

## Design stage

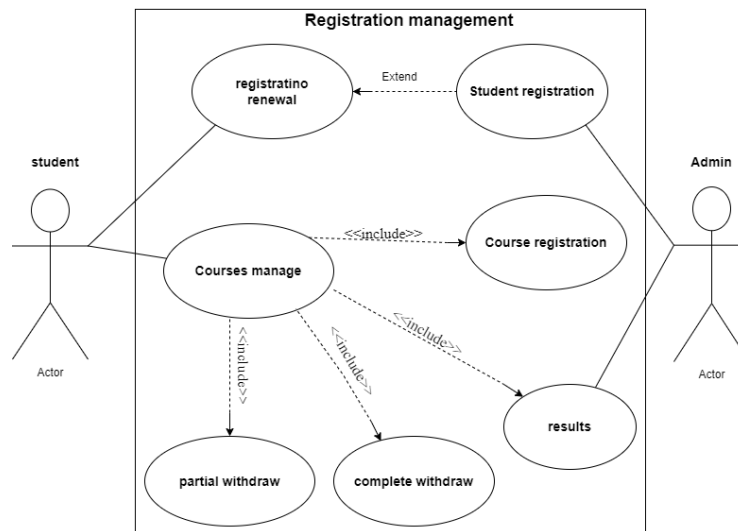
The goal of this task is to produce a detailed data design. The design was divided into two phases:

**the structural design** phase, in which the processes were explained using some UML diagrams, which are the class diagram, and **the behavioral** phase, in which the process design was described using some diagrams, which are the use case diagram, sequence diagram, and activity diagram.

### Use Case Diagram

A use-case model describes a system's functional requirements in terms of use cases.

From the initial study of the system scenario and then analyzing it, a state diagram of the system is drawn



### Use Case Description:

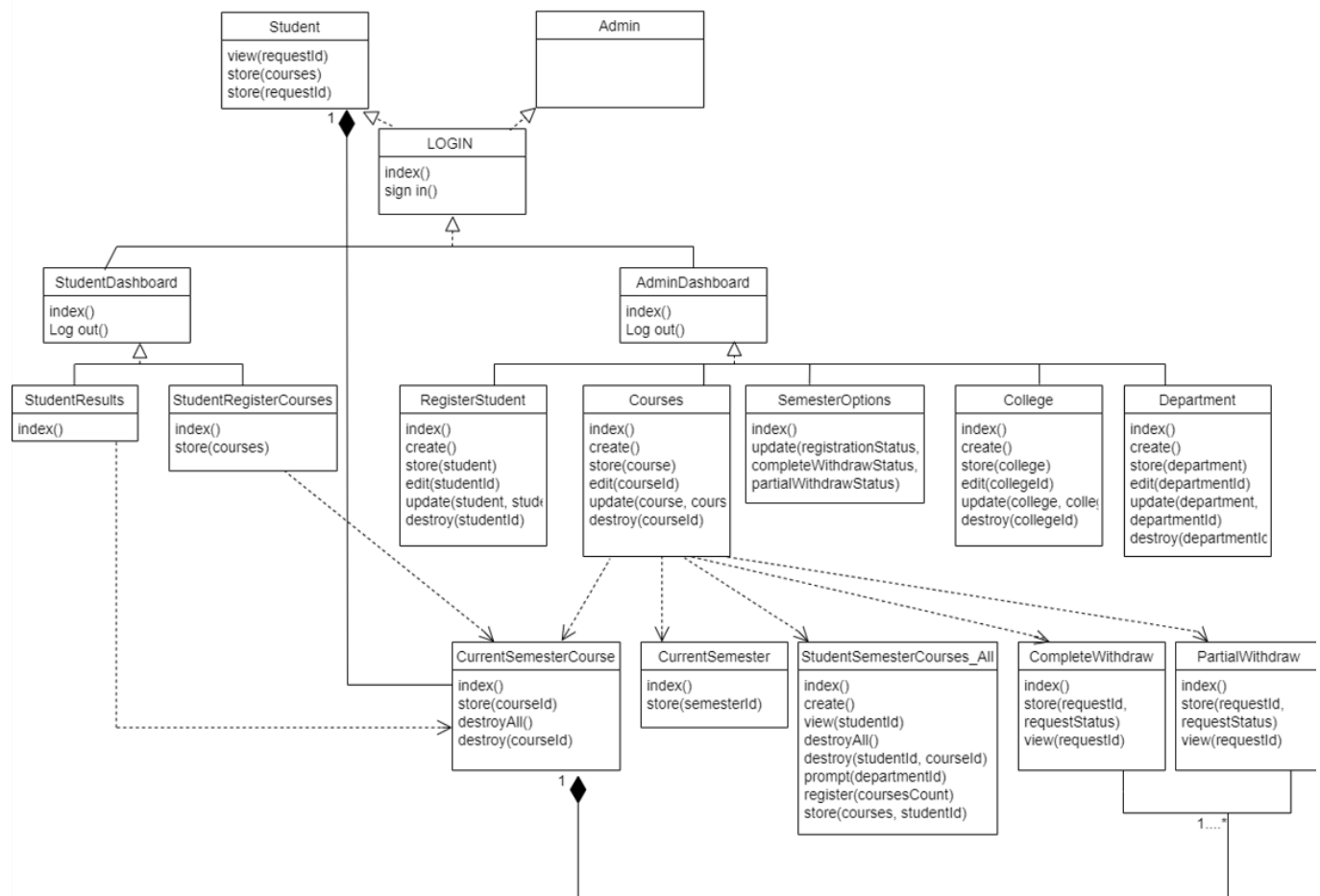
System	Registration management
<b>brief description</b>	
	This use case allows the student to register for courses in the current semester. The student can also withdraw from both types of courses in the middle of the semester. It enables the student to know his result. The system provides a list of all courses for the current semester.
Primary actors	admin/student
Flow of events	
<b>1.Basic flow</b>	
1.1_ sign in 1.2_ registering courses	First, the employee records the student's data after he is accepted into the college Secondly, this use case begins when the request reaches the system to register the course. The student enters the student ID and password, and the system verifies the student's authenticity. The system displays the jobs available to the student, and these jobs include registering courses and withdrawing, both partial and total. The student chooses the job according to the conditions.
1.3_ Select the courses	The system retrieves a list of available courses and displays it to the student. The student selects the subjects until he reaches his permissible limit The system verifies the validity of the courses available to the student and gives him the authority to register Exceptions to course registration: The system administrator or general registrar can bypass the conditions for downloading student materials if there are no courses for this student or for any reason that the system administrator or general registrar deems appropriate.
1.4 display results	The student can access the courses in which he has previously registered and view his results

## Class diagram

Class diagrams are a type of UML (Unified Modeling Language) diagram used in software engineering to visually represent the structure and relationships of classes in a system

### Relationships between classes and registration management system

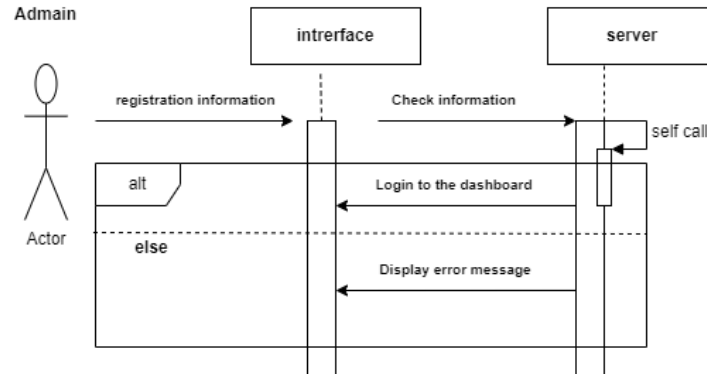
1. Class Admin and class Student relationship with Class Dashboard realization relationship.
2. Class Admin with Class College Class Department Class Courses Class RegisterStudent Class SemesterOptions realization relationship
3. Class CurrentSemesterCourse\_all with Class CurrentSemester Class CompleteWithdraw Class PartialWithdraw Class StudentSemesterCourses with Class Courses Dependency relationship.
4. Class Student RegisterCourses Dependency relationship with Class StudentSemesterCourses.
5. Class StudentResults Dependency relationship with Class StudentSemesterCourses.
6. Class Student with Class CompleteWithdraw Class PartialWithdraw Composition relationship between them and Class StudentSemesterCourses.



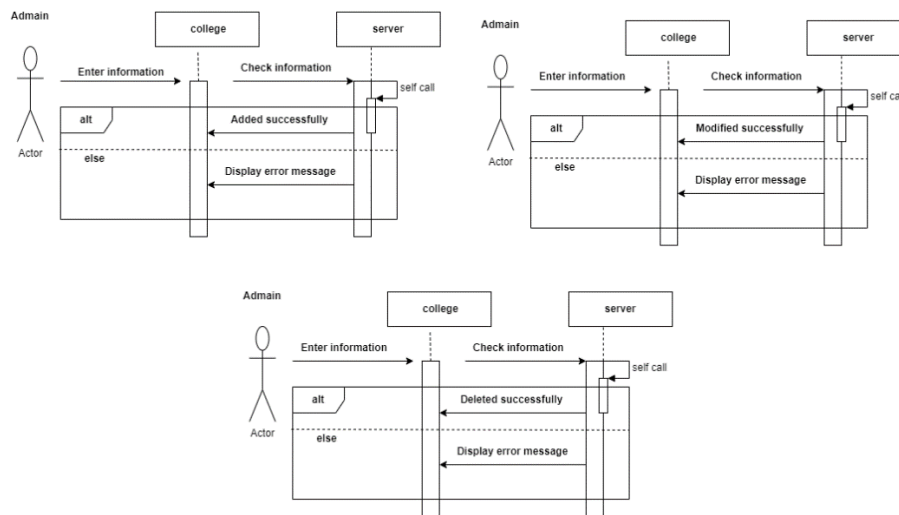
## Sequence Diagrams:-

Interaction diagram An interaction diagram is used to show the interactive behavior of a system.

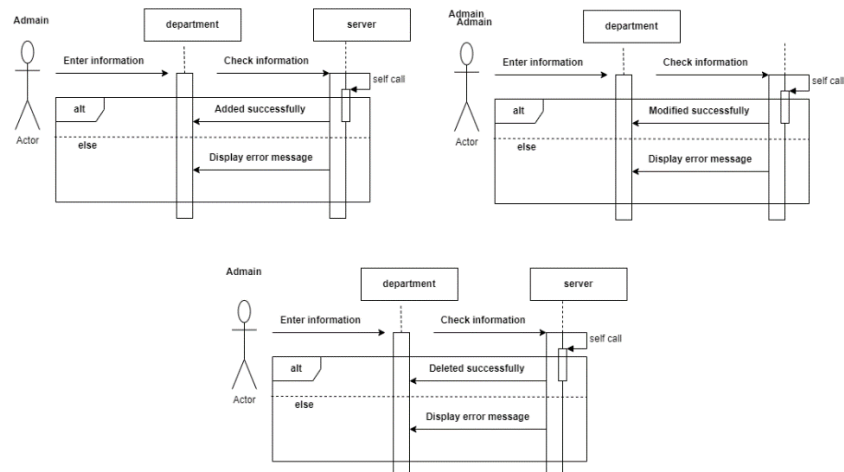
### 1\_Operations entering the system by the admin



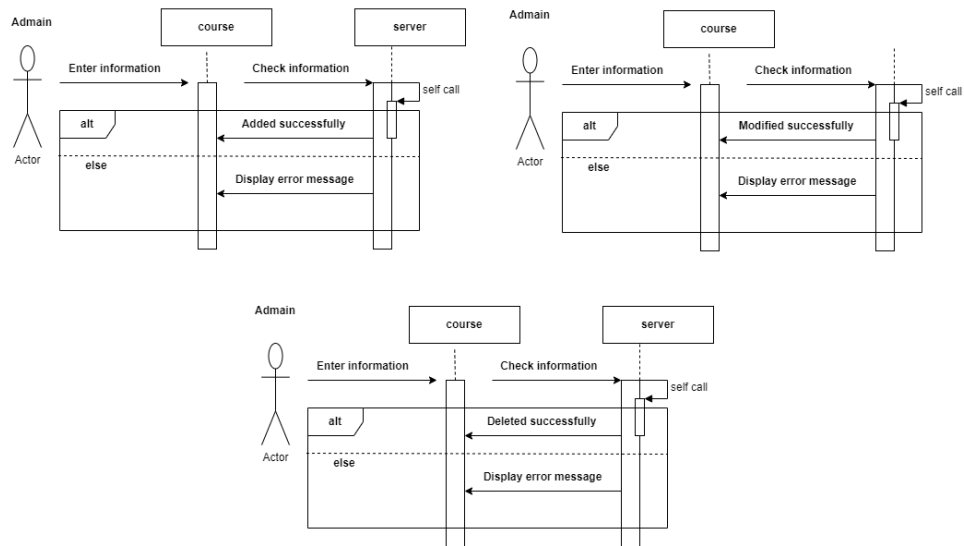
### 2\_Operations add, modifying and deleting the college



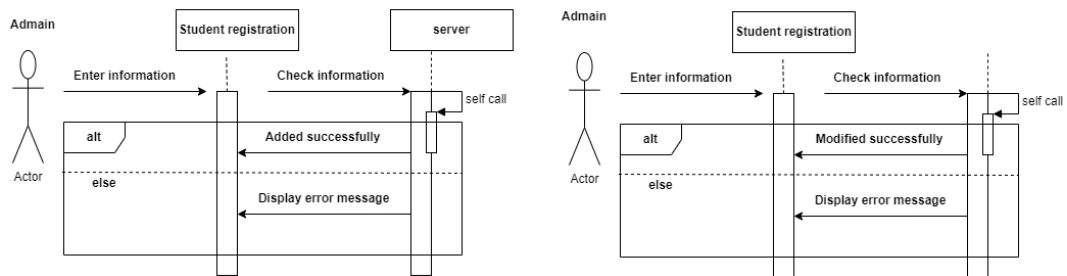
### 3\_Operations add, modifying and deleting department



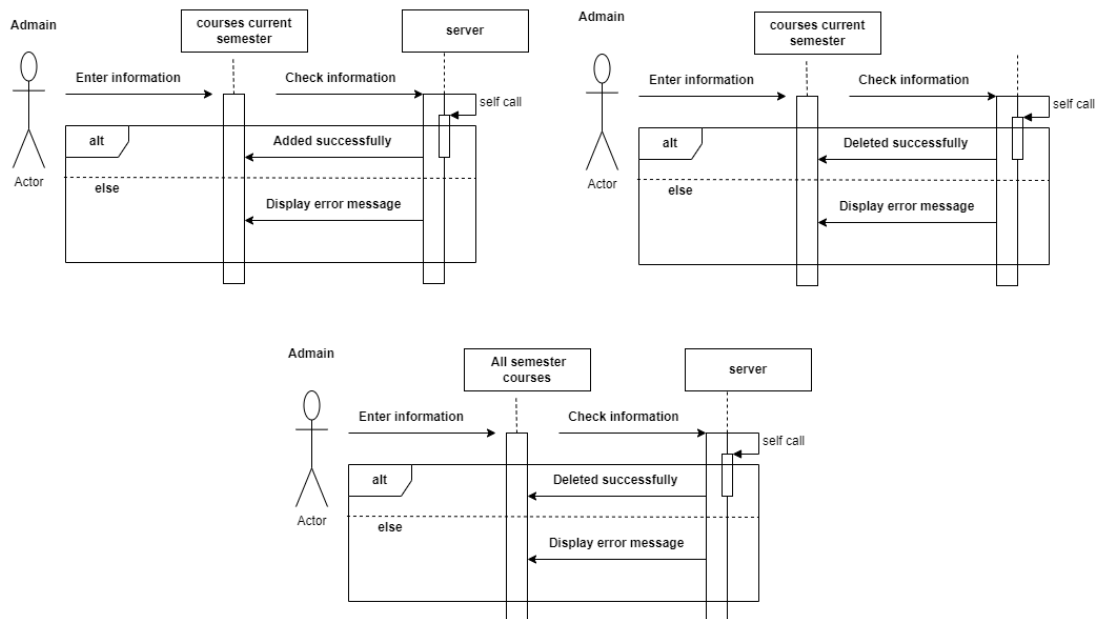
#### 4\_Operations add, modifying and deleting courses



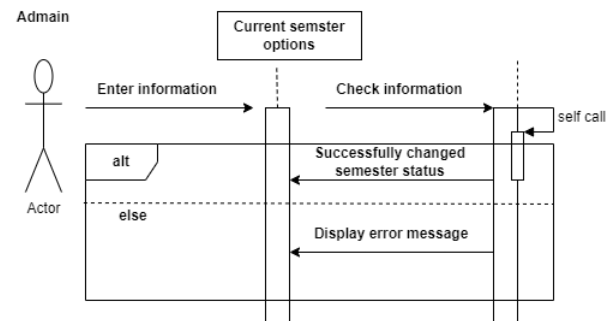
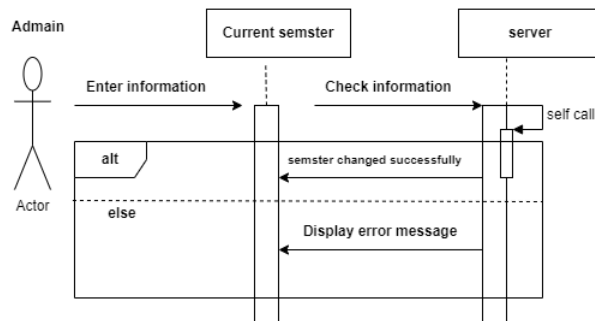
#### 5\_Operations add and modifying student registration



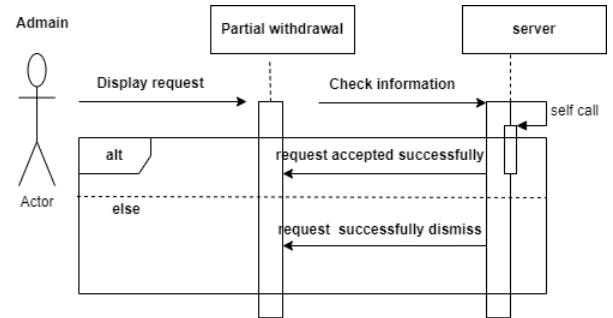
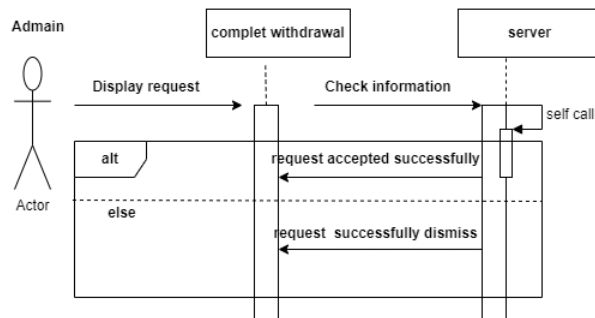
#### 6\_Operations add courses current semester, Delete current semester courses And Delete all semester courses



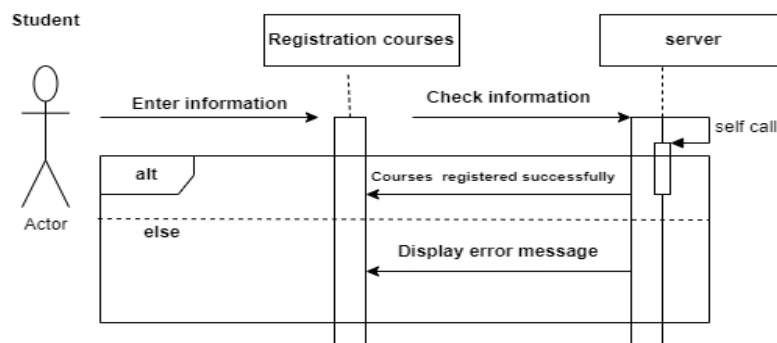
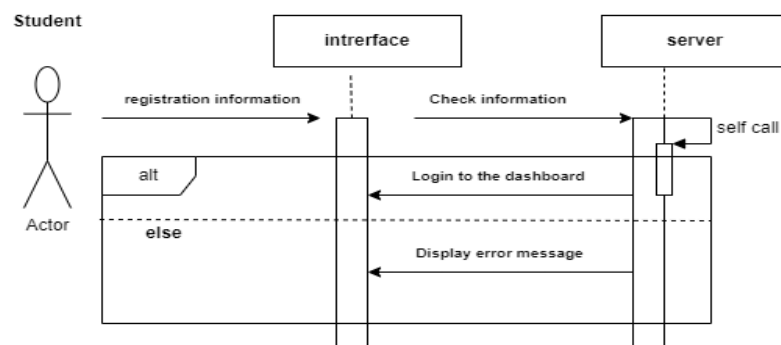
## 7\_Operations Change the semester and Current semester options



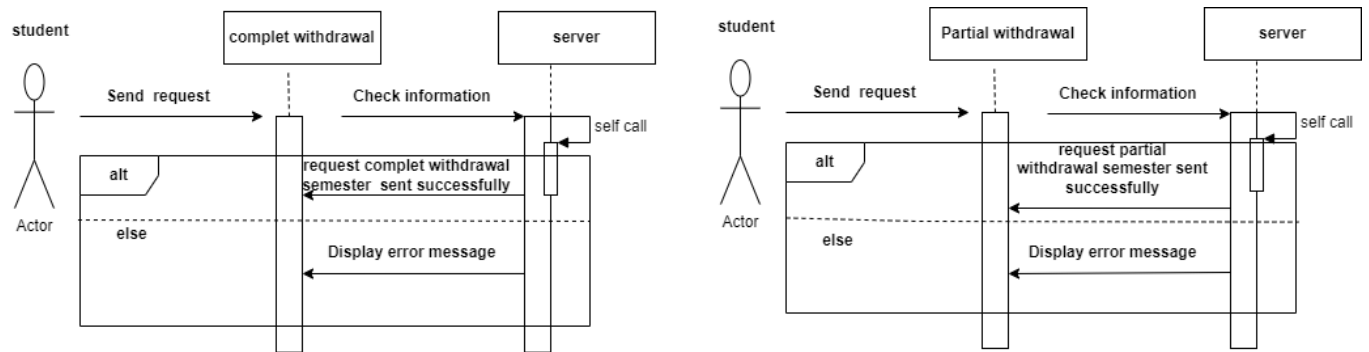
## 8\_Operations complete withdrawal and partial



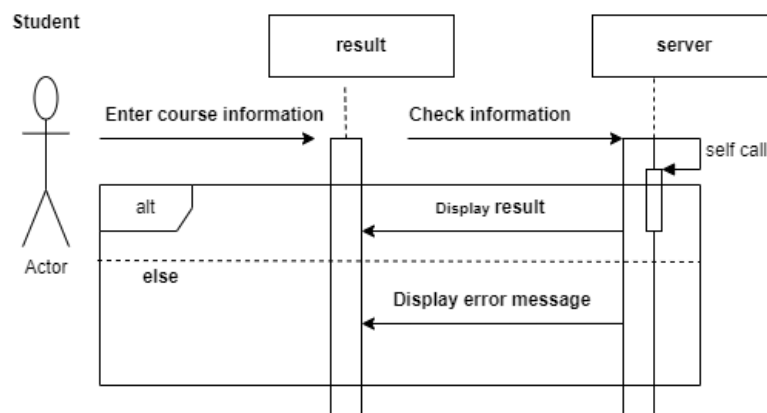
## 9\_Operations Student login and courses registration



## 10\_Operations complete withdrawal and partial for student



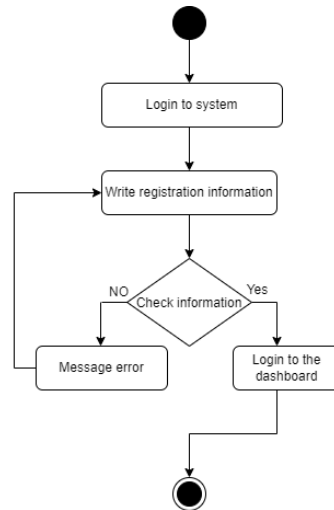
## 11\_Operations result display



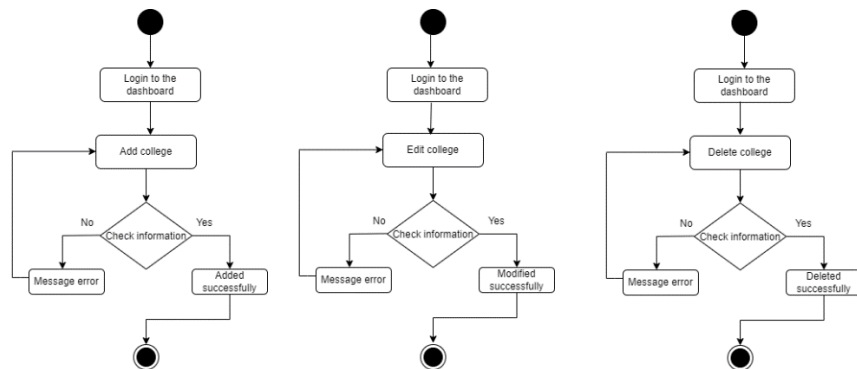
## Activity Diagrams

are used to illustrate the flow of control in a system and refer to the steps involved in the execution of a use case.

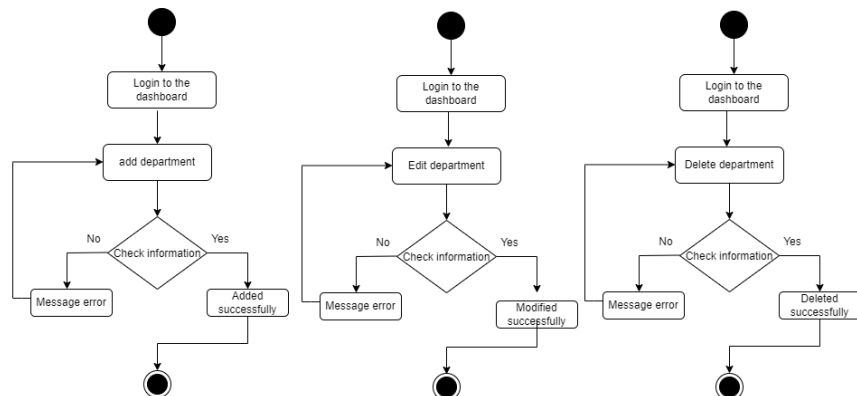
### 1. Operations entering the system by the admin



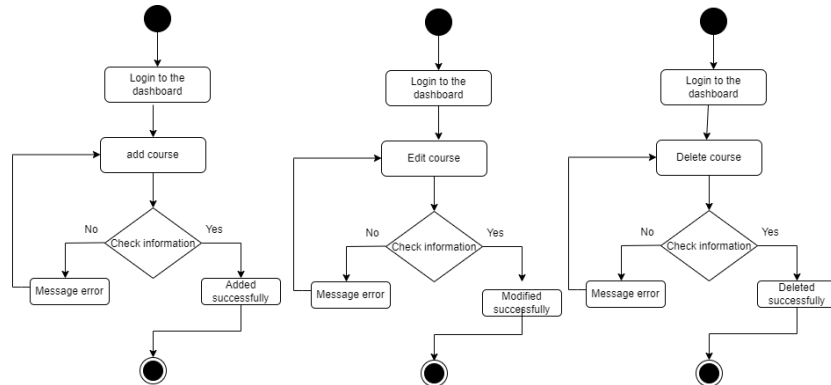
### 2. Operations add, modifying and deleting the college



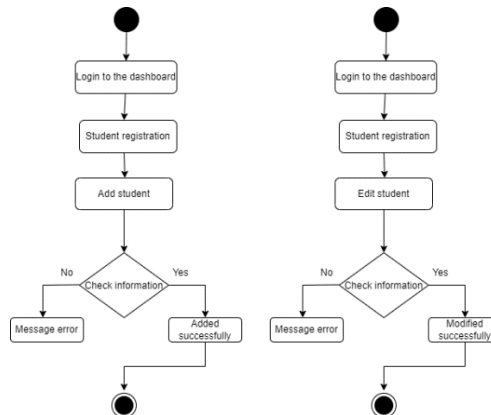
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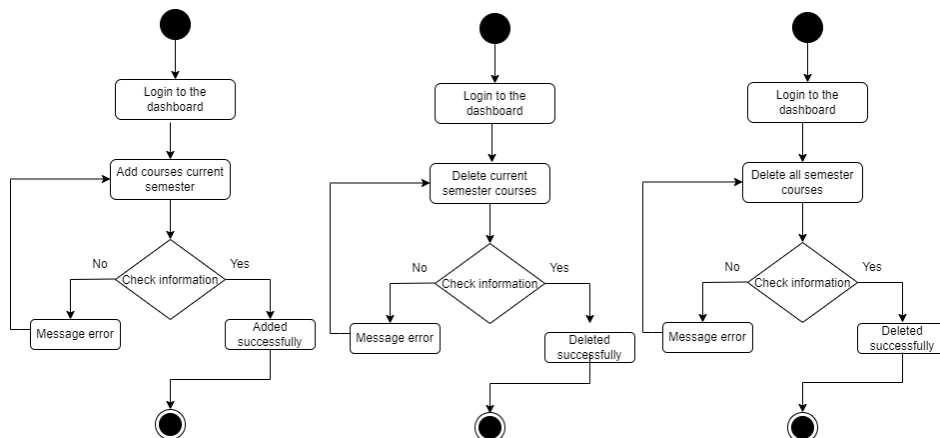
#### 4. Operations add, modifying and deleting courses



#### 5. Operations add and modifying student registration

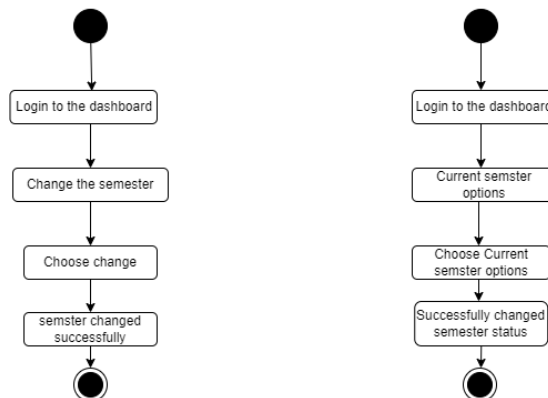


#### 6. Operations add courses current semester, Delete current semester courses And Delete all semester courses

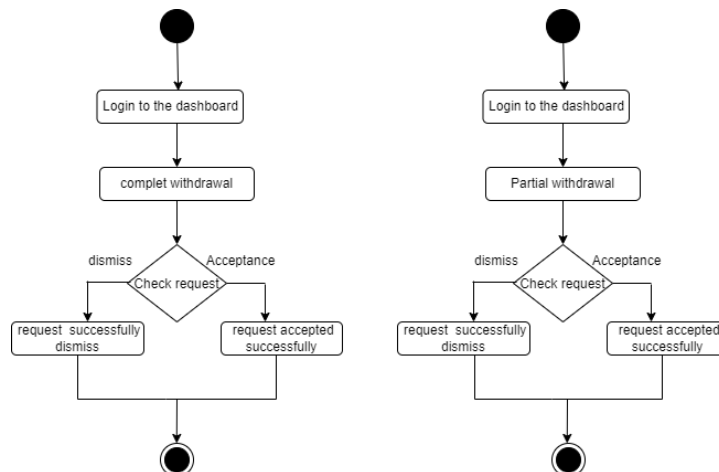




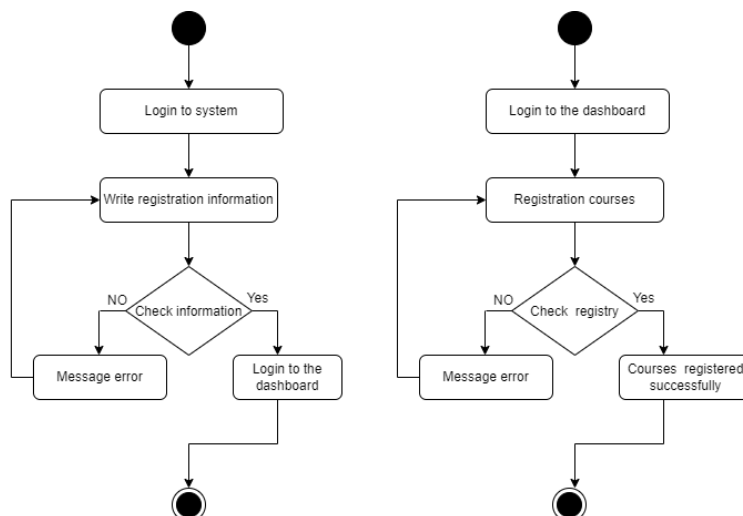
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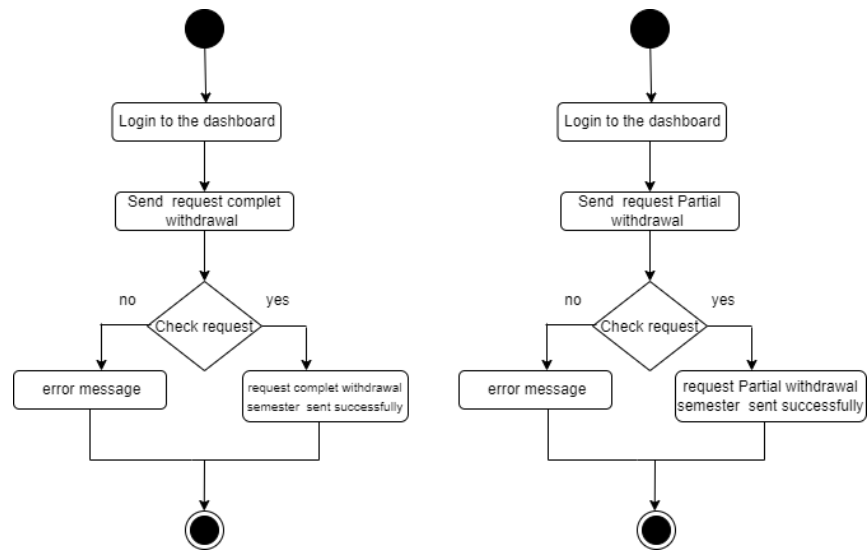
## 8. Operations complete withdrawal and partial



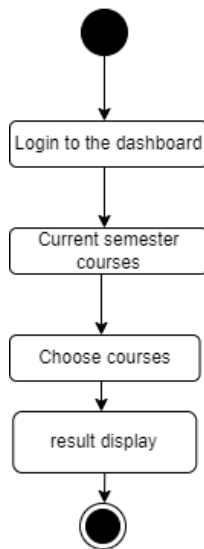
## 9. Operations Student login and courses registration



## 10. Operations complete withdrawal and partial for student

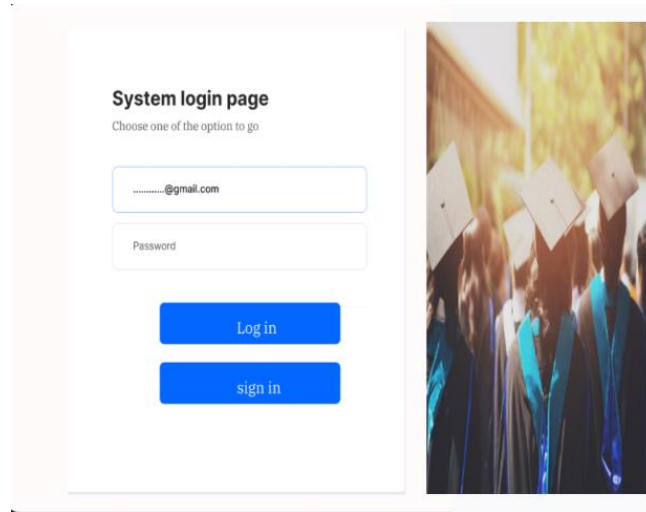


## 11. Operations result display



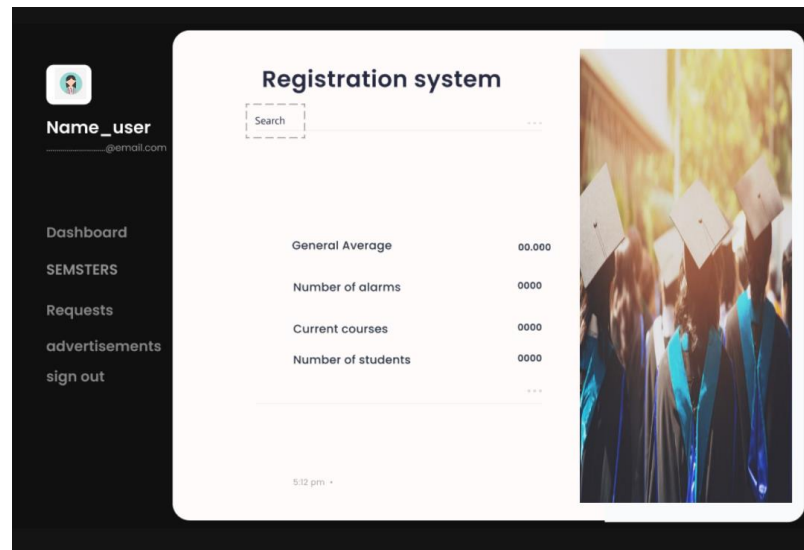
## *Prototype design of interfaces*

### **System login interface**



The image shows a prototype of a system login page. It features a white card on a light pink background. The card has the title "System login page" and a subtitle "Choose one of the option to go". Below the subtitle are two input fields: the first is labeled with a placeholder ".....@gmail.com" and the second is labeled "Password". Under the input fields are two blue buttons: "Log in" and "sign in". To the right of the card is a vertical image of graduates in blue gowns and white caps.

### **Basic interface for operations**



The image shows a prototype of a registration system interface. It features a dark blue sidebar on the left with a user profile section and a list of menu items. The main content area is white and contains a "Registration system" header, a search bar, and a table of statistics. The sidebar menu items are: "Dashboard", "SEMSTERS", "Requests", "advertisements", and "sign out". The table of statistics has the following data:

General Average	00.000
Number of alarms	0000
Current courses	0000
Number of students	0000

At the bottom of the sidebar, there is a clock showing "5:52 pm". To the right of the main content area is a vertical image of graduates in blue gowns and white caps.

***Student name: Sharifa Faraj Alabidi***

***student number: 351***

