



School of Computer Science & Information Technology

CSIT-22-S4-24 - Automatic Project Assignment

User Manual

Group No.: FYP-22-S4-32

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1. Introduction

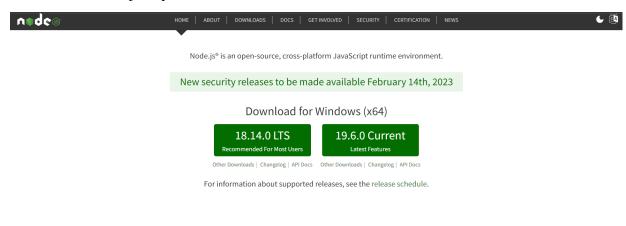
This document serves as a guide for users on how to navigate through the automation project assignment platform. It will allow different users to identify the functionalities and functions catered for them. They will also be able to understand the processes of the functions.

2. Installation and Configuration

Installation of the application in the upcoming steps is only for running the application through a localhost. For users that would like to access the web application through the live server, please use this link: https://autoassignment-fyp22s432.netlify.app/login

1. Installation of Node.js

Head over to the Node.js link and download the LTS version. Follow the installation instructions to download Node.js to your drive.



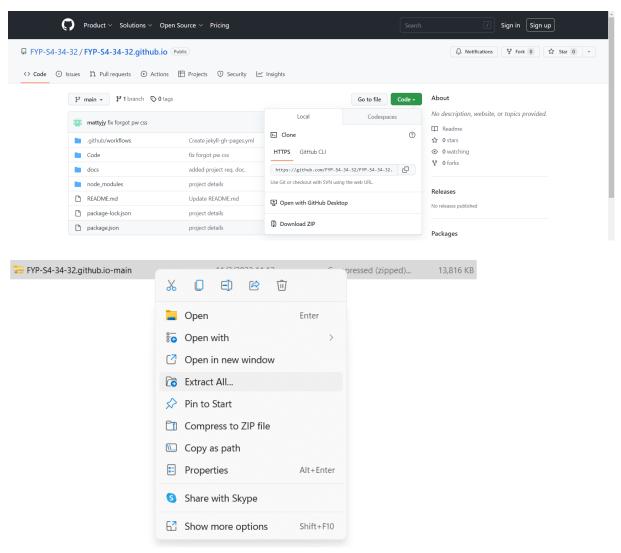
2. Installation of Visual Studio Code

Head over to the Visual Studio Code link and download the Windows version. Follow the installation instructions to download Visual Studio Code in your drive.

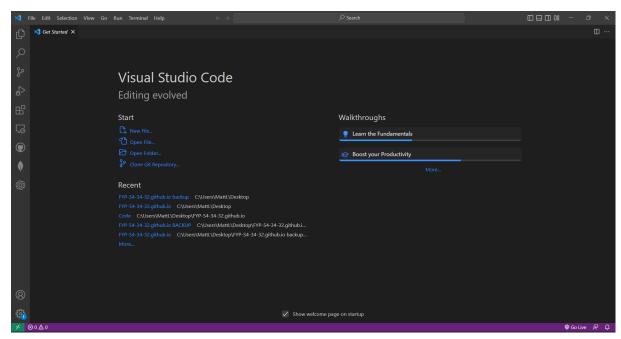


3. Download the Source Code ZIP File - Frontend File and Source Code ZIP File - Backend File

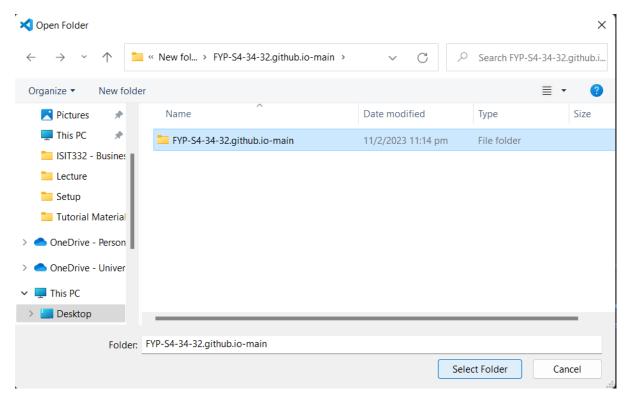
Access the Source Code ZIP File through the GitHub links above and click on the 'Code' button followed by 'Download ZIP'. Unzip/Extract both folders into your drive.



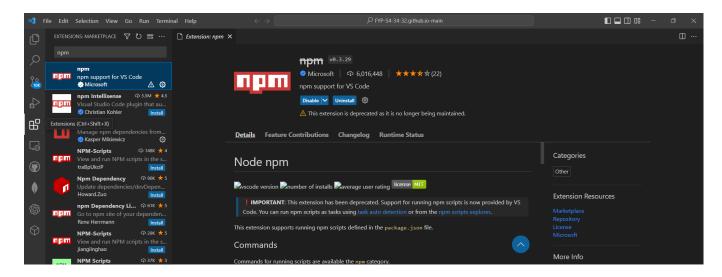
- 4. Setting up on Visual Studio Code
 - 1. Start up Visual Studio Code and click on 'Open Folder'



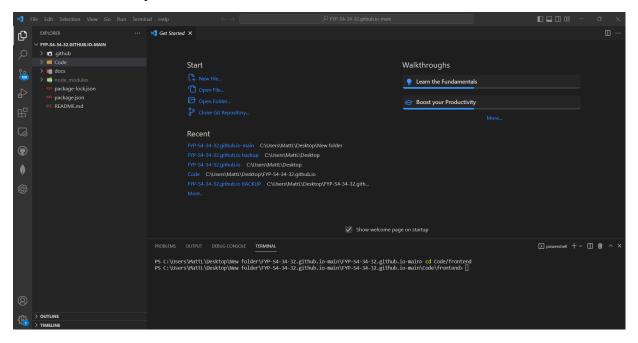
2. Click on the folder FYP-S4-34-32.github.io-main folder and click 'Select Folder' to open the folder on Visual Studio Code.



3. Click on the extensions icon and search 'npm'. You can choose either install npm or NPM



4. Press Ctrl + ~ to open the terminal for the frontend folder and backend folder



- 5. Install these dependencies on the frontend folder
 - npm/NPM install
 - npm/NPM install react-router-dom
 - npm/NPM install date-fns
 - npm/NPM install nodemailer
 - npm/NPM install react-chartjs-2

6. Press Ctrl+Shift+` to open a new terminal and type cd Code/backend.

Install these dependencies on the backend folder

- npm/NPM install
- npm/NPM install express
- npm/NPM install dotenv
- npm/NPM install mongoose
- npm/NPM install bcrypt
- npm/NPM install validator
- npm/NPM install jsonwebtoken
- npm/NPM install -g nodemon
- 5. Running the localhost web application

In the backend terminal, type npm run dev

```
PROBLEMS OUTPUT DEBUGCONSOLE TERMINAL

PS C:\Users\Mattl\Desktop\FYP-54-34-32.github.io\Code\backend> NPM run dev

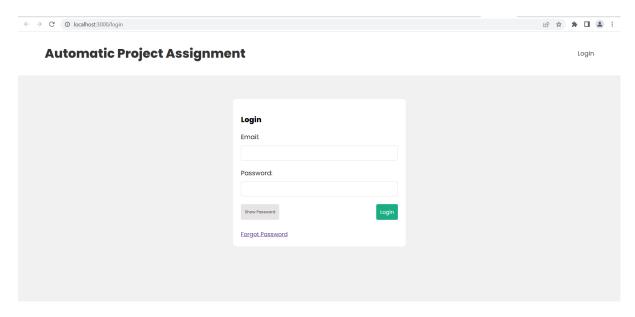
> backend@1.0.0 dev
> nodemon server.js

[nodemon] 2.0.20
[nodemon] wortening path(s): *.*
| nodemon| watching path(s): *.*
| nodemon| watching extensions: js,mjs,json
| nodemon| starting 'node server.js'

Connected to MongoOB and Listening on port 4000
```

In the frontend terminal, type npm start

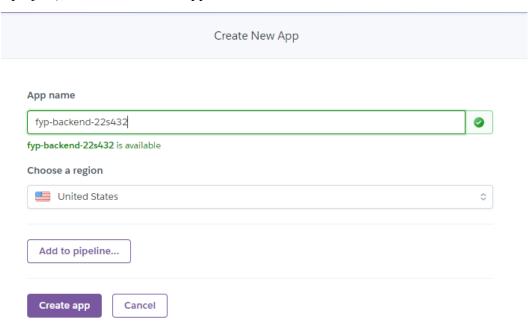
This should bring you to the starting page of the web application



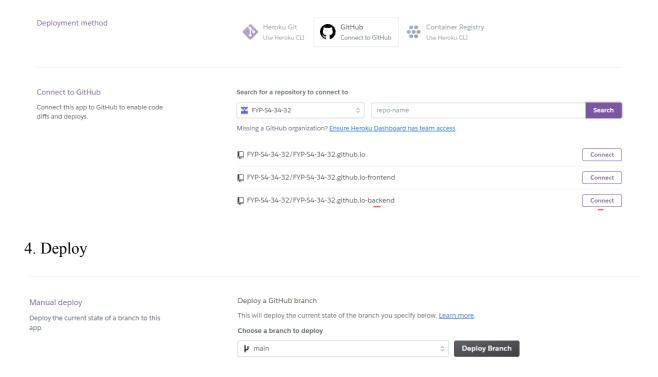
- 6. Hosting backend server on Heroku.
 - 1. Create new app



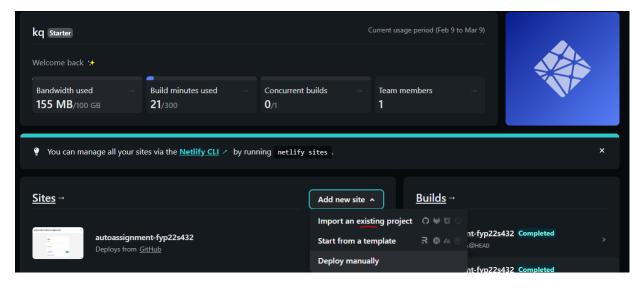
2. Include the application name and select an appropriate region (we used United States for our project), and click "Create app".



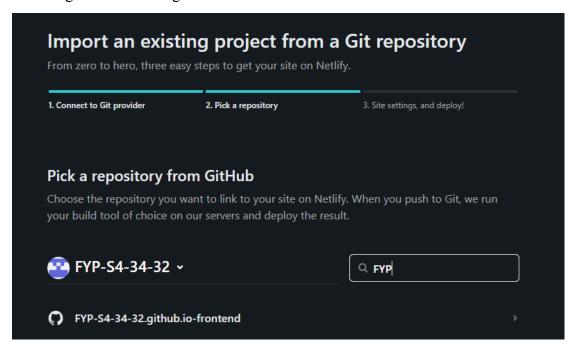
3. Connect to backend source code through Github by selecting the appropriate repository.



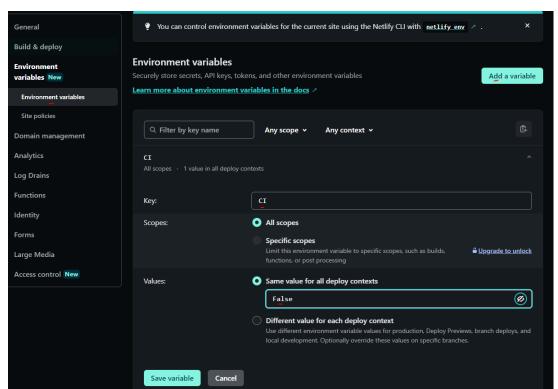
- 7. Hosting frontend server on Netlify.
 - 1. Add a new site by importing an existing project from Github repository



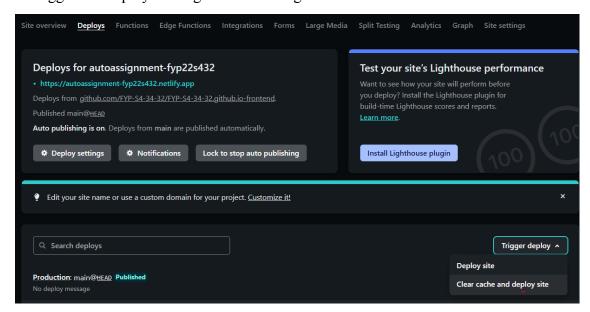
2. Select the appropriate repository and click on Deploy site at the bottom of the page while leaving the other settings as default.



3. Head over to the Site settings and include an environment variable.



4. Trigger site deployment again after adding the environment variable.



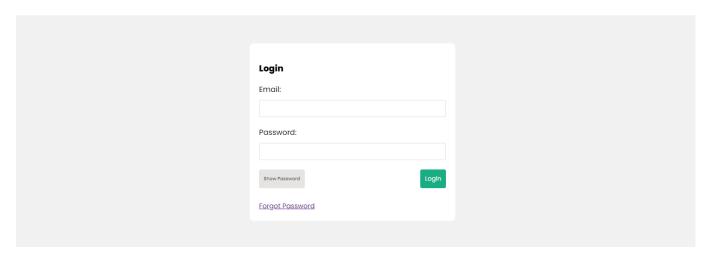
- 5. Open the web application using the link provided by Netlify.
- 8. Open the web application using the <u>link</u> provided by Netlify.

3. Main Landing Page - Login

The login page will be the main landing page all the users will see once they access the platform. Every user will be required to login before they have access to any features in the platform. Each user has to fill in their email and password, and click on the login button to verify their login information. The platform will check whether all the fields have been filled, and whether the information provided is correct before authenticating the user into the platform.

Automatic Project Assignment

Login



When the platform have confirmed that the fields provided by the user is currently an existing user of the platform, the user will be redirected to their corresponding landing page based on their user type:

- If the user is a Super Admin, they will be redirected to the Super Admin landing page
- If the user is a Project Admin, they will be redirected to the Project Admin landing page
- If the user is an Employee, they will be redirected to the Employee landing page

4. Logout

When users want to log out of the platform, they can simply click on the Logout button found on the top right of the screen.

4.1 Super Admin's View

Below would be the navigation bar of the Super Admin's View with the Logout button on the top right of the screen.

Automatic Project Assignment

Create Organisation Create Account All Users Profile



4.2 Project Admin's View

Below would be the navigation bar of the Project Admin's View with the Logout button on the top right of the screen.

Automatic Project Assignment

Assignment Create Project Organisation Skills All Users Create Account Profile



4.3 Employee's View

Below would be the navigation bar of the Employee's View with the Logout button on the top right of the screen.

Automatic Project Assignment

Project Listings Select Preference Assigned Projects Profile



Once successfully logged out, they will be redirected to the main landing page which is the login page.

Create Organisation Create Account All Users Profile

Create Organisation Create Account All Users Profile Log out

5. Super Admin - Main Page

When a user logs in as a super admin, they will be redirected to the super admin landing page where they can view a listing of organisations' information in the platform. On the main page, they will be able to see the Organisation Listings created by them or other super admin.

Automatic Project Assignment Organisation Listings Organisation Code: 1234 Created about 1 month ago by Mr Boss

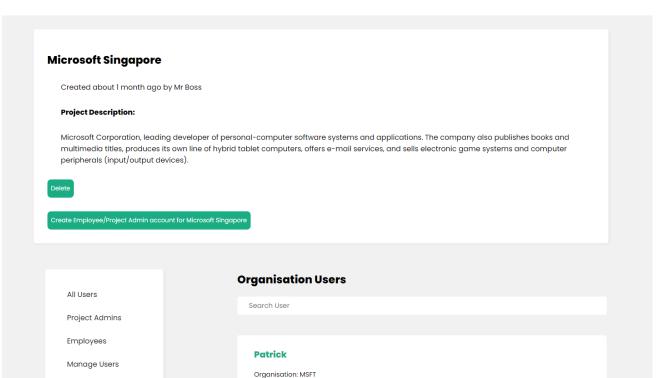
Microsoft Singapore

Organisation Code: MSFT Created about 1 month ago by Mr Boss

Orange Business Services Organisation Code: OBS Created about 1 month ago by Mr Boss

By clicking on any of the Organisation Listings, the super admin will be able to see the selected organisation's details, as well as all the users in it. They will also be able to delete the organisation if it is deemed to be unused in the future.

Automatic Project Assignment



5.1 Create Organisation

The Super Admin that is logged in will be able to create a new Organisation after clicking on "Create Organisation" from the navigation tab. It can be created simply by filling in the form with the new Organisation Name, Organisation Code as well as the description of the new Organisation.

Add a new Organisation Listing Organisation Create Account All Users Profile Log out Add a new Organisation Listing Organisation Code: Organisation Description:

Once successfully created, the super admin will be redirected back to the main page where they will see the new organisation in the listing.

5.2 Create New Account

The Super Admin that is logged in will be able to create a new Account to be used in the platform after clicking on "Create Account" on the navigation tab. A User will be required to have their account created in order to access the platform's features and functionalities. In order to create a new user, the super admin will need to select the organisation the new account will be created under, and fill in the fields required. They will also need to select the role of this new account in order to grant it the right access of features.

Automatic Project Assignment	Create Organisation Create Account All Users Profile Log out
Account Creation	
Name:	
Email:	
Organisation: Please choose an organisation •	
Password:	
Confirm Password:	
Role: Please choose one ▼	
Sign up	

Once the account is successfully created, an account created successfully message would be displayed at the bottom of the form.

Creating Super Admins

In order to create another Super Admin, the currently logged in Super Admin simply selects the role as "Super Admin" and the organisation field will be automatically filled as Undefined. This is due to Super Admin role accounts not belonging to any organisation.

5.3 All Users

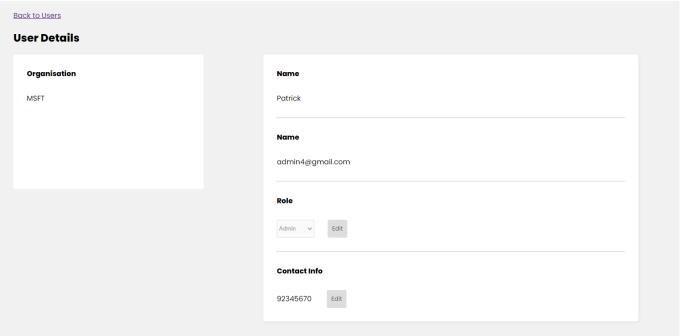
The Super Admin that is logged in will be able to see a list of All Users in the platform after clicking on "All Users" from the navigation bar. The users can be filtered by their organisation as well as by the role they belong to. Users can be searched using the search bar as well.

Automatic Project Assignment Create Organisation Create Account All Users Profile Log out Search User All Users All Organisations v Project Admins Showing 80 Users from All Organisations Super Admins Employees **Patrick** Manage Users Organisation: MSFT Email: admin4@gmail.com Role: Admin Contact Info: 92345670 **James** Organisation: MSFT Email: user4@gmail.com Role: Employee Contact Info: 91489636

View User Details

By clicking on a selected user, the Super Admin will be able to see the User's Details and the organisation they belonged in, as well as be able to edit their role and contact info.

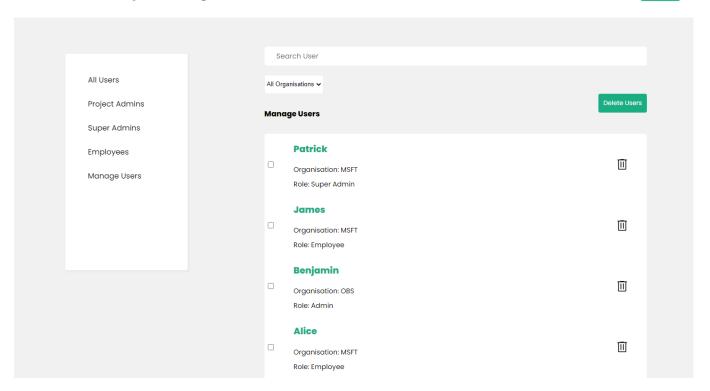




Manage Users

The Super Admin will be able to delete users by clicking on "Manage Users" on the side navigation bar. Upon clicking it, there will be a checkbox icon and a dustbin icon appearing for each user. Users can be deleted by clicking on the dustbin icon. They can also be deleted by selecting a few of them, and clicking on the "Delete Users" button.

Create Organisation Create Account All Users Profile Log out



5.4 Profile

The logged-in user will be able to see their User Information after clicking on "Profile" from the navigation bar. They will be able to edit their Contact Info which can be viewed by other users in the platform belonging to the same organisation.

User Information Change Password User Information Full Name Mr Boss Email superAdminl@gmail.com Role Super Admin

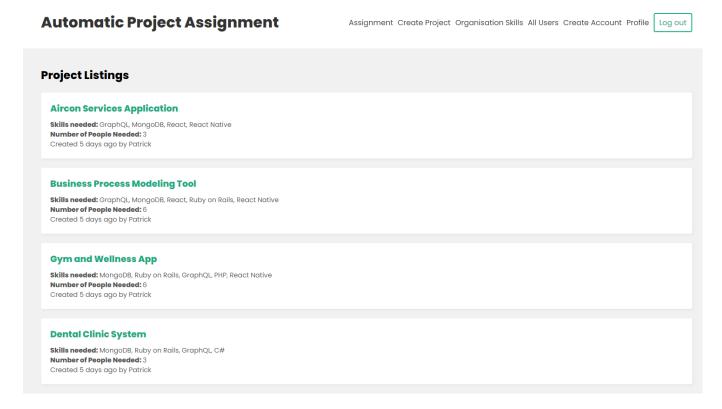
By clicking on "Change Password" from the side navigation bar, the user will be able to change their password by filling in their Current Password, New Password and Confirm New Password.

12345678

User Information Change Password Change Password Confirm New Password Concel Cancel

6. Project Admin - Main Page

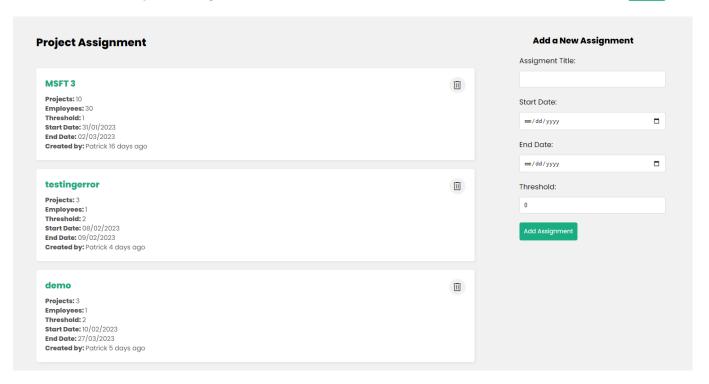
When a user logs in as a project admin, they will be redirected to the project admin landing page where they can view their organisation's information. On the main page, they will be able to see the Project Listings available in their organisation created by them or other project admins in the same organisation.



6.1 Assignment

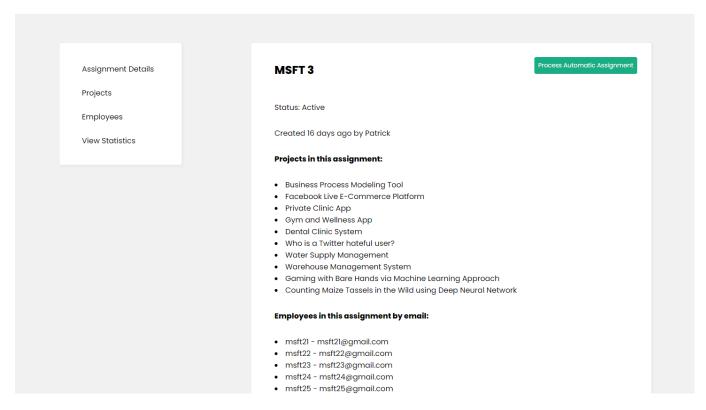
The Project Admin that is logged in will be able to manage Project Assignments of their organisation in the platform after clicking on "Assignment" on the navigation tab. The Project Admin will be able to create a new assignment via the form on the right side of the page to begin the project assignment process. After a new Assignment has been created, the admin will be required to click on the assignment to further edit the details of the assignment.

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



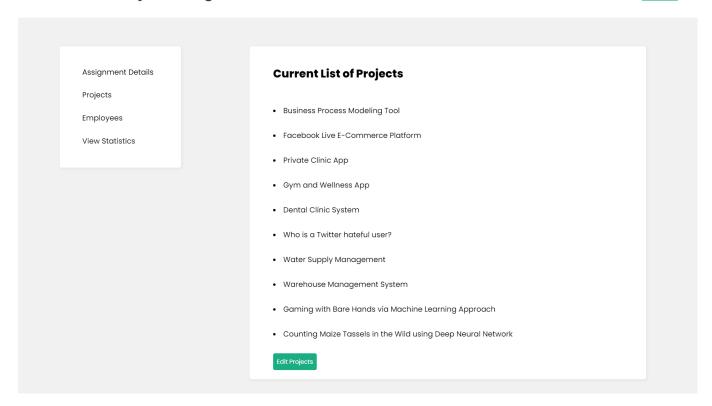
After selecting the assignment, the admin will be able to see the assignment details such as the projects and employees involved in this assignment. On this page, the admin will be able to process the automatic assignment by clicking on "Process Automatic Assignment".

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



By clicking on "Projects", the admin will be able to edit the project listings available for selection for the assignment process. The projects selected will be able to be seen by Employees and let them select their preferences according to them. The Project admin will be able to add or delete the projects from the assignment after clicking on the "Edit Projects" button.

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



By clicking on "Employees", the admin can edit the employee list that will be involved in the assignment process. They will be able to add or delete the employees from the assignment after clicking on the "Edit Employees" button.

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

Assignment Details

Projects

Employees

View Statistics

Current List of Employees

- msft21 msft21@gmail.com
- msft22 msft22@gmail.com
- msft23 msft23@gmail.com
- msft24 msft24@gmail.com
- msft25 msft25@gmail.com
- msft26 msft26@gmail.com
- msft27 msft27@gmail.com
- msft28 msft28@gmail.com
- msft29 msft29@gmail.com
- msft30 msft30@gmail.com
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- msft47 msft47@gmail.com
- msft48 msft48@gmail.com
- msft49 msft49@gmail.com
- msft50 msft50@gmail.com

By clicking on "View Statistics", the admin will be able to view the statistics of the assignment after they have processed the automatic assignment.



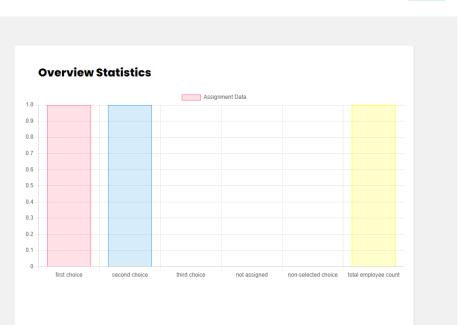
Assignment Details

Projects

Employees

View Statistics

Assignment Create Project Organisation Skills All Users Create Account Profile Log



6.2 Create Project

The Project Admin that is logged in will be able to create a new Project Listing for their organisation in the platform after clicking on "Create Project" on the navigation tab. The Project Admin will be able to create a new Project Listing after entering the details such as project title, project description, project requirements and the selection of skills required for the project and the number of people required. Once finalised, the admin will have to click on the "Add New Project Listing" button in order to create the new project. The system will check for any existing project with the same project title in the organisation before creating a new project.

Automatic	Project Assignment	Assignment Create Project Organisation Skills All Users Create	Account Profile Log out
	Add a new Project Listing		
	Project Title:		
	Project Description:		
	Project Requirements:		
	Skills Required:		
	Add Skills		

6.3 Organisation Skills

Number of People Needed:

Add New Project Listing

The Project Admin that is logged in will be able to manage Organisation Skills for their organisation in the platform after clicking on "Organisation Skills" on the navigation tab. The admin will be able to see the skills available for the employees to choose and state their skill competency level. Admin will be able to add a new skill by entering the name of the skills and clicking on the "Add" button beside the text field. They will also be able to remove existing skills by clicking on the "Dustbin" icon beside the skill.



Java	PHP III	React 🗉	Ruby on Rails 🗓	GraphQL 🔟
C++ 0 C# 0	СШ			
		Swift 🗉	React Native 🗏	
Add New Skill				
Add a new skill			Add	

6.4 All Users

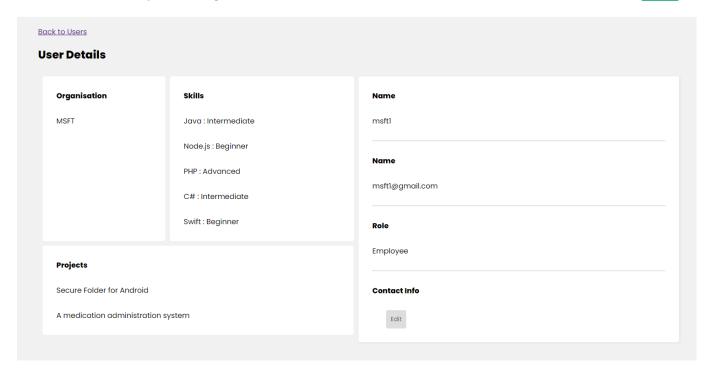
The Project Admin that is logged in will be able to manage employees for their organisation in the platform after clicking on "All Users" on the navigation tab. Users can be searched using the search bar and their further details can be viewed by clicking into them.

Automatic Project Assignment Assignment Create Project Organisation Skills All Users Create Account Profile Search User **Employees** Showing 51 Employees from MSFT Manage Employees msft1 Organisation: MSFT Email: msft1@gmail.com Contact Info: msft2 Organisation: MSFT Email: msft2@gmail.com Role: Employee Contact Info: 81234567 msft3 Organisation: MSFT Email: msft3@gmail.com Role: Employee Contact Info:

View User Details

By clicking on a selected user, the Project Admin will be able to see the User's Details, their Skill competency as well as Projects that they have been allocated. Project Admin will be able to help the employee edit their contact info as well.

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



Managing Employees

Project Admins can also manage employees after clicking "Manage Employees" from the side bar. Employees can be deleted by clicking on the "Dustbin" icon beside their names or after selecting a few of them and clicking on "Delete Employees Button"

Automatic Project Assignment Assignment Create Project Organisation Skills All Users Create Account Profile Log out Search User **Employees Manage Employees** Manage Employees msft1 Organisation: MSFT Ш Email: msft1@gmail.com Role: Employee Contact Info: msft2 Organisation: MSFT Ш Email: msft2@gmail.com Role: Employee Contact Info: 81234567

6.5 Create Account

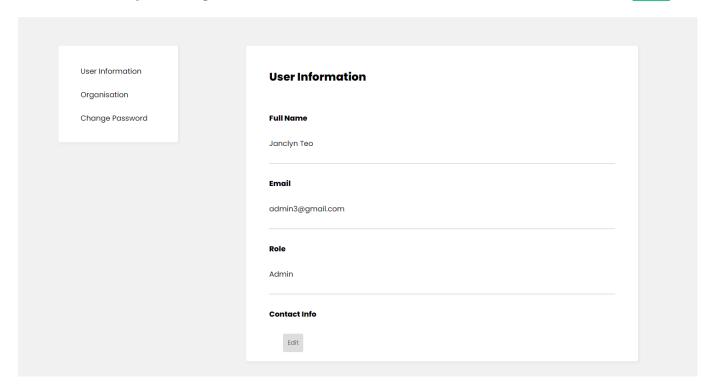
The Project Admin that is logged in will be able to create accounts for their organisation after clicking on "Create Account" on the navigation tab. Admin can fill in the details of the new account and select the role of the new account either as an "Employee" or "Project Admin" via the dropdown list. For the organisation field, it would be auto generated by the platform. By clicking on the "Sign Up" button after the fields have been filled, the system will validate whether there is an existing user with the same email address before adding in the new account details.

Automatic Project Assignment	Assignment Create Project Org	anisation Skills All Users Create Acc	ount Profile Log out
Ac	count Creation		
Nar	ne:		
Em	ail:		
	anisation:		
Ms	FT		
Pas	sword:		
Col	nfirm Password:		
	anni domoto.		
Roll			
Ple	se choose one 🗸		
sig	n up		

6.6 Profile

The logged in user will be able to see their User Information after clicking on "Profile" from the navigation bar. They will be able to edit their Contact Info which can be viewed by other users in the platform belonging to the same organisation.





By clicking on "Organisation" from the side navigation bar, the user will be able to see the organisation information they belong to.

Automatic Project Assignment User Information Organisation Change Password Organisation Name: MSFT

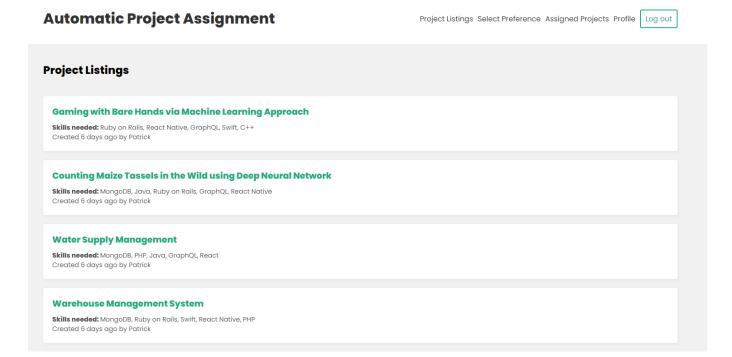
By clicking on "Change Password" from the side navigation bar, the user will be able to change their password by filling in their Current Password, New Password and Confirm New Password.

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

User Information	Change Password	
Organisation	Current Password	
Change Password		
	New Password	
	Confirm New Password	
		_
	Cancel	Submit

7. Employee - Main Page

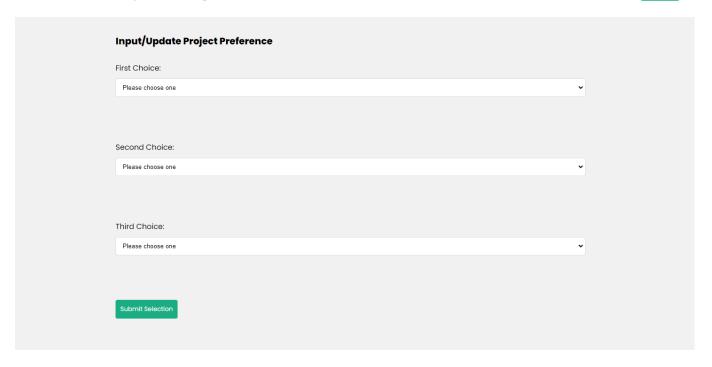
When a user logs in as an employee, they will be redirected to the employee landing page which is also the Project Listing Page, where they will be able to see the Project Listings available for the round of project assignment they are involved in. If they are not part of any allocation round or have already been allocated projects, it would be a blank project listing page.



7.1 Select Preference

The Employee that is currently logged in will be able input or update their project preferences for the round of project allocation after clicking on "Select Preference" on the navigation tab. The projects available for users to choose their preferences via the dropdown list will be the ones available for the current round of project allocation the user is taking part in. The user will be able to see the preferences they have made previously at their profile page.





7.2 Assigned Project

The Employee that is currently logged in will be able to view the projects they are assigned to after clicking on "Assigned Projects" on the navigation tab. They will be able to see the projects that they have been allocated to after the project assignment process has been completed.

Automatic Project Assignment

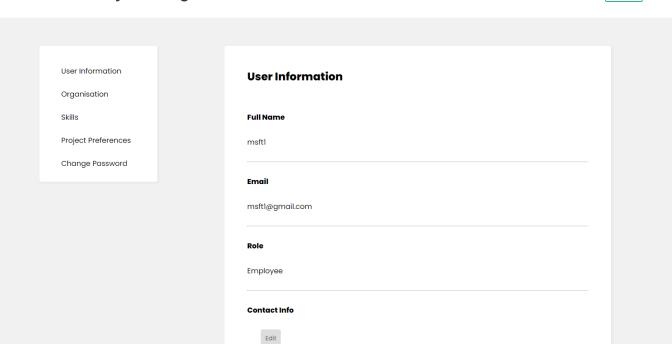


7.3 Profile

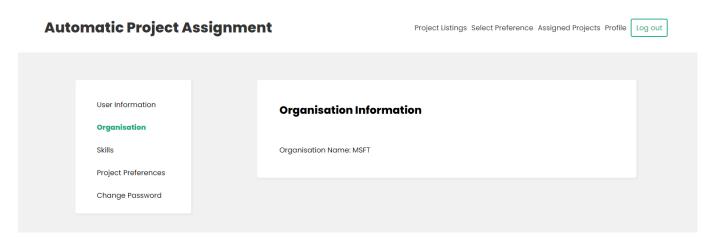
The logged in user will be able to see their User Information after clicking on "Profile" from the navigation bar. They will be able to edit their Contact Info which can be viewed by other users in the platform belonging to the same organisation.

Project Listings Select Preference Assigned Projects Profile Log out

Automatic Project Assignment



By clicking on "Organisation" from the side navigation bar, the user will be able to see the organisation information they belong to.

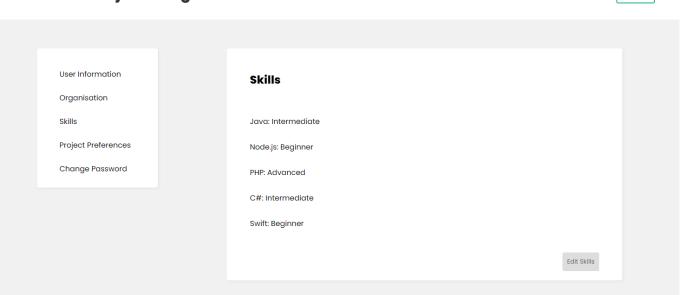


By clicking on "Skills" from the side navigation bar, the user will be able to update their skill competency level they have. They will be able to select Skills that are made available by their organisation's Project Admin which are required to assign a project to the Employee. Employees will be able to indicate their competency level of their skill either as "Beginner", "Intermediate" or "Advanced". They will also be able to remove any of the skills they added as well.

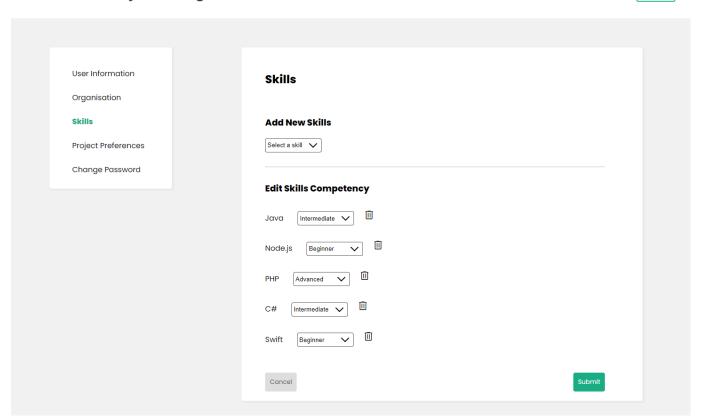
Project Listings Select Preference Assigned Projects Profile Log out

Project Listings Select Preference Assigned Projects Profile Log out

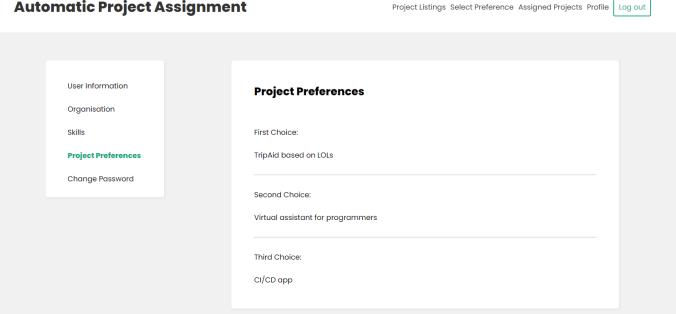
Automatic Project Assignment



Automatic Project Assignment



By clicking on "Project Preferences" from the side navigation bar, the user will be able to see the choices they have indicated through the "Select Preference" navigation tab.



By clicking on "Change Password" from the side navigation bar, the user will be able to change their password by filling in their Current Password, New Password and Confirm New Password.

Automatic Project Assignment Project Listings Select Preference Assigned Projects Profile Log out User Information **Change Password** Organisation Current Password Skills Project Preferences New Password Change Password Confirm New Password