COURSE REGISTRATION SYSTEM

Ex. No.: 1
Aim

To create a system through which students can register to the courses desired by them. Problem statement

- **The system is built to be used by students and managed by an administrator.**
- **The student and employee have to login to the system before any processing can be done.**
- **The student can see the courses available to him and register to the course he**
- **wants. The administrator can maintain the course details and view all the students who have registered to any course.**

USE-CASE DIAGRAM

The course registration system has the following use-cases

- **Login**
- **View course details**
- **Registration**
- **Display details**
- **Maintain course details**
- **Logout**

The actors involved in the system are

1. Student

2. Administrator

Use-case name: Login

The user enters the username and password and chooses if the user is student or administrator.If entered details are valid the user"s account becomes available.If it **is invalid, an appropriate message is displayed to the user.**

Use-case name: View course details

In this use case, a student can search all the courses available to him and choose the best course he wants. The student can view the course duration, faculty and department of the courses he may choose.

Use-case name: Registration

When a student has successfully chosen a course, he can register to that course. Upon registration, the student"s details are stored in the database.

Use-case name: Display details

After registration to any course, the student may see the details of his current course. He may wish to know details about fees and other information. The administrator also has the privilege to display details of the the students and the corresponding course for which they have registered.

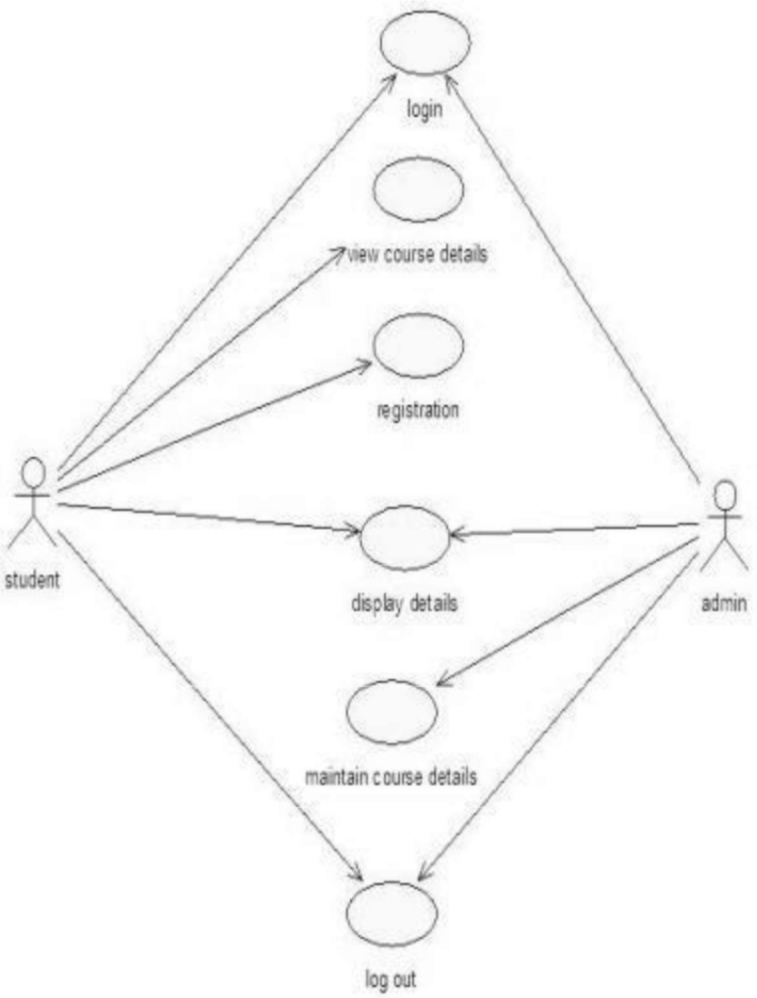
Use-case name: Maintain course details

The administrator has to perform the duties of maintaining the course details. Any change to the course structure is maintained by the administrator.

Use-case name: Logout

After all the desired transactions are made, the user may choose to logout from the system to save all he changes they have made.

Use-case diagram for course registration system



CLASS DIAGRAM

The class diagram is a graphical representation of all the classes used in the system and their operations, attributes and relationships.

The course registration system makes use of the following classes:

1. **Stud (student details)**
2. **Administrator**

1) Student

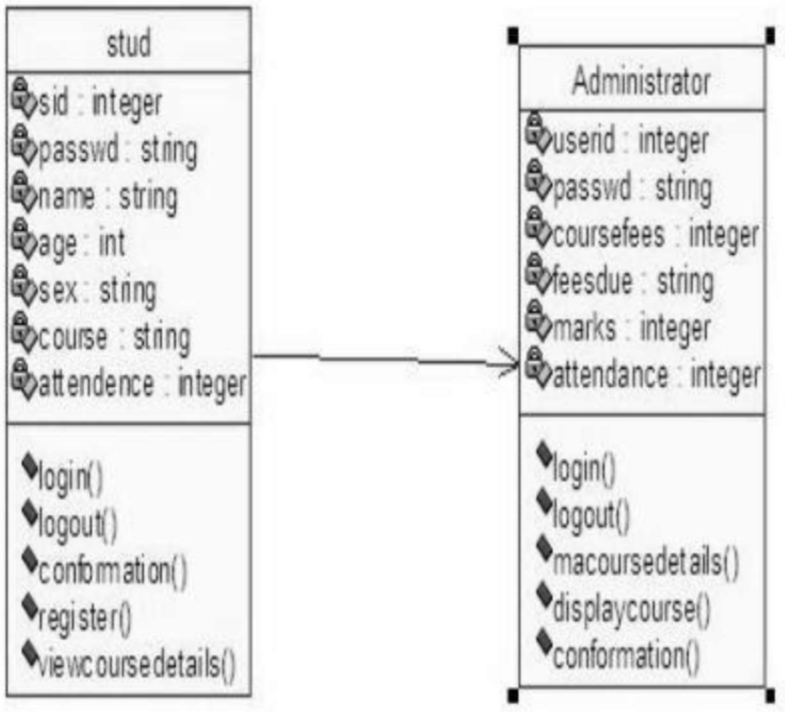
It consists of the details of all the students present in the database. The attributes present in this class are student id, password, name, age, sex, course and attendance. The object of this class is created as soon as the student registers to a course. The operations available to this class are login (), logout (), confirmation (), register (), and view course details ().

2) Administrator

It consists of details of all the courses available to the student. The attributes present in this class are username, password, course fees, fees due, marks, and attendance. The

operations available to this class are login (), logout (), ma course details (), display course (), and confirmation ().

Class diagram for course registration system

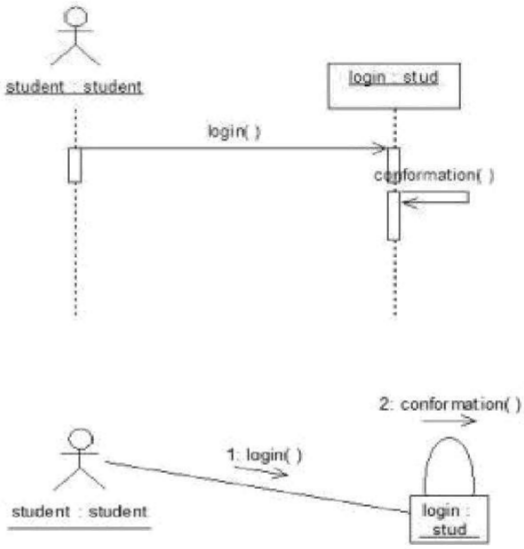


SEQUENCE DIAGRAM

A sequence diagram represents the sequence and interactions of a given usecase or scenario. Sequence diagrams can capture most of the information about the system. Most object-to-object interactions and operations are considered events and events include signals, inputs, decisions, interrupts, transitions and actions to or from users or external devices.

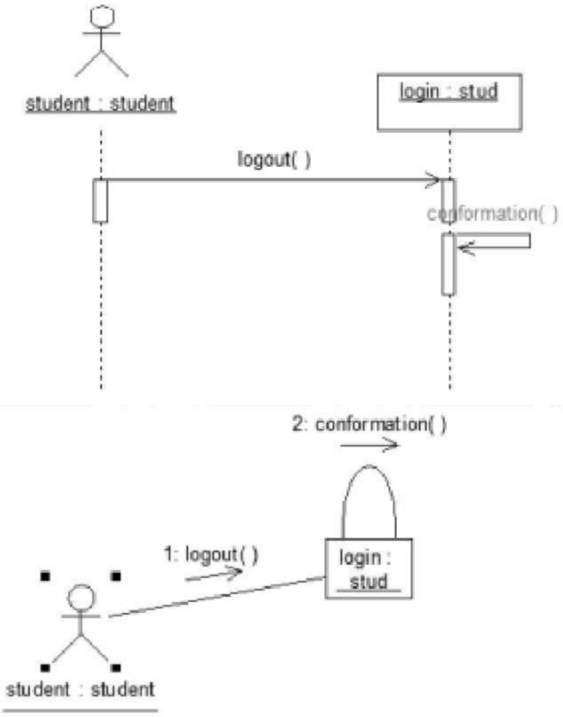
An event also is considered to be any action by an object that sends information. The event line represents a message from one object to another in which the "from" object s requesting an operation be performed by the "to" object. The "to" object performs the **operation using a method that the class contains. It is also represented by the order in which things occur and how the objects in the system send message to one another. The sequence diagram for each use-case that exists when a user logs in, adds, views, updates or deletes records in the system**

Sequence and collaboration diagram for login to the system



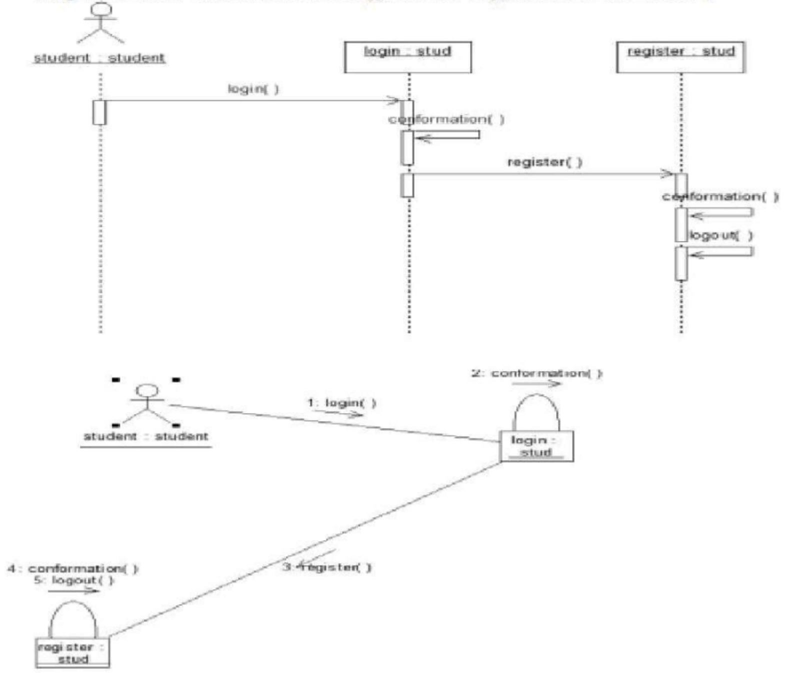
Users have to first login to the system before performing any operation. The user has to provide the necessary details to the system for login.

Sequnce and collabaration diagram for logout



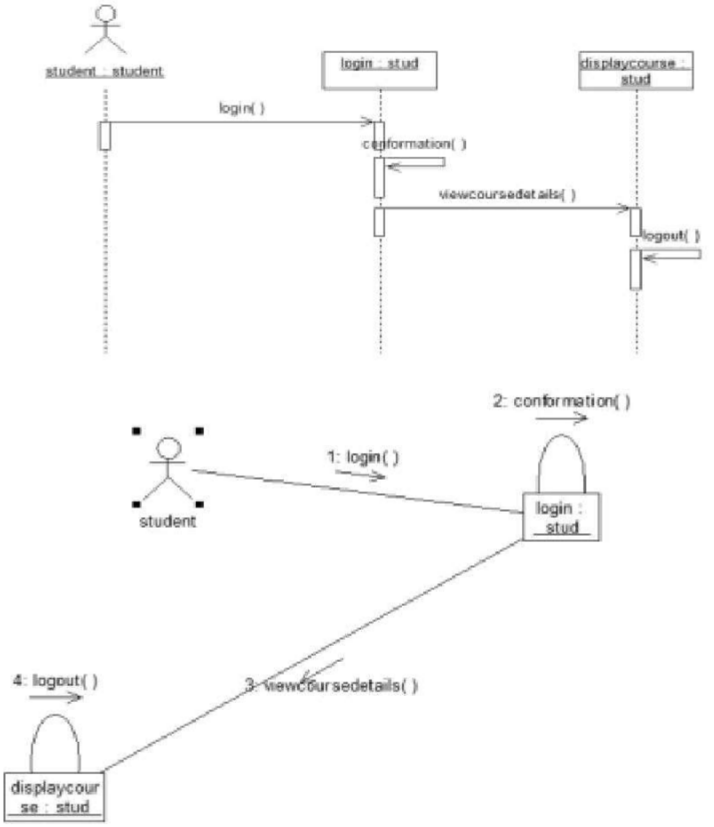
When the necessary operations have been performed on the system, the user may choose to save the changes and logout from the system.

Sequence and collabaration diagram for registration to a course



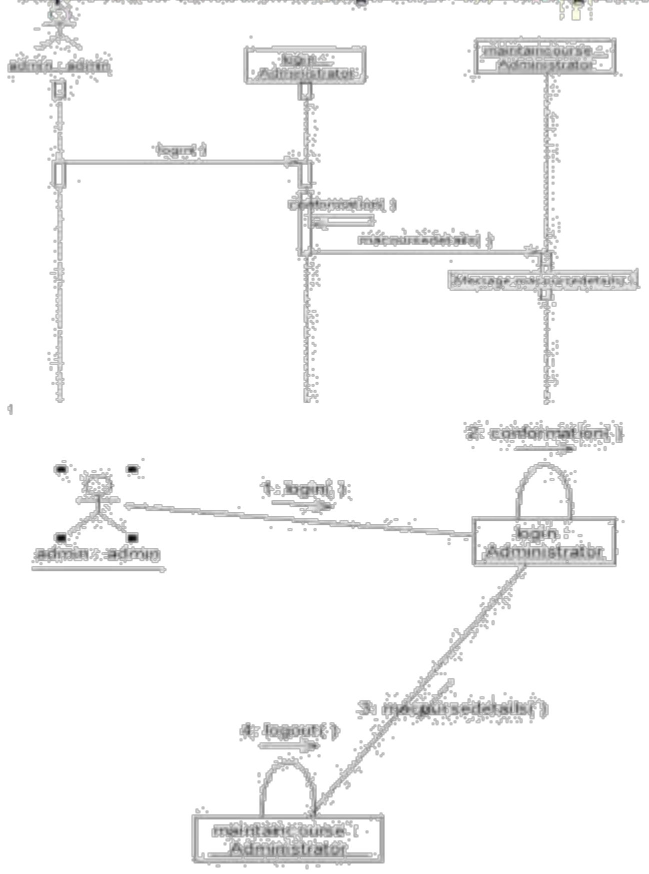
After login, the student has to register to a course of his choice. The student can view all the courses available to him and register to a course suitable to him. The student may view the course details before registration.

Sequence and collaboration diagram for viewing course details



A student may wish to view course details before registration. For this, the student has to first login and select the course details he wishes to see.

Sequence and collaboration diagram for maintaining course details



Course details may be changed as per the requirement every year. So the administrator can edit the details of the course as necessary.