FACULTY OF ENGINEERING

SCHOOL OF COMPUTING

SEMESTER 2/20202021

SCSP3106 – APPLICATION DEVELOPMENT

SECTION 01

PROJECT SARJANA MUDA 1 (PSM1) APPLICATION

.

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Matric Number : A18CS0173

Live Hosting URL : https://psm1-system.web.app/

Github : https://github.com/yongfeng98/psm1-system

User Credentials

Admin

username : admin

password : admin

PSM Committee

username : lecturer

password : lecturer

Student

username : student

password : student

username : student2

password : student

Supervisor

username : supervisor

password : supervisor

Evaluator

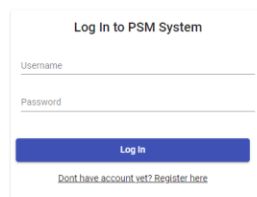username : evaluator1

password : evaluator

username : evaluator2

password : evaluator

Introduction

PSM1 System is developed with Angular and Firebase. Angular is a framework written in TypeScript. Firebase is the backend server where Cloud Firestore is implemented to store the data. Cloud Firestore is a non-relational database. Besides, Angular Material is implemented in this system. Angular Material provides UI component library in assisting AngularJS to build a attractive and functional web applications. Firebase offers free hosting so the system is hosted with Firebase Hosting.

Interface Explanation

This is the login page for all users. The users log in via username and password. The username is unique for each users and the password is hashed with Advanced Encryption Standard (AES). A salt is inserted inside the encryption standard to strengthen the hashing.

Register As Student

Username

Password

Confirm Password

Full Name

Matric Number

Academic Session ▼ / Academic Session ▼

Semester ▼

Register

I have created an account. Log In.

New student is going to register at this page. All the students' information will be recorded in database. Once registered, students may log in at the login page.


PSM1 System   LOG OUT

Academic Program   Lecturer

Academic Programs Create

Program Code
SE

Program Name
Software Engineering

Edit Delete

Program Code
DE

Program Name
Data Engineering

Edit Delete

This is the view of admin after logging in. Admin can manage academic program over here. By clicking the 'Create' button, a form will pop out and allow admin to create a new academic program. After creating the academic program, admin is allow to edit and delete the academic program.
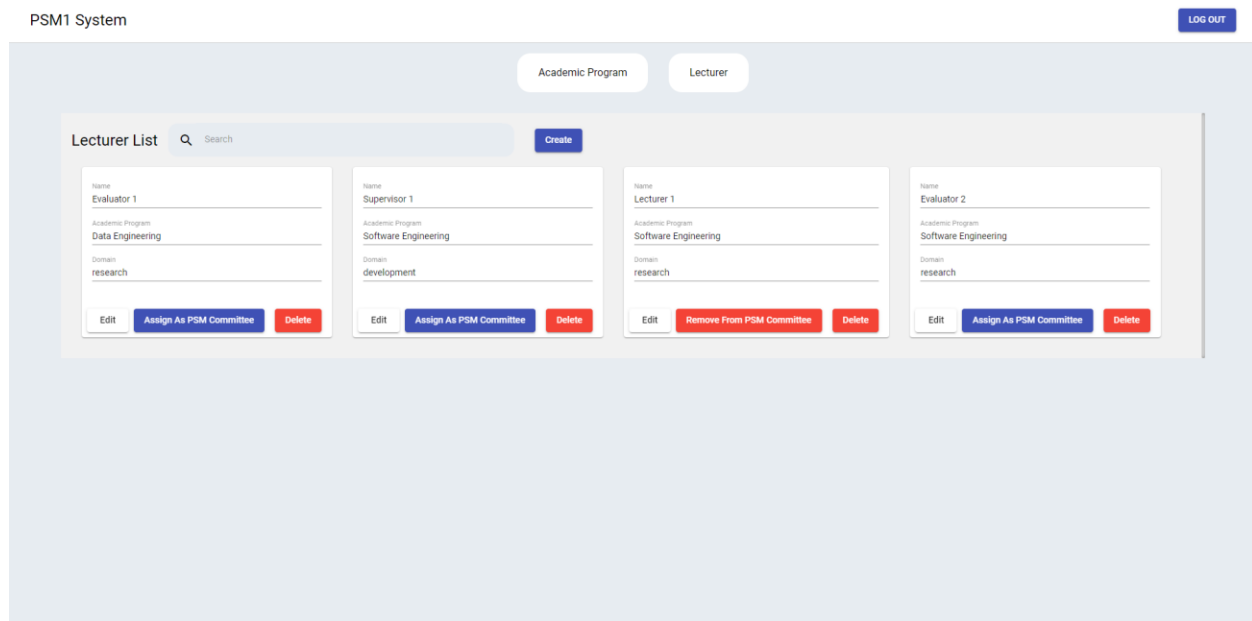
This is the lecturer list provided for admin to manage lecturers. Admin is able to create a new lecturer by clicking the 'CREATE' button. A form will pop out and admin may fill in the form correctly to create the lecturer. After the lecturer is created, admin is allow to edit and delete the lecturer. Besides, admin is able to assign the lecturer as PSM committee.
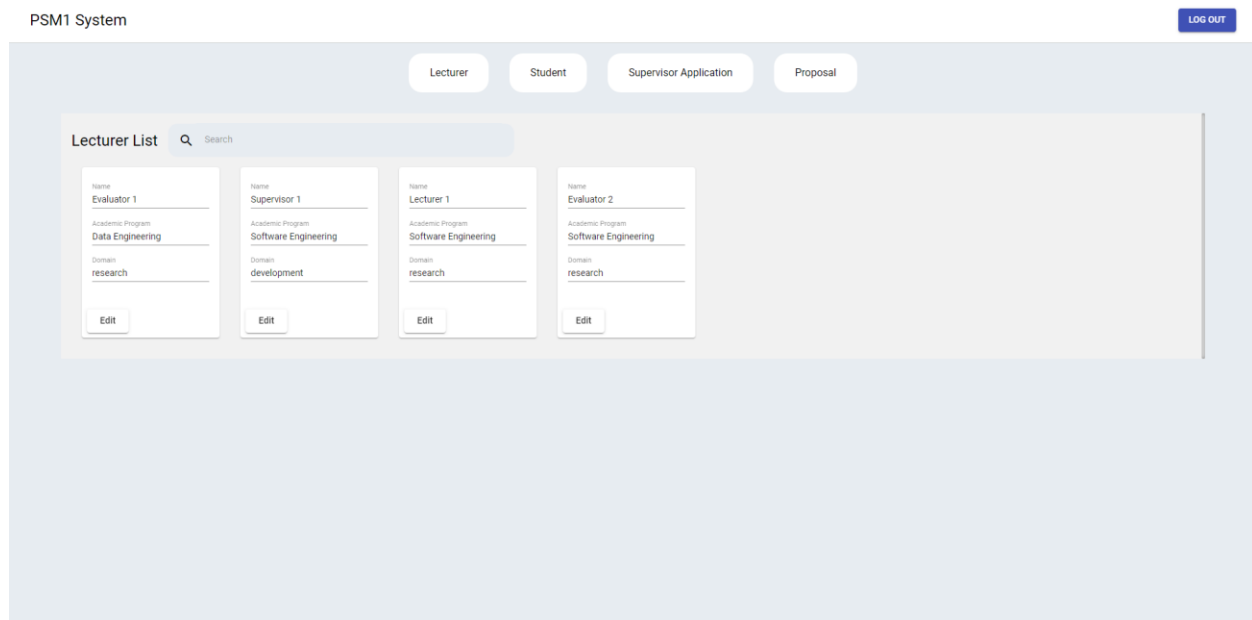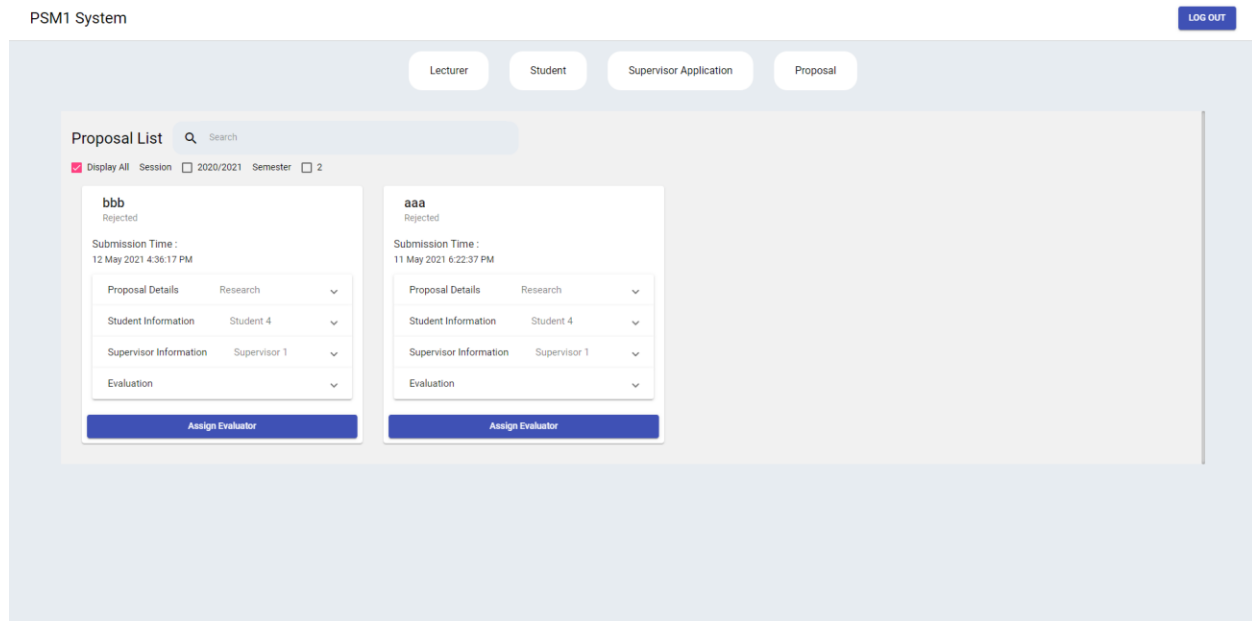

This is PSM committee's view after logged in. They can assign domain to each lecturer by selecting the 'Edit' button.
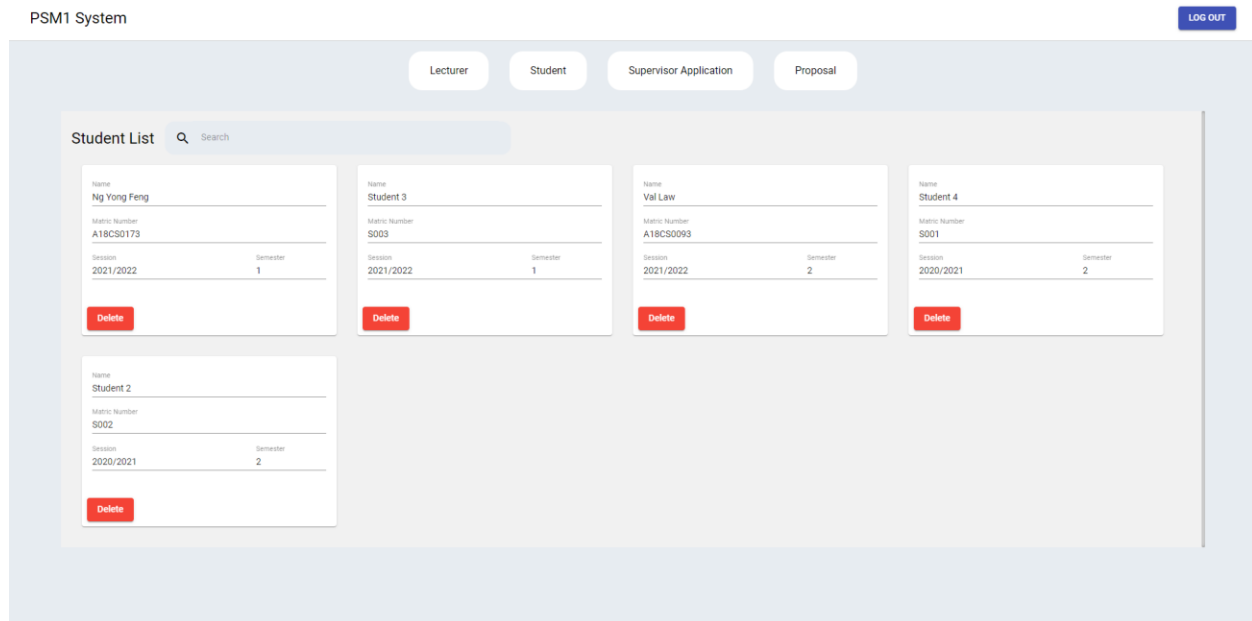
PSM committee is allowed to manage students where they can click 'Delete' button to delete the student and the student record will be removed from database. The removed student will not be able to log in the system.
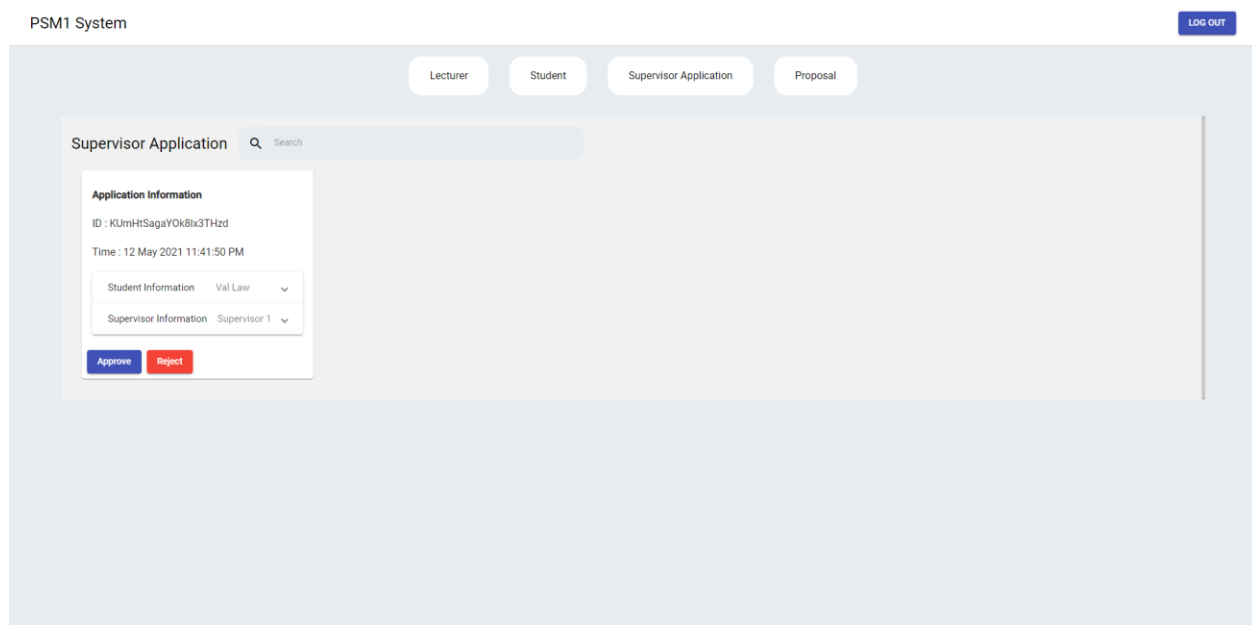

PSM committee is able to handle the supervisor application applied by students. PSM committee will approve or reject the application by clicking the buttons. They can view the details by expanding the panel and the information will be displayed.

Lecturer   Student   Supervisor Application   Proposal

Proposal List   Q Search

☑ Display All   Session   ☐ 2020/2021   Semester   ☐ 2

bbb
Rejected

Submission Time :
12 May 2021 4:36:17 PM

Proposal Details	Research	⌄
Student Information	Student 4	⌄
Supervisor Information	Supervisor 1	⌄
Evaluation		⌄

Assign Evaluator

aaa
Rejected

Submission Time :
11 May 2021 6:22:37 PM

| Proposal Details | Research | ⌄ |
Student Information	Student 4	⌄
Supervisor Information	Supervisor 1	⌄
Evaluation		⌄

Assign Evaluator

PSM committee is allowed to assign 2 evaluators to each proposal at proposal list. They can assign evaluators by clicking the 'Assign Evaluator' button and select the evaluators via drop down. The drop down list of lecturers is filtered so that PSM committee can only assign correct and suitable evaluators to the proposal.

Student   Supervisor   Evaluator

Student List   Q Search

☑ Display All   Session   ☐ 2021/2022   ☐ 2020/2021   Semester   ☐ 1   ☐ 2

Student 3

Matric Number :
S003

| Academic Session | Semester |
| 2021/2022 | 1 |

Student 2

Matric Number :
S002

| Academic Session | Semester |
| 2020/2021 | 2 |
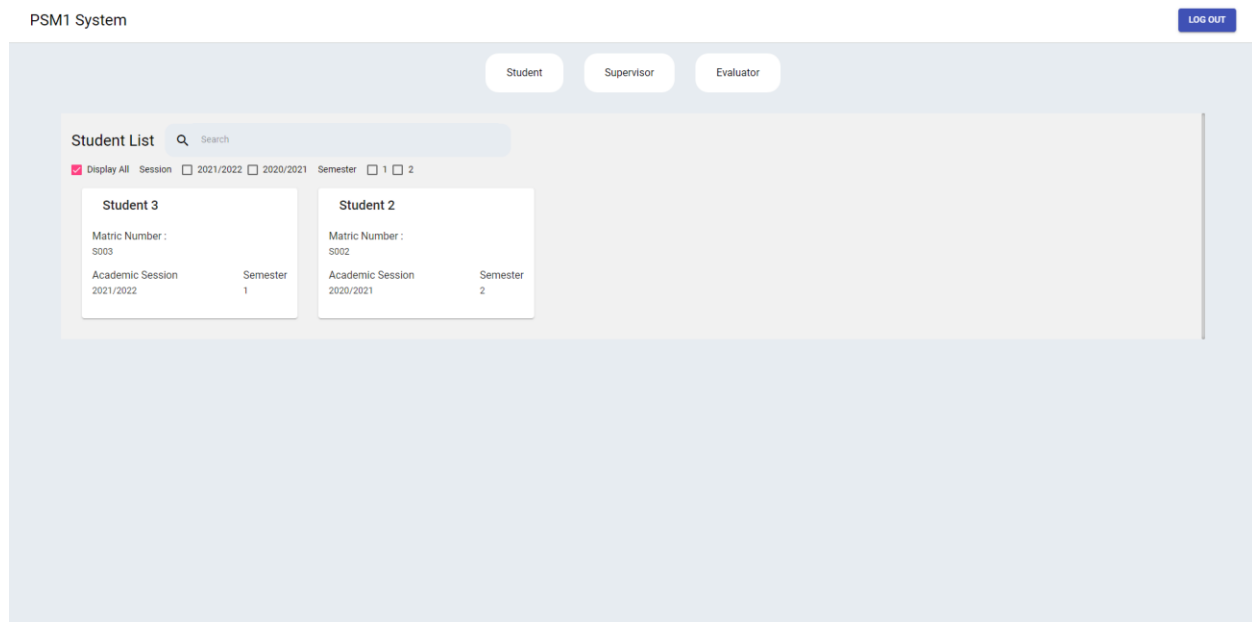
This the lecturer's view after logged in the system. The student list displayed is the students under supervision of current lecturer. Lecturer can view their students over here.
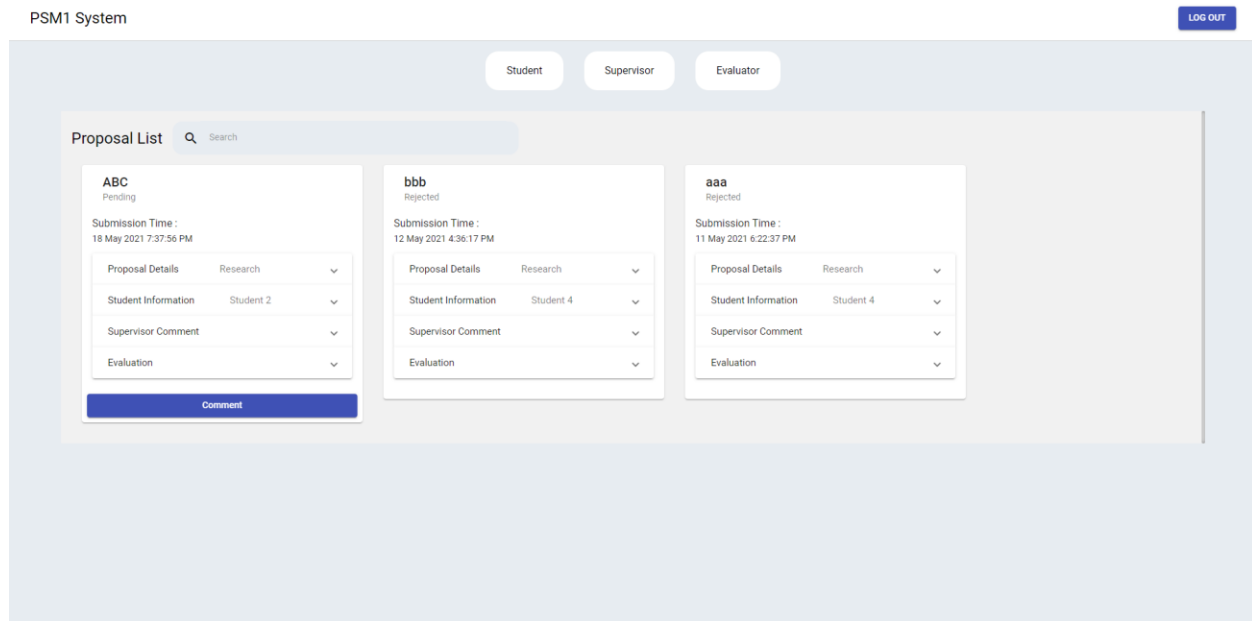
The proposal list in supervisor section displays the proposal list of current lecturer with supervisor role. Supervisor is allowed to give comment on each proposal. Supervisor can click the 'Comment' button to write the comment. Supervisor can also check the proposal details such as proposal information, student's detail and evaluation comment.
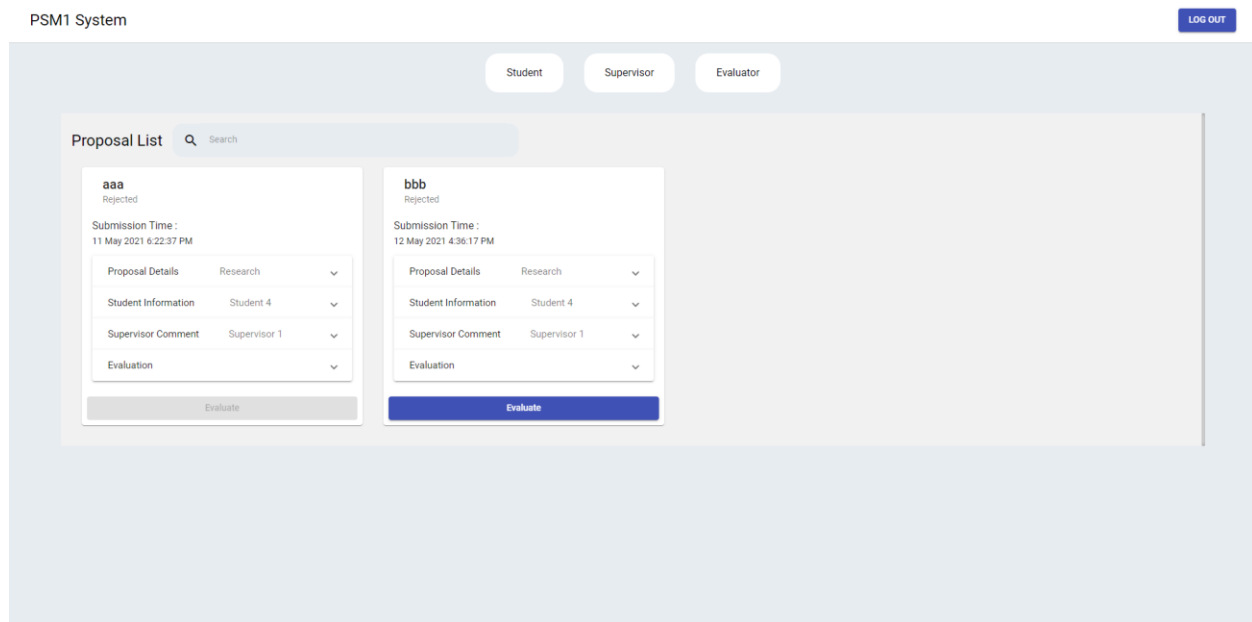
The proposal list in evaluator section displays the proposal list of current lecturer with evaluator role. Evaluator is allowed to give evaluation on each proposal. Evaluator can click the 'Evaluate' button to evaluate the proposal and give comment. Evaluator can check all the details of the proposal by expanding the panels.
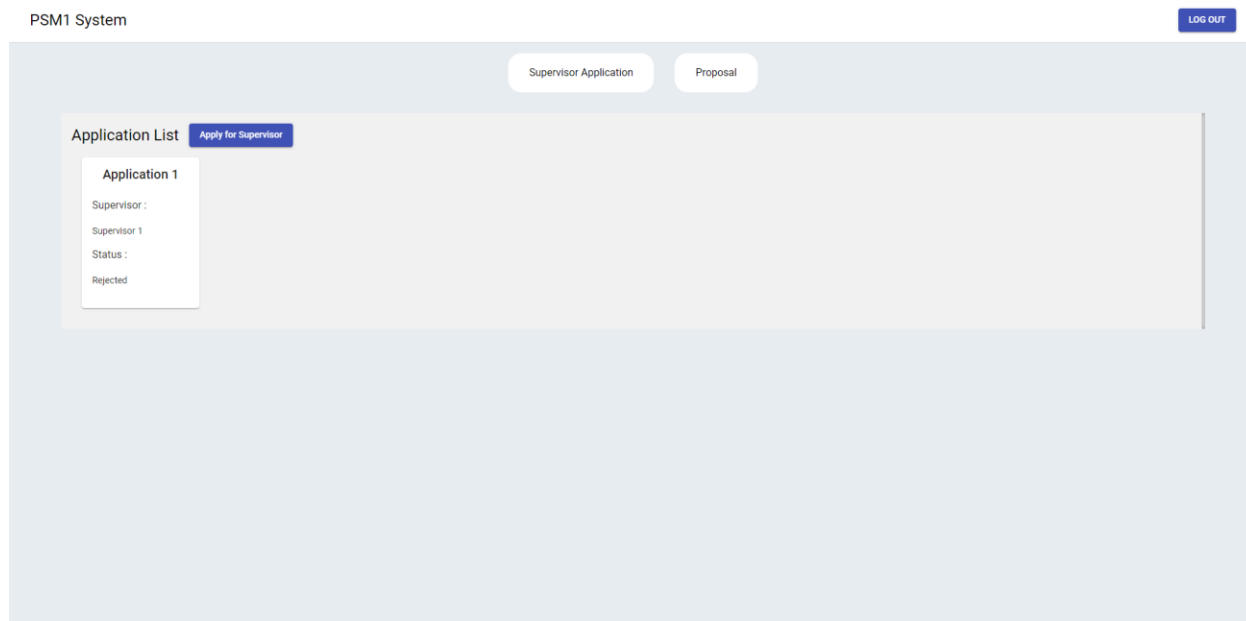
This is the student's view after logged in to the system. The student is allowed to apply for a supervisor and wait for the PSM committee to approve the application. After the approval, the student is allowed to submit the proposal.
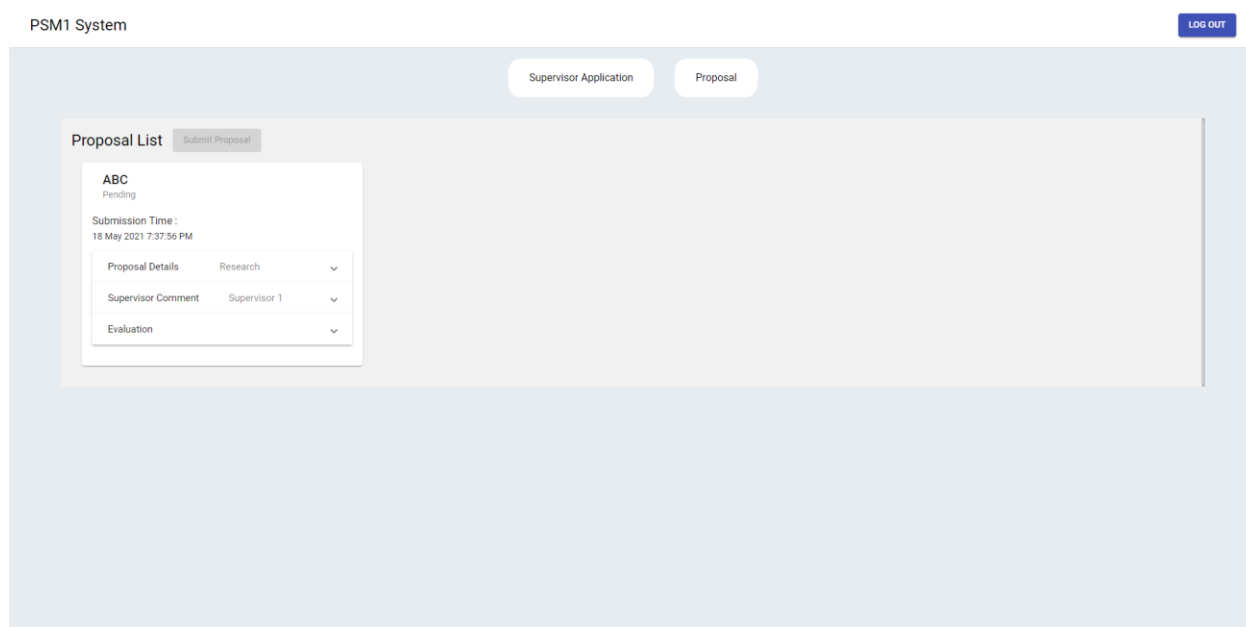
In proposal section, student is allowed to submit proposal by clicking the 'Submit Proposal' button. Student is allowed to choose the submission method. After the proposal submitted, the student can view the comment and status of the proposal.

Package/Library Installed

1. crypto-js

https://www.npmjs.com/package/crypto-js

crypto-js is a package to encrypt data. In this project, crypto-js is implemented to hash the password with AES and store the data in the database. When the user trying to log in the system, crypto-js will decrypt the hash data and the system will validate the password.

2. moment

https://www.npmjs.com/package/moment

momentjs is a popular JavaScript library in parsing, manipulating, validating and formatting the date and time. In this project, moment is used to format the date and display the date in a more readable style.

3. ng-search-filter

https://www.npmjs.com/package/ng-search-filter

ng-search-filter is a package used to simplify the filtering process in JavaScript. The package is used together with the Angular Pipe to filter the array displayed. The array will be filtered based on the input at the search bar.

Setup and Run Project

This project is developed by AngularJS and Firebase. In order to run this project, please make sure to download Angular CLI and NodeJS,

1. Download NodeJS.

> https://nodejs.org/en/

2. Install Angular CLI

> npm install -g @angular/cli

3. Go to project directory and install required package & library

> npm i

4. Run project

> ng serve –open

5. The project is displayed at default browser.