**Report Project CS162**

1 Overall about Course Registration System

The program includes two types of users:

* Staff: Managing school year, course and student data
* Student: Registration courses, view their score

2 Program usage

* Main Menu:

Graphical user interface

Description automatically generated with medium confidence H1. Main menu

To use the program, user will have to use keyboard, with arrow keys to move to options, then press enter to choose the option.

* Login:

Student:

A screenshot of a computer

Description automatically generated with low confidence H2. Student login 1

Graphical user interface, application

Description automatically generated H3. Student login 2

For student account, username is the student ID and default password will be 123456.

Staff:

Graphical user interface, application

Description automatically generated H4. Staff login 1

Graphical user interface, application

Description automatically generated H5. Staff login 2

For staff account, no default username, default password is 123456.

If choose option “Oops, wrong way, let’s return”, the user will be back at H1.

* Staff

Graphical user interface, text, application

Description automatically generated H6. Staff menu

After login with staff account, staff can view information using “View profile”.

Graphical user interface, application

Description automatically generated H7. Staff profile

If press “ESC” the user will be taken back to H6. If choose “Change password”, the user will be taken to H8.

Graphical user interface, text

Description automatically generated H8. Change password staff

Enter the current password and then select “OK”, staff will go to H9.

Graphical user interface, application

Description automatically generated H9. Change password

Enter your password of choice in all 2 boxes and choose “OK”, the password will be changed, and staff will be back to H6.

To edit, make changes about years, staff can choose “School Year” option.

Graphical user interface, text, application

Description automatically generated H10. School year menu

The staff will have option to create new school year or choose a year from the list and edit.

Enter the new school year with the format YYYY-YYYY. Example in H11 picture.

Graphical user interface, text, application

Description automatically generated

H11. Add school year

If choose to edit a school year, the staff have 2 options include “View 1st year Classes” and “View Semesters”

Graphical user interface, text, application

Description automatically generated H12. Year menu

Graphical user interface, application

Description automatically generated

H13. Add 1st Year classes

After adding the class name, student have to the program directory /Data. Then go to the year of that class, add the class .csv file to the directory.

A screenshot of a computer

Description automatically generated with medium confidenceH14. Example with 21CTT1 class in year 2021-2022

The .csv file should have the format like below, which include student ID, Last name, First name, Gender, DOB (Date of Birth), Social ID and student No in class.

Table

Description automatically generated H15. Student file format

After adding the file to the directory, staff can now view the student list in the program.

Background pattern

Description automatically generated with medium confidence H16. Choose class to view.

A picture containing text, electronics, screen

Description automatically generated

A screenshot of a computer

Description automatically generated with medium confidence

H16-17. Student information, to navigate through the board, use arrow keys.

To control Semesters, the staff must choose the “View semesters” in H12.

Graphical user interface, application

Description automatically generated H18. Semester menu.

User can choose to add new semester or edit a semester.

Graphical user interface, application, Teams

Description automatically generated H19. Add semester.

Graphical user interface, text

Description automatically generated H20. Semester control.

In the view course section, user can choose to add, view and edit courses.

Graphical user interface

Description automatically generated with medium confidence

H21. View courses

A screenshot of a computer

Description automatically generated with medium confidence

H22. Add course.

Note when adding courses:

* Session date: Using day in week: MON, TUE, WED, THU, FRI, SAT, SUN.
* S(1,2,3,4): for simplicity, user can only choose from 4 group of time:
  + 1: Start at 7h30
  + 2: Start at 9h30
  + 3: Start at 13h30
  + 4: Start at 15h30

To view more information about the course or making changes on the course, user enter the selected course and given four options

A screenshot of a computer

Description automatically generated

H23. Modify/Delete courses.

A computer screen capture

Description automatically generated with medium confidence

H24a. View student in a course

A screenshot of a computer

Description automatically generated with medium confidence

H24b. View student in a course

In the case user needs to export the student list to .csv file, go to the program directory, then go to Data/<year>/<semester>/Studentlist to get the studentlist file of the course.

A picture containing graphical user interface

Description automatically generated

H25. Student list example

Graphical user interface, application, table, Excel

Description automatically generated H26. Student list file

At the end of the semester, the staff can add student mark file so that student can view it.

Follow the directory like H25 but now we go to Mark folder.

A picture containing graphical user interface

Description automatically generated H26. Student mark

Student score file should follow the format below. File name must be “classname.csv”.

Table

Description automatically generated H27. Mark file

A computer screen capture

Description automatically generated with medium confidence

H28. Mark file

Back to H20, after creating a course in “View courses”, staff can create course registration so that student can join courses.

A screenshot of a computer screen

Description automatically generated with medium confidence

H29. Add course registration

When student score file is added, staff can also view the scoreboard of each classes in that semester.

A computer screen capture

Description automatically generated with medium confidence

H30. Course score

Note: Each class scores are on scale of 10 but GPA is on scale of 4.

Set current semester will set this semester to the current semester that the student is in.

* Student

Text

Description automatically generated H31. Student main menu

Timeline

Description automatically generated with low confidence H32. View profile of the student

Change password will be the same as the staff at H8 and H9.

A screenshot of a computer

Description automatically generated with medium confidence

H33. Enroll in courses

Student can join courses listed in that semester by pressing “ENTER” on the keyboard. Student can still view the list of enroller courses in “Enroll courses”

At the end of the semester, when staff have uploaded the score, the student can view their score.

Table

Description automatically generated with medium confidence

H34. View score.

3 About the program

Tech stack: C++.

Data: Text file and .csv files.

The program is developed with OOP (Object Oriented Programming) model. The class diagram summarizes about the project structure

A screenshot of a computer

Description automatically generated with medium confidence

H35. Class diagram

Diagram, engineering drawing

Description automatically generatedH36. Classes relationship