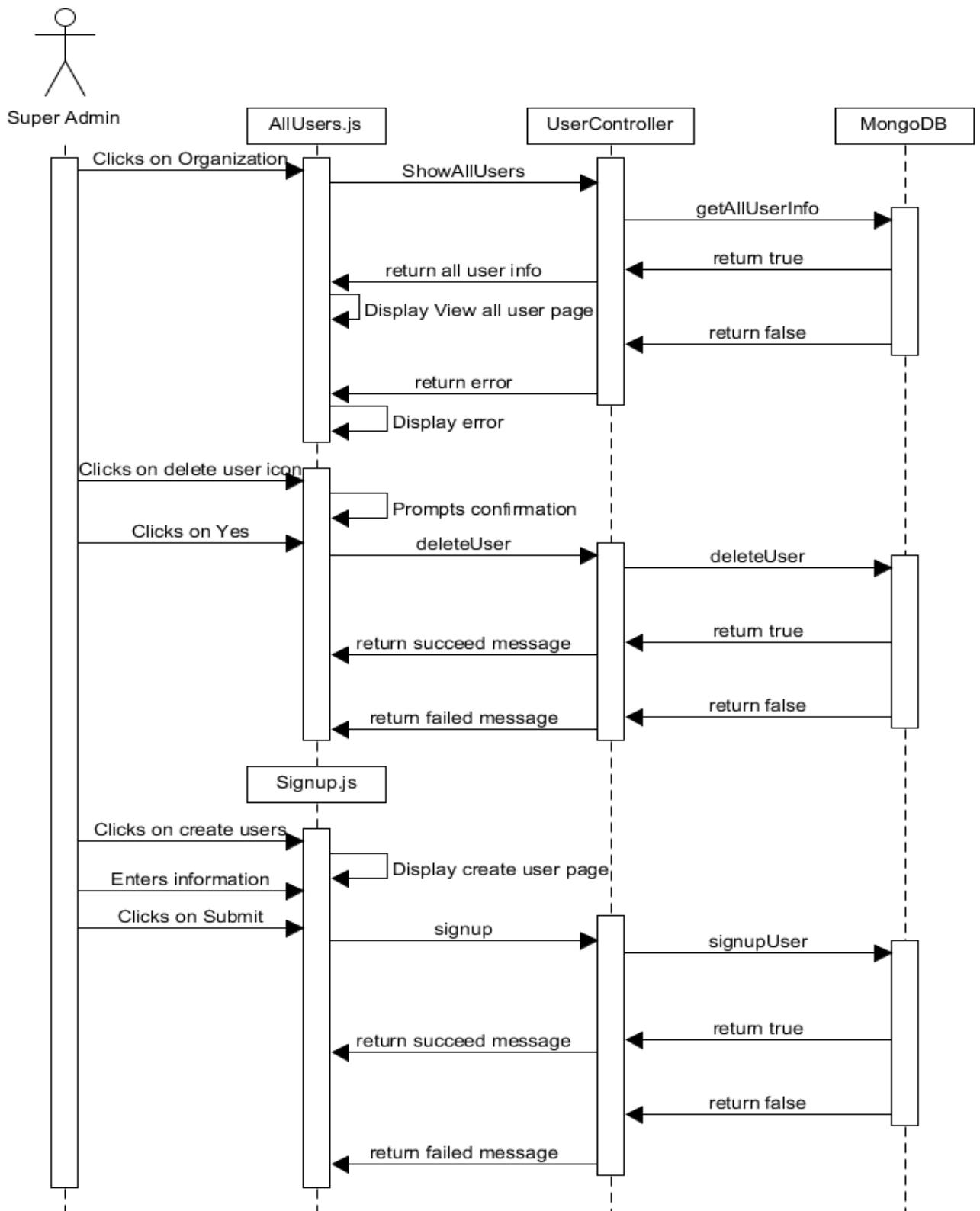
- Employee Profile



- Project Admin Profile



- Super Admin User Creation



User Interface Design (Wireframes)

- Employee View Personal Account Information

Automatic Project Assignment

Project Listings Select Preference Assigned Projects Profile Log out

Account Information

First name:	Last name:
Employee	One
Email address:	Role:
employee@emp.com	Employee
Contact Number:	
92341235	Edit

On this page, the Employee is able to view the contact information of their account. They are able to edit their contact number only which other users using the application will be able to see.

- Employee Add/Edit Contact Details

Automatic Project Assignment

Project Listings Select Preference Assigned Projects Profile Log out

Account Information

First name:	Last name:
Employee	One
Email address:	Role:
employee@emp.com	Employee
Contact Number:	
92341235	Save Cancel

Upon clicking on the Edit page, the system will allow the Employee to only edit the contact number field. Once done, he/she can simply click the save button to save the changes made.

- Employee Add Skill Competency

Automatic Project Assignment

Project Listings Select Preference Assigned Projects Profile Log out

Skill Competency

1st Skill: C# ASP.NET

Competency Level: Beginner

Add Cancel

Upon clicking on the “add” button, the Employee will be able to select the skill and the competency level of the selected skill via a drop down list. They can click the “Add” button in order to save the changes made.

- Employee Edit Skill Competency

Automatic Project Assignment

Project Listings Select Preference Assigned Projects Profile Log out

Skill Competency

1st Skill: Java

Competency Level: Beginner

2nd Skill: NodeJS

Competency Level: Advanced

3rd Skill: MongoDB

Competency Level: Expert

Update Cancel

Upon clicking on the “edit” button, the Employee will be able to edit the existing skill and the competency level via a drop down list. They can also click on the “minus” button at the side to remove the skill.

- Employee Delete Skill Competency

The screenshot shows a user interface for managing skill competency. On the left, a sidebar menu includes 'Account Information', 'Organisation Information', 'Skills Competency' (which is highlighted in blue), 'Project Preferences', and 'Change Password'. The main area is titled 'Skill Competency' and contains three dropdown fields for '1st Skill' (Java, Beginner), '2nd Skill' (NodeJS, Advanced), and '3rd Skill' (MongoDB, Expert). Each skill row has a small minus button to its right. At the bottom are 'Update' and 'Cancel' buttons. To the right, a separate window titled 'Confirm Delete Skill?' displays the selected skill 'Java' and offers 'Yes' and 'Cancel' options.

Upon clicking on the “minus” button, the system will prompt the Employee whether they want to confirm deleting the selected skill.

- Project Admin View Personal Profile Page

The screenshot shows a user interface for viewing personal profile information. A sidebar on the left lists 'Account Information', 'Organisation', and 'Change Password'. The main content area is titled 'Account Information' and displays the following details:

First name	Last name
admin	One
Email address	Role
admin@admin.com	Project Admin
Contact Number	
917737371	Edit

On this page, the Project Admin are able to view the contact information of their account. They are able to edit their contact number only which other users using the application will be able to see.

- Project Admin Add/Edit Contact Details

Automatic Project Assignment

Assignment Create Project Organisation Skills All Users Create Account Profile Log out

Account Information	
First name	Last name
admin	One
Email address	Role
admin@admin.com	Project Admin
Contact Number	
<input type="text" value="917737371"/>	<input type="button" value="Save"/> <input type="button" value="Cancel"/>

Upon clicking on the Edit page, the system will allow the Project Admin to only edit the contact number field. Once done, he/she can simply click the save button to save the changes made.

- Super Admin Home Page / Organisation List

Automatic Project Assignment

Create Organisation Create Account All Users Profile Log out

Organisation Listings	
Organisation 1: SIM	Organisation Code: SIM
Organisation 2: UOW	Organisation Code: UOW
Organisation 3: UOB	Organisation Code: UOB

In this page, the Organisation Listing page would be the main page for the Super Admin. They will be able to see the current organisations in the system. When clicking on the organisation list, they will be able to see the list of user accounts associated with the organisation. They will also be able to create a new organisation via the form in this page.

- Super Admin Creates User

The screenshot shows a 'Create Account' form titled 'Account Creation'. It contains fields for 'Name' (text input), 'Organisation' (dropdown menu with 'Choose Organisation'), 'Role' (dropdown menu with 'Project Admin'), 'Email Address' (text input), 'Password' (text input), 'Confirm Password' (text input), and a 'Create' button.

When the Super Admin clicks on Create User on the side navigation bar, a form will be shown where the Super Admin will be required to fill in the user's details such as allocating a role to the user. This new user will be tagged to the organisation after selecting an organisation from the organisation list to view its user.

- Super Admin View Users In Organisation

The screenshot shows the 'Organisation 1: SIM' page. It includes a 'Delete' button and a 'Create Employee/Project Admin for SIM' button. On the left, a sidebar has 'All Users', 'Project Admins', 'Employees', and 'Manage Users' options. The main area shows 'Organisation Users' with a search bar and two entries: 'Tian' (Role: Project Admin, Email: tian@gmail.com, Contact No: 92341999) and 'Employee' (Role: Employee, Email: employee@gmail.com, Contact No: 62345123).

On this page, the Super Admin will be able to see the list of existing users of the selected organisation. They will be able to filter the roles based on the side navigation bar.

- Super Admin Deletes Selected User

The screenshot shows the application's interface for managing users. At the top, there are navigation links: Create Organisation, Create Account, All Users, Profile, and Log out. Below this, the main content area displays 'Organisation 1: SIM' with a description: 'SIM is a private tertiary/university education institute that works with overseas institutions.' There are two buttons: 'Delete' (red) and 'Create Employee/Project Admin for SIM' (blue). To the right, a modal window titled 'Confirm Delete User?' asks 'Selected User: Employee' and provides 'Yes' and 'Cancel' buttons.

Organisation Users

Search Users Q

Tian	Role: Project Admin Email: tian@gmail.com Contact No: 92341999	trash bin icon
Employee	Role: Employee Email: employee@gmail.com Contact No: 82345123	trash bin icon

On the left, a sidebar menu includes: All Users (selected), Project Admins, Employees, and Manage Users.

When the Super Admin selects on the “dustbin” icon on Employee, a prompt pop out will appear to ask the Super Admin’s confirmation on deleting this user’s details

Sprint overview

Sprint 2 05 Nov 2022 to 18 Nov 2022

100% ✓ 55 total points 55 completed points | 0 open tasks 99 closed tasks | 0 cocaine doses

ZOOM: Detailed

USER STORY	NEW	IN PROGRESS	READY FOR TEST	CLOSED	NEEDS INFO
#5 As a Project Admin, I want to be able to add my contact details so that...				↑ 3 (Y, G, B)	
#6 As a Project Admin, I want to be able to view my account information so...				↑ 3 (Y, G, B)	
#7 As a Project Admin, I want to be able to update my contact details so that I...				↑ 3 (Y, G, B)	
#23 As an Employee, I want to be able to add my contact details so that...				↑ 3 (Y, G, B)	
#24 As an Employee, I want to be able to view my account information s...				↑ 3 (Y, G, B)	
#25 As an Employee, I want to be able to update my contact details so that ...				↑ 3 (Y, G, B)	
#26 As an Employee, I want to be able to add my skills and competency...				↑ 3 (Y, G, B)	
#28 As an Employee, I want to be able to update my skills and competency...				↑ 3 (Y, G, B)	
#43 As a Super Admin, I want to create user accounts for the organization so...				↑ 3 (Y, G, B)	
#44 As a Super Admin, I want to view user accounts for the organization so...				↑ 3 (Y, G, B)	
#115 As a Super Admin, I want to delete user accounts for the...				↑ 3 (Y, G, B)	
Storyless tasks	+ *≡				

SPRINT ISSUES | Tags + *≡

Sprint 3

Progress Report	Date : 19 November
Project Name	Automatic Project Assignment
Team	FYP-22-S4-32
Sprint Duration	19 November – 2 December 2022
Work completed during this sprint	
Further do-up of Project Progress Report Refined essential Diagrams Refining User Stories Do-up of Wireframe for Sprint 3 Begin Coding for Project Admin Create/Delete/Update Project Listing Function Begin Coding for Project Admin Project Listing Parameters Function Begin Coding for Employee View Skills and Competency Function Continuation of fault-testing code and do-up of test cases	
Work planned for next sprint	
Do-up of Presentation Slides Finalise Presentation Slides Finalise Project Progress Report Refining User Stories Do-up of Wireframe for Sprint 4 Continuation of fault-testing code and do-up of test cases Begin Coding for Employee view Project Listing and details function Begin Coding for Project Admin Create/Delete Employee Account Function Begin Coding for Project Admin Edit Employee Contact Details Function Begin Coding for Super Admin Edit User Roles/Contact Details Function	
What is going well	
Majority of planned tasks were completed	
Setbacks faced	
Certain tasks had to be pushed to Sprint 4 due to Exams Time management needs to be improved	
Suggestions	
Team should have accounted for this and delegate workload/tasks better Spend more effort on research and documentation	

Use Case Description

Use case: Create new projects as Project Admin	Taiga ID: #8
Stakeholders and goals: Project Admin - Create new projects	
Description: The Project Admin create new projects	
Actors: Project Admin	
Pre-condition: User is Admin and is logged into the system	
Post-condition: User created new projects	
Trigger: The Project Admin wants to create new projects	
Normal flow:	<ol style="list-style-type: none"> 1. The user clicks on Create Project 2. The system brings the user to the create project page 3. The user enters the relevant information 4. The user adds in the relevant skills 5. The user clicks on the add new project listing button 6. The system verifies the request from the user 7. The system adds the new project and brings the user to the home page
Sub-flows: None	
Alternative/Exceptional flows:	<p>6.a The system fails to verify the request from the user, information was not saved and the system prompts the user to fill in all fields</p>

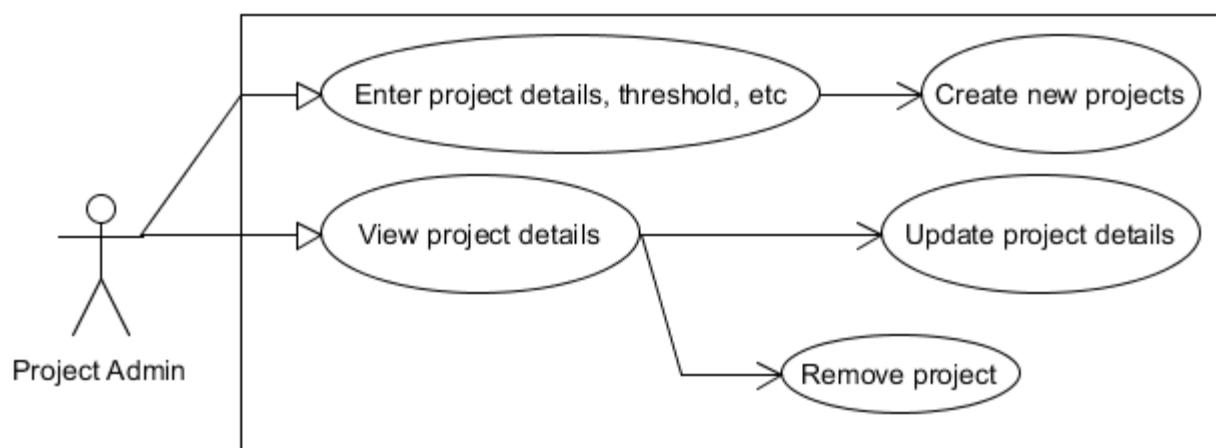
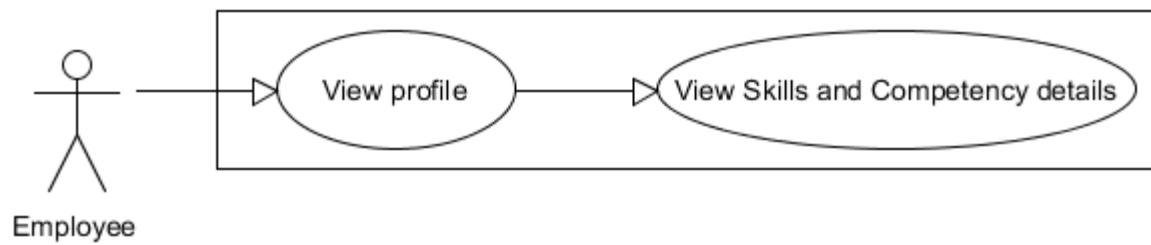
Use case: Update project details as Project Admin	Taiga ID: #10
Stakeholders and goals: Project Admin - Update project details	
Description: The Project Admin updates project details	
Actors: Project Admin	
Pre-condition: User is logged in as Admin and the chosen project exists	
Post-condition: User updates project details	
Trigger: The Project Admin wants to update project details	
<p>Normal flow:</p> <ol style="list-style-type: none"> 1. The user clicks on the name of the desired project 2. The system brings the user to the relevant project page 3. The user clicks on the edit icon 4. The user updates the project detail information and clicks the save button 5. The system verifies the request from the user 6. The system saves the information and prompts the user that the save attempt was successful 7. The system brings the user back to the relevant project page 	
Sub-flows: None	
Alternative/Exceptional flows:	
5.a The system fails to verify the request from the user, information was not saved and the system prompts the user that the save attempt was a failure	

Use case: Setting number of employee required as Project Admin	Taiga ID: #12
Stakeholders and goals: Project Admin - set number of employee required for the project	
Description: The Project Admin sets number of employee required for the project	
Actors: Project Admin	
Pre-condition: User is logged in as Admin and the chosen project exists	
Post-condition: User sets the number of employee required for the chosen project	
Trigger: The Project Admin wants to set a number of employee for the chosen project	
<p>Normal flow:</p> <ol style="list-style-type: none"> 1. The user clicks on the name of the desired project 2. The system brings the user to the relevant project page 3. The user clicks on the edit icon 4. The user enters a number under the number of employee required section and clicks the edit project listing button 5. The system verifies the request from the user 6. The system saves the information and prompts the user that the save attempt was successful 7. The system brings the user back to the relevant project page 	
Sub-flows: None	
<p>Alternative/Exceptional flows:</p> <p>5.a The system fails to verify the request from the user, information was not saved and the system prompts the user that the save attempt was a failure</p>	

Use case: Remove project as Project Admin	Taiga ID: #14
Stakeholders and goals: Project Admin - Remove project	
Description: The Project Admin removes project	
Actors: Project Admin	
Pre-condition: User is logged in as Admin and the chosen project exists	
Post-condition: User removes the chosen project	
Trigger: The Project Admin wants to remove the chosen project	
Normal flow:	<ol style="list-style-type: none"> 1. The user clicks on the name of the desired project 2. The system brings the user to the relevant project page 3. The user clicks on the delete button 4. The system verifies the users' request 5. The project is removed and the system brings the user back to the home page
Sub-flows: None	
Alternative/Exceptional flows:	
4.a	The system fails to verify the request from the user, prompts the user that an error has occurred

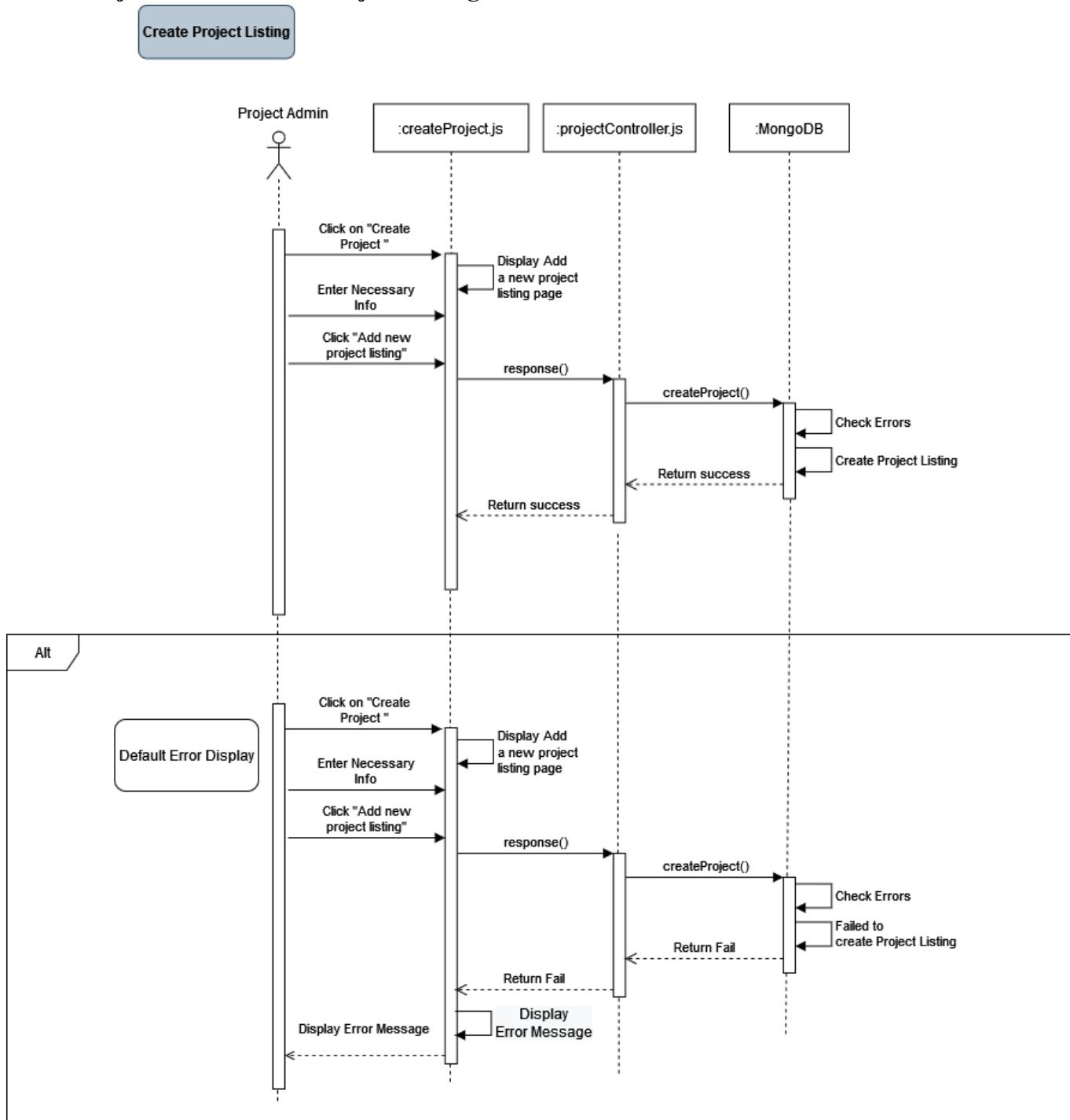
Use case: View skills and competency details as Employee	Taiga ID: #27
Stakeholders and goals: Employee - View skills and competency details	
Description: The Employee views their skills and competency details	
Actors: Employee	
Pre-condition: User is Employee and has logged into the system as Employee	
Post-condition: User views their skills and competency details	
Trigger: The Employee wants to view their skills and competency details	
<p>Normal flow:</p> <ol style="list-style-type: none"> 1. The user clicks on their profile icon 2. The system brings the user to their profile page 3. The user clicks on Skills in the side panel 4. The system brings the user to the skills section 5. The user views their skills and competency details 	
Sub-flows: None	
Alternative/Exceptional flows: None	

Use Case Diagrams



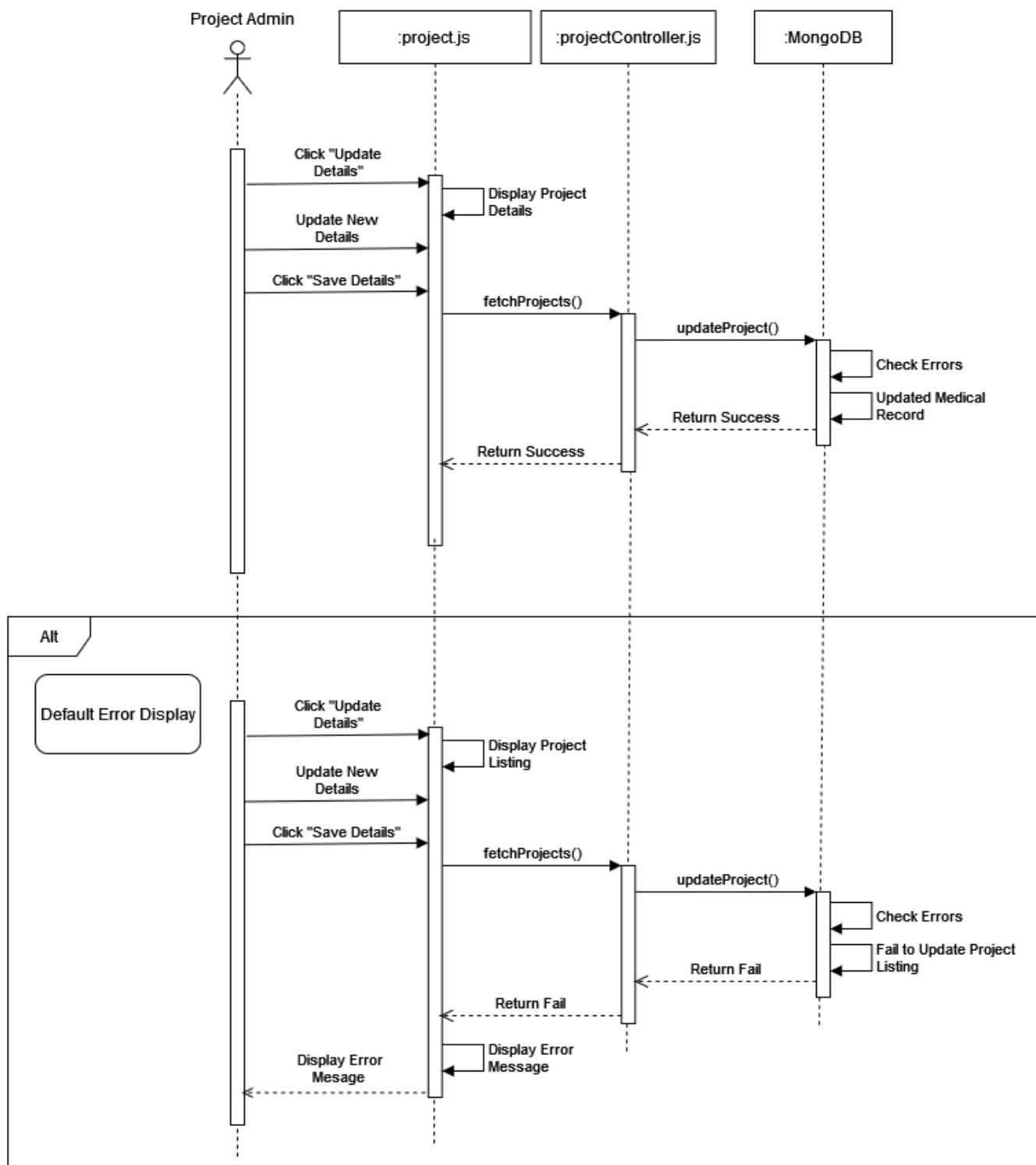
Sequence Diagrams

- Project Admin Create Project Listing



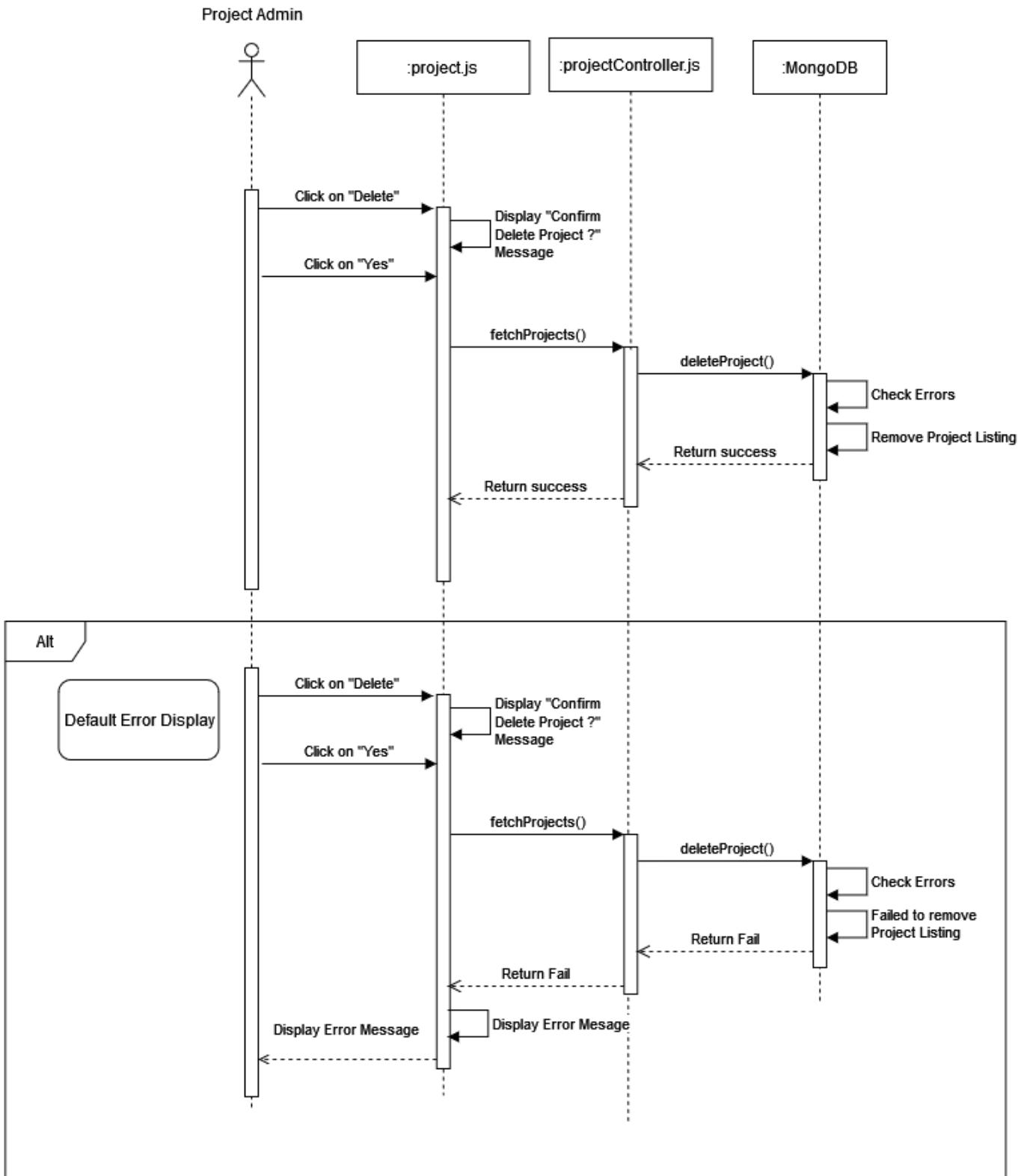
• Project Admin Update Project Listing

Update Project Listing

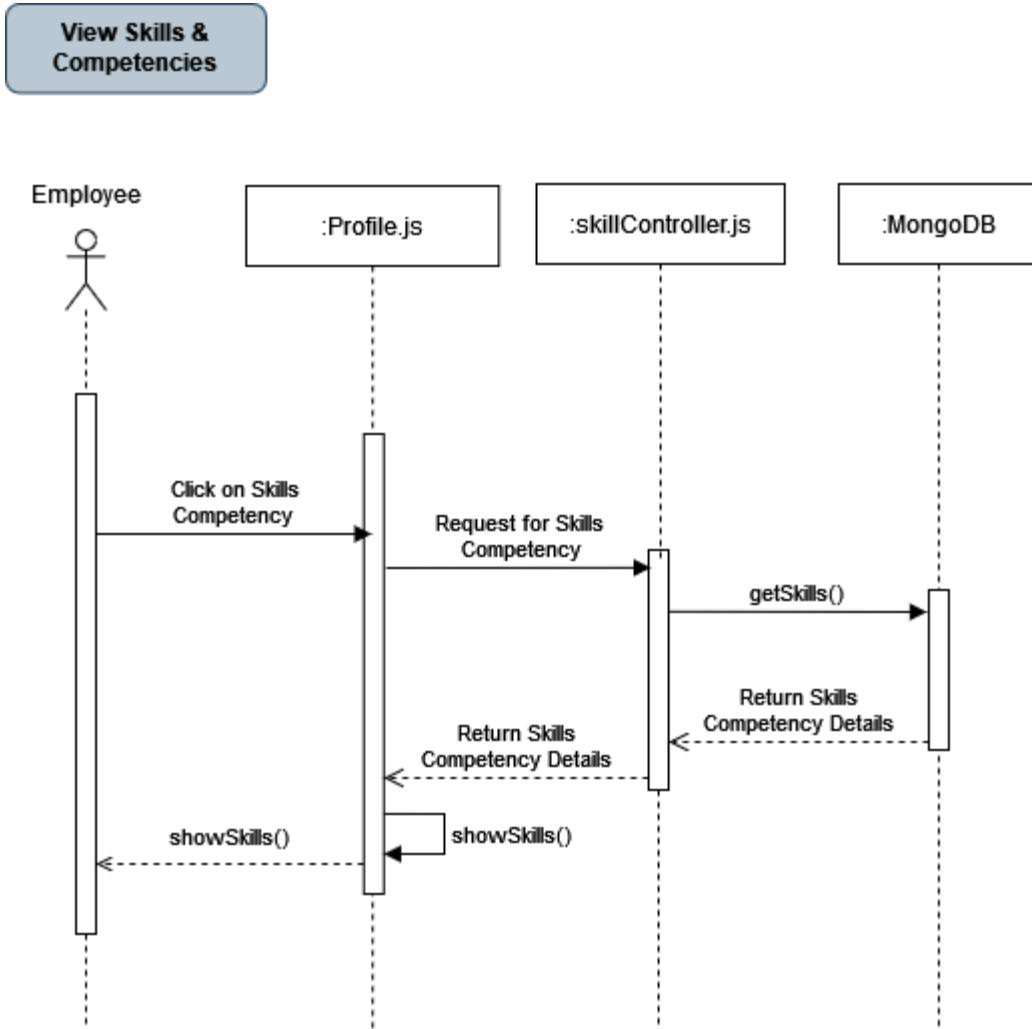


• Project Admin Delete Project Listing

Delete Project Listing



- Employee View Skills & Competencies



User Interface Design (Wireframes)

- Project Admin Create New Project Listing

The wireframe shows a form titled "Add a new Project Listing". It includes fields for "Name of Project" (text input), "Project Details" (large text area), "Estimated Total Effort (Days Needed)" (number input with up/down arrows, currently 0), "Number of People Needed" (number input with up/down arrows, currently 0), "Skills Required" (dropdown menu with placeholder "Select Skills (Can be more than 1)"), and a blue "Add New Project Listing" button at the bottom.

Upon clicking on the Create Project on the side navigation bar, the Project Admin will be able to add in the required information for the new project to be listed for selection.

- Project Admin Edit Project Details & Setting Number of Employees

Automatic Project Assignment

Assignment Create Project Organisation Skills All Users Create Account Profile Log out

Edit Project Listing

Name of Project
E-Commerce Website

Project Details
This project is required to create an E-Commerce Platform for an existing company to allow sales of their products online.

Estimated Total Effort (Days Needed) 31 Number of People Needed 5

Skills Required
Select Skills (Can be more than 1)

Edit Project Listing

Upon clicking on the edit button, the project admin will be able to edit the relevant information of the project.

- Project Admin Delete Project

Automatic Project Assignment

Assignment Create Project Organisation Skills All Users Create Account Profile Log out

Project Details

Name of Project
E-Commerce Website

Project Details
This project is required to create an E-Commerce Platform for an existing company to allow sales of their products online.

Estimated Total Effort (Days Needed) 31 Days Number of People Needed 5

Skills Required
Java (Expert)
MongoDB (Advanced)

Close Project Delete

Confirm Delete Project?

Yes Cancel

When the Project Admin selects on the Delete button, a prompt pop out will appear to ask the Project Admin's confirmation on deleting this project.

- Employee View Skills Competency Page

The screenshot displays a user interface for managing skills and competency levels. On the left, a sidebar menu includes 'Account Information', 'Organisation Information', **Skills Competency** (which is highlighted in blue), 'Project Preferences', and 'Change Password'. The main content area is titled 'Skill Competency' and lists three skills: '1st Skill' (Java, Beginner), '2nd Skill' (NodeJS, Advanced), and '3rd Skill' (MongoDB, Expert). At the bottom of this section are 'Add' and 'Edit' buttons.

When the Employee clicks on the Skills Competency on the side navigation bar, he/she will be able to see their own skill competency information. They will be able to add or edit (update/delete) their skill competency level.

Sprint overview

The screenshot shows a project management interface with a top navigation bar for 'Projects' and various status indicators. Below is a detailed view of 'Sprint 3' from 19 Nov 2022 to 02 Dec 2022. The board has columns for 'NEW', 'IN PROGRESS', 'READY FOR TEST', 'CLOSED', and 'NEEDS INFO'. Stories are listed under 'NEW' and 'IN PROGRESS'.

USER STORY	NEW	IN PROGRESS	READY FOR TEST	CLOSED	NEEDS INFO
#8 As a Project Admin, I want to be able to create new projects so that...					
#10 As a Project Admin, I want to be able to update project details ...					
#12 As a Project Admin, I want to be able to set the number of...					
#14 As a Project Admin, I want to be able to remove projects, so th...					
#27 As an Employee, I want to be able to view my skills and competency...					
Storyless tasks					

At the bottom, there are links for 'SPRINT ISSUES' and 'Tags'.

Sprint 4

Progress Report	Date : 3 December 2022
Project Name	Automatic Project Assignment
Team	FYP-22-S4-32
Sprint Duration	3 December 2022– 16 December 2022
Work completed during this sprint	
Do-up of Presentation Slides Finalise Presentation Slides Finalise Project Progress Report Refining User Stories Do-up of Wireframe for Sprint 4 Continuation of fault-testing code and do-up of test cases Begin Coding for Employee view Project Listing and details function Begin Coding for Project Admin Create/Delete Employee Account Function Begin Coding for Project Admin Edit Employee Contact Details Function Begin Coding for Super Admin Edit User Roles/Contact Details Function	
Work planned for next sprint	
TBD	
What is going well	
Supervisor meeting went well Planned tasks and overdue tasks were done on time	
Setbacks faced	
Team had an disagreement regarding presentation slides layout/format Minor Bugs faced	
Suggestions	
Spend more time fault-testing code	

Use Case Description

Use case: Setting assignment threshold as Project Admin	Taiga ID: #11
Stakeholders and goals: Project Admin - set assignment threshold	
Description: The Project Admin sets assignment threshold	
Actors: Project Admin	
Pre-condition: User is creating new assignment object	
Post-condition: User sets a threshold for the assignment	
Trigger: The Project Admin wants to set a threshold for the assignment	
Normal flow:	
1. The user click on Assignment 2. The system brings the user to the Assignment page 3. The user enters the relevant threshold information	
Sub-flows: None	
Alternative/Exceptional flows: None	

Use case: View project listing as Employee	Taiga ID: #29
Stakeholders and goals: Employee - View project listing	
Description: The Employee views project listings	
Actors: Employee	
Pre-condition: User is logged in as Employee and project exists	
Post-condition: User views the project listings	
Trigger: The Employee wants to view project listings	
Normal flow:	
1. The user clicks on Project Listing 2. The system bring the user to the Project Listing page 3. The user views the list of available project	
Sub-flows: None	
Alternative/Exceptional flows: None	

Use case: View project details as Employee	Taiga ID: #30
Stakeholders and goals: Employee - View project details	
Description: The Employee views project details	
Actors: Employee	
Pre-condition: User is logged in as Employee and project details exists	
Post-condition: User views the project details	
Trigger: The Employee wants to view project details	
Normal flow:	<ol style="list-style-type: none"> 1. The user clicks on Project Listing 2. The system bring the user to the Project Listing page 3. The user clicks on the desired project link 4. The system brings the user to the corresponding project page 5. The user views the project details
Sub-flows: None	
Alternative/Exceptional flows: None	

Use case: Create Organization codes as Super Admin	Taiga ID: #40
Stakeholders and goals: Super Admin - Create Organization codes	
Description: The Super Admin creates Organization codes	
Actors: Super Admin	
Pre-condition: User is logged in as Super Admin	
Post-condition: User has created the Organization code	
Trigger: The Super Admin wants to create Organisation codes	
<p>Normal flow:</p> <ol style="list-style-type: none"> 1. The user clicks on Create Organization 2. The system brings the user the create organisation page 3. The user inputs the information required and clicks on the Add New Organization Listing button 4. The system verifies the request from the user 5. The system creates the new organisation and brings the user back to the home page 	
Sub-flows: None	
<p>Alternative/Exceptional flows:</p> <p>4.a The system fails to verify the request from the user and prompts the user that an error has occurred, the system remains at the add organisation code page and awaits user input</p>	

Use case: Create Employee account as Project Admin	Taiga ID: #116
Stakeholders and goals: Project Admin - Create Employee account	
Description: The Project Admin creates Employee account	
Actors: Project Admin	
Pre-condition: User is logged in as Project Admin	
Post-condition: User has created the Employee account	
Trigger: The Project Admin wants to create a Employee account	
<p>Normal flow:</p> <ol style="list-style-type: none"> 1. The user clicks on Create Account 2. The system brings the user to the sign up page 3. The user inputs the information required and clicks sign up button 4. The system verifies the request from the user 5. The system prompts the user that the creation was successful 	
Sub-flows: None	
<p>Alternative/Exceptional flows:</p> <p>4.a The system fails to verify the request from the user and prompts the user that an error has occurred</p>	

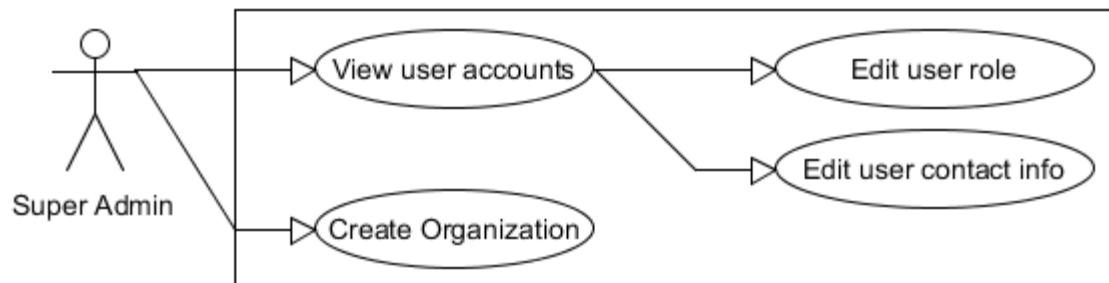
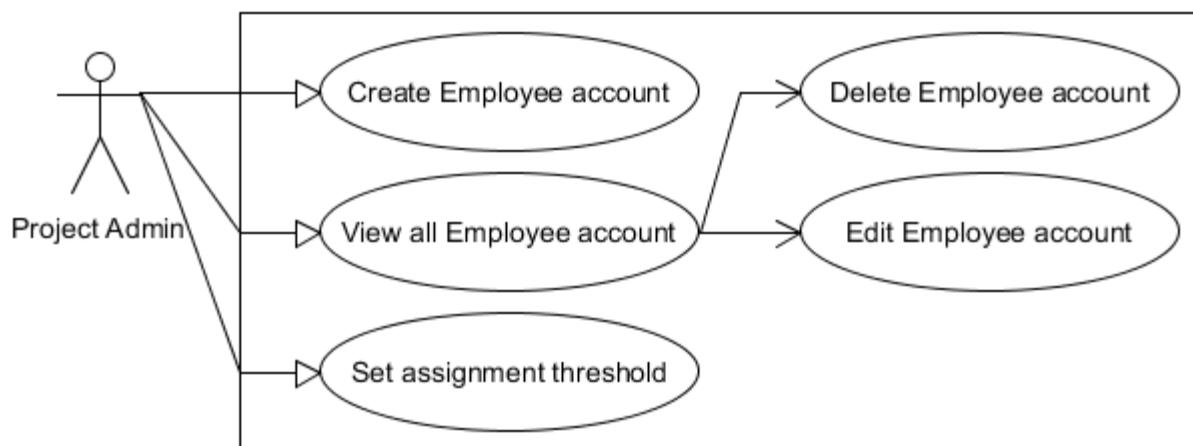
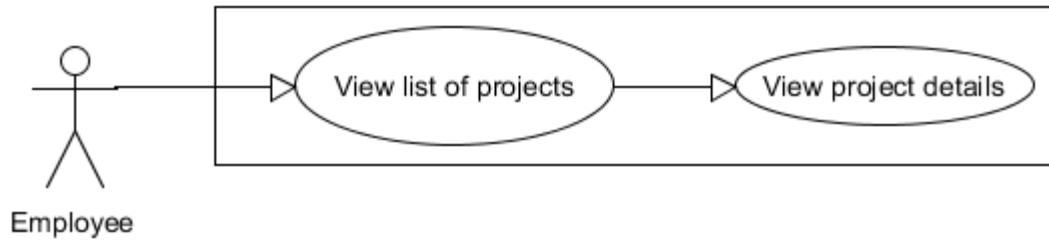
Use case: Delete Employee account as Project Admin	Taiga ID: #216
Stakeholders and goals: Project Admin - Delete Employee account	
Description: The Project Admin deletes Employee account	
Actors: Project Admin	
Pre-condition: User is logged in as Project Admin and the chosen Employee account exists	
Post-condition: User has deleted the Employee account	
Trigger: The Project Admin wants to delete Employee account	
<p>Normal flow:</p> <ol style="list-style-type: none"> 1. The user clicks on All users 2. The system brings the user to the all users page 3. The user click on the Manage Employees on the side panel 4. The user clicks on the delete icon for the desired user 5. The system prompts a confirmation from the user 6. The user clicks on the ok button 7. The system verifies the request from the user 8. The system deletes the selected user. 	
Sub-flows: None	
Alternative/Exceptional flows:	
6.a The user clicks on the cancel button and nothing happens	
7.a The system fails to verify the request from the user and prompts the user that the deletion was a failure	

Use case: Edit user role as Super Admin	Taiga ID: #291
Stakeholders and goals: Super Admin- edit user role	
Description: The Super Admin edit the role of selected user	
Actors: Super Admin	
Pre-condition: User is logged in as Super Admin and is at the all users page	
Post-condition: Role of the selected user has been edited	
Trigger: The super admin want to edit role of selected user	
<p>Normal flow:</p> <ol style="list-style-type: none"> 1. The user click on the account name of the desired user 2. The system brings the user to the corresponding user page 3. The user clicks on the Edit button under the Role section 4. The user selects the desired role for the corresponding account 5. The user clicks on the submit button 6. The system verifies the request from the user 7. The system prompts that the role is updated successfully 	
Sub-flows: None	
Alternative/Exceptional flows:	
6.a The system fails to verify the request from the user and prompts the user that an error has occurred	

Use case: Edit user account contact info as Super Admin	Taiga ID: #292
Stakeholders and goals: Super Admin - edit user account contact info	
Description: The Super Admin edit the contact info of the selected user	
Actors: Super Admin	
Pre-condition: User is logged in as Super Admin and is at the view user page	
Post-condition: The contact info of the selected user has been updated	
Trigger: The Super Admin wants to edit contact info of desired user	
<p>Normal flow:</p> <ol style="list-style-type: none"> 1. The user clicks on the account name of the desired user 2. The system brings the user to the corresponding user page 3. The user clicks on the edit button under the contact info section 4. The user enter the relevant information 5. The user clicks on the save button 6. The system verifies the request from the user 7. The system saves the information entered 	
Sub-flows: None	
<p>Alternative/Exceptional flows:</p> <p>6.a The system fails to verify the request from the user and prompts the user that the request was not saved</p>	

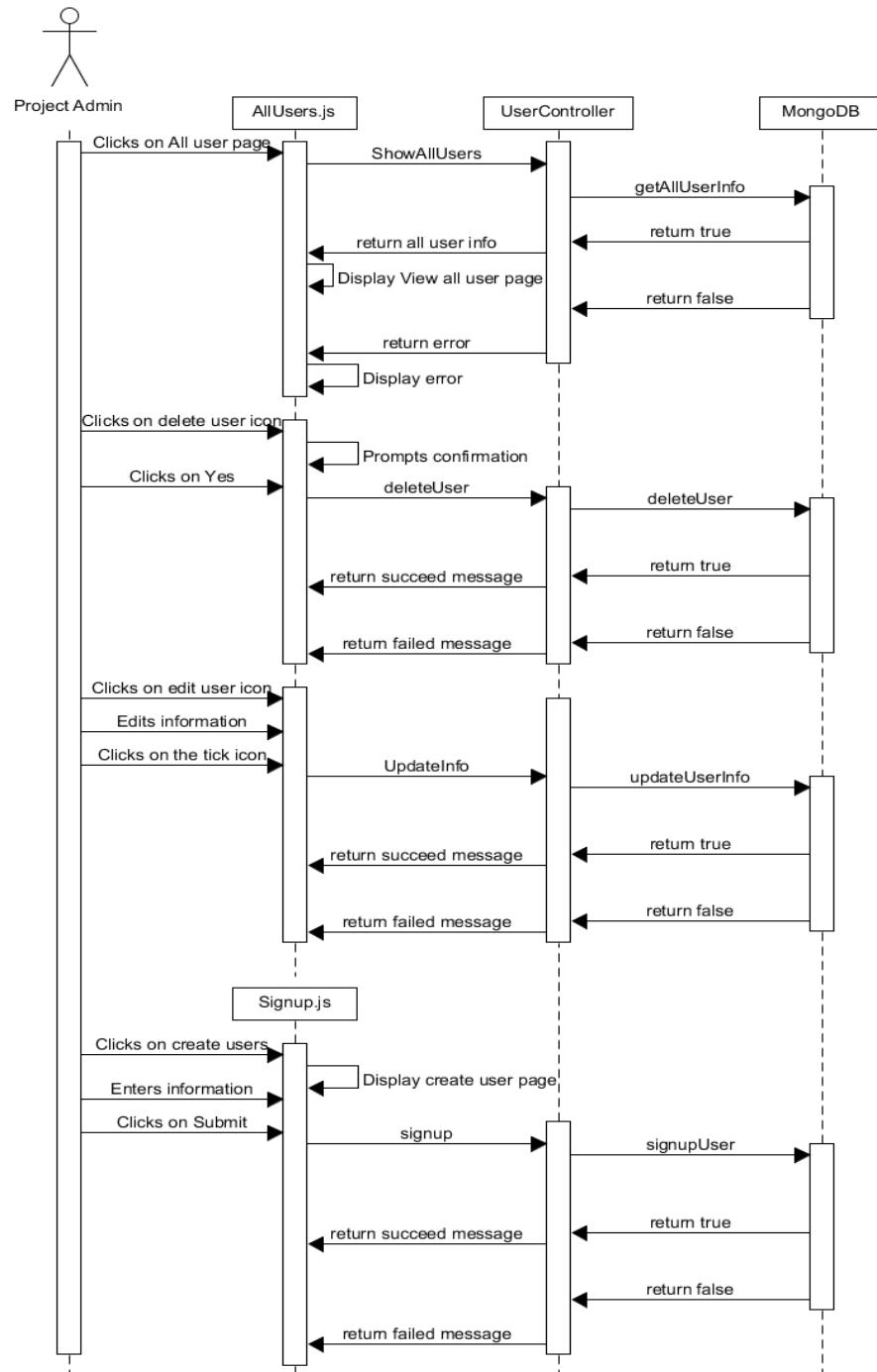
Use case: Edit Employee account contact info as Project Admin	Taiga ID: #293
Stakeholders and goals: Project Admin - edit Employee contact info	
Description: The Project Admin edit the contact info of the selected Employee	
Actors: Project Admin	
Pre-condition: User is logged in as Project Admin and is at the all users page	
Post-condition: The contact info of the selected Employee has been updated	
Trigger: The Project Admin wants to edit contact info of desired Employee	
Normal flow:	
1. The user entered the account name of the desired user 2. The user clicks on the account name of the desired user 3. The system brings the user to the corresponding user page 4. The user clicks on the edit button under the contact info section 5. The user enter the relevant information 6. The user clicks on the save button 7. The system verifies the request from the user 8. The system saves the information entered	
Sub-flows: None	
Alternative/Exceptional flows: 6.a The system fails to verify the request from the user and prompts the user that the request was not saved	

Use Case Diagrams

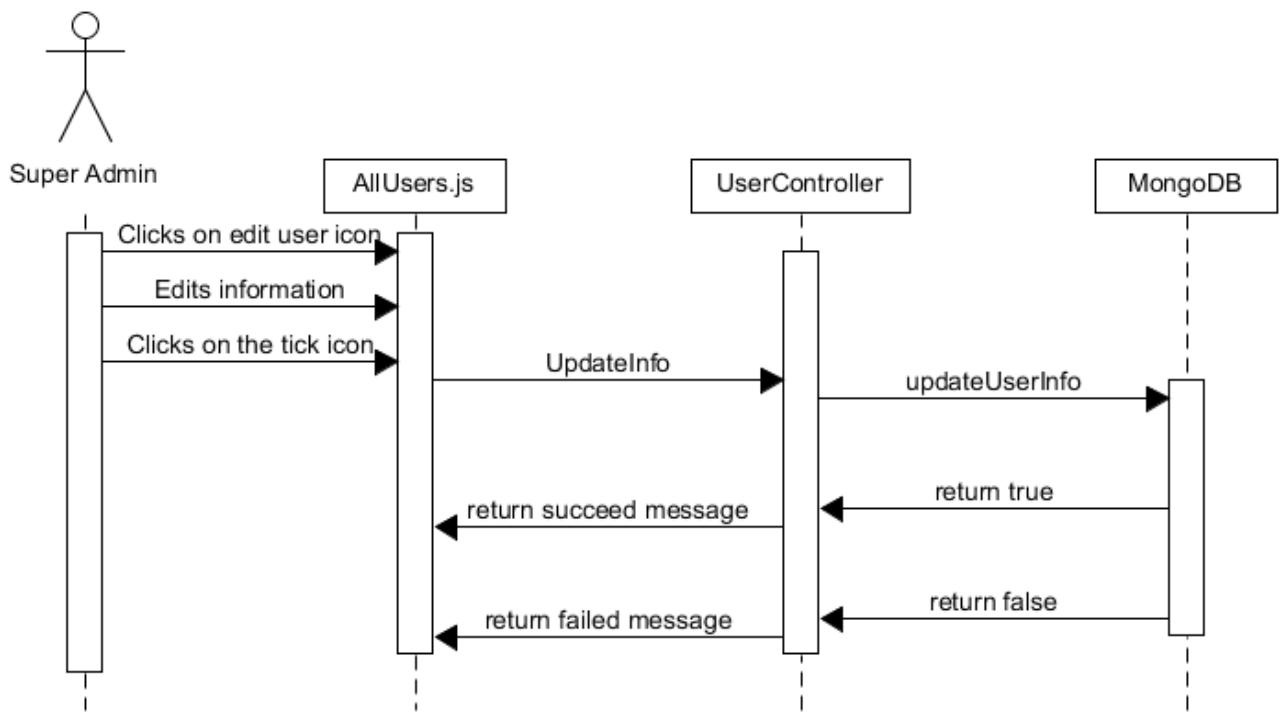


Sequence Diagrams

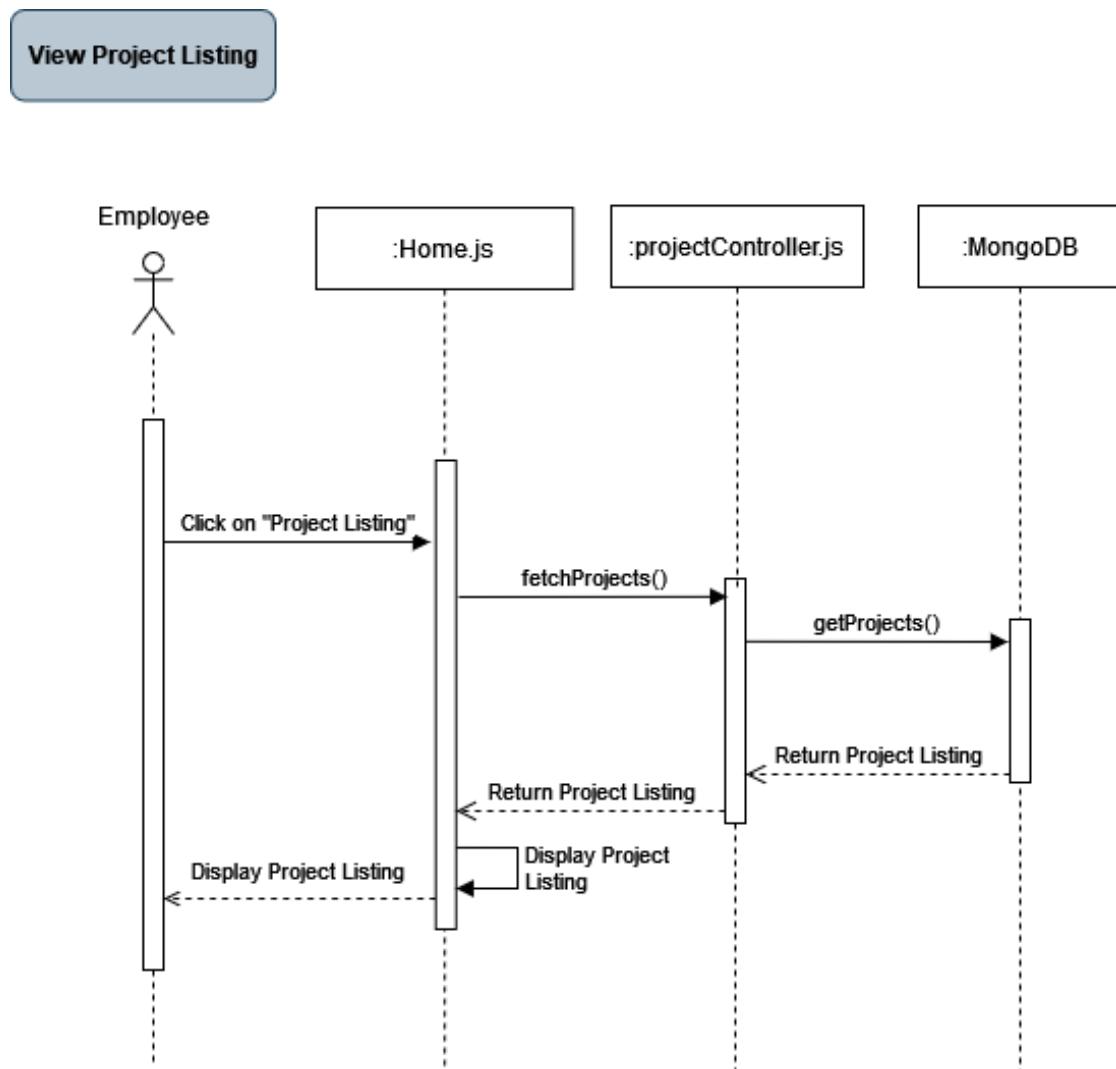
- Project Admin account creation



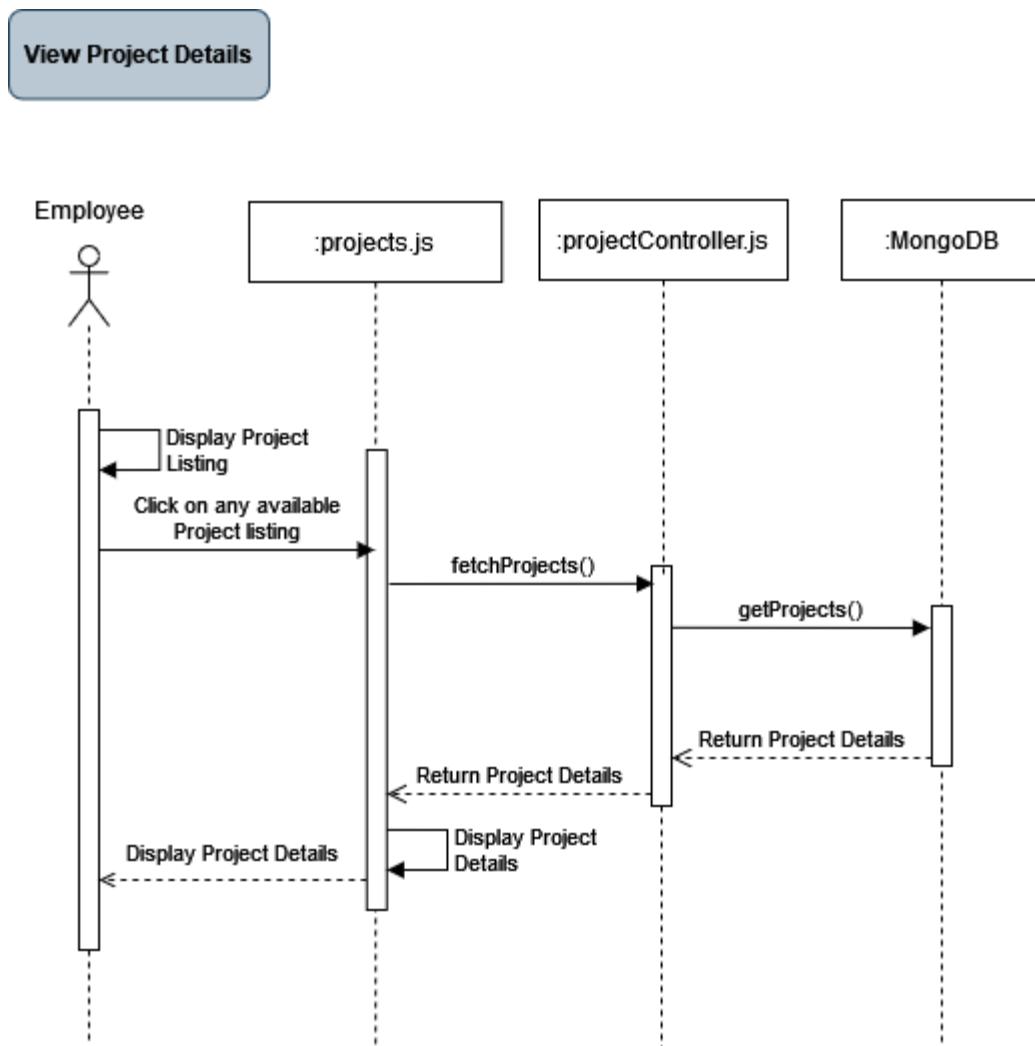
- Super Admin manage user details



- Employee View Project Listing



- Employee View Project Details



User Interface Design (Wireframes)

- Project Admin setting Assignment Threshold

The wireframe shows a header with navigation links: Assignment, Create Project, Organisation Skills, All Users, Create Account, Profile, and Log out. Below the header, there are two cards labeled "Assignment Q1" and "Assignment Q2", each containing project details like number of projects, employees, threshold, start date, and end date. To the right, there is a form titled "Add a New Assignment" with fields for Assignment Title, Start Date, End Date, and Threshold (with a dropdown menu), followed by a "Start" button.

In this page, the Project Admin will be at the Project Assignment page where he/she will be creating a new assignment. During this process, they will set the Assignment Threshold.

- Employee View Project Listings / Main Page

The wireframe shows a header with navigation links: Project Listings, Select Preference, Assigned Projects, Profile, and Log out. Below the header, there are three cards for "Health App", "Water Treatment", and "E-Commerce Website", each listing required skills and a brief description of the project.

In this page, the Employee will be able to see the list of project listings available for selection of preference. This page also serves as their main page of the system.

- Employee View Project Details

Project Details

Name of Project:
E-Commerce Website

Project Details:
This project is required to create an E-Commerce Platform for an existing company to allow sales of their products online.

Estimated Total Effort (Days Needed):
31 Days

Skills Required:
Java (Expert)
MongoDB (Advanced)

[Go Back](#)

After selecting a Project from the project listing page, the Employee will be able to see the details of the project listing.

- Super Admin Create Organization Codes

Add a new Organisation Listing

Organisation Name:

Organisation Code:

Organisation Description:

[Add New Organisation Listing](#)

On this page, the Super Admin will be able to create a new Organization with unique codes as well as the Organisation Name and Description.

- Project Admin Create Employee Account

Account Creation

Name:

Contact Number: Role:

Email Address:

Password:

Confirm Password:

On this page, the Project Admin will be able to create a new Employee account for their organisation

- Project Admin Deleting User

Employees

Manage Employee

Search Username:

Employee1 Role: Employee Email: tian@gmail.com Contact No: 92349999	<input type="button" value="Delete"/>
Employee2 Role: Employee Email: employee1@gmail.com Contact No: 82345123	<input type="button" value="Delete"/>
Employee3 Role: Employee Email: employee2@gmail.com Contact No: 888851234	<input type="button" value="Delete"/>

Confirm Delete User?

Selected User:
Employee1

On this page, the admin will have to click on “Manage Employee” on the left and click on the “Dustbin” icon of the desired employee to remove. A confirmation popup will ask the Project Admin to confirm their decision.

- Super Admin Edit User Role

The screenshot shows a user profile for an employee. On the left, there's a sidebar labeled 'User Details' with the organization 'SIM'. The main area displays the following fields:

- Name:** Employee
- Email address:** employee@gmail.com
- Role:** Employee (selected in a dropdown menu)
- Contact Number:** 93421521

There are two blue 'Edit' buttons: one next to the role dropdown and one next to the contact number input field.

On this page, Super Admin will be able to edit the user's Role as well as Contact Information. Super Admin will have to click on the "Edit" Button beside the role in order to change the user's role. Once done so just click on the "Save" Button to save the changes.

- Super Admin Edit User Contact Info

This screenshot is identical to the one above, showing the same user profile for an employee with the same details and 'Edit' buttons.

On this page, Super Admin will be able to edit the user's Role as well as Contact Information. Super Admin will have to click on the "Edit" Button beside the Contact Number in order to change the user's contact info. Once done so just click on the "Save" Button to save the changes.

- Project Admin Editing User Contact Info

Automatic Project Assignment

[Assignment](#) [Create Project](#) [Organisation Skills](#) [All Users](#) [Create Account](#) [Profile](#) [Log out](#)
User Information

Organisation MSFT	Skills Java: Intermediate Node.js: Beginner PHP: Advanced C#: Intermediate Swift: Beginner	Name Employee
Projects Water Treatment Health App	Email address employee@gmail.com	Role Employee
	Contact Number 93421521	Edit

On this page, Project Admin will be able to edit the user's contact information by clicking on the "Edit" Button beside the role in order to change the user's Contact Number in order to change the user's contact info. Once done so just click on the "Save" Button to save the changes.

Sprint overview

Sprint 4 03 Dec 2022 to 16 Dec 2022

100% ✓ 45 total points 45 completed points | 0 open tasks 81 closed tasks | 0 cocaine doses

Filters: subject or reference ZOOM: Detailed

USER STORY	NEW	IN PROGRESS	READY FOR TEST	CLOSED	NEEDS INFO
#11 As a Project Admin, I want to be able to set the project threshold, ...					
#29 As an Employee, I want to be able to see a list of the available projects ...					
#30 As an Employee, I want to view the projects' details so that I can...					
#40 As a Super Admin, I want to be able to create organization so that I...					
#116 As a Project Admin, I want to be able to create Employee...					
#216 As a Project Admin, I want to be able to delete Employee...					
#291 As a Super Admin, I want to edit user roles so that I can update...					
#292 As a Super Admin, I want to edit user account contact info ...					
#293 As a Project Admin, I want to be to edit employee contact inf...					
Storyless tasks	+				

SPRINT ISSUES | Tags +

Sprint 5

Progress Report	Date : 17 December 2022
Project Name	Automatic Project Assignment
Team	FYP-22-S4-32
Sprint Duration	17 December 2022– 30 December 2022
Work completed during this sprint	
Do-up of Project Progress Report v2 - Sprint 5 Do-up of Wireframe for Sprint 5 Do-up of User Manual Document Do-up of Necessary Diagrams Continuation of fault-testing code and do-up of test cases Begin coding of project automation process	
Work planned for next sprint	
Do-up of Project Progress Report v2 - Sprint 6 Do-up of Wireframe for Sprint 6 Do-up of User Manual Document v2 Do-up of Necessary Diagrams Continuation of fault-testing code and do-up of test cases Begin Unit Testing and Integration Testing Finish coding project automation process	
What is going well	
Team is communicating well No errors/bugs were found during this portion of the testing process	
Setbacks faced	
Work planned was slightly pushed back due to holidays	
Suggestions	
Consider holidays as a factor and reduce assigned workload during this period	

Use Case Description

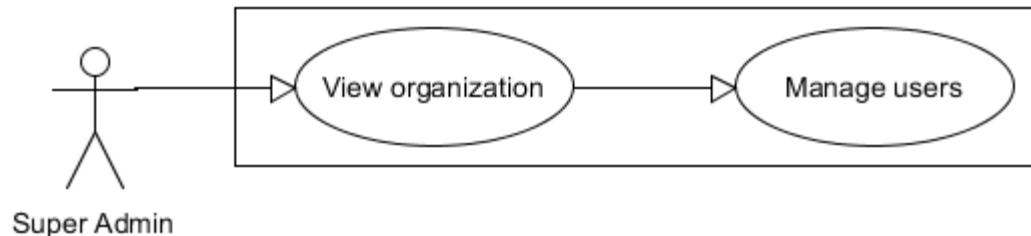
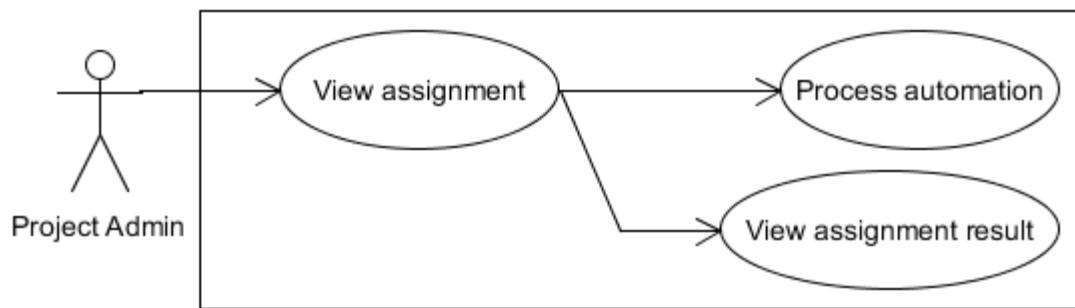
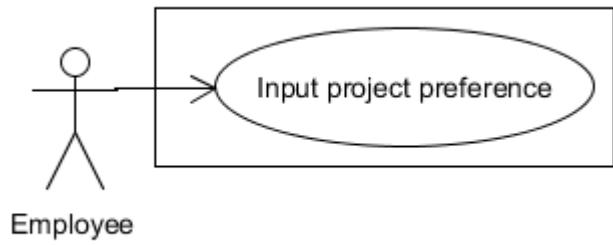
Use case: Process the automation process as Project Admin	Taiga ID: #16
Stakeholders and goals: Project Admin - Process the automation process	
Description: The Project Admin starts the automatic assignment process	
Actors: Project Admin	
Pre-condition: User is logged in as Admin	
Post-condition: The automatic assignment process starts	
Trigger: The Project Admin wants to start the automatic assignment process	
<p>Normal flow:</p> <ol style="list-style-type: none"> 1. The user click on Assignment 2. The system brings the user to the assignment page 3. The user click on the desired assignment 4. The system brings the user to the relevant assignment page 5. The user clicks on the process automatic assignment button 6. The system verifies the request from the user 7. The system prompts the user that the automatic assignment has been processed 	
Sub-flows: None	
<p>Alternative/Exceptional flows:</p> <p>6.a The system fails to verify the request from the user, prompts the user that an error has occurred and brings the user back to the assignment page</p>	

Use case: View assignment result as Project Admin	Taiga ID: #17
Stakeholders and goals: Project Admin - View assignment result	
Description: The Project Admin wants to view the result of the automatic assignment process	
Actors: Project Admin	
Pre-condition: User is logged in as Admin and the automated assignment process is successful	
Post-condition: User views the result of the automated assignment process	
Trigger: The Project Admin runs the automated assignment process	
Normal flow: <ol style="list-style-type: none">1. The user clicks on the view statistics link on the side panel2. The user views the result of the automated assignment process	
Sub-flows: None	
Alternative/Exceptional flows: None	

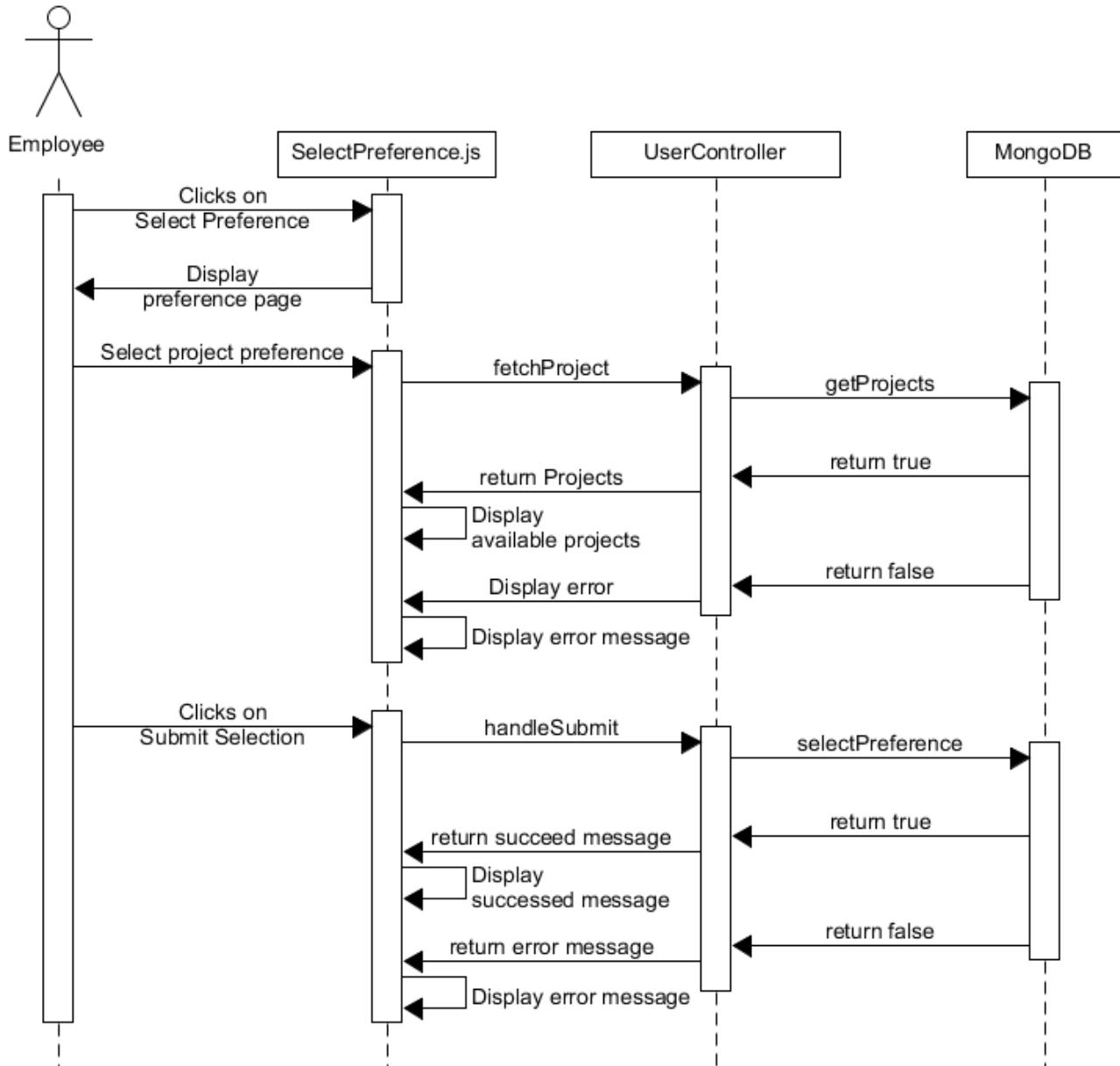
Use case: Input project preference as Employee	Taiga ID: #31
Stakeholders and goals: Employee - Input project preference	
Description: The Employee inputs their project preference	
Actors: Employee	
Pre-condition: User is logged in as Employee and project exists	
Post-condition: User inputted their project preference	
Trigger: The Employee wants to input their project preference	
<p>Normal flow:</p> <ol style="list-style-type: none"> 1. The user clicks on select preference 2. The system bring the user to the select preference page 3. The user selects their first, second, and third preference 4. The user clicks on the submit selection button 5. The system verifies the users' request and saves the users' selection 6. The system brings the user back to the project listing page 	
Sub-flows: None	
<p>Alternative/Exceptional flows:</p> <p>5.a The system fails to verify the request from the user, and prompts the user to ensure all fields are selected and that no project are duplicated</p>	

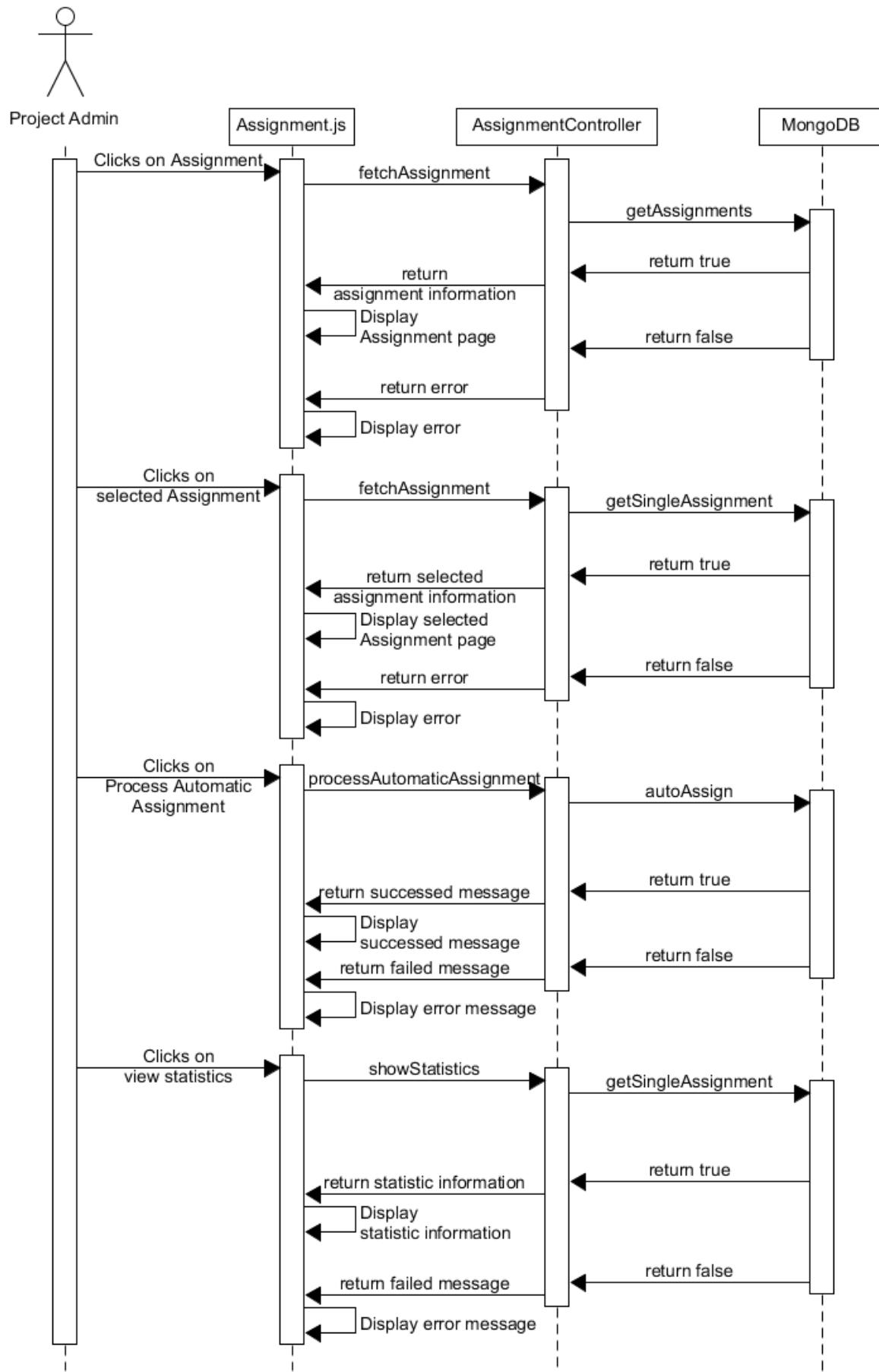
Use case: Manage users in an Organization as Super Admin	Taiga ID: #42
Stakeholders and goals: Super Admin - Manage users in an Organization	
Description: The Super Admin manages users in an Organization	
Actors: Super Admin	
Pre-condition: User is logged in as Super Admin and the chosen Organization exists	
Post-condition: User has managed the users in an Organization	
Trigger: The Super Admin wants to manage users in an Organization	
Normal flow:	
1. The user clicks the desired organisation name 2. The system brings the user to the corresponding organisation page 3. The user clicks on Manage Users	
Sub-flows: None	
Alternative/Exceptional flows: None	

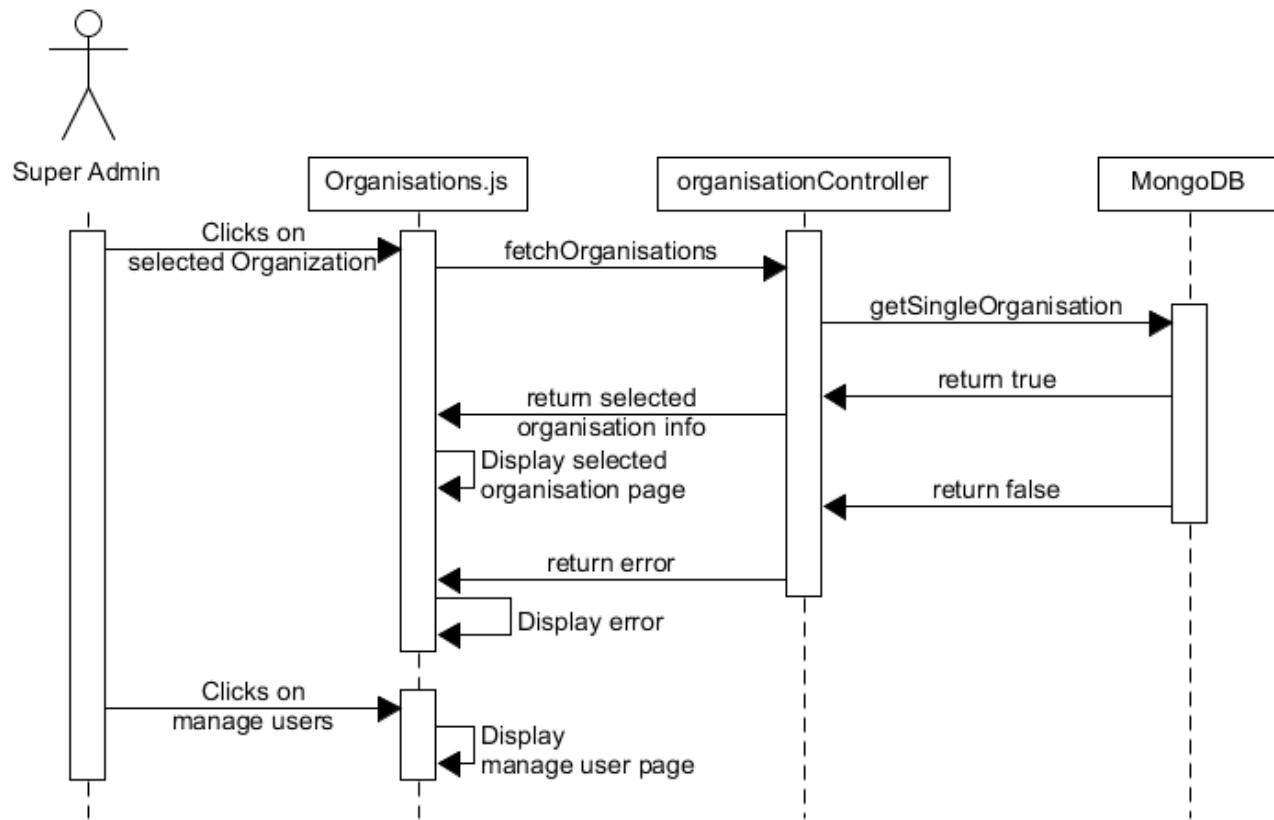
Use Case Diagrams



Sequence Diagrams







User Interface Design (Wireframes)

- Project Admin Process Automation Process

The wireframe shows a dashboard for a Project Admin. On the left is a sidebar with 'Assignment Details' (Projects, Employees, View Statistics). The main area is titled 'Assignment Q1' (Status: Active) and contains sections for 'Projects in this assignment' (Water Treatment, Health App, E-Commerce Website) and 'Employees in this assignment by email' (emp1 - emp1@gmail.com, emp2 - emp2@gmail.com, emp3 - emp3@gmail.com, emp4 - emp4@gmail.com, emp5 - emp5@gmail.com). A blue button 'Process Automatic Assignment' is at the top right, and a blue button 'Update Status' is at the bottom.

In this page, the Project Admin will be able to see the Assignment Details. The admin will have to click on the “Process Automatic Assignment” to automate the assignment of the projects to employees.

- Project Admin View Assignment Result

The wireframe shows a dashboard for a Project Admin. On the left is a sidebar with 'Assignment Details' (Projects, Employees, View Statistics). The main area is titled 'Overall Statistics' and features a horizontal bar chart showing project preferences: 1st Choice (blue bar), 2nd Choice (red bar), 3rd Choice (green bar), Not Assigned (orange bar), and Non Selected (yellow bar).

In this page, the Employee will be able to see the list of project listings available for selection of preference. This page also serves as their main page of the system.

- Employee Input Project Preference

Input/Update Project Preference

1st Choice

2nd Choice

3rd Choice

Submit

In this page, the Employee will be able to choose their project preferences based on the list of projects in the current assignment phase.

- Super Admin Manager Users in an Organization

Organisation 1: SIM

Organisation Description:
 SIM is a private tertiary/university education institute that works with overseas institutions.

[Delete](#) [Create Employee/Project Admin for SIM](#)

Organisation Users

Search Users	
Tian	
Employee	
Role: Project Admin	
Email: tian@gmail.com	
Contact No: 923456789	
Role: Employee	
Email: employee@gmail.com	
Contact No: 823456123	

[All Users](#) [Project Admins](#) [Employees](#) [Manage Users](#)

In this page, Super Admin will be able to manage users belonging in an Organization. They will be able to delete them from the list of users by clicking on the “Dustbin” icon beside the desired user details.

Sprint overview

The screenshot shows a project management interface for 'Sprint 5' from 17 Dec 2022 to 30 Dec 2022. The board has columns: NEW, IN PROGRESS, READY FOR TEST, CLOSED, and NEEDS INFO. The NEW column has one item: '#16 As a Project Admin, I want to be able to process the automation...'. The IN PROGRESS column has four items: '#17 As a Project Admin, I want to be able to view the project assignmen...', '#31 As an Employee, I want to be able to input my project preferences, ...', '#42 As a Super Admin, I want to be able to manage users in an organizatio...', and 'Storyless tasks'. The READY FOR TEST, CLOSED, and NEEDS INFO columns each have three items represented by small icons. At the bottom, there are sections for 'SPRINT ISSUES' and 'Tags'.

USER STORY	NEW	IN PROGRESS	READY FOR TEST	CLOSED	NEEDS INFO
#16 As a Project Admin, I want to be able to process the automation...				3 icons	
#17 As a Project Admin, I want to be able to view the project assignmen...				3 icons	
#31 As an Employee, I want to be able to input my project preferences, ...				3 icons	
#42 As a Super Admin, I want to be able to manage users in an organizatio...				3 icons	
Storyless tasks					

Sprint 6

Progress Report	Date : 31 December 2022
Project Name	Automatic Project Assignment
Team	FYP-22-S4-32
Sprint Duration	31 December 2022– 13 January 2023
Work completed during this sprint	
Do-up of Project Progress Report v2 - Sprint 6 Do-up of Wireframe for Sprint 6 Update User Manual Document Do-up of Technical Manual Document Do-up of Necessary Diagrams Continuation of fault-testing code and do-up of test cases Begin Unit Testing and Integration Testing Finish coding project automation process Finish change password function	
Work planned for next sprint	
Do-up of Project Progress Report v2 - Sprint 7 Do-up of Wireframe for Sprint 7 Update User Manual Document Update Technical Manual Document Do-up of Necessary Diagrams Continuation of fault-testing code and do-up of test cases Begin Unit Testing and Integration Testing v2	
What is going well	
Team is communicating well Team managed to finish planned workload ahead of time in time for the CNY holidays	
Setbacks faced	
Workload this sprint was slightly heavier to prepare for CNY holiday	
Suggestions	
-	

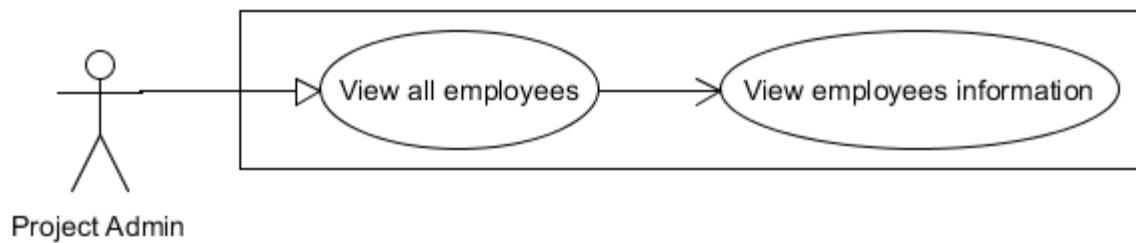
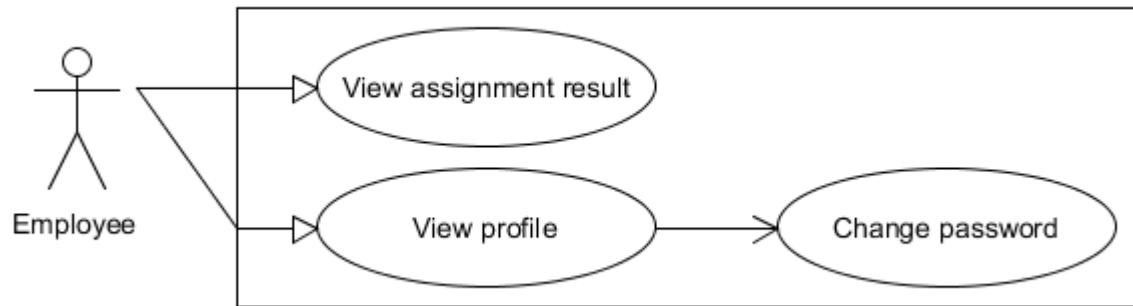
Use Case Description

Use case: View employee information as Project Admin	Taiga ID: #15
Stakeholders and goals: Project Admin - View employee information	
Description: The Project Admin views the information of employees	
Actors: Project Admin	
Pre-condition: User is logged in as Admin and the chosen employee exists	
Post-condition: User views the information of the chosen employee	
Trigger: The Project Admin wants to view information of the chosen employee	
<p>Normal flow:</p> <ol style="list-style-type: none"> 1. The user clicks on All Users 2. The system brings the user to the all users page 3. The user clicks on the account name of the desired user 4. The system bring the user to the profile page of the chosen user 5. The user views the information available 	
Sub-flows: None	
Alternative/Exceptional flows: None	

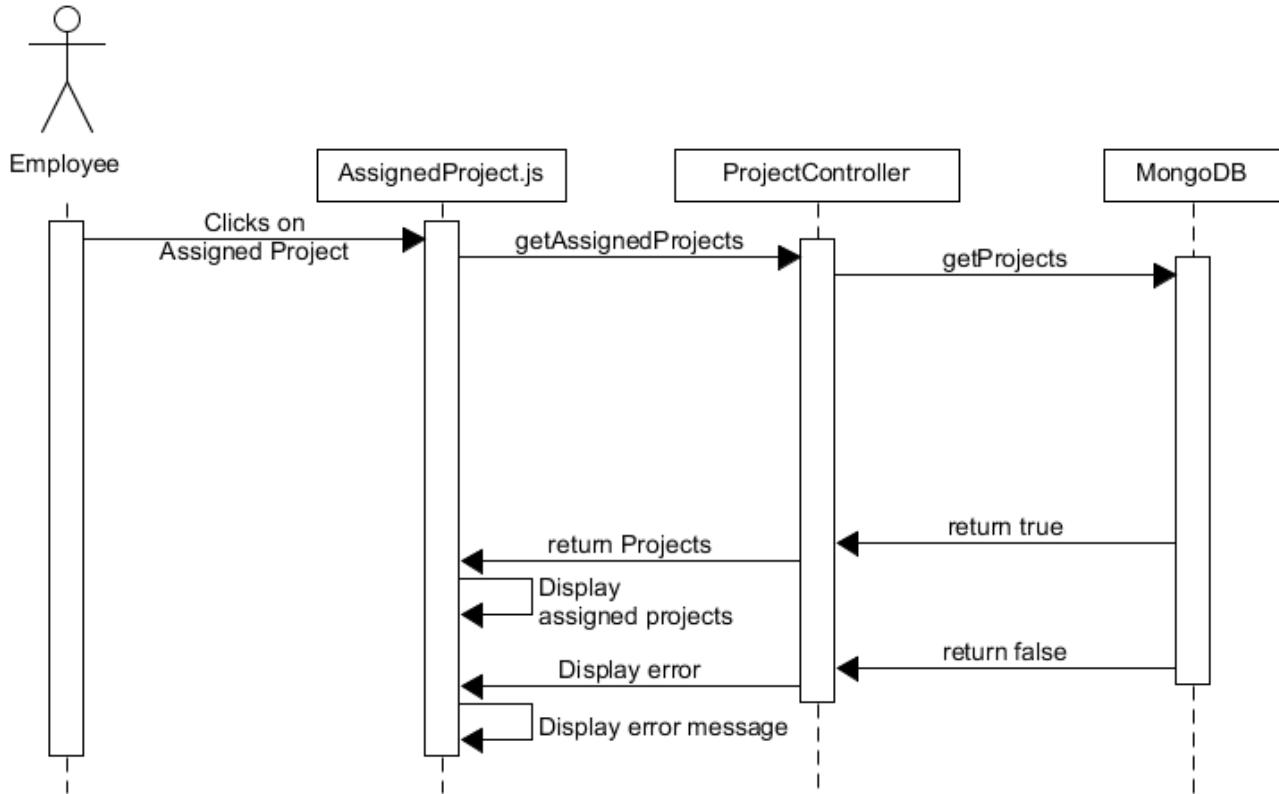
Use case: View assignment result as Employee	Taiga ID: #33
Stakeholders and goals: Employee - View assignment result	
Description: The Employee wants to view the result of the automatic assignment process	
Actors: Employee	
Pre-condition: User is logged in as Employee and the automated assignment process is successful	
Post-condition: User views the result of the automated assignment process	
Trigger: The Employee wants to view the result of the automated assignment process	
Normal flow: <ol style="list-style-type: none">1. The user clicks on assigned project2. The system brings the user to their assigned project page3. The user views the result of the assigned project	
Sub-flows: None	
Alternative/Exceptional flows: None	

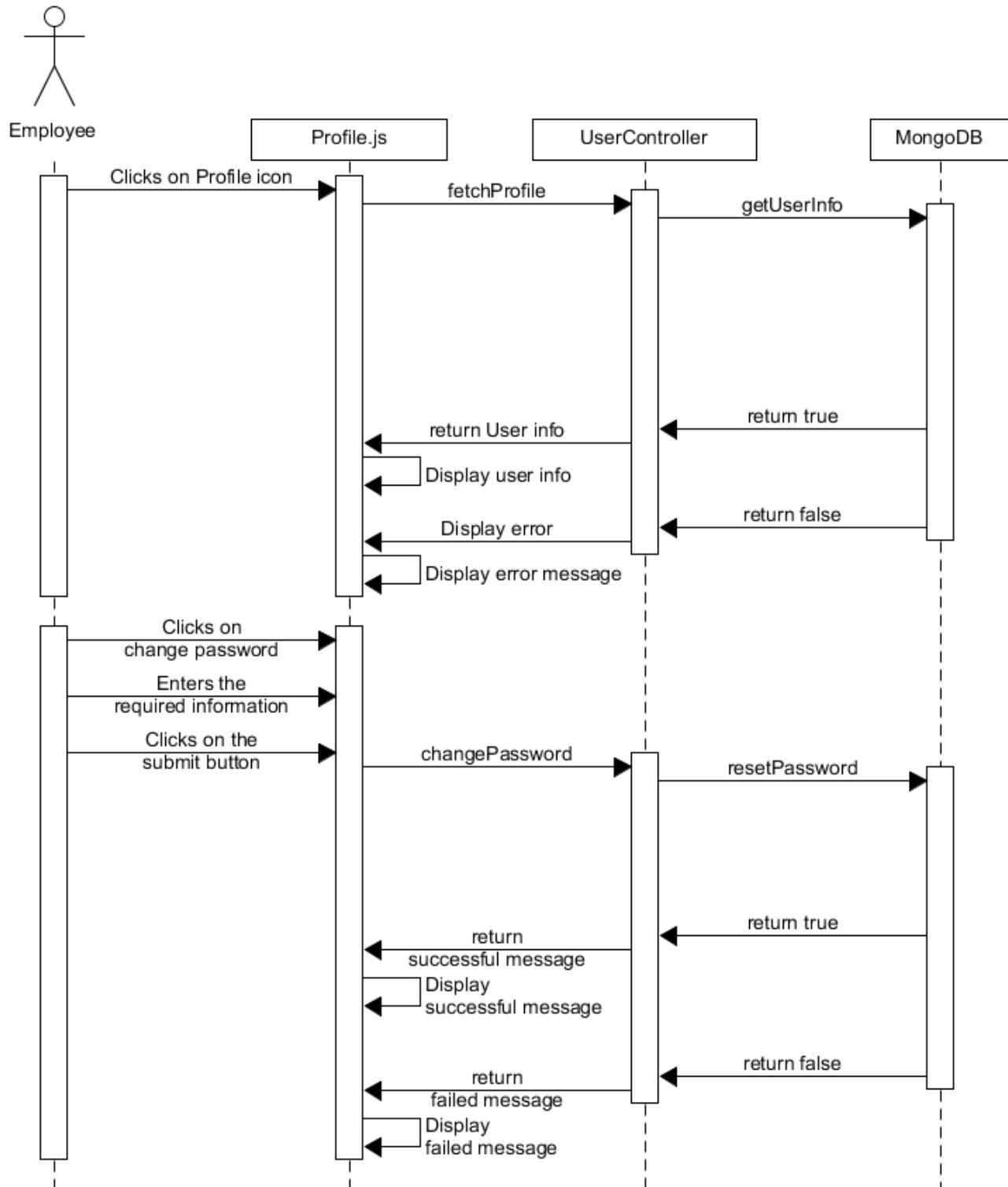
Use case: Change and reset password as Employee	Taiga ID: #225
Stakeholders and goals: Employee - Change and reset password	
Description: The Employee changes and resets their password	
Actors: Employee	
Pre-condition: User is logged in as Employee	
Post-condition: User has changed and reset their password	
Trigger: The Employee wants to change and reset password	
<p>Normal flow:</p> <ol style="list-style-type: none"> 1. The user clicks on their profile icon 2. The system brings the user to their profile page 3. The user clicks on change password 4. The system brings the user to the change password page 5. The user enters their current password and the new password 6. The user clicks the submit button 7. The system verifies the request from the user 8. The system saves the changes made and prompts the user that the save was successful 	
Sub-flows: None	
Alternative/Exceptional flows:	
6.a The system fails to verify the request from the user and prompts the user that the changes was not saved, the system remains in the change password page and awaits user input	

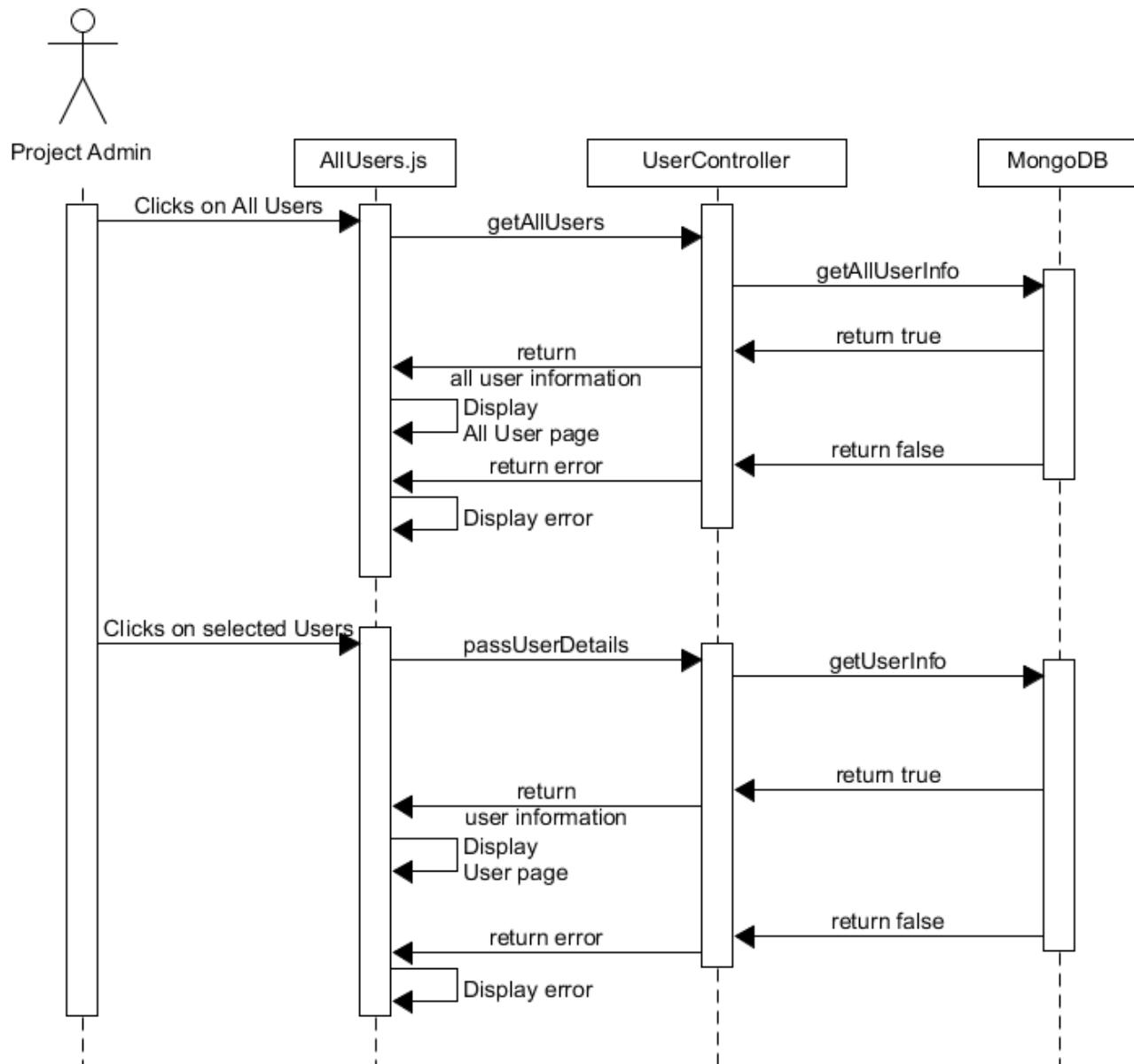
Use Case Diagrams



Sequence Diagrams







User Interface Design (Wireframes)

- Project Admin View Employee Information

The wireframe shows a user interface for viewing employee information. At the top, there's a navigation bar with links for Assignment, Create Project, Organisation Skills, All Users, Create Account, Profile, and Log out. Below the navigation is a section titled "User Information" which includes three main boxes: "Organisation" (containing "MSFT"), "Skills" (listing Java: Intermediate, Node.js: Beginner, PHP: Advanced, C#: Intermediate, Swift: Beginner), and "Projects" (listing Water Treatment and Health App). To the right is a detailed view of an employee profile with fields for Name (Employee), Email address (employee@gmail.com), Role (Employee), and Contact Number (93421521). A blue "Edit" button is located at the bottom right of this panel.

In this page, the Project Admin will be able to see Employee's Information such as the Projects they have been assigned to as well as their skill competency along with their contact details.

- Employee View Assignment Result

The wireframe shows a user interface for viewing assignment results. At the top, there's a navigation bar with links for Project Listings, Select Preference, Assigned Projects, Profile, and Log out. Below the navigation is a section titled "Assigned Projects" which lists two projects: "Water Treatment" and "Health Management App".

In this page, the Employee will be able to see projects they have been assigned to after the automatic assignment has been done.

- Employee Change Password

The screenshot shows a user interface for changing a password. On the left, there is a sidebar with navigation links: Account Information, Organisation Information, Skills Competency, Project Preferences, and Change Password. The 'Change Password' link is highlighted in blue. The main content area is titled 'Change Password'. It contains three input fields: 'Old Password', 'New Password', and 'Confirm New Password'. Below these fields is a blue 'Save' button. At the top right of the main area, there are several small links: Project Listings, Select Preference, Assigned Projects, Profile, and Log out.

In this page, the Employee will be able change their password by filling in the form. Once it passes all the validation checks, the password will be successfully updated.

Sprint overview

The screenshot shows a project management interface with a top navigation bar for 'Projects' and various status icons. Below the header is a summary bar for 'Sprint 6' (31 Dec 2022 to 13 Jan 2023) showing progress (100%), total points (15), completed points (15), open tasks (0), closed tasks (27), and cocaine doses (0). A 'Filters' dropdown and a search bar are also present.

The main area is a Kanban board with columns: NEW, IN PROGRESS, READY FOR TEST, CLOSED, and NEEDS INFO. The 'IN PROGRESS' column is highlighted in orange. The board lists several user stories:

- #115 As a Project Admin, I want to be able to view employees' information... (Status: In Progress)
- #33 As an Employee, I want to be able to see the results of the project... (Status: In Progress)
- #225 As an Employee, I want to be able to change and reset my password... (Status: In Progress)
- Storyless tasks (Status: In Progress)

Each story card includes a '+' icon and a three-dot menu icon. To the right of each card is a vertical column of five circular icons representing team members or reviewers.

At the bottom of the board are buttons for 'SPRINT ISSUES' and 'Tags'. On the far left, there is a vertical sidebar with icons for search, filter, and other project management functions.

Sprint 7

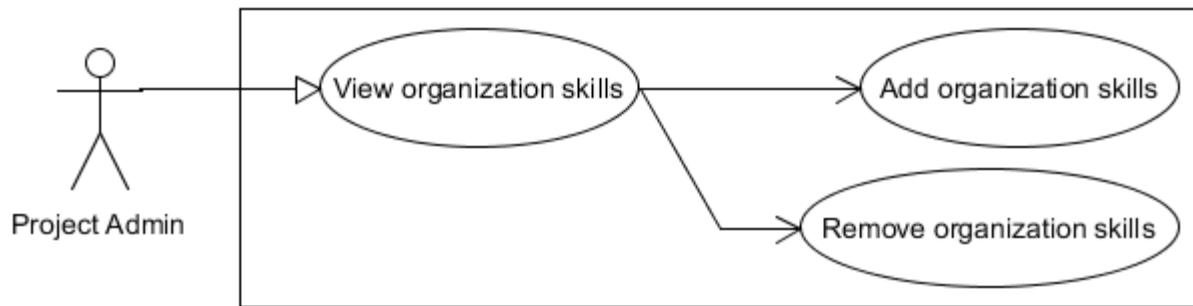
Progress Report	Date : 14 January 2023
Project Name	Automatic Project Assignment
Team	FYP-22-S4-32
Sprint Duration	14 January 2023 – 27 January 2023
Work completed during this sprint	
Do-up of Project Progress Report v2 - Sprint 7 Do-up of Wireframe for Sprint 7 Update User Manual Document Update Technical Manual Document Do-up of Necessary Diagrams Continuation of fault-testing code and do-up of test cases Begin Unit Testing and Integration Testing v2 Refining and Finalising Code Prepare Live Server for Application	
Work planned for next sprint	
Do-up of Project Progress Report v2 - Sprint 8 Do-up of Wireframe for Sprint 8 Update User Manual Document Update Technical Manual Document Do-up of Necessary Diagrams Continuation of fault-testing code and do-up of test cases Begin Unit Testing and Integration Testing v3 Finalising Code	
What is going well	
Team is communicating well Team managed to finish planned workload ahead of time	
Setbacks faced	
-	
Suggestions	
-	

Use Case Description

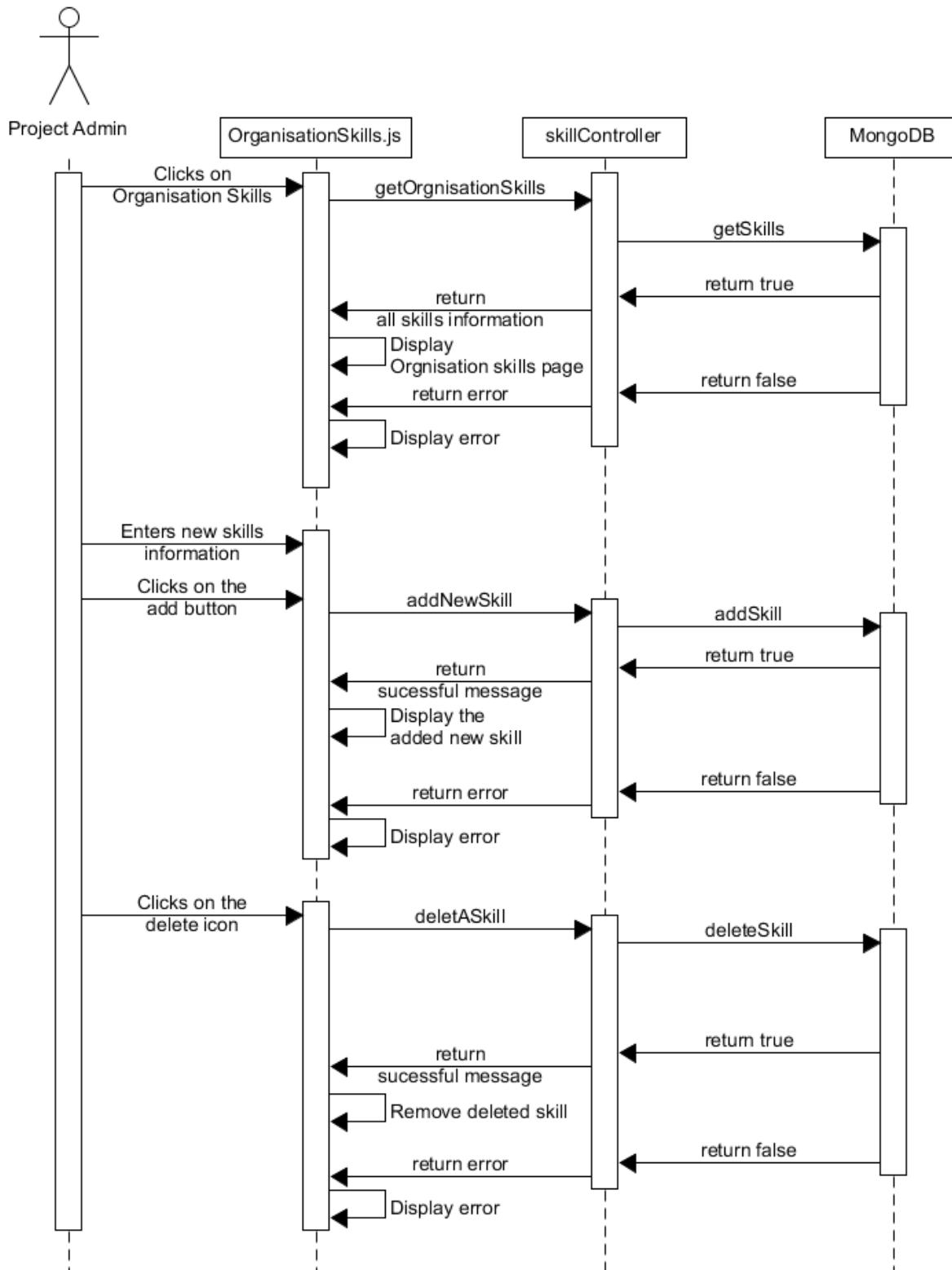
Use case: Add skills to organisation list as Project Admin	Taiga ID: #375
Stakeholders and goals: Project Admin - Add skill to organisation list	
Description: The Project Admin add skills to the organisation list	
Actors: Project Admin	
Pre-condition: User is logged in as Project Admin and adds skills to organisation list	
Post-condition: The skill has been added to the organisation list	
Trigger: The Project Admin wants add skill to the organisation list	
<p>Normal flow:</p> <ol style="list-style-type: none"> 1. The user clicks on Organization Skills 2. The system brings the user to the organisation skills page 3. The user enters new skills information and clicks the add button 4. The system verifies the request from the user 5. The system adds the new skill to the organisation skill list 	
Sub-flows: None	
Alternative/Exceptional flows:	
5.a The system fails to verify the information entered and prompts the user that an error has occurred	

Use case: Remove skills from organisation list as Project Admin	Taiga ID: #376
Stakeholders and goals: Project Admin - remove skill from organisation list	
Description: The Project Admin remove skills from the organisation list	
Actors: Project Admin	
Pre-condition: User is logged in as Project Admin, removes skills from organisation list	
Post-condition: The skill has been removed from the organisation list	
Trigger: The Project Admin wants remove skill from the organisation list	
<p>Normal flow:</p> <ol style="list-style-type: none"> 1. The user clicks on Organization Skills 2. The system brings the user to the organisation skills page 3. The user click on the delete icon beside the desired selection 4. The system prompts a confirmation from the user 5. The user clicks on the ok button 6. The system verifies the request from the user 7. The system deletes the selected skill 	
Sub-flows: None	
<p>Alternative/Exceptional flows:</p> <p>5.a The user clicks on the cancel button and nothing happens</p> <p>6.a The system fails to verify the request from the user and prompts that an error has occurred.</p>	

Use Case Diagrams



Sequence Diagram



User Interface Design (Wireframes)

- Project Admin Add Skills to Organization

The wireframe shows a user interface for adding skills. At the top, there is a navigation bar with links: Assignment, Create Project, Organisation Skills, All Users, Create Account, Profile, and Log out. Below the navigation bar, the page title is "Organisation Skills". There is a text input field labeled "Add a New Skill" and a blue "Add" button. Below this, there is a list of three skills: Java, PHP, and React, each with a small trash can icon to its right.

In this page, the Project Admin will be able to see the list of Skills available for selection in their organization. To add new skills into the Organisation, they will have to type in the new skill name in the “Add a New Skill” text field. Once confirmed, Project Admin will have to click on the “Add” button and the new skill will be added into the Organization.

- Project Admin Remove Skills from Organization

The wireframe shows a user interface for removing skills. At the top, there is a navigation bar with links: Assignment, Create Project, Organisation Skills, All Users, Create Account, Profile, and Log out. Below the navigation bar, the page title is "Organisation Skills". There is a text input field labeled "Add a New Skill" and a blue "Add" button. Below this, there is a list of three skills: Java, PHP, and React, each with a small trash can icon to its right. To the right of the skill list, a modal window titled "Confirm Delete Skill?" appears. It contains the text "Selected Skill:" followed by "Java", and two buttons: a red "Yes" button and a blue "Cancel" button.

In this page, the Project Admin will be able to see the list of Skills available for selection in their organization. The Project Admin will have to click on the “Dustbin” icon beside the skill they would like to remove. A confirmation popout will appear to delete the skill.

Sprint overview

The screenshot shows a project management interface for a sprint. At the top, there's a header bar with icons for search, projects, and notifications. Below it, a navigation bar includes a green square icon, a 'Projects' tab, and a date range 'Sprint 7 14 Jan 2023 to 27 Jan 2023'. To the right are icons for user profile, help, and settings.

The main area is a 'Sprint Issues' board. It features a horizontal timeline at the top with progress bars: 100% total points, 10 completed points, 0 open tasks, 18 closed tasks, and 0 cocaine doses. Below the timeline is a 'Filters' section with a search bar and a 'Detailed' button.

The board has six columns: NEW (underlined), IN PROGRESS, READY FOR TEST, CLOSED, and NEEDS INFO. There are three rows of items:

- #375** As a Project Admin, I want to be able to add skills to organization... (Status: NEW)
- #376** As a Project Admin, I want to be able to remove skills from th... (Status: IN PROGRESS)
- Storyless tasks** (Status: NEEDS INFO)

Each item row contains a '+' icon and a '≡' icon. To the right of each item are four small circular icons with different symbols (green, red, yellow, blue).

At the bottom of the board, there are buttons for 'SPRINT ISSUES' and 'Tags', and a '+' icon.

The left sidebar contains a vertical stack of icons: a magnifying glass, a document, a person, a gear, and a circular arrow.

Sprint 8

Progress Report	Date : 28 January 2023
Project Name	Automatic Project Assignment
Team	FYP-22-S4-32
Sprint Duration	28 January 2023 – 10 February 2023
Work completed during this sprint	
Do-up of Project Progress Report v2 - Sprint 8 Do-up of Wireframe for Sprint 8 Update User Manual Document Update Technical Manual Document Do-up of Necessary Diagrams Continuation of fault-testing code and do-up of test cases Begin Unit Testing and Integration Testing v3 Finalizing Code Set-up Live Server for Application	
Work planned for next sprint	
Finalizing Project Progress Report Finalizing User Manual Document Finalizing Technical Manual Document Finalizing remaining diagrams Finalizing Testing Finalizing Code Do-up of Mock Final Presentation Slides for Supervisor Meeting	
What is going well	
Team is communicating well Team managed to complete workload before deadline	
Setbacks faced	
-	
Suggestions	
-	

Use Case Description

**Originally our design was to accommodate for the automatic assignment of a single assignment, but we have changed our design as such to allow the creation of multiple assignments*

Use case: Creating assignments as Project Admin	Taiga ID: #602
Stakeholders and goals: Project Admin - creating assignments	
Description: The Project Admin creates an assignment	
Actors: Project Admin	
Pre-condition: User is logged in as Project Admin	
Post-condition: The assignment has been created	
Trigger: The Project Admin wants create an assignment	
<p>Normal flow:</p> <ol style="list-style-type: none"> 1. The user clicks on Assignment 2. The system brings the user to the assignment page 3. The user enters the relevant information under the Add a New Assignment section 4. The user clicks on the Add Assignment button 5. The system verifies the request from the user 6. The system add the new assignment to the project assignment page 	
Sub-flows: None	
<p>Alternative/Exceptional flows:</p> <p>5.a The system fails to verify the request from the user and prompts the user that an error has occurred</p>	

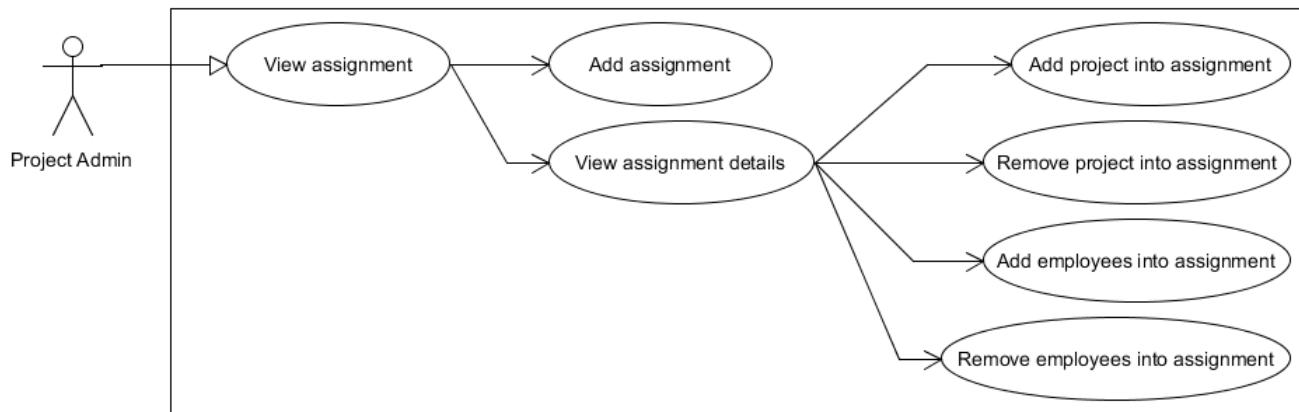
Use case: Adding project into the assignments as Project Admin	Taiga ID: #603
Stakeholders and goals: Project Admin - add project into assignment	
Description: The Project Admin adds projects into the assignment	
Actors: Project Admin	
Pre-condition: User is logged in as Project Admin and assignment is created	
Post-condition: The project has been added	
Trigger: The Project Admin wants to add project into the assignment	
<p>Normal flow:</p> <ol style="list-style-type: none"> 1. The user clicks on Assignment 2. The system brings the user to the assignment page 3. The user clicks on the name of the desired assignment 4. The system brings the user to the corresponding assignment page 5. The user clicks on projects on the side panel 6. The user clicks on the Edit projects button 7. The user selects the desired projects and clicks on the submit button 8. The system verifies the request from the user 9. The system adds the project into the assignment 	
Sub-flows: None	
Alternative/Exceptional flows:	
8.a The system fails to verify the request from the user and prompts the user that an error has occurred	

Use case: Removing project from assignments as Project Admin	Taiga ID: #604
Stakeholders and goals: Project Admin - remove project from assignment	
Description: The Project Admin removes projects from the assignment	
Actors: Project Admin	
Pre-condition: User is logged in as Project Admin and projects are in the assignment	
Post-condition: The project has been removed	
Trigger: The Project Admin wants to remove project from the assignment	
<p>Normal flow:</p> <ol style="list-style-type: none"> 1. The user clicks on Assignment 2. The system brings the user to the assignment page 3. The user clicks on the name of the desired assignment 4. The system brings the user to the corresponding assignment page 5. The user clicks on projects on the side panel 6. The user clicks on the Edit projects button 7. The user clicks on the delete icon besides the desired project selection 8. The system verifies the request from the user 9. The system removes the project into the assignment 	
Sub-flows: None	
Alternative/Exceptional flows:	
8.a The system fails to verify the request from the user and prompts the user that an error has occurred	

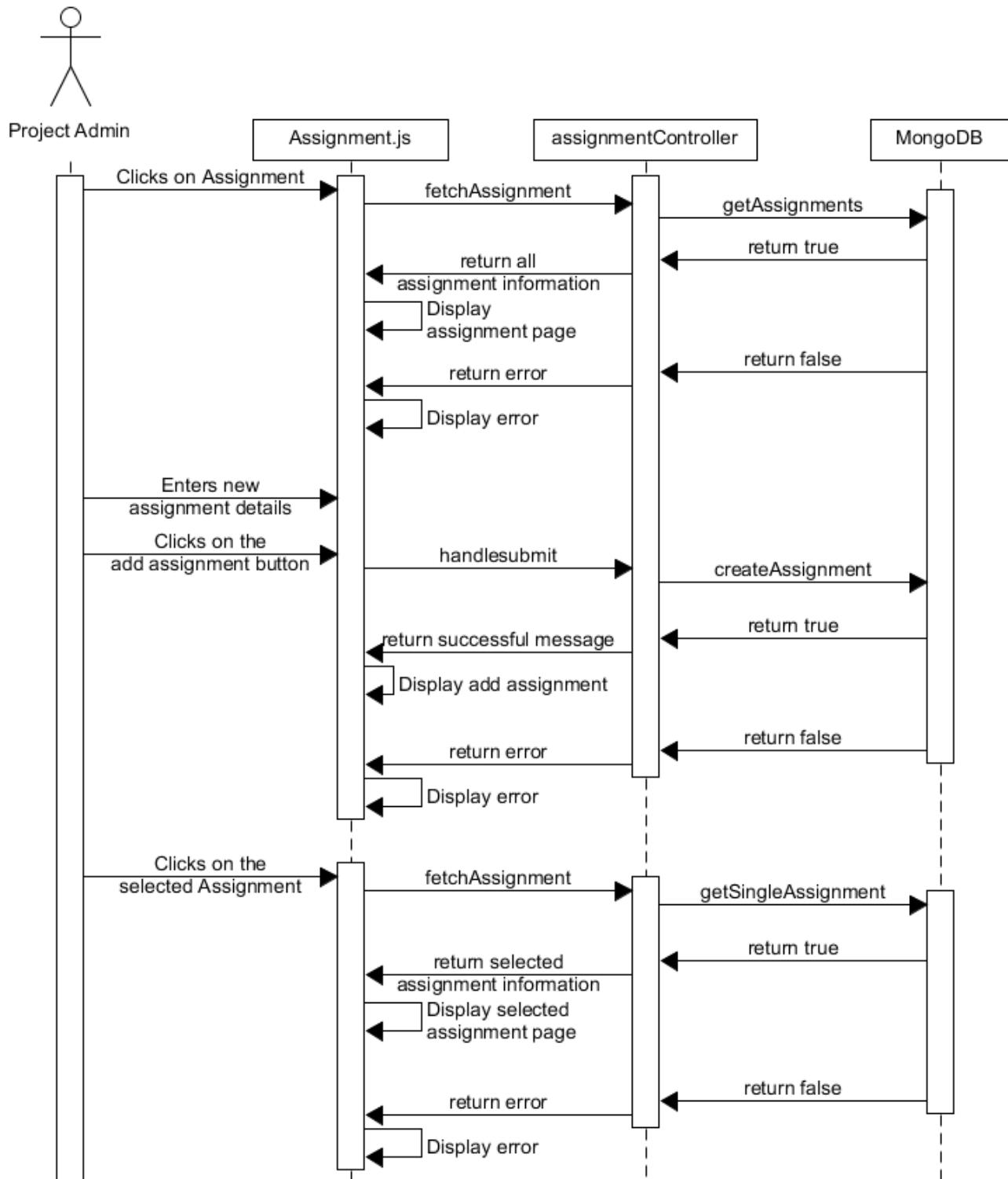
Use case: Adding employees into the assignments as Project Admin	Taiga ID: #605
Stakeholders and goals: Project Admin - add employees into assignment	
Description: The Project Admin adds employees into the assignment	
Actors: Project Admin	
Pre-condition: User is logged in as Project Admin and assignment is created	
Post-condition: The employee has been added	
Trigger: The Project Admin wants to add employees into the assignment	
<p>Normal flow:</p> <ol style="list-style-type: none"> 1. The user clicks on Assignment 2. The system brings the user to the assignment page 3. The user clicks on the name of the desired assignment 4. The system brings the user to the corresponding assignment page 5. The user clicks on Employees on the side panel 6. The user clicks on the Edit employees button 7. The user selects the desired employee and clicks on the submit button 8. The system verifies the request from the user 9. The system adds the employees into the assignment 	
Sub-flows: None	
Alternative/Exceptional flows:	
8.a The system fails to verify the request from the user and prompts the user that an error has occurred	

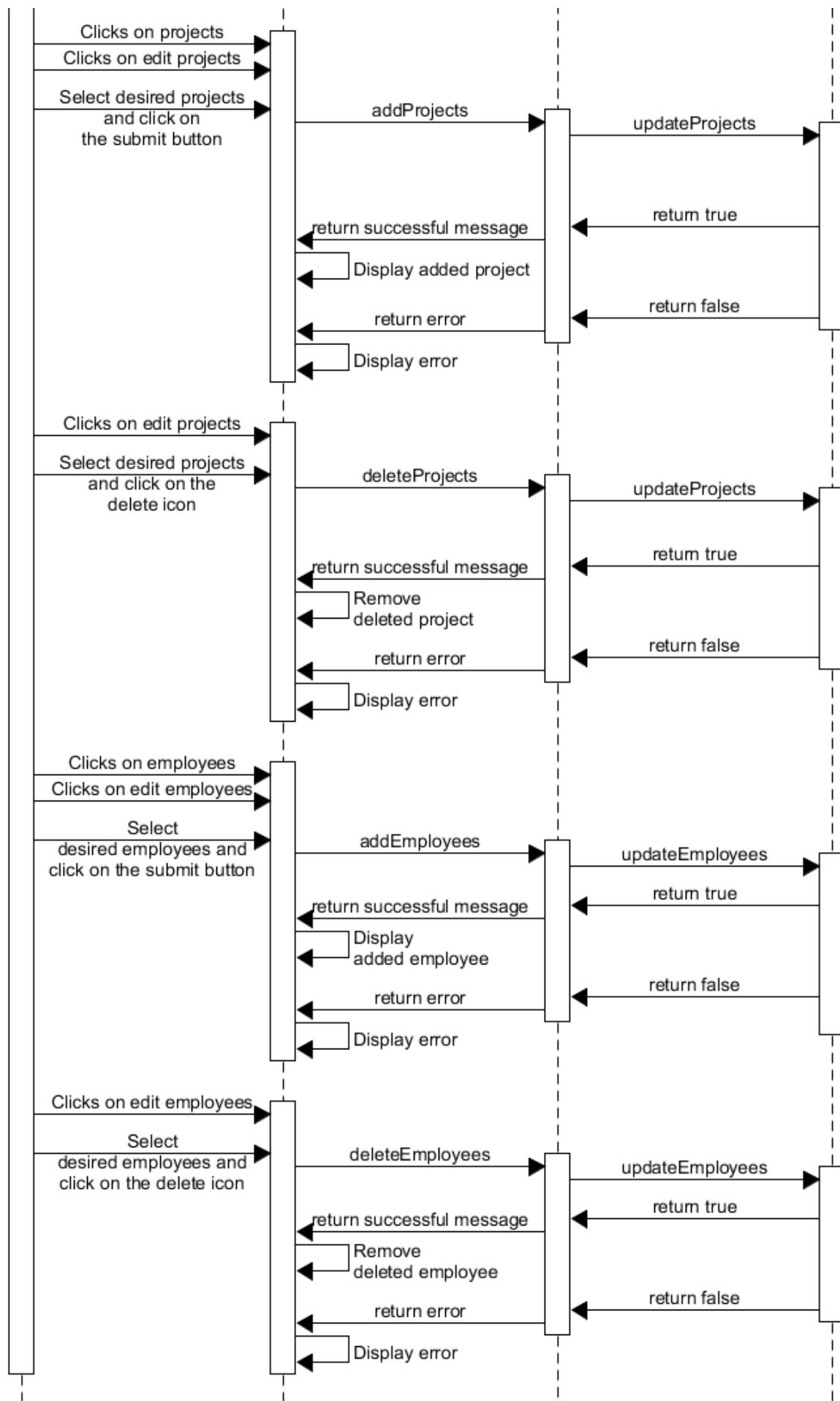
Use case: Removing employees from the assignments as Project Admin	Taiga ID: #606
Stakeholders and goals: Project Admin - remove employees from assignment	
Description: The Project Admin removes employees from the assignment	
Actors: Project Admin	
Pre-condition: User is logged in as Project Admin and projects are in the assignment	
Post-condition: The employee has been removed	
Trigger: The Project Admin wants to remove employees from the assignment	
Normal flow:	
1. The user clicks on Assignment 2. The system brings the user to the assignment page 3. The user clicks on the name of the desired assignment 4. The system brings the user to the corresponding assignment page 5. The user clicks on Employees on the side panel 6. The user clicks on the Edit employees button 7. The user clicks on the delete icon besides the desired employee selection 8. The system verifies the request from the user 9. The system removes the employee into the assignment	
Sub-flows: None	
Alternative/Exceptional flows: 8.a The system fails to verify the request from the user and prompts the user that an error has occurred	

Use Case Diagrams



Sequence Diagrams





User Interface Design (Wireframes)

- Project Admin Assignment Page

The wireframe shows a header with 'Automatic Project Assignment' and a navigation bar with links: Assignment, Create Project, Organisation Skills, All Users, Create Account, Profile, and Log out.

Project Assignment

Assignment Q1

- Projects: 10
- Employees: 30
- Threshold: 2
- Start Date: 31/02/2022
- End Date: 07/02/2022

Assignment Q2

- Projects: 10
- Employees: 30
- Threshold: 2
- Start Date: 31/02/2022
- End Date: 07/02/2022

Add a New Assignment

Assignment Title:

Start Date:

End Date:

Threshold:

Start

In this page, the Project Admin will be able to see the list of Assignments in the Organization. Admin will also be able to Create New Assignment using the form on the right. Once done, the new Assignment can be viewed on the list of assignments.

- Project Admin Adding Project into the Assignment

The wireframe shows a header with 'Automatic Project Assignment' and a navigation bar with links: Assignment, Create Project, Organisation Skills, All Users, Create Account, Profile, and Log out.

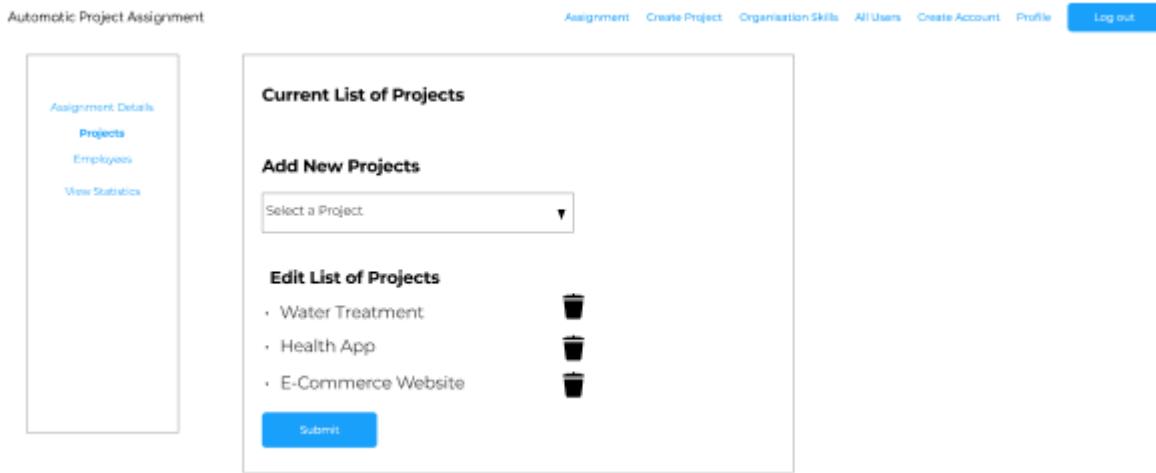
Assignment Details

- Projects**
- Employees**
- View Statistics**

Current List of Projects

- Water Treatment
- Health App
- E-Commerce Website

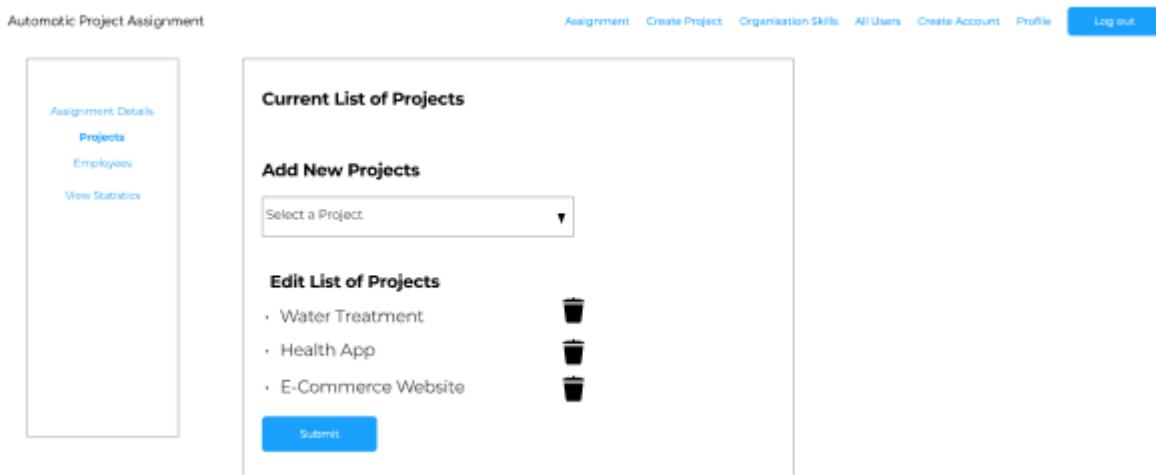
Edit Projects



From the selected Assignment details page, the Project Admin will have to click on “Projects” from the side navigation bar in order to manage projects for the assignment. After clicking on the “Edit Projects” button, the project admin will be able to add in new projects into the assignment via the dropdown list.

Once changes are confirmed, click on the “Submit” button to update.

- Project Admin Removing Project from the Assignment



Similar to the earlier wireframe, the Project Admin can remove Projects from the Assignment by clicking on the “Dustbin” icon beside the project which the admin wishes to remove. Once changes are confirmed, click on the “Submit” button to update.

- Project Admin Adding Employees into the Assignment

Current List of Employees

- emp1 - emp1@gmail.com
- emp2 - emp2@gmail.com
- emp3 - emp3@gmail.com
- emp4 - emp4@gmail.com
- emp5 - emp5@gmail.com

[Edit Employees](#)

Current List of Employees

Add New Employees

Select a Employee ▾

Edit List of Employees

- emp1 - emp1@gmail.com
- emp2 - emp2@gmail.com
- emp3 - emp3@gmail.com
- emp4 - emp4@gmail.com
- emp5 - emp5@gmail.com

[Submit](#)

From the selected Assignment details page, the Project Admin will have to click on “Employee” from the side navigation bar in order to manage employees for the assignment. After clicking on the “Edit Employees” button, the project admin will be able to add in new projects into the assignment via the dropdown list. Once changes are confirmed, click on the “Submit” button to update.

- Project Admin Removing Employee from the Assignment

The wireframe shows a sidebar on the left with links: Assignment Details, Projects, Employees (which is highlighted in blue), and View Statistics. The main content area has a header "Current List of Employees". Below it is a section "Add New Employees" with a dropdown menu labeled "Select a Employee". Under "Edit List of Employees", there is a list of five employees: emp1 - emp1@gmail.com, emp2 - emp2@gmail.com, emp3 - emp3@gmail.com, emp4 - emp4@gmail.com, and emp5 - emp5@gmail.com. Each employee entry has a small black trash can icon to its right. At the bottom is a blue "Submit" button.

Similar to the earlier wireframe, the Project Admin can remove an Employee from the Assignment by clicking on the “Dustbin” icon beside the employee who the admin wishes to remove. Once changes are confirmed, click on the “Submit” button to update.

Sprint overview

The screenshot shows a project management interface with a top navigation bar for 'Projects' and various status icons. Below the header, a summary bar displays 'Sprint 8' from 28 Jan 2023 to 10 Feb 2023, with progress at 100%, 25 total points completed, 0 open tasks, 45 closed tasks, and 0 cocaine doses. A 'Filters' dropdown and a search bar are also present.

The main area is a Kanban board with columns: NEW, IN PROGRESS, READY FOR TEST, CLOSED, and NEEDS INFO. The 'IN PROGRESS' column is highlighted in orange. The board lists several user stories and storyless tasks, each with a detailed view icon (three dots) and a list of assigned team members (represented by icons).

USER STORY	NEW	IN PROGRESS	READY FOR TEST	CLOSED	NEEDS INFO
#602 As a Project Admin, I want to be able to create assignments, s...					
#603 As a Project Admin, I want to be able to add projects into the...					
#604 As a Project Admin, I want to be able to remove projects fro...					
#605 As a Project Admin, I want to be able to add employees into the...					
#606 As a Project Admin, I want to be able to remove employees...					
Storyless tasks					

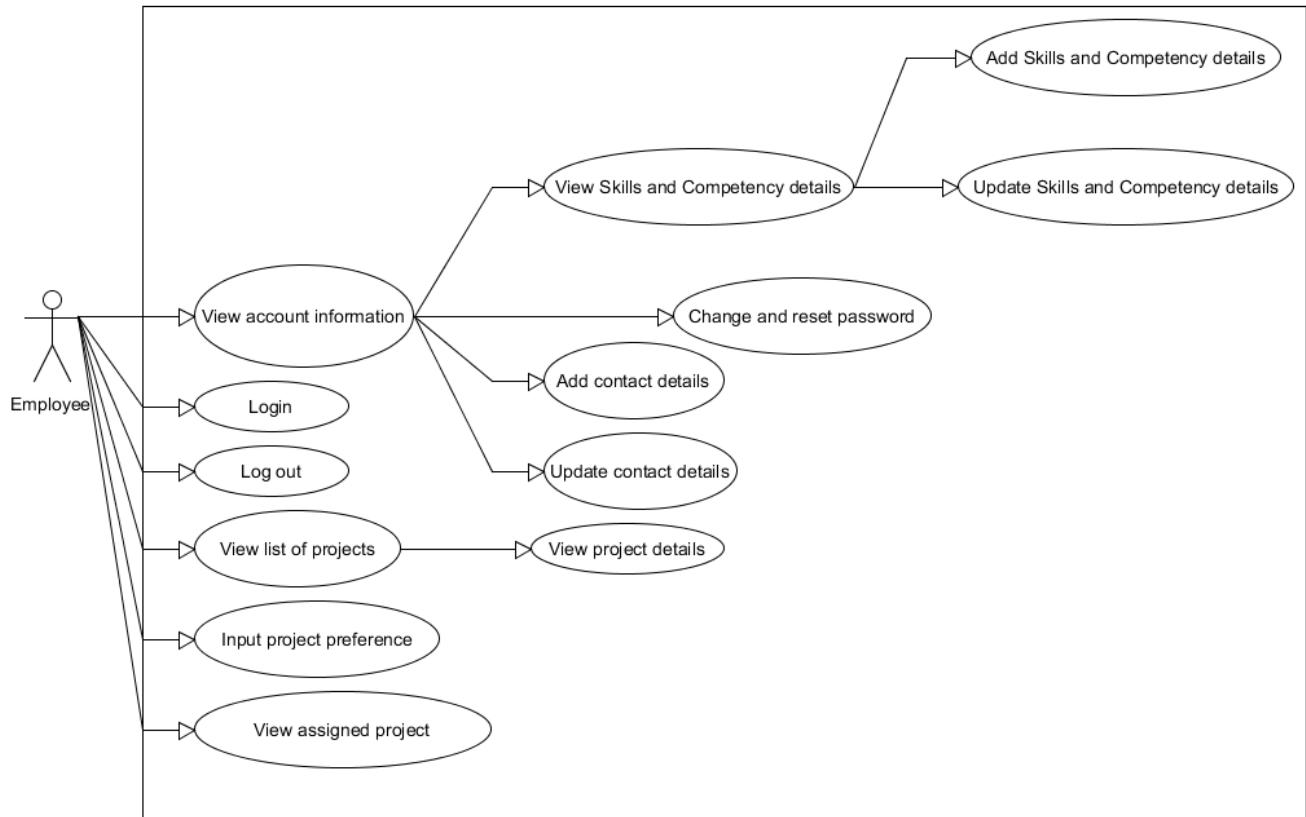
At the bottom, there are links for 'SPRINT ISSUES' and 'Tags', along with a '+' icon and a 'Tags' filter button.

Sprint 9

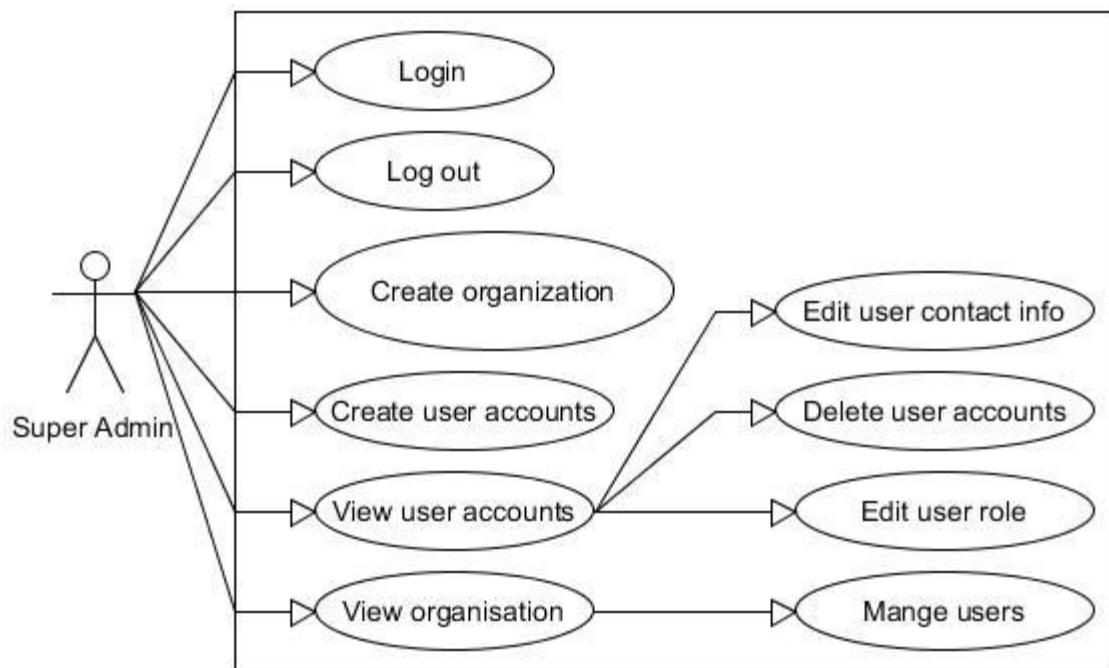
Progress Report	Date : 11 Feb 2023
Project Name	Automatic Project Assignment
Team	FYP-22-S4-32
Sprint Duration	11 February 2023 – 24 February 2023
Work completed during this sprint	
Finalising Project Progress Report Finalising User Manual Document Finalising Technical Manual Document Finalising remaining diagrams Finalising Testing Finalising Code Do-up of Mock Final Presentation Slides for Supervisor Meeting Finalise Final Presentation Slides Final rehearsal for presentation and application demo	
Work planned for next sprint	
-	
What is going well	
Team is communicating well Team managed to complete workload before deadline Final Rehearsal Went Well	
Setbacks faced	
-	
Suggestions	
-	

System

Use Case Diagram

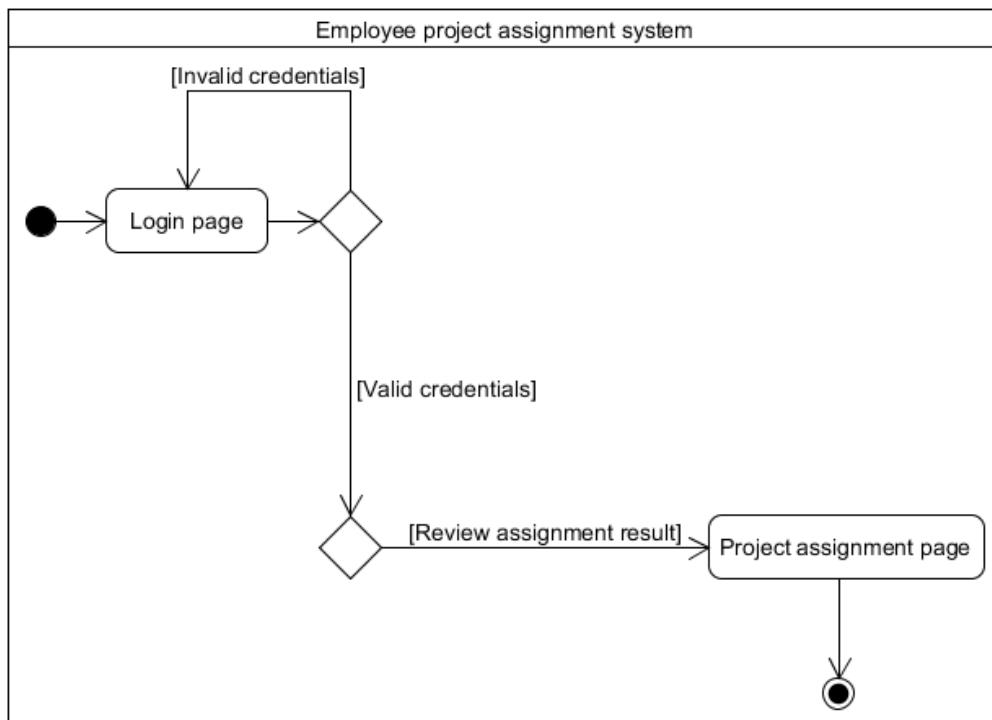
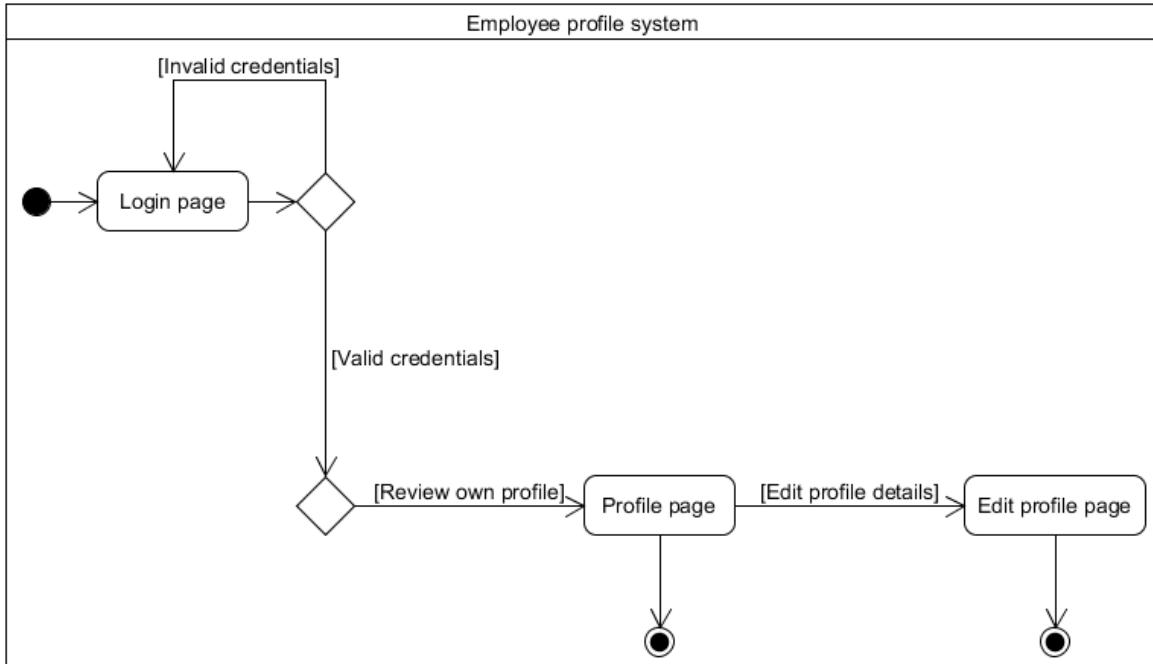


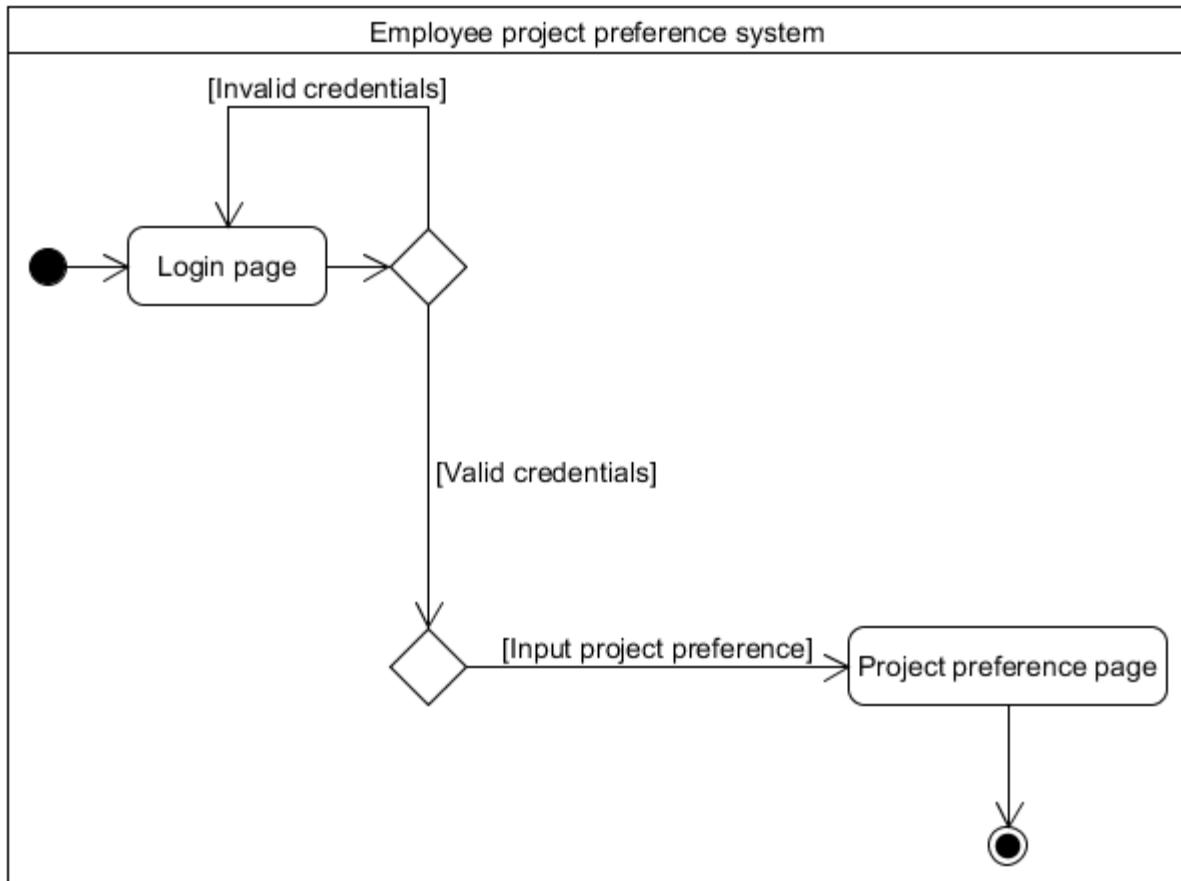
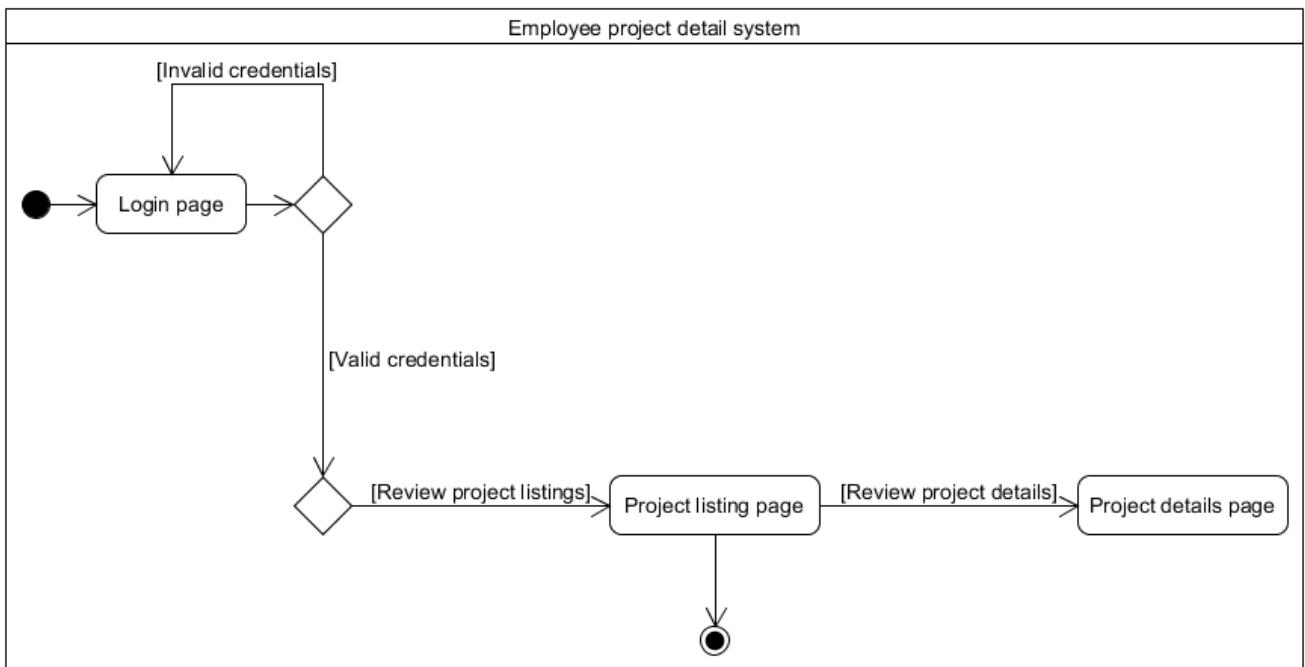




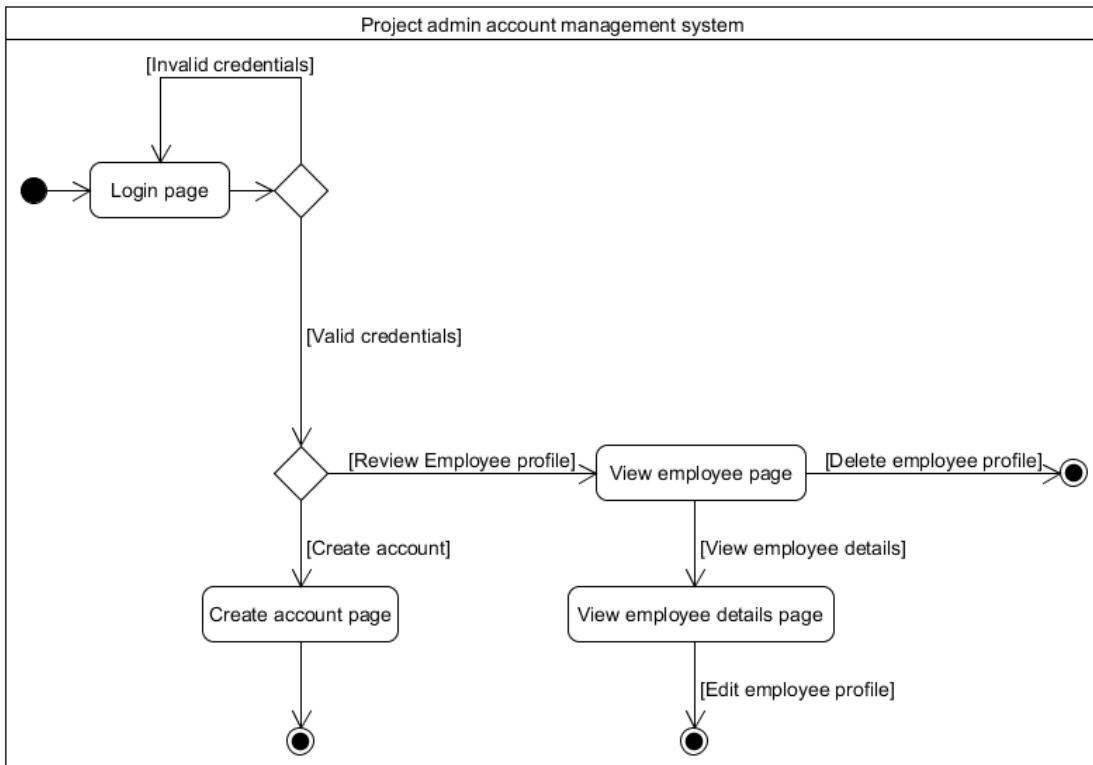
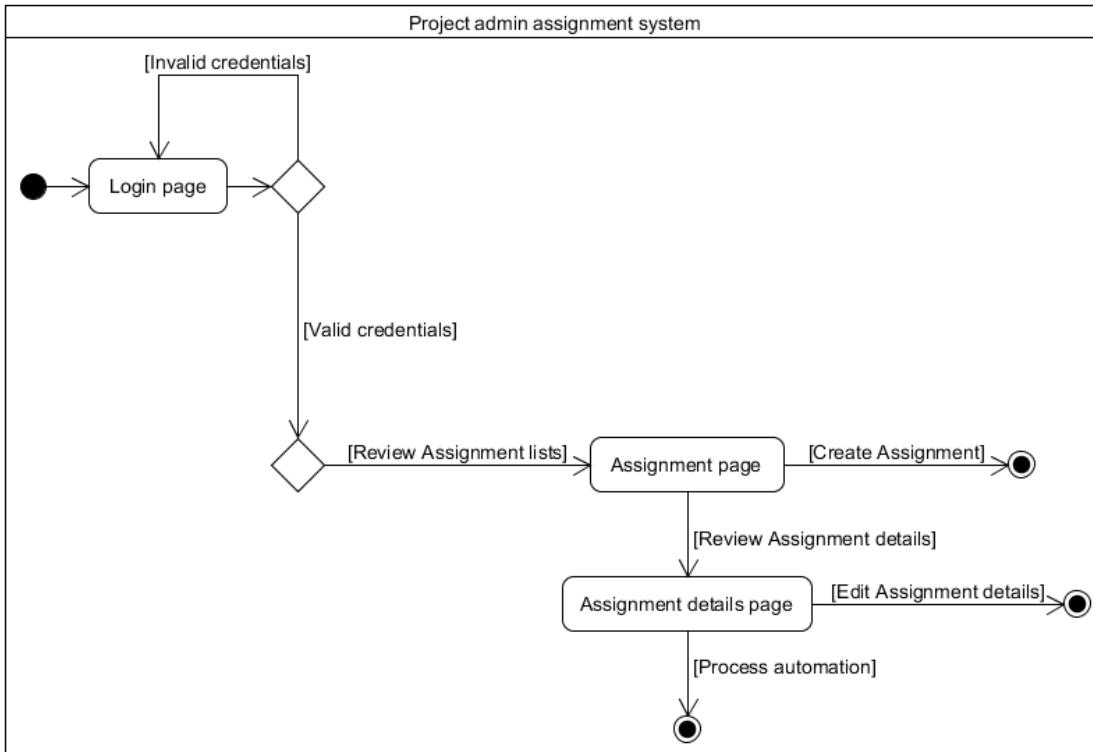
State Diagrams

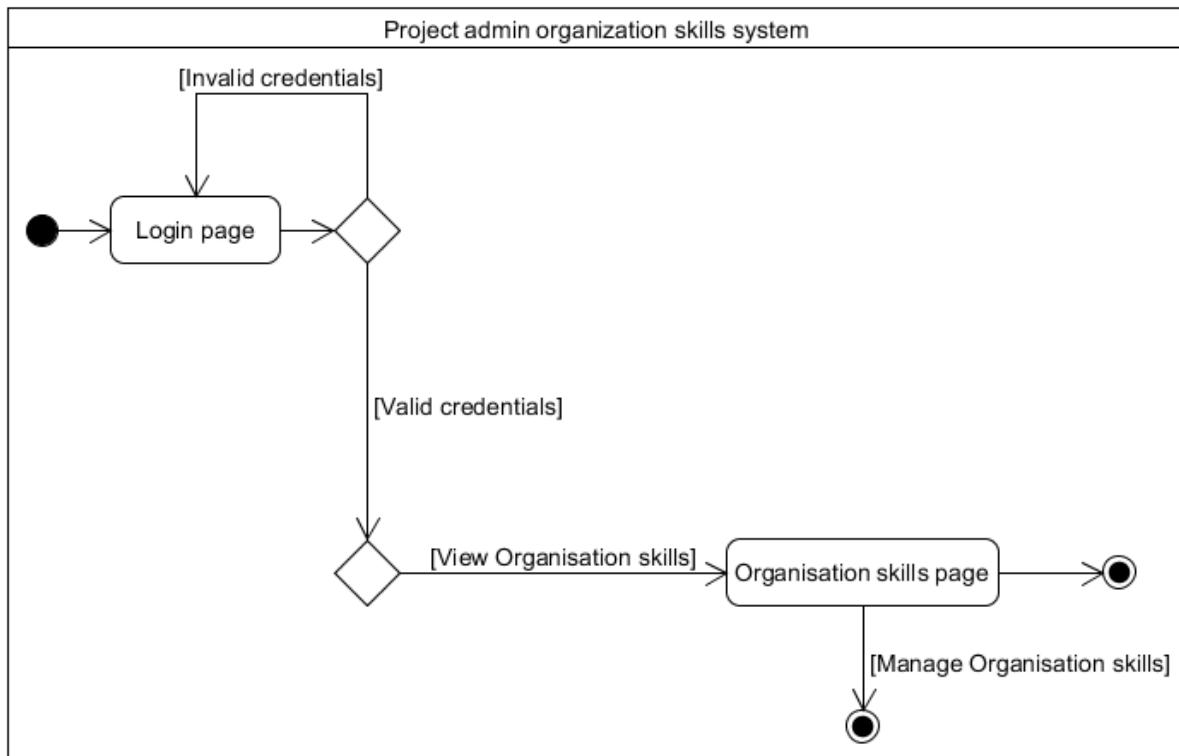
- Employee

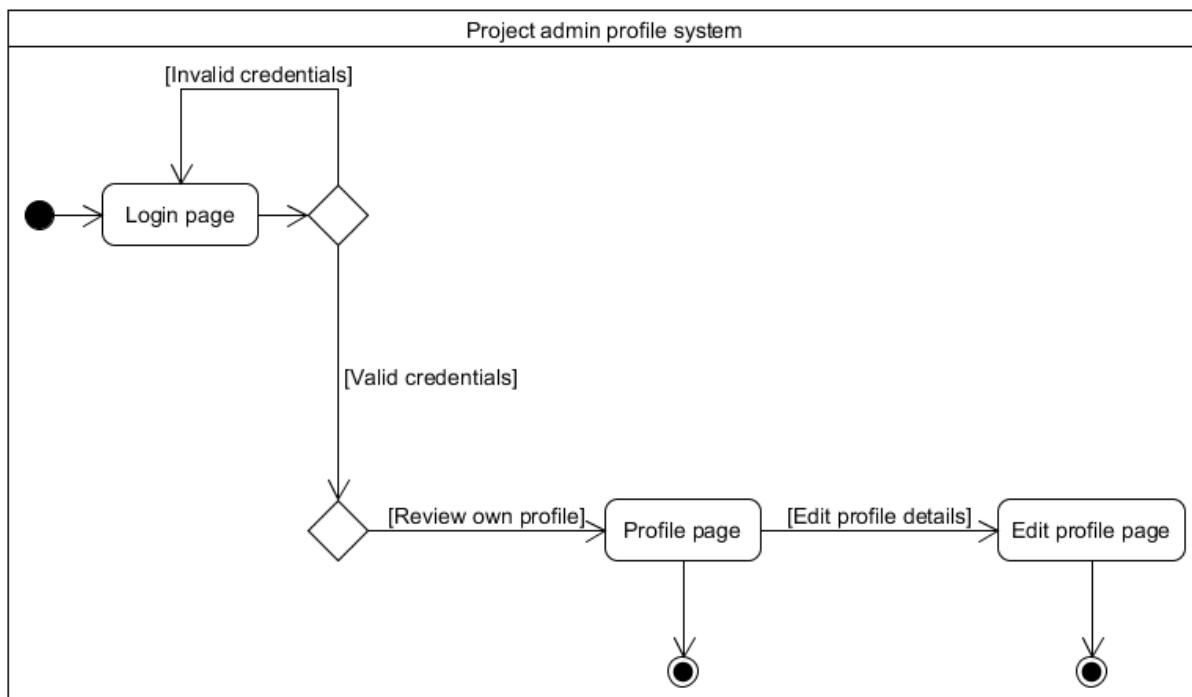


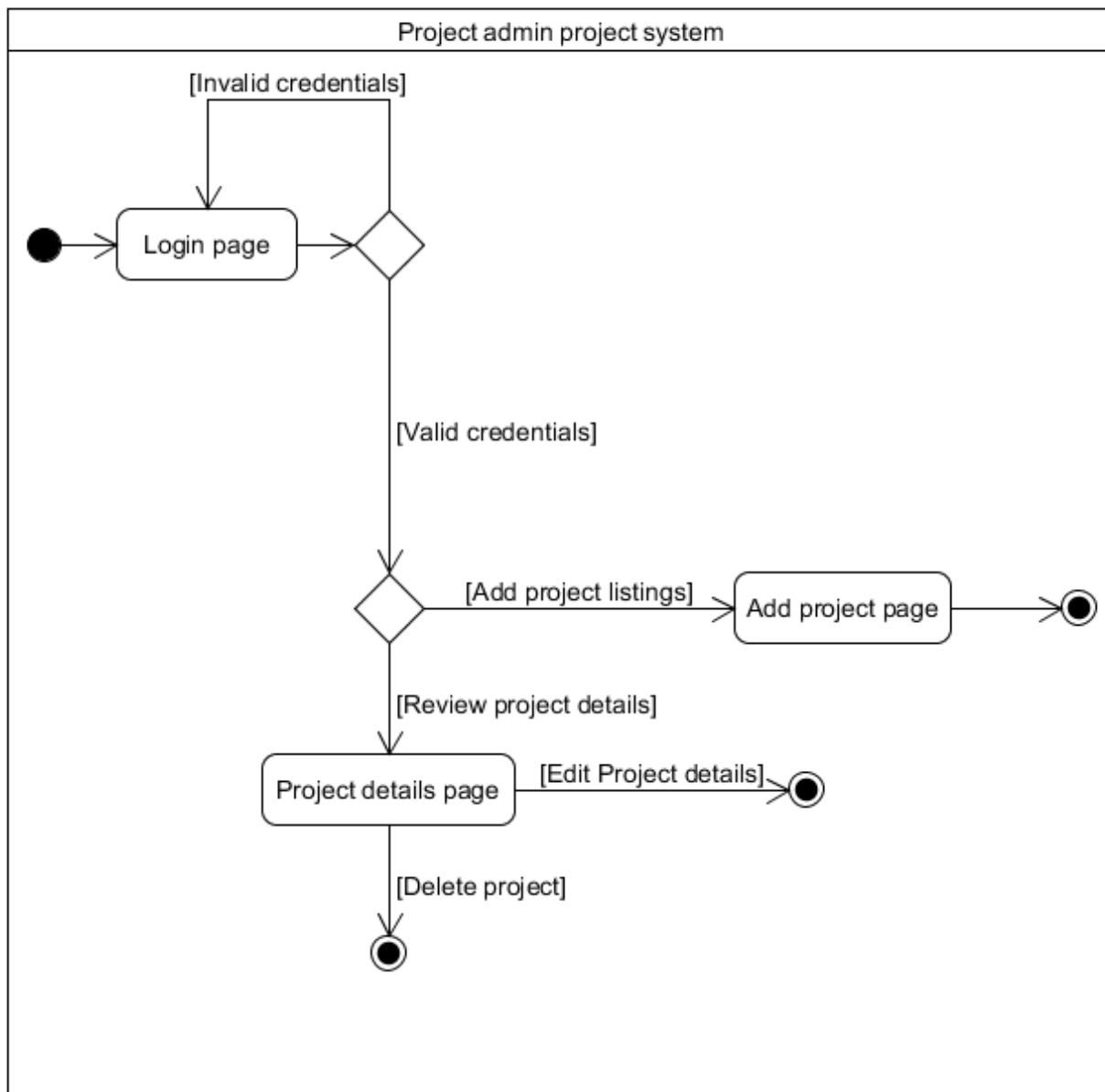


- **Project Admin**

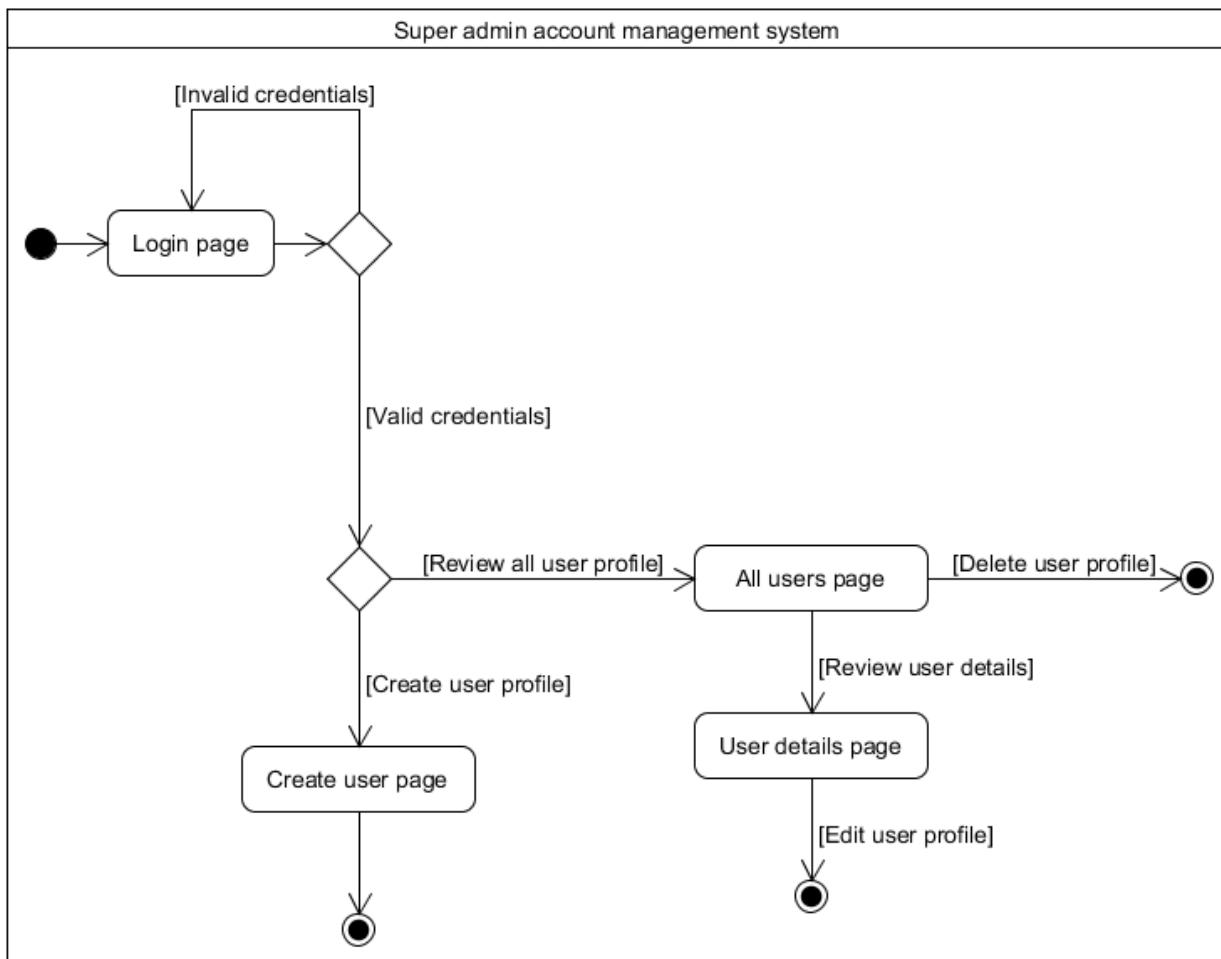


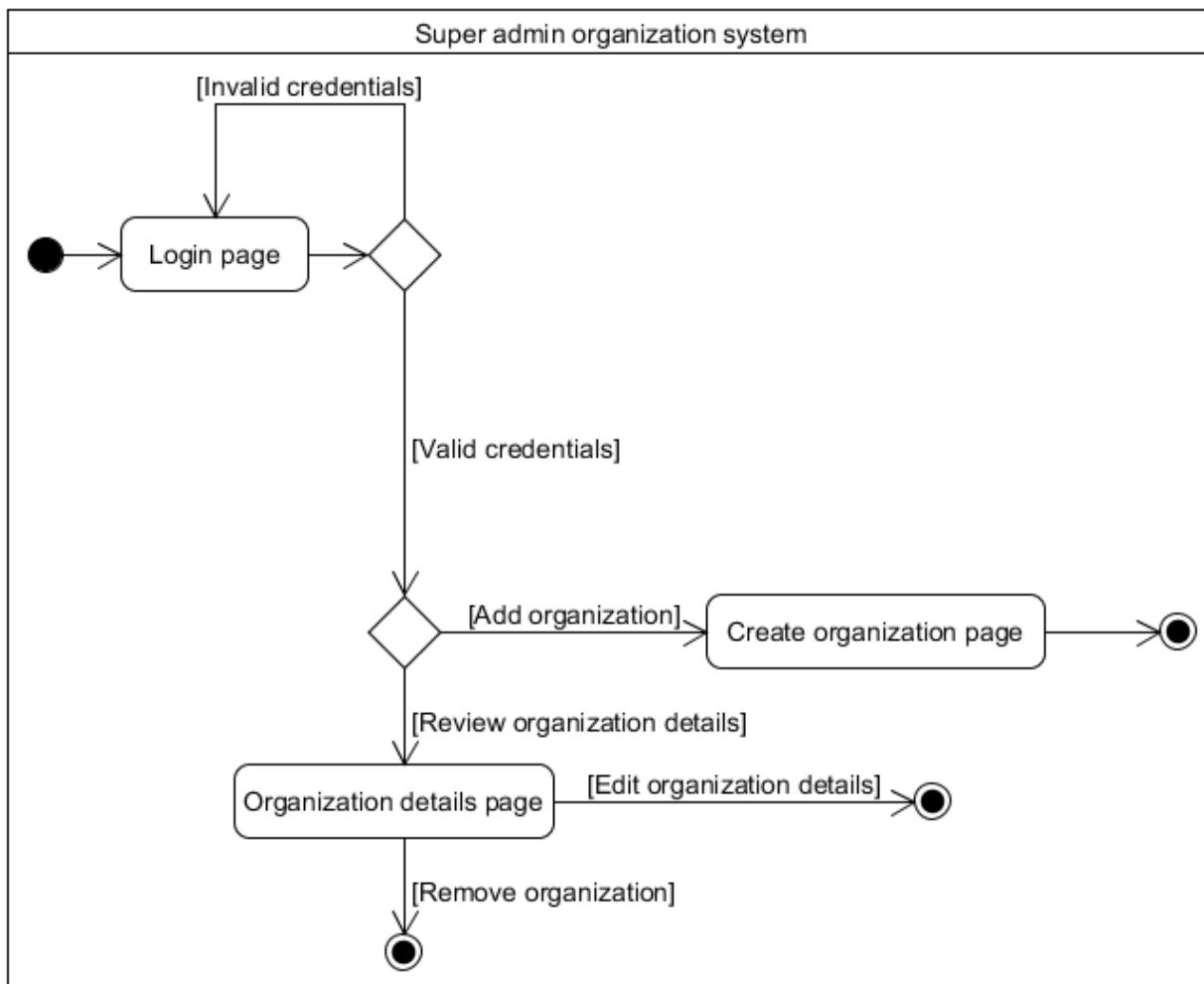


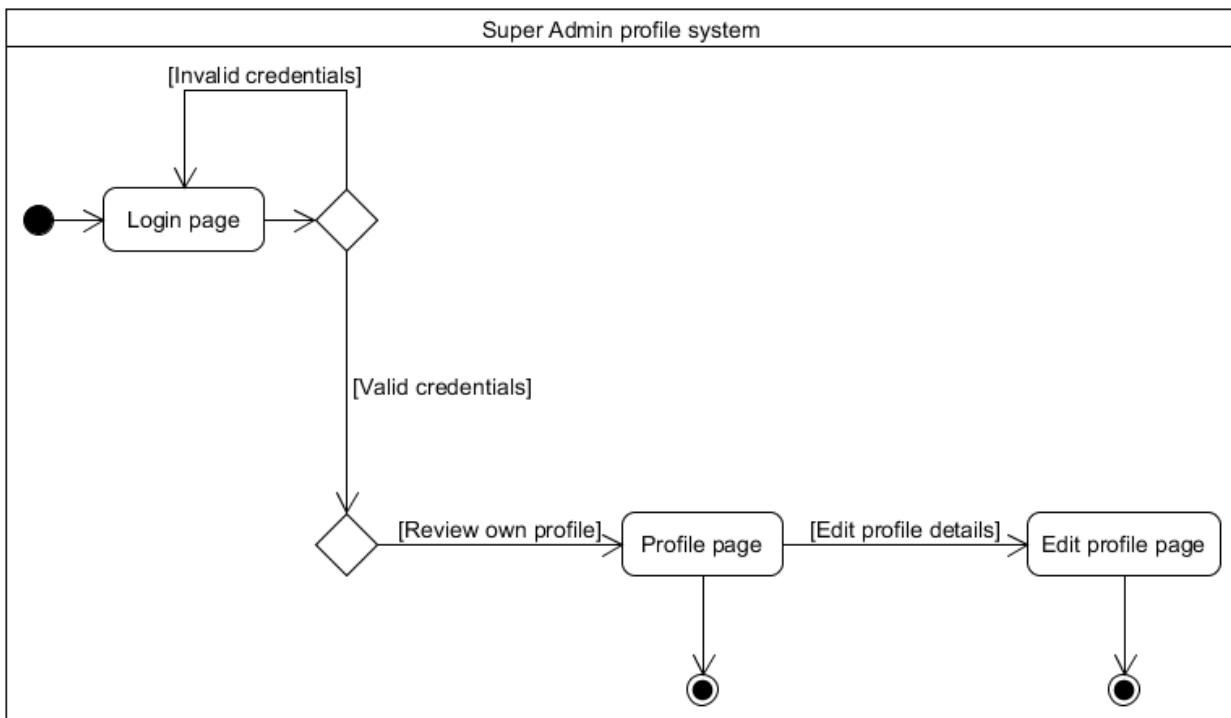




- Super Admin







Non-Functional Requirement

Performance	<ul style="list-style-type: none"> ◦ Responsiveness of the website ◦ Responsiveness of the features
Security	<ul style="list-style-type: none"> ◦ User information is protected by their email as login ID and their password ◦ Important data will always be encrypted ◦ Advanced feature is protected behind permission given to different users, such as deletion and creation of accounts ◦ Only users with accounts will be allowed access into the system
Reliability	<ul style="list-style-type: none"> ◦ Ability to perform said task under the expected time in an controlled situation ◦ Little to no down-time ◦ Readily accessible and available
Usability	<ul style="list-style-type: none"> ◦ Website is user-friendly and intuitive ◦ Users will only be able to access functions relating to their roles ◦ Upon account creation , users will be able to access the application
Maintainability	<ul style="list-style-type: none"> ◦ System logs will log and update every user actions ◦ Data stored in server is backed up
Verifiability	<ul style="list-style-type: none"> ◦ Dummy data will be used to test the system and application features ◦ Dummy data will be used during the various stages of development ◦ Developers and testers will have identical development environment configurations
Confidentiality	<ul style="list-style-type: none"> ◦ Users will not be able to view the details of other users , only administrators are allowed to ◦ Important details like password and user information will be encrypted before storing into database

Project Backlog

As a	I want to be able to	So that	Score	Sprint	ID
Project Admin	Login	I can use the system's feature	5	1	#3
Project Admin	Log out	I can prevent unauthorised access	5	1	#4
Project Admin	View account information	I can see the personal details in the system	5	2	#6
Project Admin	Update contact details	I can keep my contact details updated	5	2	#7
Project Admin	Create new project	Employees will be able to see them	5	3	#8
Project Admin	Update project details	I can make necessary changes	5	3	#10
Project Admin	Set project threshold	I can decide the project per employee ratio	5	4	#11
Project Admin	Set employee limit per project	I can limit the no. of employees enrolled	5	3	#12
Project Admin	Remove project	Unavailable projects can be deleted	5	3	#14
Project Admin	View employee information	I know the involvement of each employee	5	6	#15
Project Admin	Start automation process	I can give the employee their assignment	5	5	#16
Project Admin	View assignment result	I know who each employee's assignment	5	5	#17
Employee	Login	I can use the system's feature	5	1	#21
Employee	Log out	I can prevent unauthorised access	5	1	#22
Employee	Add contact details	Other personnel can contact me	5	2	#23
Employee	View account information	I can see the personal details in the system	5	2	#24
Employee	Update contact details	I can keep my contact details updated	5	2	#25
Employee	Add skills and competency	I can provide the relevant information	5	2	#26
Employee	View skills and competency	I can see my relevant information	5	3	#27
Employee	Update skills and competency	I can keep the information updated	5	2	#28
Employee	See a list of available projects	I know what project are available	5	4	#29
Employee	View project details	I can obtain more project information	5	4	#30
Employee	Input project preference	I can be assigned to a preferred project	5	5	#31

Employee	See result of allocation	I know what are my allocated project(s)	5	6	#33
Super Admin	Login	I can use the system's feature	5	1	#38
Super Admin	Log out	I can prevent unauthorised access	5	1	#39
Super Admin	Create organisation code	I can allocate users to their organisation	5	4	#40
Super Admin	Manage user in organisation	I can ensure all user is allocated correctly	5	5	#42
Super Admin	Create user account	Organisation user can access our system	5	2	#43
Super Admin	View user in organisation	I can see who is in which organisation	5	2	#44
Super Admin	Delete user account	I can remove invalid users	5	2	#115
Project Admin	Create Employee account	There is no unauthorised Employee account	5	4	#116
Project Admin	Delete Employee account	All unused Employee account are removed	5	4	#216
Employee	Change and reset my password	I can keep my information secured	5	6	#225
Super Admin	Edit user roles	Update user privileges as needed	5	4	#291
Super Admin	Edit user account contact info	Ensure their contact information are up to date	5	4	#292
Project Admin	Edit employee contact info	Ensure their contact information are up to date	5	4	#293
Project Admin	Add skill to Organization	I can specify skills that are relevant	5	7	#375
Project Admin	Remove skill from Organisation	I can remove irrelevant skills	5	7	#376
Project Admin	Create an assignment	I can schedule assignment ahead of time	5	8	#602
Project Admin	Add project into assignment	I can include only relevant projects	5	8	#603
Project Admin	Remove project from assignment	I can remove irrelevant projects	5	8	#604
Project Admin	Add employee into assignment	There are employee ready to be assigned	5	8	#605
Project Admin	Remove employee from assignment	Only employee available will be included	5	8	#606

Database

Entities

Below are the entities that will be used for our database.

- Organisations
- Users
- Skills
- Projects

Relationships

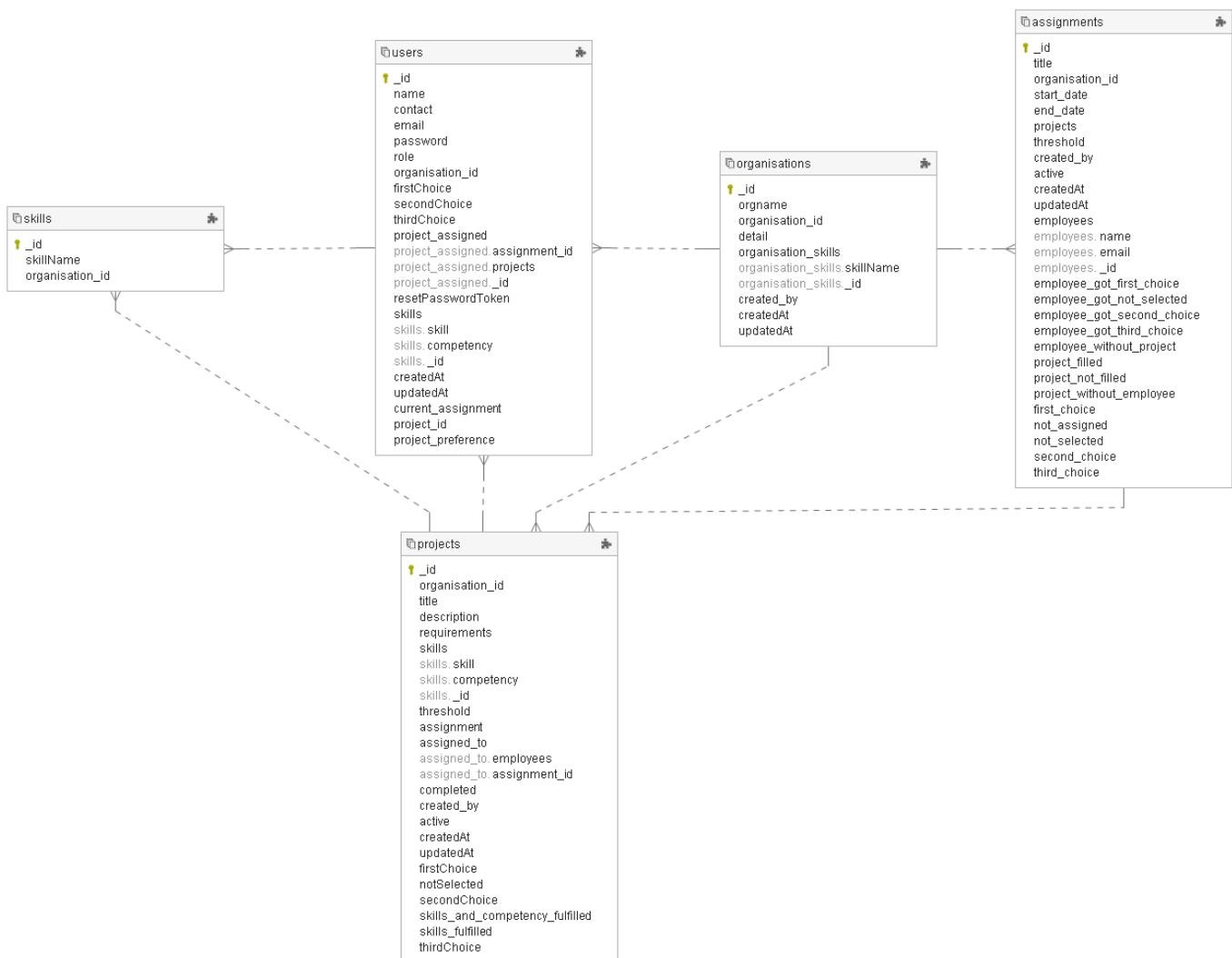
Below are each entity interacting with one another.

- - Organizations → Users = 1:1..*
- - Organizations → Projects = 1:1..*
- - Organizations → Assignments = 1:1..*
- - Users → Projects = 1:1..*
- - Users → Skills = 1:1..*
- - Users → Assignments = 1..*:1
- - Users → Organizations = 1..*:1
- - Assignments → Organizations 1..*:1
- - Assignments → Projects = 1:1..*
- - Assignments → Users = 1:1..*
- - Projects → Skills = 1..*:1
- - Projects → Users = 1:1..*
- - Projects → Organizations = 1..*:1
- - Projects → Assignments = 1..*:1
- - Skills → Users = 1..*:1

Attributes

Organization	Projects	Skills	Users	Assignments																																																																																																																																				
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Design



Project Plan

Scope and Problems of Limitation

Scope

The team will centre our attention on building a solution for our customers to improve the efficiency of the project assignment phase, and to increase the odds of completing and implementing the assigned projects successfully. In addition, we will also be looking to provide a platform for our users to share and receive project materials and other relevant information to and from the relevant parties. The team will also be looking into other needs of our target users to provide them with a solution that includes other relevant components and functionalities that supplement our core service.

At this stage of the project, the team will focus on building our solution as a web application because we feel that our users will primarily be employing our product's services when they are not on the move. Our users will require an active internet connection to engage with our product.

Problems of Limitation

In the event that the skills of users are not diverse enough, our solution may not work as intended. The automatic project assignment system may resort to a level of randomness due to mismatching of skills between the projects and the users. Hence, we will be exploring different mechanisms and controls to bring down the level of randomness, if not eliminate it completely, when such a situation arises.

Development Methodology

The methodology we will adopt is the Agile and SCRUM development model, which consists of 5 phases. As for our project management tool, we are using Taiga, an agile project management platform.

Phase 1 - Requirements Gathering & Planning

At this stage, we will be analysing the current systems and methods used by academic institutions for project allocation, and identifying shortcomings that can be resolved. To help us better understand the functional requirements of our project from the users' perspective, we will develop user stories to identify the functionalities that our system should have. Followed by ranking these requirements and planning the scope of our proposed system. After which, we will decide on the programming languages to use, and the project's feasibility. Accordingly, we

will delegate tasks among the group members, and plan weekly meetings to discuss and update each other on the progress of the tasks. The minutes of our meetings will also be done progressively. We will be using a Gantt chart to keep track of our project deadlines and milestones.

Deliverables: Project proposal, user stories, and system requirements specification ready for Assessment 1.

Phase 2 - Designing

From the system requirements we have identified, we will transform the requirements into a structured use case diagram and descriptions to summarise the features of the users' interactions with our system. A class diagram will be developed to map out the blueprint of our system and display the relationships and dependencies of the system properties. We should have our use cases and class diagrams ready for Assessment 1 on 12 November 2022.

At the same time, we will also be working on our system prototype, which consists of the bare basic features. We should aim to accomplish this by the end of sprint 4, for Assessment 2 on 17 December 2022.

Deliverables: UML use case diagram, use case descriptions, Class Diagrams, system prototype, system prototype PowerPoint slides for Assessment 2.

Phase 3 - Developing

Using the proposed programming languages, each of us will be assigned tasks to develop the system. Around the midpoint of this phase when the basic functionalities of the system are done, we will incorporate the testing stage to identify the system flaws that have to be fixed to minimise the risks of any failures.

Deliverables: A working system that is still undergoing testing

Phase 4 - Testing

This stage requires us to test the functionalities of our system during the development stage to identify any errors and features we have to fix. As well as making sure system bugs are not

overlooked. We will also be acquiring feedback and suggestions from our project supervisor to make improvements. Once our system is fully developed, we will start on our test plan, test cases and results for the technical manual document in preparation for our final submission.

Deliverables: A functional system, test plan, test cases and results.

Phase 5 - Implementation/Deployment of system

At this stage, we should have a fully functional system and we will be finishing up our test cases for our technical manual. All our meeting minutes, system reports, and relevant documentation will be compiled into our final project documentation for submission. A marketing video that advertises the features of our final product will also be made.

Deliverables: Final technical manual, final project documentation, fully functional product, marketing video

Development Tools

For our web-based application development process , we will be using **ReactJS** for our front-end development and for our back-end development we will be using **ExpressJS** in tandem with **NodeJS**.

With **ReactJS** reusability and DOM feature , we will be able to break down and test React components independently. Its reusable components and modular structure allows us to quickly scale up our front-end development with effortless maintenance .

ExpressJS is a flexible **NodeJS** web application framework that provides a robust set of features and enhances the functionality of **NodeJS**. With **NodeJS** executing requests quickly with the use of event loops and the ease of coding using **ExpressJS**.

We will be able to handle a large number of client requests and reduce coding time , saving time for both the users and the company.

For the storage and management of our data , we will be using **MongoDB** as our centralized database. **MongoDB** is not a Relational Database Management System like mySQL but a document-based database . Given its flexible schema approach in storing data , it will work perfectly with our agile development model.

Risk Management Matrix

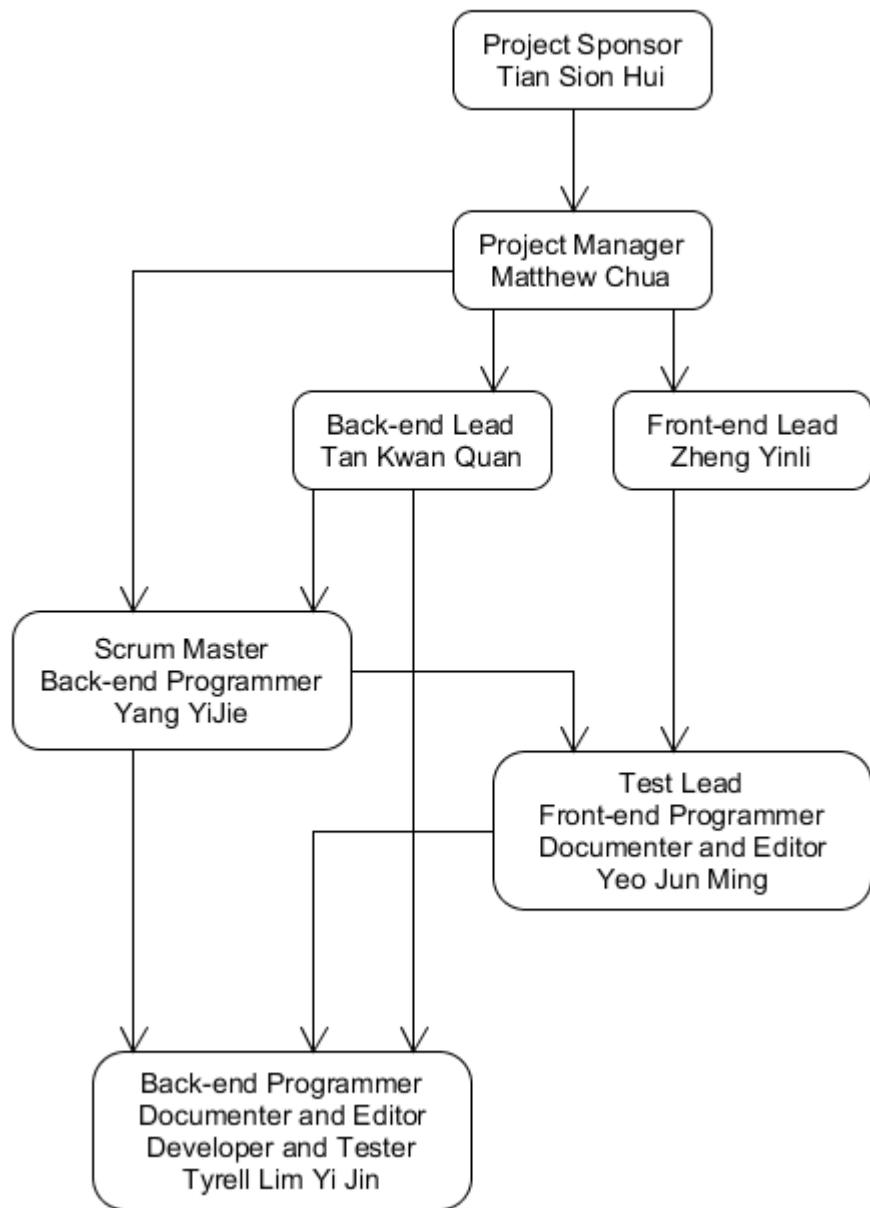
Risk Description	Probability	Impact	Mitigation
Change in Technology	Improbable	Tolerable	<p>Team should be in-touch with the latest updates involving software used.</p> <p>At least one team member should be tasked in maintaining the software/servers to its latest version.</p>
Failure to meet deadlines	Possible	Intolerable	<p>Team is to update project progress on Taiga regularly.</p> <p>Team members should play to their strengths and weaknesses and occupy positions that will ensure a smoother workflow.</p> <p>Project leads should update their team's progress regularly so that the project manager can monitor deadlines and make the necessary changes.</p>
Inability to meet software requirements and implement core features	Possible	Intolerable	<p>Through prototyping , our team will be able plan for and make changes according to the outcome.</p> <p>Product owner and team should be communicating closely to ensure that the team understands the final outcome of the software.</p>
Inability to implement additional features	Possible	Tolerable	<p>Software with core features should be completed earlier so that the team will have more time to work on the additional features.</p>
Unforeseen software bugs and errors	Probable	Acceptable	<p>Frequent testing during the development stages and independent testing at the end of each sprint should be implemented.</p>

Unplanned absence/withdrawal of a team member	Improbable	Undesirable	<p>Team should forecast dates which they are unable to commit to and inform the team in advance should they withdraw from the course.</p> <p>Workload will be evenly re-distributed among the team if needed.</p>
Poor team communication	Possible	Undesirable	<p>Appropriate communication channels should be set up (e.g Discord , Telegram).</p> <p>Regular team meetings should be held in online and offline settings to foster team bonding and allow for team updates.</p>
Zero/Minimal contribution from team member	Improbable	Undesirable	<p>Team should be communicating regularly and hold each other accountable.</p> <p>The Project Manager should intervene if needed.</p>
Changes in software requirements	Probable	Acceptable	<p>Buffer time should allow us to reprioritize our workload and account for shorter/longer sprint intervals to accommodate these changes .</p>
Scheduling risks	Possible	Tolerable	<p>Team should review and update the project timeline regularly .</p> <p>Schedule buffer should be incorporated into the project timeline.</p>

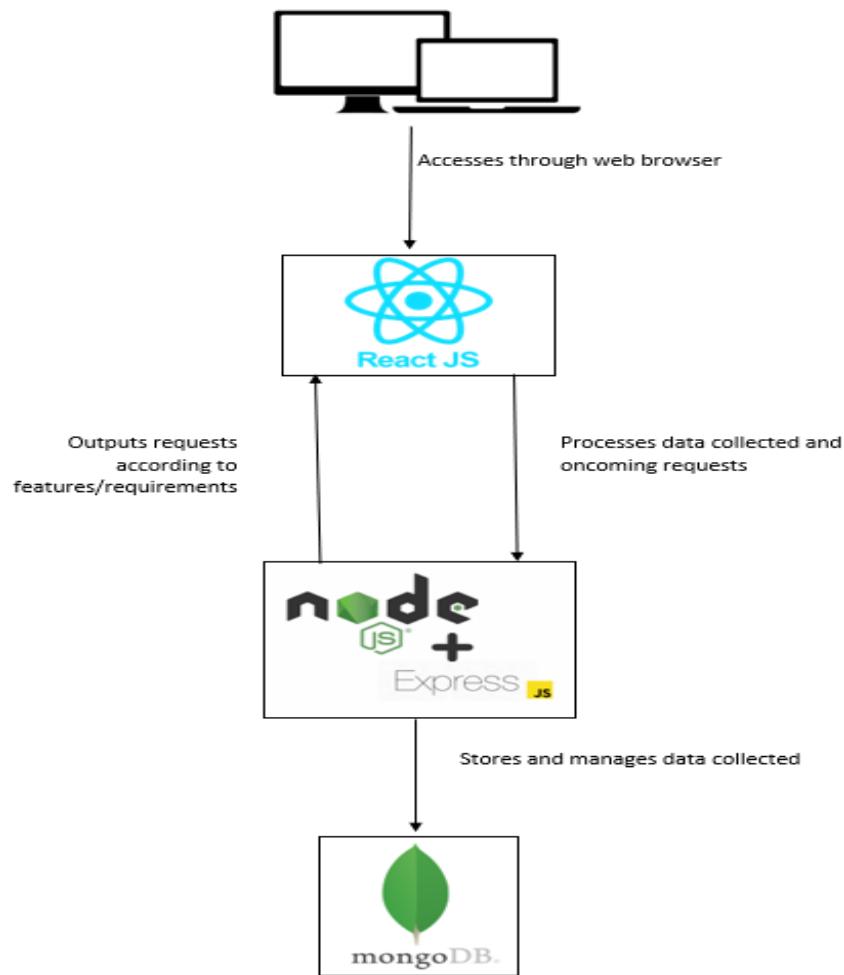
Roles and Responsibilities

Roles	Responsibilities
Project Sponsor/Supervisor	<ul style="list-style-type: none"> - Provides necessary resources and support towards the team - Informs team of potential changes - Provides feedback and ensures team meets the project requirements
Team Leader/Project Manager	<ul style="list-style-type: none"> - Managing Team Members - Delegating Roles and Responsibilities - Amend and allocate/reallocate project schedule and resources - Ensures deadlines are met
Backend Lead	<ul style="list-style-type: none"> - Coordinates with other backend programmers and oversees team's deadline - Develops features in relation to user stories regarding backend - Compile backend's team progression and tasks for Project Manager
Frontend Lead	<ul style="list-style-type: none"> - Coordinates with other frontend programmers and oversees team's deadline - Develops features in relation to user stories regarding frontend - Compile frontend's team progression and tasks for Project Manager
Backend Programmer	<ul style="list-style-type: none"> - Develops features in relation to user stories regarding backend
Frontend Programmer	<ul style="list-style-type: none"> - Develops features in relation to user stories regarding frontend
Test Lead	<ul style="list-style-type: none"> - Coordinates test plans - Schedules all product tests - Oversees and delegates tests to other tester
Developer and Tester	<ul style="list-style-type: none"> - Participates in the development of features relating to prototype/product - Participates in the testing of features relating to prototype/product

Scrum Master	<ul style="list-style-type: none"> - Oversees documentation progress - Creates and maintains product backlog - Assigns tasks to streamline team's progression - Ensures documentation fits requirements and meet deadlines
Documenter and Editor	<ul style="list-style-type: none"> - Documents essential diagrams and information regarding project - Edits and proofreads other documenters' work if necessary.



System Design



Users will be able to access our system through any browser using a web-connected device.

Our system will be built upon the three-tiered architecture , which consists of three computing tiers ; the presentation tier , the application tier and the data tier. Given that each tier runs on its own infrastructure , each tier can be developed concurrently and updated or scaled without affecting the other layers.

For our **presentation tier** , the webpage's intuitive and user-friendly UI will be developed using React. Providing users with an interactive and seamless user experience , React will be supporting all the incoming requests when users interact with our features and collect information gathered from these users.

For our **application tier** ,

Express.js will be used for the development of backend web application frameworks that are to be layered on top of Node.js and will replace the functions used on an excel worksheet .

Our main scripting language for the development of backend functions will be Node.js which will process the information collected and ensure all the inner workings of our user-side of the webpage is up and running.

For our **data tier**,

MongoDB will be our supporting database which will store and manage all the necessary information to be processed by the application tier.

Technology Architecture

System Overview	
Hardware Interface	The product will utilise the MongoDB Atlas which is a document-oriented cloud server database to handle all backend functionalities.
Software Interface	The Live Server will run on Windows 10/11 settings. The system will be operated using a web application interface where users will be able to access the system with any computer terminal running on a javascript-enabled web browser.
Connectivity Requirements	To access the web application , users are required to have an internet connection via Wi-Fi/Ethernet etc.

Agile Project Schedule

Timetable

Our schedule for the development of this project will be split into two phases ;

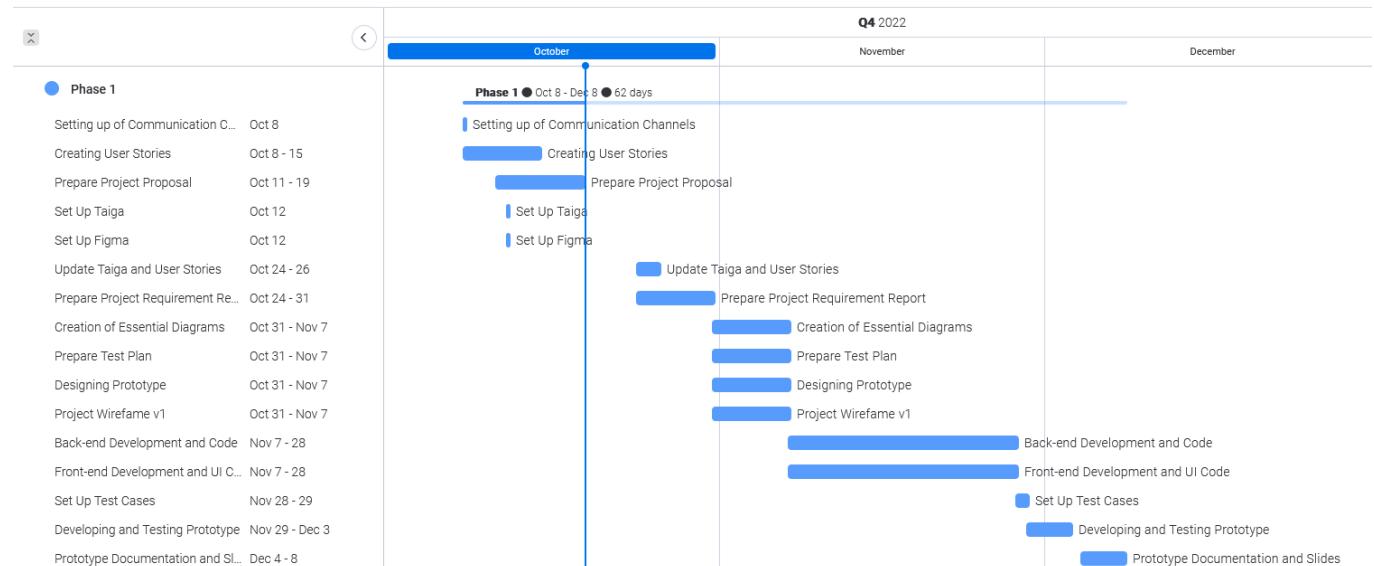
The research and ideation phase will last from 8th Oct 2022 to 8th Dec 2022.

Focus for this phase of our project would be towards theorising and researching before developing a working prototype with some working core features.

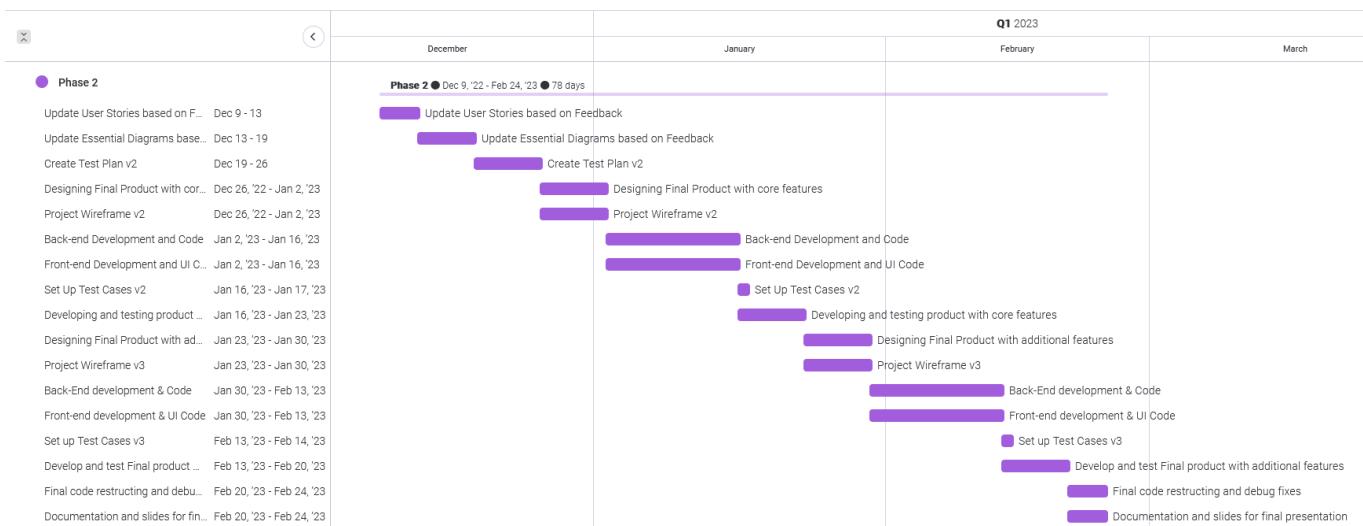
The design and development phase will last from 9th Dec 2022 to 25th Feb 2023.

For the second phase , we will mainly be focusing on developing and designing our final product with frequent testing and delivering additional features alongside the core features.

- **Phase 1**



● Phase 2



Deliverables

Deliverables	Planned	Actual
Project Proposal	19th October 2022	20th October 2022
Project Requirements Specification Documentation	11th November 2022	12th November 2022
Project Progress Report	17th December 2022	17th December 2022
Prototype Slides	23th December 2022	25th December 2022

Meeting Minutes

- **Meeting Minutes 1**

FYP-22-S4-32

8 Oct , 2022

Project Name : Automatic Project Assignment

Opening : The first group meeting of FYP-22-S4-32 was called to conduct on 8 Oct 2022

Present : Matthew Chua Yu Jie , Tan Kwan Quan , Tyrell Lim Yi Jin , Yang Yijie , Yeo Jun Ming , Zheng Yinli

Meeting Objective : Begin Sprint 0, Further discussion of application/document expectations and planning as well as delegation of roles/workload

Agenda :

- Group icebreaker and introduction of group members
- Revising , reviewing and proofreading group's compiled user stories
 - Define deliverables in Sprint 0

S/No	Action Item	Assigned To	Due Date
1	Group Icebreaker and introduction of group members	Matthew Chua Yu Jie , Zheng Yinli , Yang Yi Jie	8/10/2022
2	Delegations of roles and workload	Matthew Chua Yu Jie , Tan Kwan Quan	8/10/2022
3	Discussion and implementation of required diagrams and chart for Sprint 0	Tyrell Lim Yi Jin , Yeo Jun Ming , Yang YiJie	8/10/2022
4	Creation of user stories	Done by group	8/10/2022
5	Reviewing and revising user stories	Done by group	8/10/2022
6	Proofreading and compiling user stories	Tyrell Lim Yi Jin , Yeo Jun Ming	14/10/2022
7	Research for information needed for proposal	Tyrell Lim Yi Jin , Yeo Jun Ming , Yang YiJie	14/10/2022

S/No	Discussion Notes
1	Conducted Icebreaker and self-introduction , so that group can get to know one another better through identifying their respective strengths and weaknesses .
2	Conducted small discussion of each member's expectations and standards to better allow for roles delegation .
3	Identified project requirements , expectations and variables required through the creation of user stories.
4 ,5 ,6	Review and feedback session of the group's user stories before final edit and proofreading of user stories for submission
7	Discussion to identify the required diagrams and information for the mock proposal

Date and time of next meeting : 15/10/2022

Prepared by : Tyrell Lim

● **Meeting Minutes 2**

FYP-22-S4-32

15 Oct , 2022

Project Name : Automatic Project Assignment

Opening : The second group meeting of FYP-22-S4-32 was called to conduct on 15 Oct 2022

Present : Matthew Chua Yu Jie , Tan Kwan Quan , Tyrell Lim Yi Jin , Yang Yijie , Yeo Jun Ming , Zheng Yinli

Meeting Objective : Continuation of Sprint 0 , further discussion of application/document expectations and planning and selection of user stories for mock proposal submission

Agenda :

- Finalize Mock Project Proposal
- Finalize User Stories for Project Proposal
- Review and Build On Required Documentation

S/No	Action Item	Assigned To	Due Date
1	Do up of required diagrams and necessary documentation	Tyrell Lim Yi Jin , Yeo Jun Ming , Yang Yijie	19/10/2022
2	Do up of Gantt Chart	Tyrell Lim Yi Jin	15/10/2022
3	Discussion and implementation of software and application for prototype	Matthew Chua Yu Jie , Tan Kwan Quan , Zheng Yinli	15/10/2022
4	Reviewing and revising user stories	Done by group	15/10/2022

S/No	Discussion Notes
1 , 2	Do up of the necessary documentations and diagrams (e.g Gantt Chart)
3	Discussion held to plan out layout of code and what programming language to use
4	Discussion held to decide priority for the selection of user stories for mock proposal

Date and time of next meeting : 22/10/2022

Prepared by : Tyrell Lim

● **Meeting Minutes 3**

FYP-22-S4-32

22 Oct , 2022

Project Name : Automatic Project Assignment

Opening : The third group meeting of FYP-22-S4-32 was called to conduct on 22 Oct 2022

Present : Matthew Chua Yu Jie , Tan Kwan Quan , Tyrell Lim Yi Jin , Yang Yijie , Yeo Jun Ming , Zheng Yinli

Meeting Objective : Begin Sprint 1 , Further discussion of application/document expectations and planning and selection of user stories for Sprint 1

Agenda :

- Create Project Requirements Document
 - Define deliverables for Sprint 1
 - Create Product and Sprint 1 backlog
 - Begin Coding for Login/Logout Function
- Review and Build On Required Documentation

S/No	Action Item	Assigned To	Due Date
1	Discussion and implementation of required diagrams and chart for Project Requirements Document	Done by Group	22/10/2022
2	Do up of required diagrams and necessary documentation	Tyrell Lim Yi Jin , Yeo Jun Ming , Yang YiJie	28/10/2022
3	Creation of new user stories	Done by group	21/10/2022
4	Reviewing and revising user stories	Done by group	21/10/2022
5	Creation of GUI for application (Login/Logout)	Matthew Chua Yu Jie , Tan Kwan Quan , Zheng Yinli	28/10/2022

S/No	Discussion Notes
1	Discussion held to decide layout of Project requirements documents and the necessary documents.
2	Do up of the necessary documentations and diagrams
3 , 4	Identified Sprint 1 requirements , diagrams and variables required after selection of user stories.

5	Implementation of the necessary code for the intended function
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Date and time of next meeting : 29/10/2022

Prepared by : Tyrell Lim

● **Meeting Minutes 4**

FYP-22-S4-32

29 Oct , 2022

Project Name : Automatic Project Assignment

Opening : The fourth group meeting of FYP-22-S4-32 was called to conduct on 29 Oct 2022

Present : Matthew Chua Yu Jie , Tan Kwan Quan , Tyrell Lim Yi Jin , Yang Yijie , Yeo Jun Ming , Zheng Yinli

Meeting Objective : Continuation of Sprint 1 , further discussion of application/document expectations and planning and selection of user stories for project requirements document submission.

Agenda :

- **Further discussion on Project Requirements Document**
 - Begin Coding for Individual accounts
 - Review and Build On Required Documentation

S/No	Action Item	Assigned To	Due Date
1	Discussion and implementation of required diagrams and chart for Project Requirements Document	Done by Group	29/10/2022
2	Do up of required diagrams and necessary documentation	Tyrell Lim Yi Jin , Yeo Jun Ming , Yang YiJie	4/11/2022
3	Creation of new user stories	Done by group	29/10/2022
4	Reviewing and revising user stories	Done by group	29/10/2022
5	Creation of user accounts for application	Matthew Chua Yu Jie , Tan Kwan Quan , Zheng Yinli	5/11/2022

S/No	Discussion Notes
1	Discussion held to decide additional Project requirements documents and details.
2	Further do up of the necessary documentations and diagrams
3 , 4	Discussion held to decide additional user stories and/or removing unnecessary stories.
5	Implementation of the necessary code for the intended function

Date and time of next meeting : 5/11/2022

Prepared by : Tyrell Lim

● **Meeting Minutes 5**

FYP-22-S4-32

5 Nov, 2022

Project Name : Automatic Project Assignment

Opening : The fifth group meeting of FYP-22-S4-32 was called to conduct on 5 Nov 2022

Present : Matthew Chua Yu Jie , Tan Kwan Quan , Tyrell Lim Yi Jin , Yang Yijie , Yeo Jun Ming , Zheng Yinli

Meeting Objective : Begin Sprint 2 , Further discussion of application/document expectations and planning and selection of user stories for Sprint 2

Agenda :

- **Further discussion on Project Requirements Document**
- **Finalise User Stories for Project Requirements Document**
 - **Finalising Project Requirements Document**

S/No	Action Item	Assigned To	Due Date
1	Finalise discussion and implementation of required diagrams and chart for Project Requirements Document	Done by Group	5/11/2022
2	Finalise do up of required diagrams and necessary documentation	Tyrell Lim Yi Jin , Yeo Jun Ming , Yang YiJie	11/11/2022
3	Finalise creation of new user stories for requirements doc	Done by group	5/11/2022
4	Final reviewing and revising of user stories	Done by group	5/11/2022

S/No	Discussion Notes
1	Discussion held to decide additional Project requirements documents and details.
2	Further do up of the necessary documentations and diagrams
3 , 4	Final discussion held to decide additional user stories and/or removing unnecessary stories.

Date and time of next meeting : 12/11/2022

Prepared by : Tyrell Lim

● **Meeting Minutes 6**

FYP-22-S4-32

12 Nov , 2022

Project Name : Automatic Project Assignment

Opening : The sixth group meeting of FYP-22-S4-32 was called to conduct on 12 Nov 2022

Present : Matthew Chua Yu Jie , Tan Kwan Quan , Tyrell Lim Yi Jin , Yang Yijie , Yeo Jun Ming , Zheng Yinli

Meeting Objective : Continuation of Sprint 2 , Begin discussion of application/document expectations and planning and selection of user stories for Project Prototype

Agenda :

- Discussion on Project Prototype
- Begin Coding for Core Features
- Creation of Prototype related documentation

S/No	Action Item	Assigned To	Due Date
1	Discussion and implementation of required diagrams and chart for prototype documentation	Done by Group	12/11/2022
2	Do up of required diagrams and necessary documentation	Tyrell Lim Yi Jin , Yeo Jun Ming , Yang Yijie	18/11/2022
3	Discussion and implementation of software and application for Core Features	Matthew Chua Yu Jie , Tan Kwan Quan , Zheng Yinli	18/11/2022

S/No	Discussion Notes
1	Identified Prototype requirements , diagrams and variables required after selection of user stories.
2	Do up of the necessary documentations and diagrams (e.g State diagram and Use Case Diagrams)
5	Implementation of the necessary code for the intended function

Date and time of next meeting : 19/11/2022

Prepared by : Tyrell Lim

● **Meeting Minutes 7**

FYP-22-S4-32

19 Nov , 2022

Project Name : Automatic Project Assignment

Opening : The seventh group meeting of FYP-22-S4-32 was called to conduct on 19 Nov 2022

Present : Matthew Chua Yu Jie , Tan Kwan Quan , Tyrell Lim Yi Jin , Yang Yijie , Yeo Jun Ming , Zheng Yinli

Meeting Objective : Begin of Sprint 3 , Further discussion of application/document expectations and planning of Prototype

Agenda :

- **Further discussion on Project Prototype**
 - **Further Coding for Core Features**
 - **Further do-up of Prototype related documentation**

S/No	Action Item	Assigned To	Due Date
1	Discussion and implementation of required diagrams and chart for prototype documentation	Done by Group	19/11/2022
2	Do up of required diagrams and necessary documentation	Tyrell Lim Yi Jin , Yeo Jun Ming , Yang Yijie	25/11/2022
3	Discussion and implementation of software and application for Core Features	Matthew Chua Yu Jie , Tan Kwan Quan , Zheng Yinli	25/11/2022

S/No	Discussion Notes
1	Identified Prototype requirements , diagrams and variables required after selection of user stories for core features
2	Do up of the necessary documentations and diagrams
3	Implementation of the necessary code for the intended function

Date and time of next meeting : 26/11/2022

Prepared by : Tyrell Lim

● **Meeting Minutes 8**

FYP-22-S4-32

26 Nov , 2022

Project Name : Automatic Project Assignment

Opening : The eighth group meeting of FYP-22-S4-32 was called to conduct on 26 Nov 2022

Present : Matthew Chua Yu Jie , Tan Kwan Quan , Tyrell Lim Yi Jin , Yang Yijie , Yeo Jun Ming , Zheng Yinli

Meeting Objective : Continuation of Sprint 3 , Further discussion of application/document expectations and planning of Prototype

Agenda :

- Further discussion on Project Prototype
 - Further Coding for Core Features
- Further do-up of Prototype related documentation
 - Begin Test-cases

S/No	Action Item	Assigned To	Due Date
1	Discussion and implementation of required diagrams and chart for prototype documentation	Done by Group	26/11/2022
2	Do up of required diagrams and necessary documentation	Tyrell Lim Yi Jin , Yeo Jun Ming , Yang YiJie	2/12/2022
3	Discussion and implementation of software and application for Core Features	Matthew Chua Yu Jie , Tan Kwan Quan , Zheng Yinli	26/11/2022
4	Testing of application and creation of test cases	Tyrell Lim Yi Jin , Yeo Jun Ming	2/12/2022

S/No	Discussion Notes
1	Identified Prototype requirements , diagrams and variables required after selection of user stories for core features
2	Do up of the necessary documentations and diagrams
3	Implementation of the necessary code for the intended function and functions required for testing

4	Recorded test results in form of documentation to be submitted as test cases
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Date and time of next meeting : 3/12/2022

Prepared by : Tyrell Lim

● **Meeting Minutes 9**

FYP-22-S4-32

3 Dec , 2022

Project Name : Automatic Project Assignment

Opening : The ninth group meeting of FYP-22-S4-32 was called to conduct on 3 Dec 2022

Present : Matthew Chua Yu Jie , Tan Kwan Quan , Tyrell Lim Yi Jin , Yang Yijie , Yeo Jun Ming , Zheng Yinli

Meeting Objective : Beginning of Sprint 4 , Further discussion of application/document expectations and planning of Prototype

Agenda :

- Further discussion on Project Prototype
 - Further Coding for Core Features
- Further do-up of Prototype related documentation
 - Further do up of Test-cases
 - Begin Prototype Slides

S/No	Action Item	Assigned To	Due Date
1	Further discussion and implementation of required diagrams and chart for prototype documentation	Done by Group	3/12/2022
2	Further do up of required diagrams and necessary documentation	Tyrell Lim Yi Jin , Yeo Jun Ming , Yang Yijie	3/12/2022
3	Discussion and implementation of software and application for Core Features	Matthew Chua Yu Jie , Tan Kwan Quan , Zheng Yinli	9/12/2022
4	Testing of application and do-up of test cases	Tyrell Lim Yi Jin , Yeo Jun Ming	9/12/2022
5	Discussion and do-up of prototype slides	Done by Group	9/12/2022

S/No	Discussion Notes
1	Identified Prototype requirements , diagrams and variables required after selection of user stories for core features

2	Do up of the necessary documentations and diagrams
3	Implementation of the necessary code for the intended function and functions required for testing
4	Recorded test results in form of documentation to be submitted as test cases
5	Do-up of the presentation slides according to decided format

Date and time of next meeting : 10/12/2022

Prepared by : Tyrell Lim

● **Meeting Minutes 10**

FYP-22-S4-32

10 Dec , 2022

Project Name : Automatic Project Assignment

Opening : The tenth group meeting of FYP-22-S4-32 was called to conduct on 10 Dec 2022

Present : Matthew Chua Yu Jie , Tan Kwan Quan , Tyrell Lim Yi Jin , Yang Yijie , Yeo Jun Ming , Zheng Yinli

Meeting Objective : Continuation of Sprint 4 , Further discussion of application/document expectations and planning of Prototype

Agenda :

- Finalise Project Prototype Documentation
 - Finalise Project Prototype Slides
 - Begin User Manual
 - Further do up of Test-cases

●

S/No	Action Item	Assigned To	Due Date
1	Finalise discussion and implementation of required diagrams and chart for prototype documentation	Done by Group	10/12/2022
2	Finalise do up of required diagrams and necessary documentation	Tyrell Lim Yi Jin , Yeo Jun Ming , Yang YiJie	16/12/2022
3	Do-up and discussion of User Manual v1	Tyrell Lim Yi Jin , Yeo Jun Ming , Yang YiJie	16/12/2022
4	Further testing of application and do-up of test cases	Tyrell Lim Yi Jin , Yeo Jun Ming	16/12/2022

S/No	Discussion Notes
1	Finalise discussion pertaining to prototype documentation and slides
2	Finalising the necessary documentations and diagrams for prototype documentation
3	Begin do-up of User Manual v1
4	Recorded test results in form of documentation to be submitted as test cases

Date and time of next meeting : 17/12/2022

Prepared by : Tyrell Lim

Meeting Minutes 11

FYP-22-S4-32

17 Dec , 2022

Project Name : Automatic Project Assignment

Opening : The eleventh group meeting of FYP-22-S4-32 was called to conduct on 17 Dec 2022

Present : Matthew Chua Yu Jie , Tan Kwan Quan , Tyrell Lim Yi Jin , Yang Yijie , Yeo Jun Ming , Zheng Yinli

Meeting Objective : Beginning of Sprint 5 , Further discussion of application/document expectations

Agenda :

- Begin Documentation for Sprint 5
- Begin coding for automatic project assignment function

S/No	Action Item	Assigned To	Due Date
1	Begin discussion and implementation of required diagrams and chart for Sprint 5 documentation	Done by Group	17/12/2022
2	Begin do up of required diagrams and necessary documentation	Tyrell Lim Yi Jin , Yeo Jun Ming , Yang Yijie	24/12/2022
3	Do-up and discussion of User Manual v1	Tyrell Lim Yi Jin , Yeo Jun Ming , Yang Yijie	24/12/2022
4	Further testing of application and do-up of test cases	Tyrell Lim Yi Jin , Yeo Jun Ming	24/12/2022
5	Begin Coding of Automatic Project Assignment Function	Done by Group	24/12/2022

S/No	Discussion Notes
1	Begin discussion pertaining to sprint 5 documentation
2	Do-up the necessary documentations and diagrams for sprint 5 documentation
3	Begin do-up of User Manual v1
4	Recorded test results in form of documentation to be submitted as test cases

5	Do-up of Automatic Project Assignment Function
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Date and time of next meeting : 24/12/2022

Prepared by : Tyrell Lim

Meeting Minutes 12

FYP-22-S4-32

24 Dec , 2022

Project Name : Automatic Project Assignment

Opening : The twelfth group meeting of FYP-22-S4-32 was called to conduct on 24 Dec 2022

Present : Matthew Chua Yu Jie , Tan Kwan Quan , Tyrell Lim Yi Jin , Yang Yijie , Yeo Jun Ming , Zheng Yinli

Meeting Objective : Continuation of Sprint 5 , Further discussion of application/document expectations and planning of Prototype

Agenda :

- Begin Documentation for Sprint 5
- Begin coding for automatic project assignment function

S/No	Action Item	Assigned To	Due Date
1	Finalise discussion and implementation of required diagrams and chart for sprint 5 documentation	Done by Group	24/12/2022
2	Finalise Do up of required diagrams and necessary documentation for Sprint 5	Tyrell Lim Yi Jin , Yeo Jun Ming , Yang YiJie	31/12/2022
3	Finalise Do-up and discussion of User Manual	Tyrell Lim Yi Jin , Yeo Jun Ming , Yang YiJie	31/12/2022
4	Further testing of application and do-up of test cases	Tyrell Lim Yi Jin , Yeo Jun Ming	31/12/2022
5	Continue Coding of Automatic Project Assignment Function	Done by Group	31/12/2022

S/No	Discussion Notes
1	Finalise discussion pertaining to sprint 5

2	Finalise Do-up of necessary documentations and diagrams for sprint 5
3	Finalise do-up of User Manual
4	Recorded test results in form of documentation to be submitted as test cases
5	Continue Do-up of Automatic Project Assignment Function

Date and time of next meeting : 31/12/2022

Prepared by : Tyrell Lim

Meeting Minutes 13

FYP-22-S4-32

31 Dec , 2022

Project Name : Automatic Project Assignment

Opening : The thirteenth group meeting of FYP-22-S4-32 was called to conduct on 31 Dec 2022

Present : Matthew Chua Yu Jie , Tan Kwan Quan , Tyrell Lim Yi Jin , Yang Yijie , Yeo Jun Ming , Zheng Yinli

Meeting Objective : Beginning of Sprint 6 , Further discussion of application/document expectations

Agenda :

- Begin Sprint 6 Documentation
- Continuing Discussion regarding automatic project assignment function
 - Further do up of Test-cases
- Begin Discussion of Unit and Integration Testing

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S/No	Action Item	Assigned To	Due Date
1	Begin discussion and implementation of required diagrams and chart for Sprint 6 documentation	Done by Group	31/12/2022
2	Begin do up of required diagrams and necessary documentation for Sprint 6	Tyrell Lim Yi Jin , Yeo Jun Ming , Yang Yijie	7/1/2023
3	Do-up and discussion of User Manual v2 and Technical Manual	Tyrell Lim Yi Jin , Yeo Jun Ming , Yang Yijie	7/1/2023
4	Further testing of application and do-up of test cases	Tyrell Lim Yi Jin , Yeo Jun Ming , Yang Yijie	7/1/2023
5	Begin Unit and Integration Testing	Tyrell Lim Yi Jin , Yeo Jun Ming	7/1/2023

6	Continue Coding of Automatic Project Assignment Function	Done by Group	7/1/2023
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S/No	Discussion Notes
1	Begin discussion pertaining to sprint 6
2	Do-up the necessary documentations and diagrams for sprint 6 documentation
3	Do-up of User Manual V2 and Technical Manual
4	Begin Unit and Integration Testing and Documents
5	Recorded test results in form of documentation to be submitted as test cases
6	Continue Do-up of Automatic Project Assignment Function

Date and time of next meeting : 7/1/2023

Meeting Minutes 14

FYP-22-S4-32

7 Jan , 2023

Project Name : Automatic Project Assignment

Opening : The fourteenth group meeting of FYP-22-S4-32 was called to conduct on 7 Jan 2023

Present : Matthew Chua Yu Jie , Tan Kwan Quan , Tyrell Lim Yi Jin , Yang Yijie , Yeo Jun Ming , Zheng Yinli

Meeting Objective : Continuation of Sprint 6 , Further discussion of application/document expectations

Agenda :

- Finalise Sprint 6 Documentation
- Finalise Discussion regarding automatic project assignment function
 - Further do up of Unit Testing and Integration Testing
 - Further do up of Test-cases

S/No	Action Item	Assigned To	Due Date
1	Finalise discussion and implementation of required diagrams and chart for Sprint 6 documentation	Done by Group	7/1/2023
2	Finalise do up of required diagrams and necessary documentation	Tyrell Lim Yi Jin , Yeo Jun Ming , Yang YiJie	13/1/2023

3	Do-up and discussion of User Manual v2 & Technical Manual	Tyrell Lim Yi Jin , Yeo Jun Ming , Yang YiJie	13/1/2023
4	Further testing of application and do-up of test cases	Tyrell Lim Yi Jin , Yeo Jun Ming , Yang YiJie	13/1/2023
5	Continue Unit and Integration Testing	Tyrell Lim Yi Jin , Yeo Jun Ming	13/1/2023
6	Finalize Coding of Automatic Project Assignment Function	Done by Group	13/1/2023

S/No	Discussion Notes
1	Finalise discussion pertaining to Sprint 6
2	Finalising the necessary documentations and diagrams for Sprint 6
3	Do-up of User Manual v2 and Technical Manual
4	Recorded test results in form of documentation to be submitted as test cases
5	Continue Unit and Integration Testing
6	Finalise Do-up of Automatic Project Assignment Function

Date and time of next meeting : 14/1/2023

Meeting Minutes 15

FYP-22-S4-32

14 Jan , 2023

Project Name : Automatic Project Assignment

Opening : The fifteenth group meeting of FYP-22-S4-32 was called to conduct on 14 Jan 2023

Present : Matthew Chua Yu Jie , Tan Kwan Quan , Tyrell Lim Yi Jin , Yang Yijie , Yeo Jun Ming , Zheng Yinli

Meeting Objective : Beginning of Sprint 7 , Further discussion of application/document expectations

Agenda :

- Begin Sprint 7 Documentation
- Begin Discussion regarding remaining application function
 - Further do up of Unit Testing and Integration Testing
 - Further do up of Test-cases

S/No	Action Item	Assigned To	Due Date

1	Begin discussion and implementation of required diagrams and chart for Sprint 7 documentation	Done by Group	14/1/2023
2	Do up of required diagrams and necessary documentation for Sprint 7	Tyrell Lim Yi Jin , Yeo Jun Ming , Yang YiJie	21/1/2023
3	Do-up and discussion of User Manual v3 and Technical Manual v2	Tyrell Lim Yi Jin , Yeo Jun Ming , Yang YiJie	21/1/2023
4	Continue testing of application and do-up of test cases	Tyrell Lim Yi Jin , Yeo Jun Ming , Yang YiJie	21/1/2023
5	Continue Unit and Integration Testing	Tyrell Lim Yi Jin , Yeo Jun Ming	21/1/2023
6	Coding of Remaining Application Function	Done by Group	21/1/2023

S/No	Discussion Notes
1	Begin discussion pertaining to sprint 7
2	Do-up of the necessary documentations and diagrams for Sprint 7
3	Do-up of User Manual v3 and Technical Manual v2
4	Recorded test results in form of documentation to be submitted as test cases
5	Continue Unit and Integration Testing
6	Do-up of remaining application Function

Date and time of next meeting : 21/1/2023

Meeting Minutes 16

FYP-22-S4-32

21 Jan , 2023

Project Name : Automatic Project Assignment

Opening : The sixteenth group meeting of FYP-22-S4-32 was called to conduct on 21 Jan 2023

Present : Matthew Chua Yu Jie , Tan Kwan Quan , Tyrell Lim Yi Jin , Yang Yijie , Yeo Jun Ming , Zheng Yinli

Meeting Objective : Continuation of Sprint 7 , Further discussion of application/document expectations

Agenda :

- Finalise Sprint 7 Documentation
- Finalise Discussion regarding remaining application function
- Further do up of Unit Testing and Integration Testing
 - Further do up of Test-cases

S/No	Action Item	Assigned To	Due Date
1	Finalise discussion and implementation of required diagrams and chart for Sprint 7 documentation	Done by Group	21/1/2023
2	Finalise Do up of required diagrams and necessary documentation for Sprint 7	Tyrell Lim Yi Jin , Yeo Jun Ming , Yang YiJie	27/1/2023
3	Do-up and discussion of User Manual v3 and Technical Manual v2	Tyrell Lim Yi Jin , Yeo Jun Ming , Yang YiJie	27/1/2023
4	Continue testing of application and do-up of test cases	Tyrell Lim Yi Jin , Yeo Jun Ming , Yang YiJie	27/1/2023
5	Continue Unit and Integration Testing	Tyrell Lim Yi Jin , Yeo Jun Ming	27/1/2023
6	Finalise Coding of Remaining Application Function	Done by Group	27/1/2023

S/No	Discussion Notes
1	Finalise discussion pertaining to sprint 7
2	Finalise do-up of the necessary documentations and diagrams for Sprint 7

3	Do-up of User Manual v3 and Technical Manual v2
4	Recorded test results in form of documentation to be submitted as test cases
5	Continue Unit and Integration Testing
6	Finalise Coding of remaining application Function

Date and time of next meeting : 28/1/2023

Meeting Minutes 17

FYP-22-S4-32

28 Jan , 2023

Project Name : Automatic Project Assignment

Opening : The seventeenth group meeting of FYP-22-S4-32 was called to conduct on 28 Jan 2023

Present : Matthew Chua Yu Jie , Tan Kwan Quan , Tyrell Lim Yi Jin , Yang Yijie , Yeo Jun Ming , Zheng Yinli

Meeting Objective : Beginning of Sprint 8 , Further discussion of application/document expectations

Agenda :

- Begin Sprint 8 Documentation
- Begin discussion regarding finalising application
- Do up of Integration Testing and UAT Tests
 - Further do up of Test-cases

S/No	Action Item	Assigned To	Due Date
1	Begin discussion and implementation of required diagrams and chart for Sprint 8 documentation	Done by Group	28/1/2023
2	Do up of required diagrams and necessary documentation for Sprint 8	Tyrell Lim Yi Jin , Yeo Jun Ming , Yang YiJie	4/2/2023
3	Do-up and discussion of Technical Manual v2 and UAT Tests	Tyrell Lim Yi Jin , Yeo Jun Ming , Yang YiJie	4/2/2023
4	Continue testing of application and do-up of test cases	Tyrell Lim Yi Jin , Yeo Jun Ming , Yang YiJie	4/2/2023
5	Continue Unit and Integration Testing	Tyrell Lim Yi Jin , Yeo Jun Ming	4/2/2023
6	Begin Finalising Coding of Remaining Application Function	Done by Group	4/2/2023

S/No	Discussion Notes
1	Finalise discussion pertaining to sprint 7
2	Finalise do-up of the necessary documentations and diagrams for Sprint 7
3	Do-up of Technical Manual v2 and UAT Tests
4	Recorded test results in form of documentation to be submitted as test cases
5	Continue Unit and Integration Testing
6	Begin Finalising Coding of remaining application Function

Date and time of next meeting : 4/2/2023

Meeting Minutes 18

FYP-22-S4-32

4 Feb , 2023

Project Name : Automatic Project Assignment

Opening : The eighteenth group meeting of FYP-22-S4-32 was called to conduct on 4 Feb 2023

Present : Matthew Chua Yu Jie , Tan Kwan Quan , Tyrell Lim Yi Jin , Yang Yijie , Yeo Jun Ming , Zheng Yinli

Meeting Objective : Continuation of Sprint 8 , Further discussion of application/document expectations

Agenda :

- Finalise Sprint 8 Documentation
- Finalise discussion regarding finalising application
- Do up of Integration Testing and UAT Tests
- Further do up of Test-cases

S/No	Action Item	Assigned To	Due Date
1	Finalise discussion and implementation of required diagrams and chart for Sprint 8 documentation	Done by Group	4/2/2023
2	Finalise Do up of required diagrams and necessary documentation for Sprint 8	Tyrell Lim Yi Jin , Yeo Jun Ming , Yang YiJie	11/2/2023

3	Finalise Do-up and discussion of Technical Manual v2 and UAT Tests	Tyrell Lim Yi Jin , Yeo Jun Ming , Yang YiJie	11/2/2023
4	Continue testing of application and do-up of test cases	Tyrell Lim Yi Jin , Yeo Jun Ming , Yang YiJie	11/2/2023
5	Continue Unit and Integration Testing	Tyrell Lim Yi Jin , Yeo Jun Ming	11/2/2023
6	Finalising Coding of Remaining Application Function	Done by Group	11/2/2023

S/No	Discussion Notes
1	Finalise discussion pertaining to sprint 7
2	Finalise do-up of the necessary documentations and diagrams for Sprint 7
3	Do-up of Technical Manual v2 and UAT Tests
4	Recorded test results in form of documentation to be submitted as test cases
5	Continue Unit and Integration Testing
6	Finalising Coding of remaining application Function

Date and time of next meeting : 11/2/2023

Meeting Minutes 19

FYP-22-S4-32

11 Feb , 2023

Project Name : Automatic Project Assignment

Opening : The final group meeting of FYP-22-S4-32 was called to conduct on 11 Feb 2023

Present : Matthew Chua Yu Jie , Tan Kwan Quan , Tyrell Lim Yi Jin , Yang Yijie , Yeo Jun Ming , Zheng Yinli

Meeting Objective : Beginning of Sprint 9, Discussion of final deliverables and objectives

Agenda :

- Finalise all documentation
 - Finalise coding
 - Finalise testing
- Prepare video demonstration
- Prepare Rehearsal for final presentation

S/No	Action Item	Assigned To	Due Date
1	Finalise discussion and implementation of required diagrams and all necessary documentation	Done by Group	16/2/2023
2	Finalise all testing and do-up all remaining test-related documentations	Done by Group	16/2/2023
3	Finalise all code related items/functions	Done by Group	16/2/2023
4	Prepare Video Demonstration	Yin li , Matthew	16/2/2023
5	Discuss Final Presentation Slides	Done by Group	16/2/2023
6	Discuss Rehearsal dates	Done by Group	16/2/2023

S/No	Discussion Notes
1	Finalise discussion pertaining to entire FYP project
2	Finalise all test-related items/documents
3	Finalise all code-related items/documents
4	Preparation of Video Demo
5	Discussion of Slides layout and details
6	Date planning for group rehearsal

Date and time of next meeting :-

Reflective Diaries

Sprint 0 (8 October 2022 – 21 October 2022)

Tyrell Lim Yi Jin

Objectives Achieved:

Individual research pertaining to FYP topic

Creating User Stories relevant to FYP topic

Setting up Communication Channels and Taiga Account

Documentation pertaining to Mock Project Proposal

Setbacks occurred:

Had to cut out a few created user stories due to it being unrelated to the topic.

Group had some disagreement pertaining to user stories.

Doing-up of Mock Project Proposal was harder than expected due to unfamiliarity.

Matthew Chua Yu Jie

Objectives Achieved:

Met with the supervisor to discuss the project specifications.

Setting up of all necessary materials for the project (taiga, google docs, etc)

Research on existing products if any and confirmation of programming software to be used.

Completion of first project requirements document draft and submitted to supervisor for feedback.

Setbacks occurred:

We were unable to find any existing products online that are similar to what we have to produce as our product is more of an internal application.

Tan Kwan Quan

Objectives Achieved:

Met up with the supervisor for clarification on the project

Met up with teammates to discuss how we want to proceed with the project

Drafted the Project Requirements Documentation with my teammates

Set up the necessary technologies and tools that the team will be using e.g., Taiga, GitHub, Figma.

Crafted user stories

Setbacks occurred:

Unfamiliarity with some tools e.g., Figma

Difficulty in finding similar product/application while conducting research

Yang Yijie

Objectives Achieved:

Met our supervisor for the first time and discussed the project requirements.

Set up basic tools required for the project such as Google Drives, Taiga, etc.

Started creation of user stories for the project.

Started and completed our initial project proposal draft.

Setbacks occurred:

Due to the nature of our project assignment, we are unable to find any competitors in the field of project assignment system.

Yeo Jun Ming

Objectives Achieved:

Setting up Communication Channels

Setting up Figma/Taiga

Started drafting out User Stories for the project

Started and completed our initial project proposal draft

First Meeting with Supervisor to find out his instructions for us on this project.

Setbacks occurred:

Due to the nature of our project assignment, we are unable to find any competitors in the field of project assignment system.

Zheng Yinli

Objectives Achieved:

Discussed project requirements with supervisor, Mr Tian

Research on existing programs

Started on user stories

Decided on a software development life cycle (Agile scrum)

Finished up project requirement document (1st draft)

Planned to have weekly meetings on Wednesday

Setbacks occurred:

Unable to find competitor programs, only found a university's internal project allocation website with limited information available to the public

Sprint 1 (22 October 2022 – 4 November 2022)

Tyrell Lim Yi Jin

Objectives Achieved:

Creating User Stories pertaining to additional features for future use

Identifying the functionalities and software development methodologies regarding our FYP topic

Merged Project Proposal with Initial Project Requirement Document

Do-up of Documentation details for Project Requirements Document

Setbacks occurred:

Group had some disagreement pertaining to what should be an additional feature.

Had an issue finding a competitor who provides a similar functionality to our FYP topic.

Unsure what should be added into Proposal to qualify for additional marks

Matthew Chua Yu Jie

Objectives Achieved:

Setting up of programming software for the project and completion of base layout of the program.

Refinement of project requirements documentation

Completed tutorials on MERN Stack needed to start on the programming for the project.

Setbacks occurred:

As it was the start of the project, I had a hard time trying to absorb all the tutorial materials needed for the programming portion of the project.

Tan Kwan Quan

Objectives Achieved:

Decided on the user stories for our first sprint

Did some set up with regards to our programming environment i.e., database (MongoDB), VSCode, React app, among others

Designed and programmed functionalities relating to the user stories in our first sprint

Setbacks occurred:

Unfamiliarity with programming language, so took some time to learn and get used to

Yang Yijie

Objectives Achieved:

Completed all base level user stories.

Setting up of programming tools needed for the project.

Refined project requirement documentation.

Learned how to use NodeJS and MondoDB.

Learned how to coordinate coding through Github.

Setbacks occurred:

Learning how to use NodeJS and MondoDB proved to be quite challenging.

Yeo Jun Ming

Objectives Achieved:

Testing out and learning the programming language decided by the group (NodeJS and MongoDB)

Setting up of the proposal template and other document templates

User Stories Completed

Using GitHub to compile codes used for the prototype

Completed Wireframe required for User Stories in Sprint 1

Setbacks occurred:

Picking up a new programming language such as NodeJS and MongoDB proved to be a challenge

Zheng Yinli

Objectives Achieved:

Finished user stories and delegated the user stories amongst us

Created project website with git pages <https://fyp-s4-34-32.github.io/>

Started learning MERN stack

Kwan Quan set up the programming resources on our github

Had short meetings with Kwan Quan and Matthew regarding MongoDB account and the setting up of users' login pages (whether to separate or not)

Setbacks occurred:

It took me some time to understand the flow of MERN stack

Sprint 2 (5 November 2022 – 18 November 2022)

Tyrell Lim Yi Jin

Objectives Achieved:

Finalizing User stories for Prototype

Finalizing documentation of Project Requirements Document for submission

Submission of Project Requirements Documentation

Do-up of Documentation details regarding Progress Report

Setbacks occurred:

Struggled with managing my workload for this period due to assignments from other modules.

Matthew Chua Yu Jie

Objectives Achieved:

Final audit and submission of project requirements documentation

Employee functions that were assigned for sprint 2

Refinement of user stories and use case descriptions for certain functions

Setbacks occurred:

Tan Kwan Quan
<u>Objectives Achieved:</u>
Refined our user stories
Decided on the user stories for sprint 2
Worked together with the team to design and implement the functionalities relating to our sprint's objective
Submitted our Project Requirements Documentation
<u>Setbacks occurred:</u>

Yang Yijie
<u>Objectives Achieved:</u>
Refined our existing user stories.
Final audit and submission of project requirement documentation.
<u>Setbacks occurred:</u>
Had minor confusion as the purpose of our initial user stories was not defined clearly.

Yeo Jun Ming
<u>Objectives Achieved:</u>
Refined existing user stories
Submission of project requirement documentation
Cleared any misunderstandings we have on the existing user stories as it was phrased differently
Completed Wireframe required for User Stories in Sprint 2
<u>Setbacks occurred:</u>
There were minor issues on how the initial user stories were phrased leading to some confusion.

Zheng Yinli

Objectives Achieved:

Prepared for the submission of project requirement documentation

Uploaded project requirement documentation onto our project website

Created profile pages for the user (super admin, admin, employees)

Setbacks occurred:

It took me a while to understand the flow of the pages and how ReactJS hooks worked. However, after reading up and googling while attempting to set up some pages, I was able to get the hang of it.

Sprint 3 (19 November – 2 December 2022)

Tyrell Lim Yi Jin

Objectives Achieved:

Do-up of Documentation details regarding Progress Report

Back-end coding for prototype

Fault testing certain portion of prototype code

Do-up of test cases

Setbacks occurred:

Had an issue remembering what I learnt regarding programming.

Had to re-watch certain programming videos to re-learn certain parts of the code.

Struggled with coding my portion of the initial prototype.

Struggled with managing my workload for this period due to examinations.

Matthew Chua Yu Jie

Objectives Achieved:

Employee and Project administrator functions that were assigned for sprint 3

Setting up of progress report documentation and further refinement of use case descriptions to match up with the actual program features.

Setbacks occurred:

I was unable to complete all of the programming functions needed to be done by the end of sprint 3 due to an overlapping exam schedule.

Tan Kwan Quan

Objectives Achieved:

Decided on the user stories for sprint 3

Worked together with the team to design and implement the functionalities relating to our sprint's objective

Started drafting the Progress Report Documentation

Setbacks occurred:

Assignments and exam for the other module I am taking concurrently with this FYP has taken up a lot of my time during this sprint

As a result, the team was unable to complete all the user stories pertaining to this sprint, so we pushed them over to the next

Yang Yijie

Objectives Achieved:

Started preparation for progress report documentation

Adjustments to use case diagrams and description to match with the actual program.

Setbacks occurred:

Preparations for the exam are underway for all team members, hence some of Sprint 3's story is shifted to Sprint 4.

Yeo Jun Ming

Objectives Achieved:

Started on doing the test plan for the prototype

Testing and Debug of the current prototype

Completed user stories

Completed Wireframe required for User Stories in Sprint 3

Setbacks occurred:

Managing the time, we have on hand while juggling for our examinations as it was during our exam preparation week

Some of Sprint 3's tasks must be shifted to Sprint 4

Zheng Yinli

Objectives Achieved:

Started on some of the employee and project admin functions for sprint 3

Refined some existing features added to user profile pages

Setbacks occurred:

Did not do much programming for this period as teammates were preparing for their exams and I was also busy with my Offensive Security Certified Professional exam.

Sprint 4 (3 December 2022– 16 December 2022)

Tyrell Lim Yi Jin

Objectives Achieved:

Finalising Documentation of Progress Report

Do-up of Class Diagrams and Activity Diagrams

Finalising Mid-term Presentation Slides

Finalising Format of Project Progress Report

Submission of Mid-term Presentation Slides

Submission Of Project Progress Report

Do-up of User Manual v1

Setbacks occurred:

Had to re-watch videos to learn how to do Class and Activity Diagrams correctly.

Group had some disagreement regarding who should present what slides.

Had trouble deciding what style/format to be used for presentation slides.

Matthew Chua Yu Jie

Objectives Achieved:

Completion of all leftover functions from sprint 3

Employee functions that were assigned for sprint 4

Database designs for progress report

Presentation slides powerpoint

Setbacks occurred:

As I had to go back for an army reservist, I was halted on progress by a week, but all deadline progress has been met.

Tan Kwan Quan

Objectives Achieved:

Decided on the user stories for sprint 4 and included the leftovers from sprint 3

Worked together with the team to design and implement the functionalities relating to our sprint's objective

Preparation for the team's prototype demonstration/presentation

Setbacks occurred:

Yang Yijie

Objectives Achieved:

Completed state and sequence diagram.

Adjustments made to use case diagrams.

Setbacks occurred:

Faced some difficulty while crafting the sequence diagram

Yeo Jun Ming

Objectives Achieved:

Testing and Debug of the current prototype

Completed Wireframe required for User Stories in Sprint 4

Setbacks occurred:

Some of the wireframes design are not functional or implementable using the programming language

Zheng Yinli

Objectives Achieved:

Finished up the front-end development for users' profile pages

- Change password
- Edit contact details

Finished some features for admins & super admins: view all users, delete users

Demo our prototype to mr tian and acquired his feedbacks

Discussed our program's project allocation algorithm with Kwan Quan and Matthew.

Setbacks occurred:

Implementation of search bar for project admin and super admins took quite some time

The “edit skills” feature for employees had some bugs, it took me a few days to fully understand what went wrong and fix it.

Sprint 5 (17 December 2022 – 30 December 2022)

Tyrell Lim Yi Jin

Objectives Achieved:

Updated and revised all required documents according to the latest sprint.

Updated technical manual and test plan up to latest sprint before handing it over to Test Lead(Junming) for proofreading

Conducted Unit Testing and Integration Testing for newly added functions

Had to edit some documentation based on Assessor's feedback

Setbacks occurred:

Assessor's feedback highlighted a few points that we lacked , so we had to rework certain aspects of our projects as a team

Healthy feedback is always welcomed even though it meant more work

Matthew Chua Yu Jie

Objectives Achieved:

Completion of Mid-point Presentation and Progress Report.

Completion of functions listed for sprint 5 except for the automatic assignment function

Revision of documentation for automatic assignment algorithm to include a proper UML diagram

Testing and Debugging of concurrent features using integration testing

Setbacks occurred:

As the mid-point presentation occurred on the 17th of December, we received some feedback from our assessor in terms of beefing up our documentation, and so I noted the revisions that we could implement before the submission of our progress report and those that we could improve on for the implementation of our final report. As our automatic assignment function was considered the main

core function of our project, it was naturally a given that we would not have been able to complete the automatic assignment feature within a single sprint's timeframe. As such I have decided to extend the deadline to the end of the next sprint.

Tan Kwan Quan

Objectives Achieved:

Mid-point presentation and Progress Report.

Accepted the feedback from the assessor during our presentation and worked them into our program.

Continued to work on our assignment algorithm and tasks for sprint 5.

Setbacks occurred:

Realised that our assignment algorithm is not as structured as we once thought, so we had to re-design our algorithm.

Assessor had some points and feedback that we did not think of, so we were grateful for them and worked them into our project.

Yang Yijie

Objectives Achieved:

Completed Mid Point Presentation

Creation of Technical Manual draft

Completed all Super Admin related stories

Adjustments to use case diagrams, description, diagrams and Sequence diagrams to match with the actual program.

Setbacks occurred:

Presentation slides lacks necessary information during the Mid Point Presentation

Unable to make decision on how to best represent the Automation Algorithm into a diagram

Yeo Jun Ming

Objectives Achieved:

Testing and Debug of the current prototype

Completed Wireframe required for User Stories in Sprint 5

Drafting of User Manual Document

Drafting of Test Plan Document

Setbacks occurred:

Some of the functionality required for the wireframe is tedious to replicate on design tool

Had to do wireframe in a more lengthy way due to the limitations of the design tool

Zheng Yinli

Objectives Achieved:

Set up “User Details” page for super admins and project admins

Project admins can edit the contact info of employees in their organisation

Super admins can change roles and edit the contact info of the project admins and employees.

Fixed issues occurred when employees are editing their skills on their profile page

Added extra features: search bar on “All Users” page, and resetting of passwords

Setbacks occurred:

Stumbled upon whether I should add a password reset page that expires after 30min, but after trying it seemed that sending out a reset password token to the users’ registered email addresses is more effective.

Sprint 6 (31 December 2022 – 13 January 2023)

Tyrell Lim Yi Jin

Objectives Achieved:

Updated and revised all required documents according to the latest sprint.

Updated technical manual and test plan up to latest sprint before handing it over to Test Lead(Junming) for proofreading

Conducted Unit Testing and Integration Testing for newly added functions

Did some manual testing and debugging for certain functions of the code

Setbacks occurred:

Had to re-do certain test cases due to some use cases being changed

Matthew Chua Yu Jie

Objectives Achieved:

Completion of functions listed for sprint 6

Testing and Debugging of concurrent features using integration testing

Updates to the documentation team on changes and improvements to old features in order to keep the documentation up to date such as Use case description.

Setbacks occurred:

Tan Kwan Quan

Objectives Achieved:

Decided on the user stories for sprint 6

Worked together with the team to design and implement the functionalities relating to our sprint's objective

Finalised how we want our assignment algorithm to run

Setbacks occurred:

The assignment algorithm had to be revised constantly to improve it

Yang Yijie

Objectives Achieved:

Completed initial draft of the Algorithm diagram

Completed all Employee related stories

Adjustments to use case diagrams, description, State diagrams and Sequence diagrams to match with the actual program.

Setbacks occurred:

Initial draft of Algorithm diagram does not accurately represent the actual algorithm

Yeo Jun Ming

Objectives Achieved:

Testing and Debug of the current prototype

Completed Wireframe required for User Stories in Sprint 6

Continuation of User Manual Document

Continuation of Test Plan Document

Setbacks occurred:

Previous iteration of wireframes have to be edited to fit our functionality requirements

Zheng Yinli

Objectives Achieved:

Added organisation skill page to allow project admins to define the skillsets of their organisation.

Updated the “All Users” page to show the number of users being displayed.

Fixed some styling issues.

Assisted Matthew to finish up the employee listings and editing (adding and removing) employees from an assignment object for the “Assignment” page.

Setbacks occurred:

Sprint 7 (14 January 2023 – 27 January 2023)

Tyrell Lim Yi Jin

Objectives Achieved:

Updated and revised all required documents according to the latest sprint.

Updated technical manual and test plan up to latest sprint before handing it over to Test Lead(Junming) for proofreading

Conducted Unit Testing and Integration Testing for newly added functions

Setbacks occurred:

Even though we forecasted workload to be done earlier , we still had to bring over some workload to the next sprint due to the long CNY Holidays

Struggled with managing my workload for this period due to assignments and CNY Preparations from another module.

Matthew Chua Yu Jie

Objectives Achieved:

Completion of certain functions listed for sprint 7

Testing and Debugging of concurrent features using integration testing

Updates to the documentation team on changes and improvements to old features in order to keep the documentation up to date such as Use case description.

Setbacks occurred:

There was a slight delay in completion of certain functions due to there being a long public holiday, as such they were completed during the start of sprint 8 timeline.

Tan Kwan Quan

Objectives Achieved:

Decided on the user stories for sprint 7

Worked together with the team to design and implement the functionalities relating to our sprint's objective

Setbacks occurred:

Some of our task had to be moved into sprint 8 because of time constraint

Yang Yijie

Objectives Achieved:

Updated Technical Manual document

Testing and debugging of the current prototype

Adjustments to use case diagrams, description, State diagrams and Sequence diagrams to match with the actual program.

Setbacks occurred:

PC sent in for maintenance, delayed my overall progression

Yeo Jun Ming

Objectives Achieved:

Testing and Debug of the current prototype

Completed Wireframe required for User Stories in Sprint 7

Continuation of User Manual Document

Continuation of Test Plan Document

Setbacks occurred:

Zheng Yinli

Objectives Achieved:

Fixed the validation of the organisation's skills being added by project admins.

Some minor front-end fixes for sprint 7 and previous sprints.

Setbacks occurred:

Had some personal commitments going on during the CNY period, so I was not productive at all.

Sprint 8 (28 January 2023 – 10 February 2023)

Tyrell Lim Yi Jin

Objectives Achieved:

Updated and revised all required documents (e.g Technical Manual and Test Plan) according to the latest sprint.

Debugged and ran manual testing for certain portion of the code

Finished up most of the required testing and related documents

Did final checks , proofreading and revision of every documentation before handing over to the respectives lead.

Setbacks occurred:

Manual Testing was kind of a pain to conduct.

Had a lot of back and forth with certain team members regarding certain documents

Matthew Chua Yu Jie

Objectives Achieved:

Completion of remaining functions listed for sprint 7 and all functions listed for sprint 8

Testing and Debugging of concurrent features using integration testing

Updates to the documentation team on changes and improvements to old features in order to keep the documentation up to date such as Use case description.

Completion of final product and showcase of product to supervisor.

Setbacks occurred:

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Tan Kwan Quan
<p><u>Objectives Achieved:</u></p> <p>Went through the remaining user stories, including the ones we could not finish from sprint 7.</p> <p>Worked together with the team to design and implement the functionalities relating to our sprint's objective</p> <p><u>Setbacks occurred:</u></p>

Yang Yijie
<p><u>Objectives Achieved:</u></p> <p>Completed revised version of Algorithm diagram</p> <p>Completed all remaining user stories</p> <p>Adjustments to use case diagrams, description, State diagrams and Sequence diagrams to match with the actual program.</p> <p><u>Setbacks occurred:</u></p>

Yeo Jun Ming
<p><u>Objectives Achieved:</u></p> <p>Testing and Debug of the current prototype</p> <p>Completed Wireframe required for User Stories in Sprint 8</p>

Continuation of User Manual Document

Continuation of Test Plan Document

Demo of Prototype to Mr Tian for his advice and suggestions

Setbacks occurred:

Zheng Yinli

Objectives Achieved:

Finalised the “Projects Assigned” page for employees so that they can view the projects they are assigned to.

Fixed some styling issues on the pages done in previous sprints.

Researched how to create an advertising video.

Setbacks occurred:

I have deadlines for my other module during this period, so I had to juggle the tasks.

Sprint 9 (11 February 2023 – 24 February 2023)

Tyrell Lim Yi Jin

Objectives Achieved:

Finalize all required documents, process includes proofreading etc...

Update and planned final presentation slides with team

Conducted some test rehearsal for final presentation

Final sit-down with supervisor before submission

Sit-down went great , supervisor said we covered all of the base requirements for all documents

Setbacks occurred:

Felt a little awkward rehearsing in front of team

Attention spent proofreading decreased with each repeated action

Matthew Chua Yu Jie

Objectives Achieved:

Fixed all the remaining bugs and styling errors that were present.

Complete rundown of all normal scenario workflow for all different users (employee, administrator, super administrator).

Division of workload in order to ensure that both sides of programming and documentation are able to be completed by the pre submission assessment deadline with the supervisor.

Finalisation of documents and source code in preparation for final submission on the 25th.

Setbacks occurred:

Tan Kwan Quan

Objectives Achieved:

Clean up our code and documentation in preparation for submission

Setbacks occurred:

Yang Yijie

Objectives Achieved:

Completed Technical Manual document

Meeting with our Supervisor for final submission review

Updated presentation slides to reflect the final product

Adjustments to use case diagrams, description, State diagrams and Sequence diagrams to match with the actual program.

Setbacks occurred:

Yeo Jun Ming

Objectives Achieved:

Testing and Debug of the finalised prototype

Completed User Manual document

Document review with Mr Tian for his advice and suggestions

Proof Reading of documents required for submission

Setbacks occurred:

Zheng Yinli

Objectives Achieved:

Did some final tests and fixed some bugs that were not entirely fixed in previous sprints.

Created an advertisement video to promote our system.

Checked and updated our documentation for submission.

Setbacks occurred:

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Appendix

Appendix A: MongoDB resources

<https://www.tutorialsteacher.com/mongodb/what-is-mongodb>

Appendix B: Express.js resources

<https://en.wikipedia.org/wiki/Express.js>

Appendix C: React resources

<https://www.freecodecamp.org/news/why-use-react-for-web-development/>

<https://reactjs.org/blog/2013/06/05/why-react.html>

Appendix D: Node.js resources

https://www.tutorialspoint.com/nodejs/nodejs_introduction.htm