

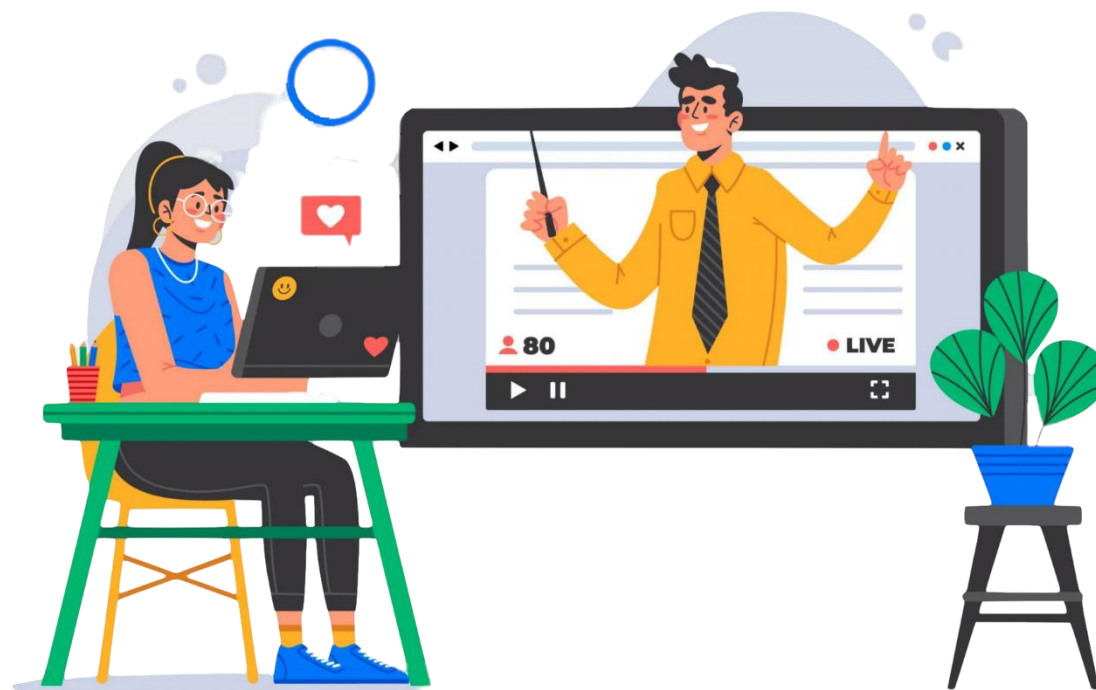


UNIVERSITY OF COLOMBO SCHOOL OF COMPUTING

SCS 1210 -Software Engineering II - Group Assignment

APARNA INSTITUTE

Course Management System



Group Details

	Name	Index Number
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2.		
3.		
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Overview

- ✓ Case Study
- ✓ Use Case Diagram
- ✓ Class Diagram
- ✓ Use Case Narrative Documents, Sequence Diagrams and UIs for identified 5 Use Cases
- ✓ Contribution

Case Study

The management of APARNA institute which has several branches wishes to develop a web-based Course Management system for the staff and students. Currently, they have only a student registration system which is used only to register the students and parents. By observing the operations of the institute and by talking to the employees, the analysts discovered the following

Student Management: Students need to first register with the Institute. Subsequently, students must register for the courses by filling out a course registration form. Details such as student number, course code, branch number etc. will be collected. Subsequently, they need to pay for the course intended to follow. There is a separate payment clerk who handles the payments. After the payment, the student will be issued a course ID card which he/she is required to use for marking attendance and collecting course materials. A student can follow many courses at a time.

Teacher Registration: Teachers need to come to the institute to register with the institute. They need to pay an annual registration fee. Details such as NIC number, name, educational qualifications, professional qualifications, number of years of teaching experience etc. will be collected.

Parent Registration: Parent details are collected when the students are registered using the student registration system.

There can be a maximum of 2 teachers teaching a particular course. Teachers need to mark the attendance of students during a lecture and hand over the attendance sheet to the administration office. At the end of each course, there will be an examination.

The following are the duties of a lecturer:

Marking attendance, handing over a copy of the teaching materials to the administration office to print copies, Hand over the course examination marks to the administration office.

Administration: There is an administrative coordinator who will perform the following duties: Distribute the materials to the respective classes, maintain student and teacher attendance details, maintain class schedules by identifying location, time, and the teacher, monitor student payments, assign teachers for courses, and maintain course examination marks.

A minimum of ten (10) students is needed to register for a course to be conducted. A teacher is allowed to teach a maximum of three (3) courses.

A system needs to be developed initially with the following functionalities.

Master Module: The administrative coordinator should also be able to insert, delete, update, view, and search course details, lecturer details, and lecture material details. The administrator also can retrieve the student and parent details from the student registration system, generate various reports etc.

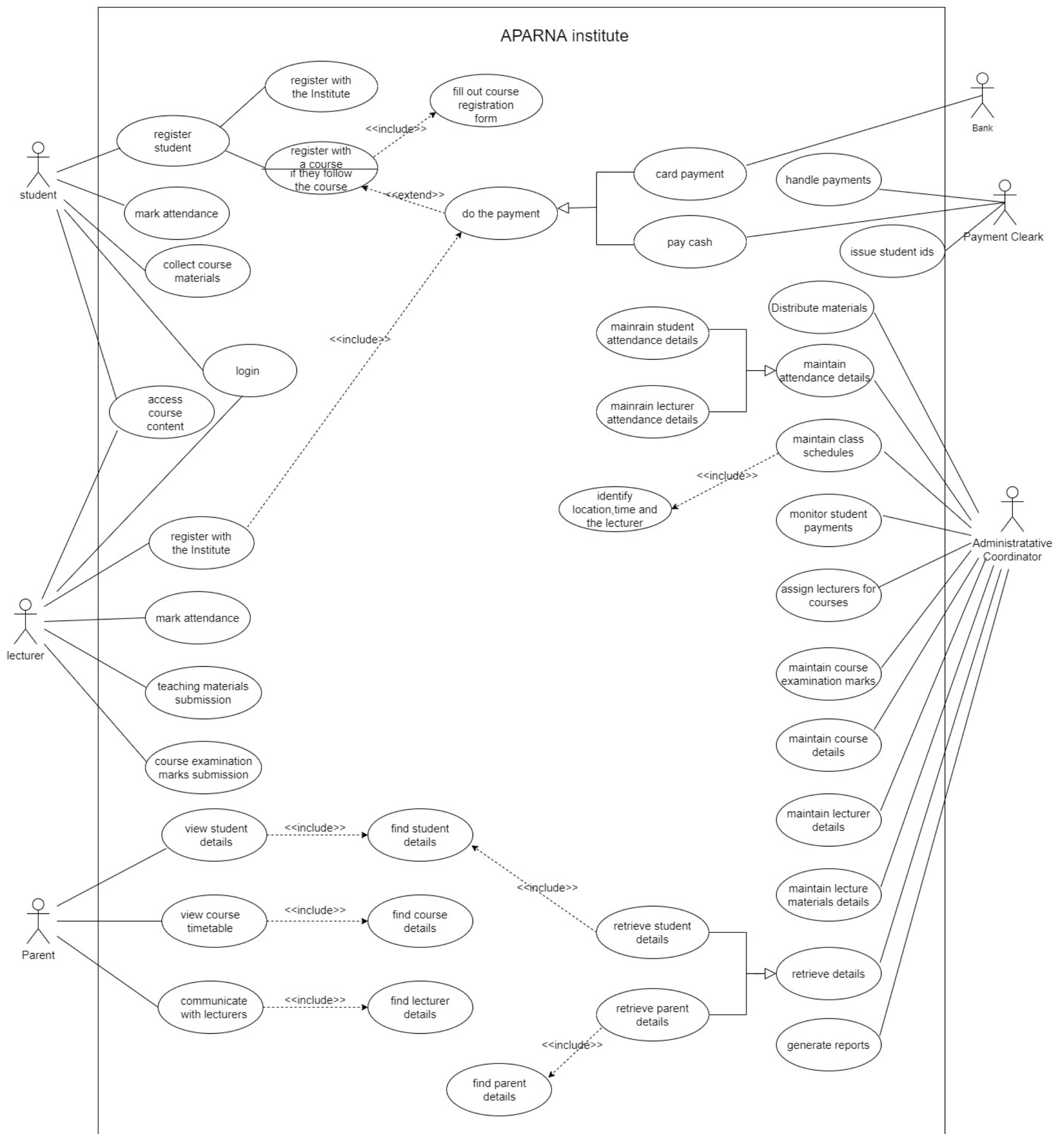
Payment Module: The student should be able to log in to the system and pay using his/her credit card or pay cash to the payment clerk. If he/she pays using an ABN bank credit card a 2% discount is given whereas if he/she pays using any other credit card/debit card, 1% discount will be given. Further, no discount will be given for cash payments. Cash payments will be accepted only by the payment clerk at the administrative office. The payment clerk handles all the payment-related tasks such as updating all the payments to the system etc.

Course Module: Registration of students for courses, Registration of Lecturers, maintain attendance details, maintain course schedules, etc.

Parent Module: Parent should be able to access the student's attendance details, course examination marks, course timetable and should be able to communicate with the teachers.

Report Module: Reports regarding courses, students, lecturers, payments, etc. could be generated using this module.

Use Case Diagram

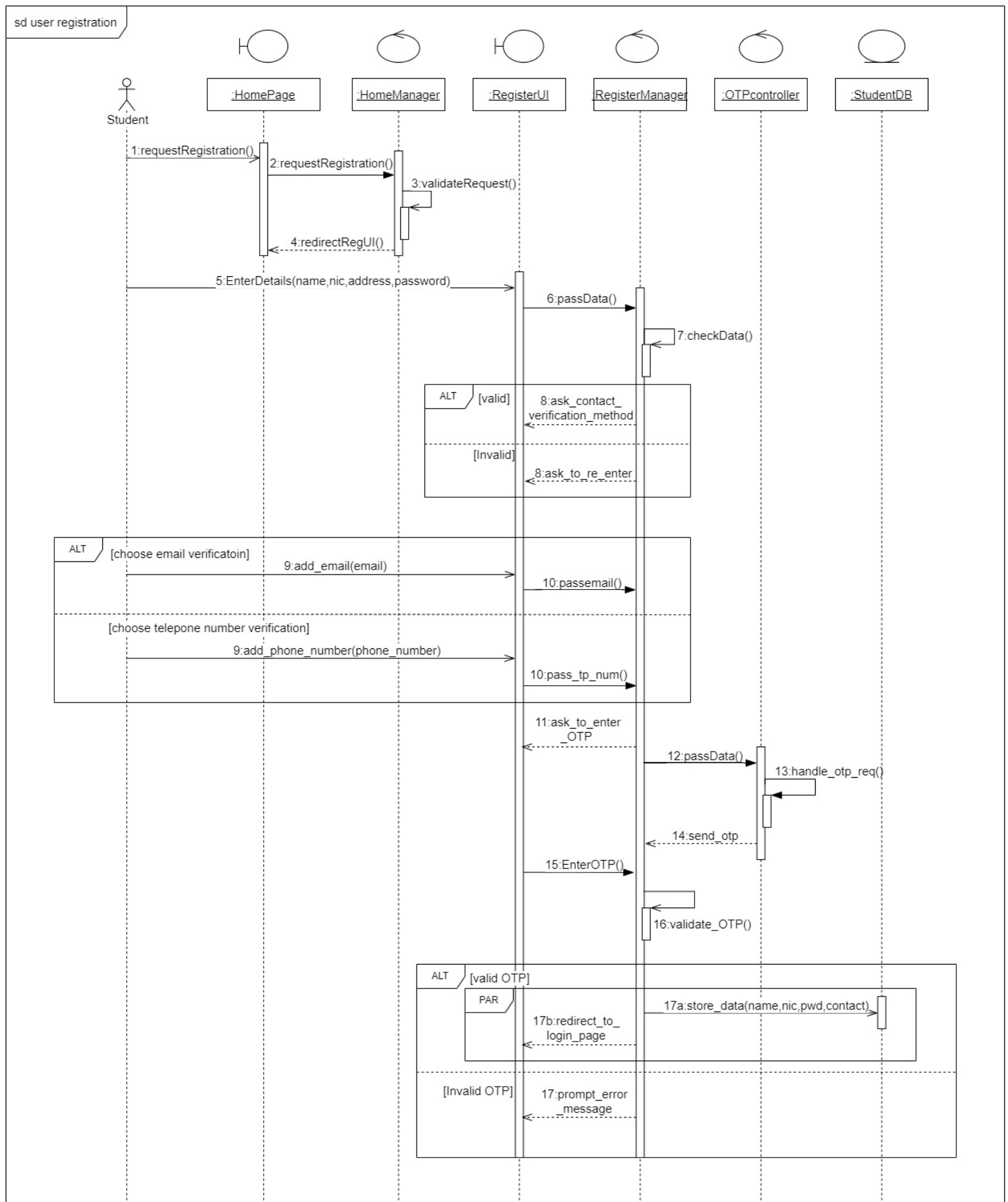


Class Diagram

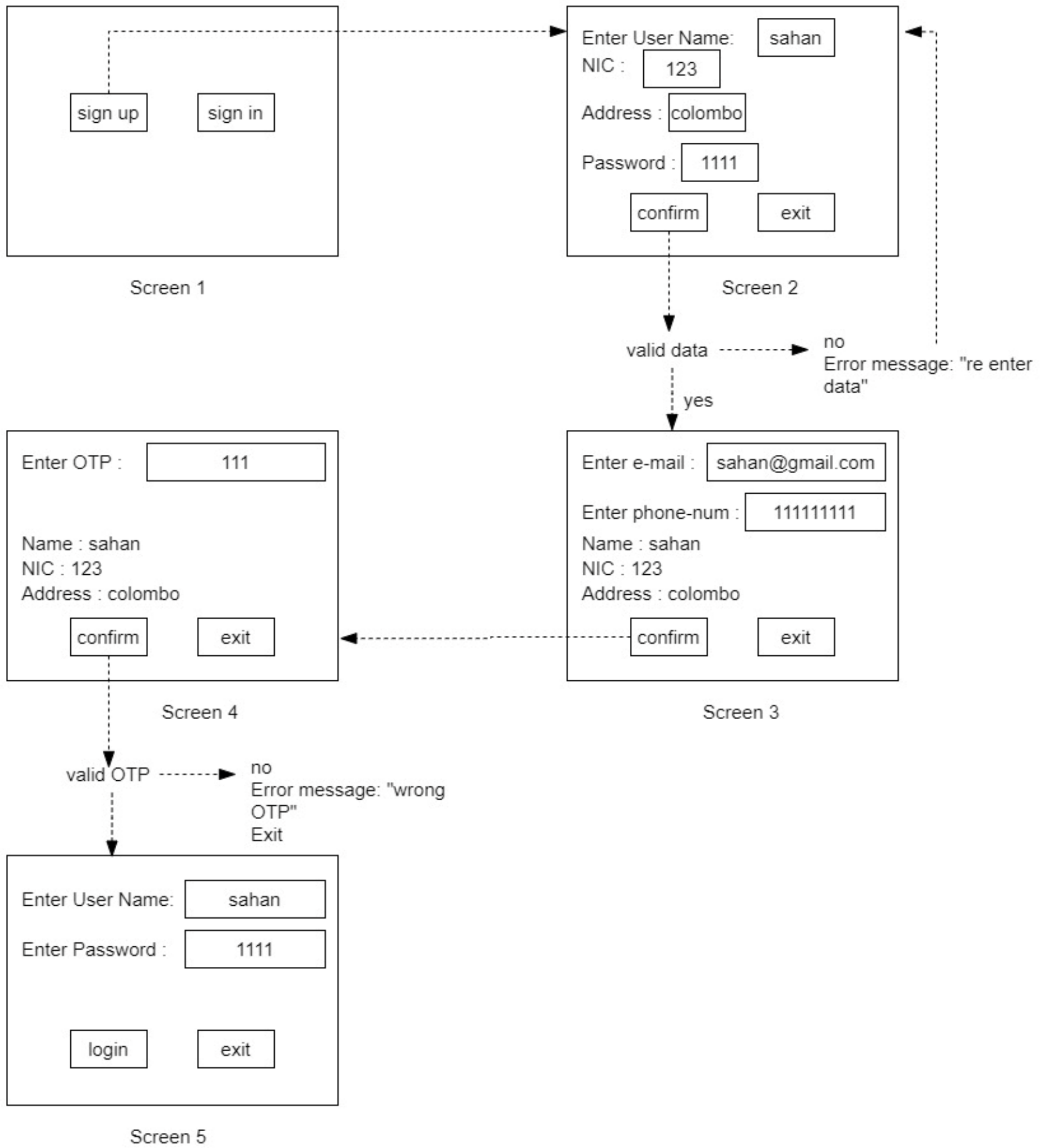
1. Narrative Document

Use – Case Name:	Student Registration with system.	
Use – Case ID:	UC001	
Priority:	High	
Trigger:	A new student wants to register with the institute.	
Primary Actor:	Student	
Preconditions:	<ul style="list-style-type: none">• The student has not yet registered with the institute.• The student has the necessary information and documents required for registration.	
Postconditions:	<ul style="list-style-type: none">• The student has been successfully registered with the Institute.• The student's information has been added to the Institute's database.• The student can now proceed to register for courses offered by the Institute.• The student's information has been added to the Institute's database.	
Main Scenario:	1.	Student visits home page of the system.
	2.	Student requests institute registration from the system.
	3.	System displays signup page.
	4.	Student enters details.
	5.	System validates data.
	6.	If valid system asks for contact information verification.
	7.	Student chooses verification method (email or phone).
	8.	System generate OTP and send it to the student.
	9.	Student enters the OTP.
	10.	If valid system stores data in the database and redirect student to login page.
Extensions:	6a.	If not, system asks student to reenter details.
	10a.	If not, system displays an error message.

2. Sequence Diagram



3. UI



Use Case -- ()

- 1. Narrative Document
- 2. Sequence Diagram
- 3. UI

Use Case -- ()

- 1. Narrative Document
- 2. Sequence Diagram
- 3. UI

Use Case -- ()

- 1. Narrative Document
- 2. Sequence Diagram
- 3. UI

Use Case -- ()

1. Narrative Document

2. Sequence Diagram

3. UI

Contribution as an Individual

	Name	Index	Contribution
1.	B.W.D.S Chandrasena	21000298	<ul style="list-style-type: none">Created use case narrative document for Use Case Student Registration with the System.Drew sequence diagrams for Use Case Student Registration with the System.Designed and created the user interfaces for the Homepage and registration page.
2.			<ul style="list-style-type: none">Created use case narrative document for Use Case 1.Drew sequence diagrams for Use Case 1.Designed and created the user interfaces for the Homepage and registration page.
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5.			<ul style="list-style-type: none">Created use case narrative document for Use Case 1.Drew sequence diagrams for Use Case 1.Designed and created the user interfaces for the Homepage and registration page.

Contribution as a group

To make sure that our endeavor was a success, we all collaborated. Effective communication is crucial, therefore we made sure to always stay in touch with one another while the project was being completed. We approached the project as a team and assigned assignments based on everyone's skills and areas of expertise. **Together, we drew the class and use case diagrams, making sure they perfectly fit the project requirements. To ensure that the project report was comprehensive and well-written, we also collaborated to finish it. We each reviewed and edited the work of the other.** We are proud of what we accomplished as a team because of our collective efforts, which allowed us to finish the project on schedule and to a high caliber.

