

COMP 6030 : Software Engineering

Coursework – Individual Part

Group : 15

Student Number : 19145380

Subsystem : Cla-Clo Administrator

Introduction:

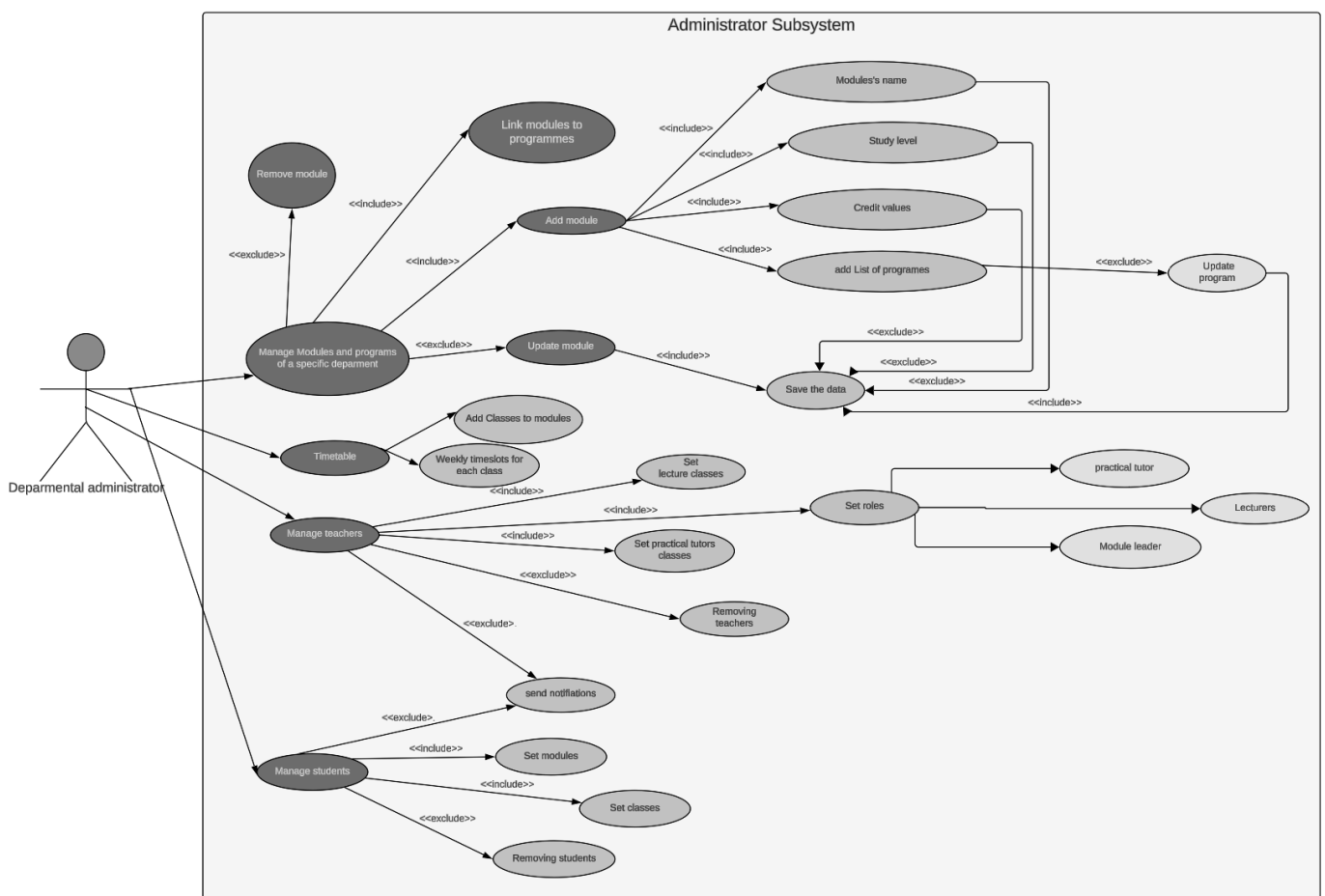
This report presents the development of the ClaClo-Admin subsystem as part of the larger ClaClo project. The ClaClo system is designed to serve the needs of students, teachers, administrators, and university managers through four distinct subsystems: ClaClo-Student, ClaClo-Teacher, ClaClo-Admin, and ClaClo-Manager. These subsystems collectively deliver an integrated platform for managing educational processes effectively.

The ClaClo-Admin subsystem focuses on supporting course administrators by providing functionalities for managing programmes, modules, teachers, and students. The report is structured to cover the specific tasks assigned in the coursework, including specification, modeling, architectural design, detailed design, and testing.

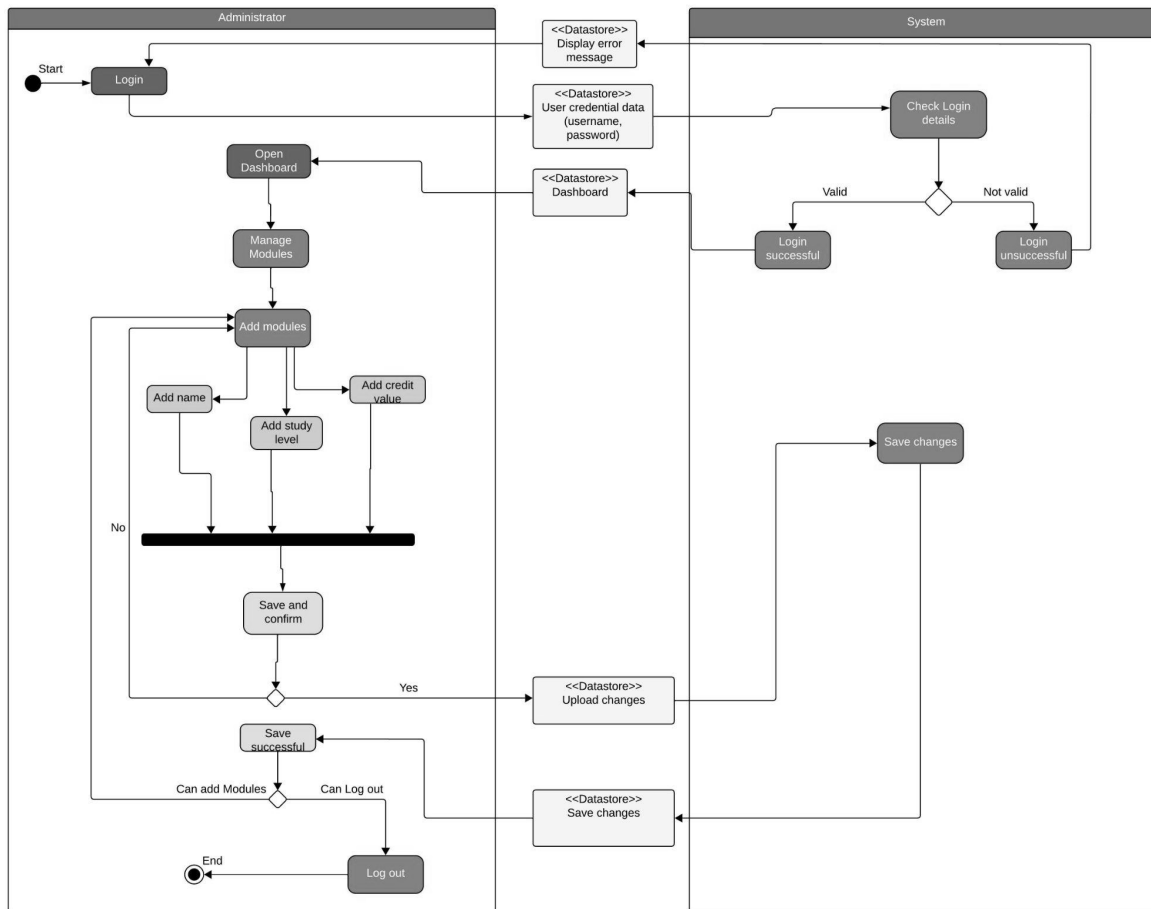
Link: [Lucidchart](#)

Task 1: Specification and Modelling Software Functional Requirements

1. Use case

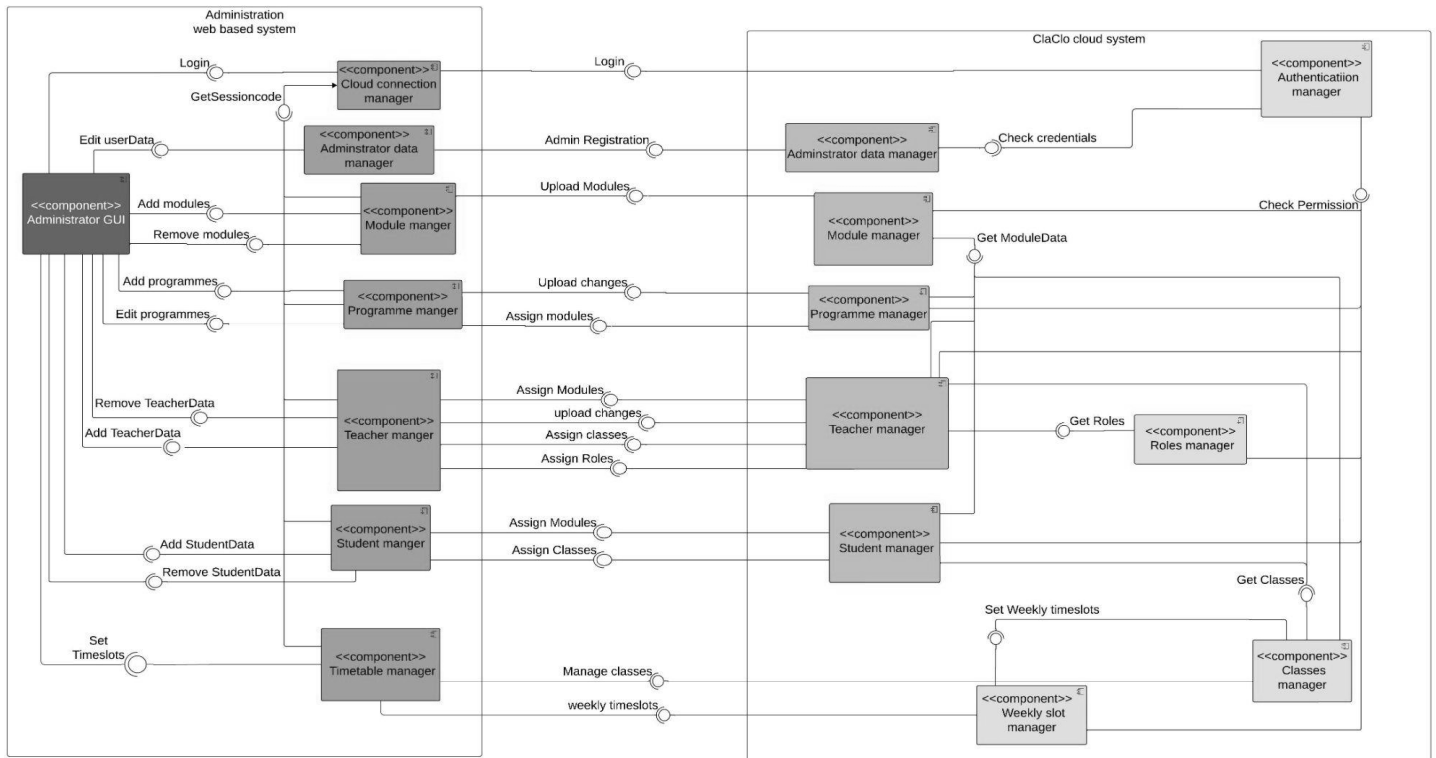


2. Activity Diagram: Selected Add Module use case



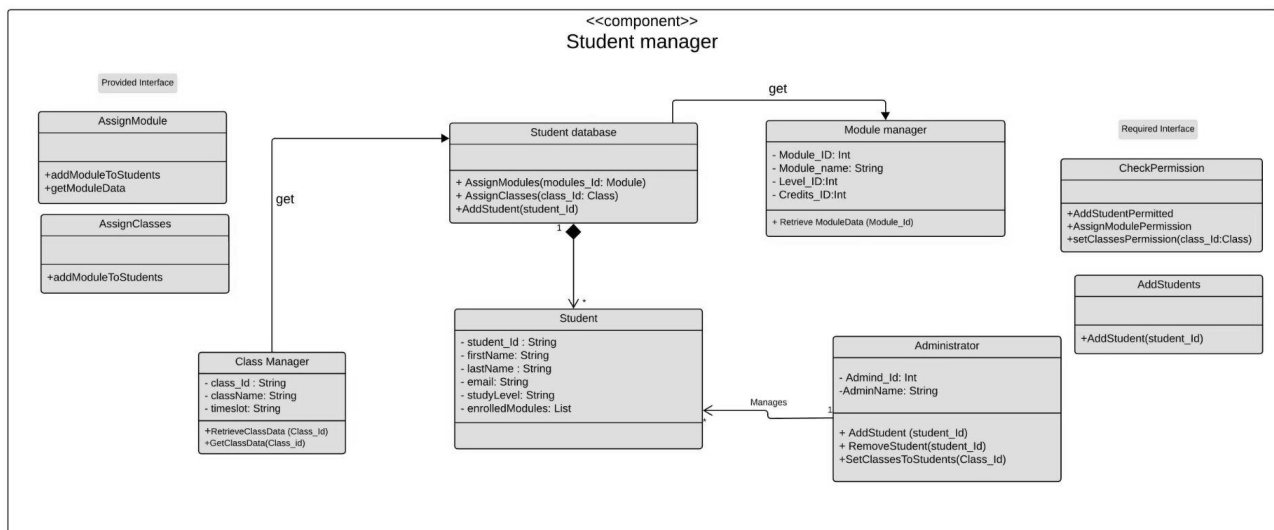
Task 2: Software Architectural Design

1. Admin subsystem architectural design

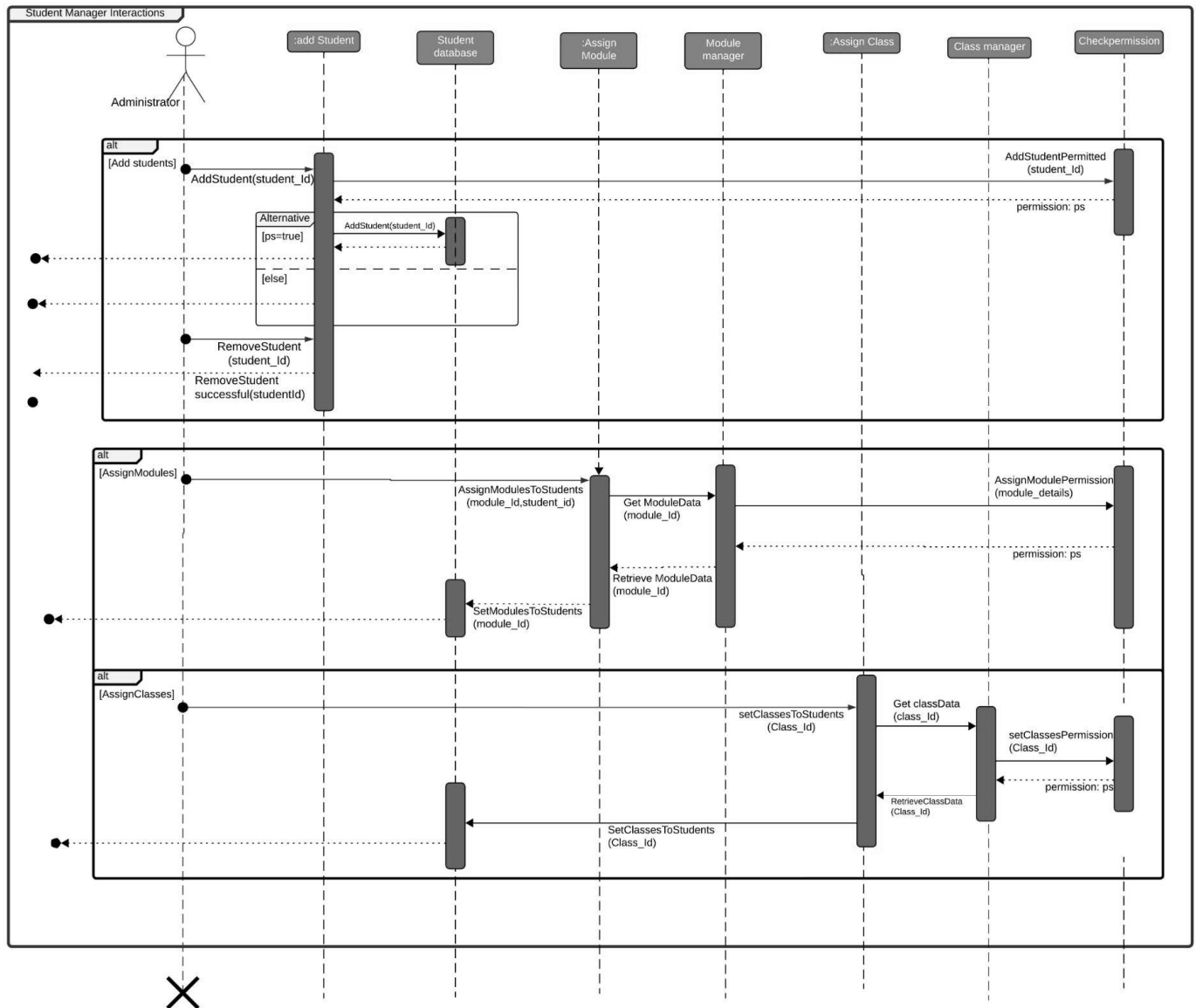


Task 3: Software Detailed Design

1. Structural diagram (class diagram): selected student manager component



2. Behaviuoral diagram (Sequence diagram): selected student manager compoment



Task 4: Software Testing

1. Unit test plan for Student Manager:

Test Case	Method and Parameters	Expected Output
Add Student successfully	addStudent(Student_Id, First_Name, Last_Name, Email, Enrollment_Id)	Student record should be successfully added to the database.
Add Student failed (Missing required data)	addStudent(Student_Id, First_Name, Last_Name)	Error message: "Required fields missing."
Edit Student data successfully	editStudent(Student_Id)	Student record should be successfully updated with the provided details.
Edit Student failed (Invalid Student ID)	editStudent(Invalid_Student_Id)	Error message: "Student ID not found."
Get Student details	getStudentDetails(Student_Id, studentName)	Correct student data should be returned based on the given Student ID or name.
Get Student details failed	getStudentDetails(Invalid_Student_Id, Invalid_StudentName)	Error message: "Student ID not found." or "Student name not found"
Delete Student successfully	RemoveStudent(Student_Id)	Student record should be deleted successfully from the database.
Delete Student failed (Invalid Student ID)	removeStudent(Invalid_Student_Id)	Error message: "Student ID not found."

2. System test plan for Add Modules

Use Case: Add Modules. Scenario: Successful login to add modules

Preconditions

- User must be an admin and has user details

Administrator	System
1. Enter login details	2. Check If login details are correct
	3. Valid details
5. Opens dashboard	4. Login successfully

Use Case: Add Modules. Scenario: Addition successful

Preconditions:

- Admin already logged
- Admin has access to web based system
- Admining has access to add module page

Administrator	System
1. Open dashboard and manage modules.	
2. Open add modules page	
3. Enter valid inputs: - Name - Credit Value - Study Level	
4. Save and confirm	5. Save changes and sends back saved changes
6. Save successfull	

Use Case: Add Modules. Scenario: invalid module details

Administrator	System
1. Open dashboard and manage modules.	
2. Open add modules page	
3. Enter invalid inputs: - Name - Credit Value - Study Level	4. Checks valid details and sends back to module page
5. Goes back to add module page	

Use Case: Add Modules. Scenario: Unsuccessful login

Preconditions

- User must be an admin and has user details

Administrator	System
1. Enter login details	2. check if login details are correct
	3. Not valid
5. Login page opens	4. sends display error

Use Case: Add Modules. Scenario: Login successful

Preconditions

- User must be an admin and has user details

Administrator	System
1. Enter login details	2. Check If login details are correct
	3. Valid details
5. Opens dashboard	4. Login successfully