

University Registration management system

Submitted to:
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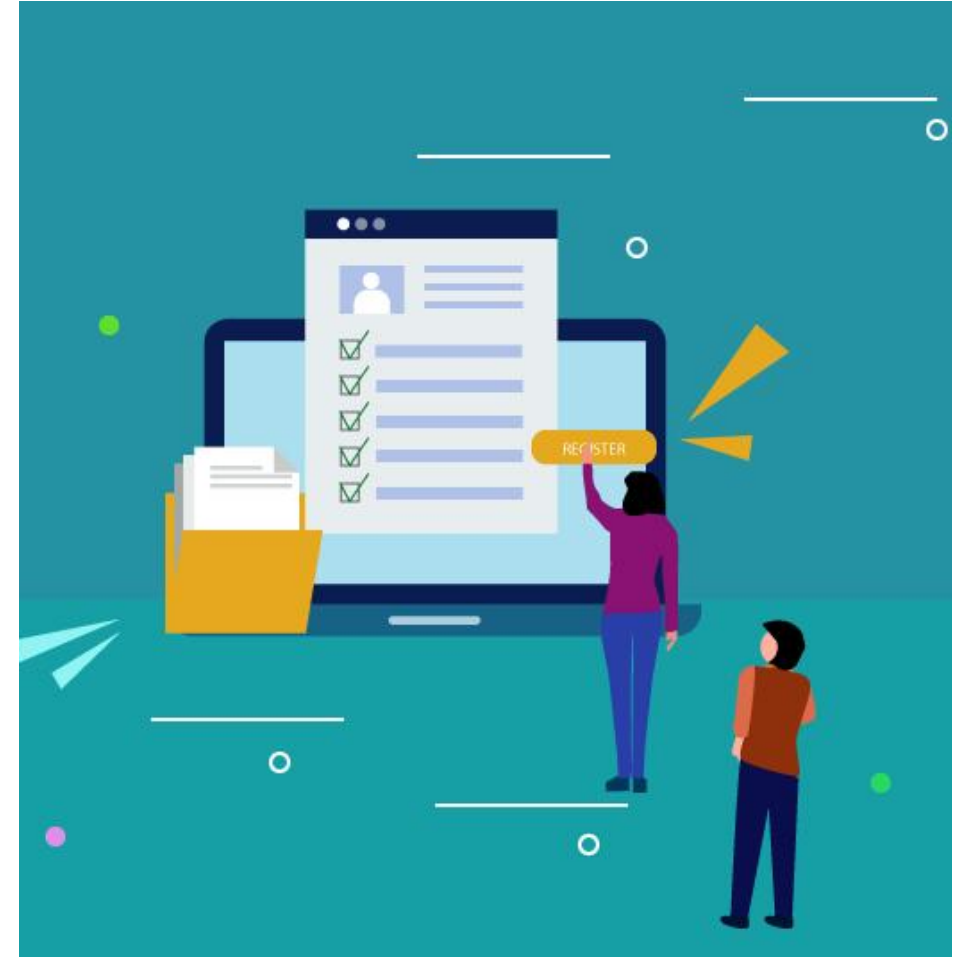


Problem Statement

Managing registration of students for the next year/semester manually, becomes a very tedious and time-consuming task, with lot of errors and redundancy in data while managing excel sheets and storing data of students in separate files. The numerous amount of student data results in human crept in errors and may lead to important information loss/ discrepancy in data.

Various other problems that are faced in manual registration process are:

- Redundancy(deprecated/ old information storage) and inconsistency(conflicting data) in student data.
- Duplicate data being entered
- Difficulty in keeping track of various parameters such as number of students registered in a particular year and course.
- Difficulty in retrieving data of a student.
- Maintaining excel sheets and difficulty in locating and accessing them.



Proposed Solution

- To develop a computerized University Registration Management System (URMS) which will solve the above stated problems and will have the following features:
- There will be three types of members that can access the system:
 - Administrator
 - Data entry operator
 - Student
- The administrator can login with authorized credentials and manage the whole system.
- The administrator will be able to see total number students, number of students in particular courses, details of specific student and view the database as a whole. He will also be able to view details of students by selecting a particular year, branch or course.
- The Data Entry Operator will be able to add, modify and remove courses after the successful authorization of credentials.
- The students will be able to login and enter their details such as email, phone number, address etc.
- A user- friendly portal will be given where students can access the list of courses offerings and information about each course such as
 - Course ID
 - Department
 - Course description
 - Course In-charge
 - Course credits
- The system will not allow duplicated entries for same student id.
- The students will be able to register for maximum of six courses and a minimum of five courses.

Software Requirement Specification

Hardware Interfaces:

- Screen resolution of at least 640 * 480 or above
- Computer System will be in the networked environment as it is a multi-user system

User Interfaces:

The URMS will have the following user-friendly and menu-driven interfaces

- Login: to allow the entry of only authorized users through valid username and password.
- Student Course Registration: to allow students to register for courses and fill their personal details.
- Create New Course : to allow Admin/DEO to add a new course to database.
- Modify Course: to allow Admin/DEO to modify existing course.
- Remove Course: to allow Admin/DEO to remove course from database.
- View all Student: to allow Admin to view all students in different courses, year and branch
- View Student Info: to allow Admin to view details of any student.

Software Interfaces:

- Multi Platform operating system : Windows 7 & and above, MacOS, Linux
- Java Runtime Environment
- Backend built on MySQL(Maria DB) and php
- Frontend made in Java NetBeans.

The screenshot displays the 'UNIVERSITY REGISTRATION MANAGEMENT SYSTEM' interface, specifically the 'STUDENT COURSE REGISTRATION' section. The interface is divided into several functional areas:

- PERSONAL DETAILS:** A form on the left for student registration, including fields for ROLL NO (2k18/SE/003), NAME (Aaron Paul Jacob), BRANCH (SE), YEAR (3), PHONE (9810146716), EMAIL (ob_2k18se003@dtu.ac.in), GENDER (Male/Female), and ADDRESS (E-Block Pitampura Delhi - 110034). It features 'SUBMIT' and 'CLEAR' buttons at the bottom.
- LIST OF AVAILABLE COURSES FOR YOUR BRANCH:** A table listing available courses with columns for Course ID, Course Name, Branch, Type, and Credits.
- SELECT COURSE:** A section for selecting courses, including a 'COURSE ID' input field, 'VIEW', 'ADD', and 'DROP' buttons, and counters for 'Number of Course Selected' (6) and 'Total Credits Selected' (20).
- REGISTERED COURSES:** A table showing the student's selected courses with columns for Course ID, Course Name, Type, and Credits.

At the bottom, a message states: 'You can select a maximum of 6 courses and a minimum of 5 courses.' A 'SUBMIT' button is located at the bottom right of the registered courses section.

COURSE ID	COURSE NAME	BRANCH	TYPE	CREDITS
OE301	Finance	All	OPTIONAL	4
OE311	Economics	All	OPTIONAL	4
OE323	Mechanical Drawing -2	All	OPTIONAL	4
SE301	Software Engineering -2	SE	COMPULSORY	4
SE303	Database Management Syst...	SE	COMPULSORY	4
SE305	OOPS	SE	COMPULSORY	4
SE307	Artificial Intelligence	SE	OPTIONAL	4
SE327	Operating Systems	SE	OPTIONAL	4

Course ID	Course Name	Type	Credits
SE303	Database Management System	COMPULSORY	4
SE305	OOPS	COMPULSORY	4
SE301	Software Engineering -2	COMPULSORY	4
OE323	Mechanical Drawing -2	OPTIONAL	4
OE311	Economics	OPTIONAL	4

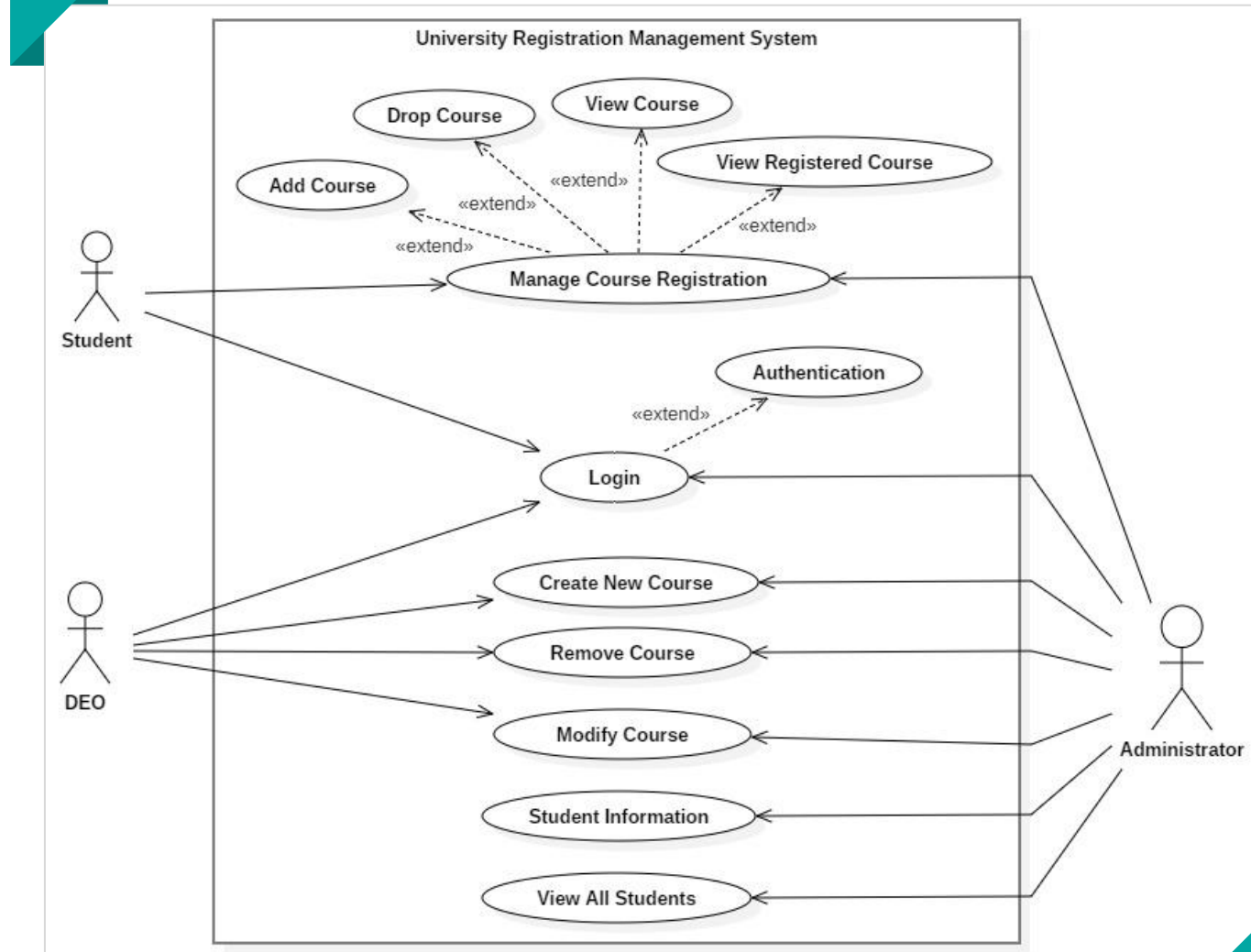
Use Case Diagram

Actors:

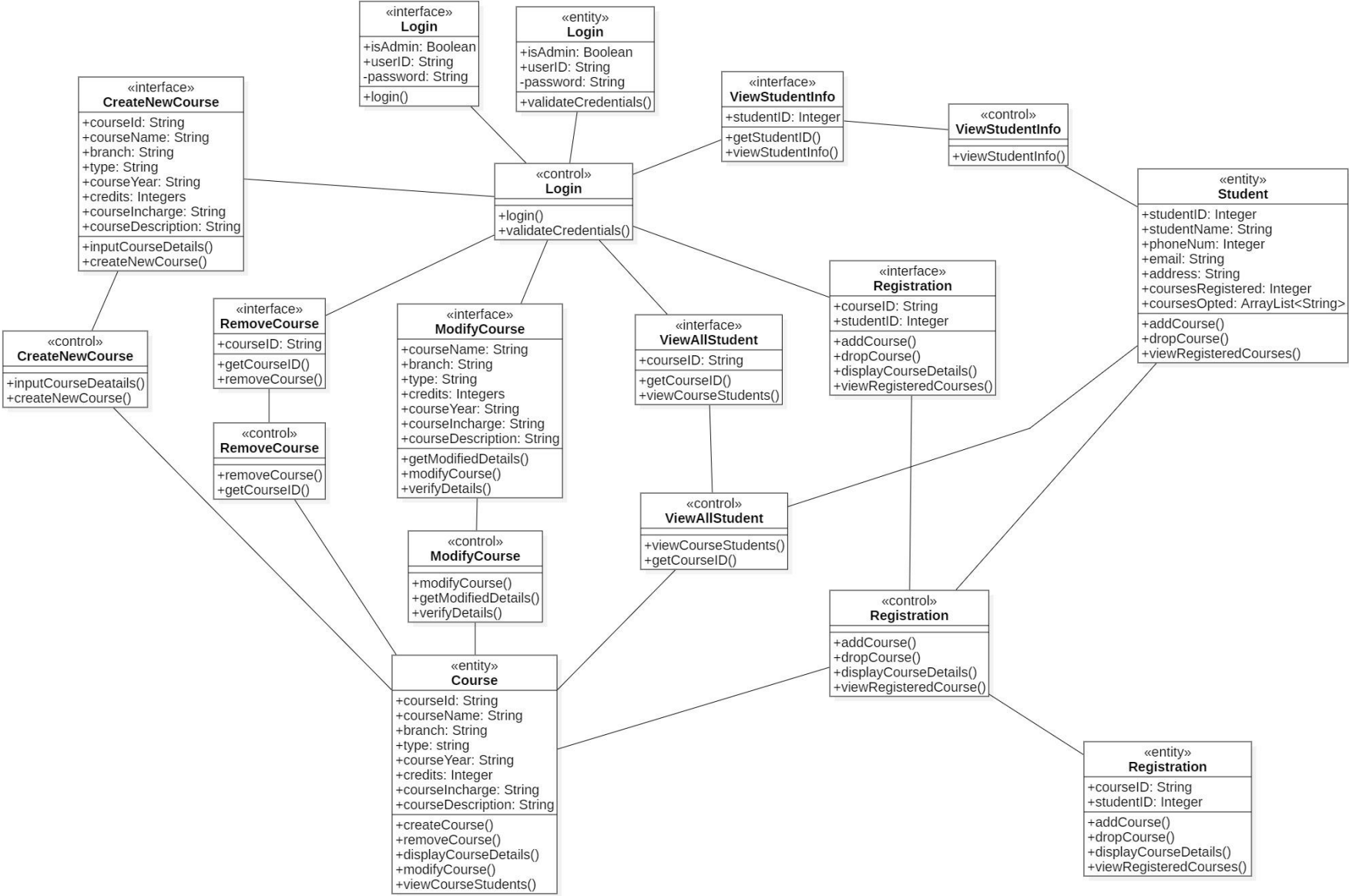
1. Administrator
2. Data Entry Operator (DEO)
3. Student

Use Cases:

1. Manage Course
 - a. Add Course
 - b. Drop Course
 - c. View Course
 - d. View Registered Course
2. Login
3. Create New Course
4. Remove Course
5. Modify Course
6. Student Information
7. View All Student

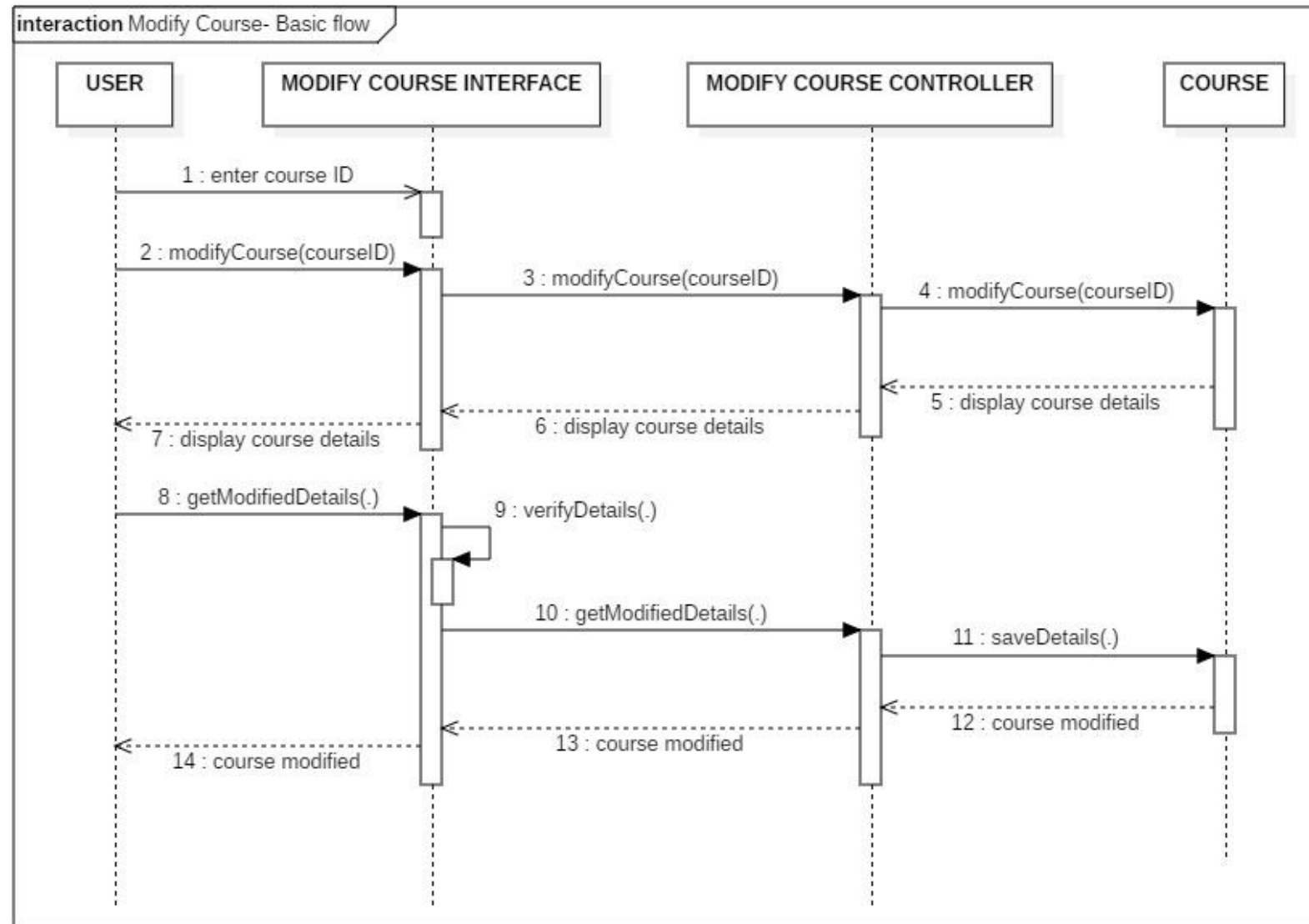


Class Diagram:



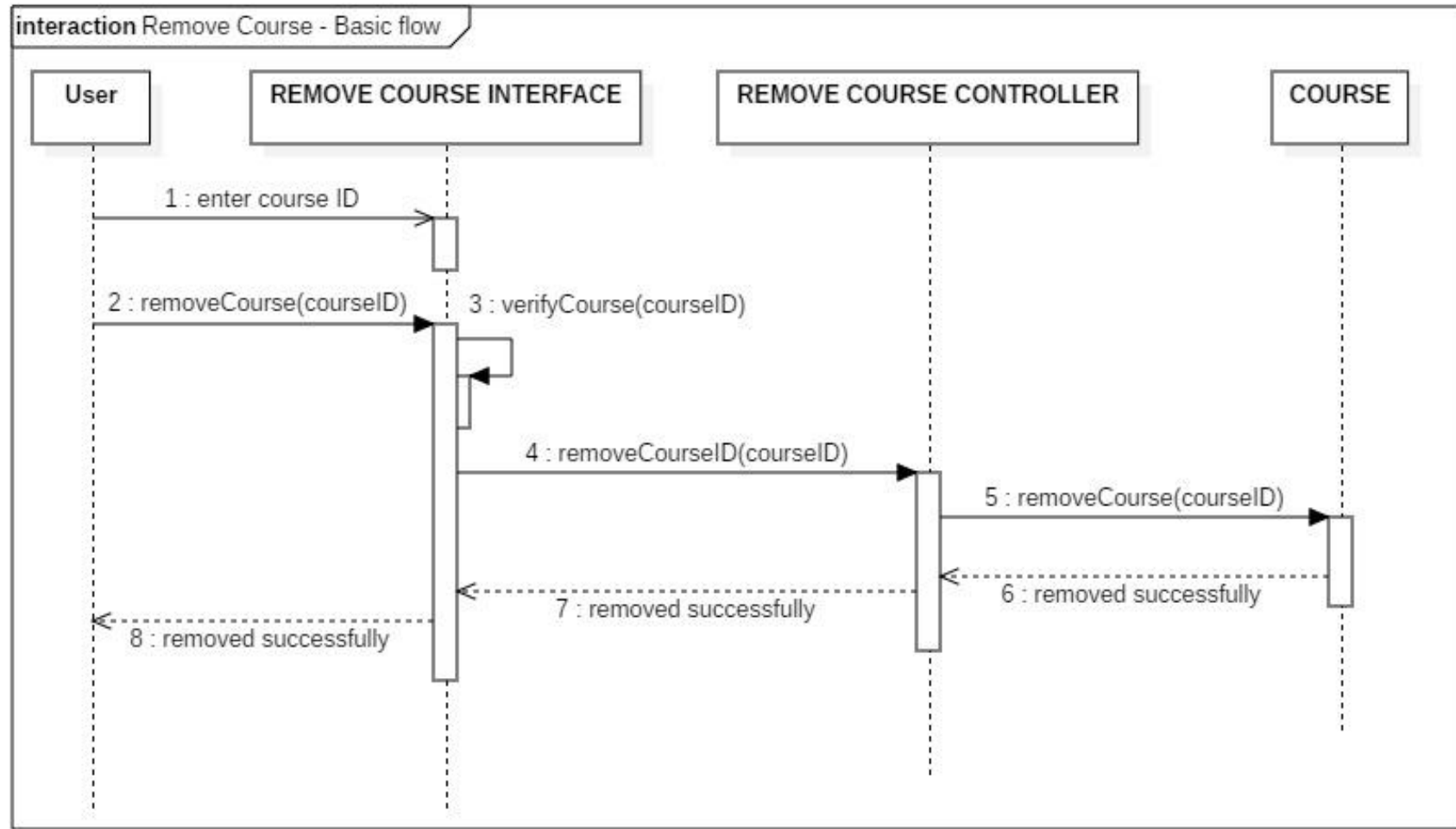
Sequence Diagrams

Modify Course:



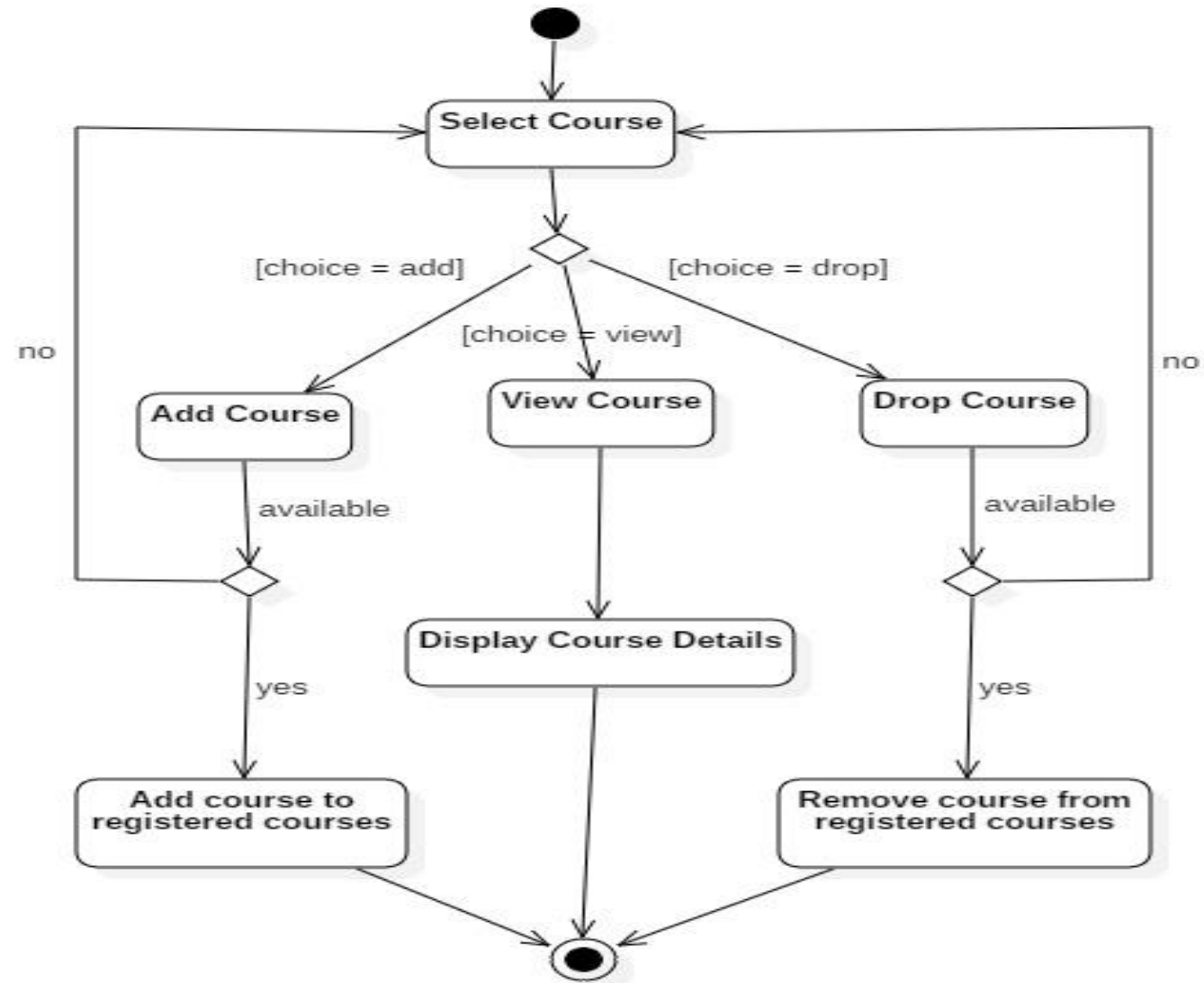
Sequence Diagrams

Remove Course:



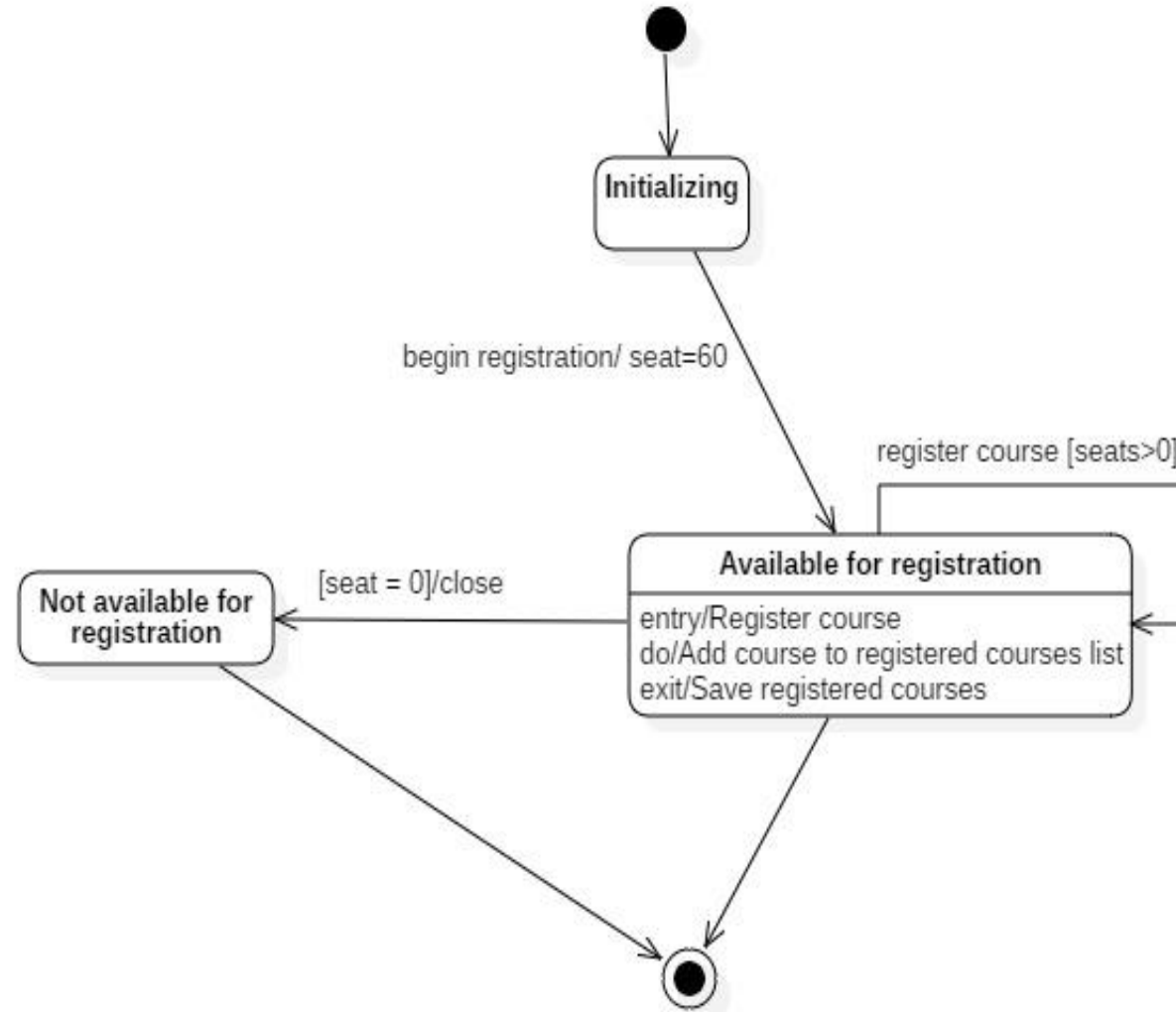
Activity Diagram

Course Registration:



State Chart Diagram

State chart diagram for Course class:



TEST CASE MATRIX

Create New Course:

Test Case ID	Scenario name and description	Input 1 Course ID	Input 2 Course name	Input 3 Branch	Input 4 Course type	Input 5 year	Input 6 credits	Excepted output	Remarks
TC ₁	Scenario 1 – create new course	OE311	Economics	All	Optional	3	4	Course added	A new course is added to database
TC ₂	Scenario 2 – create new course alternate flow: invalid entry	-	Economics	All	Optional	3	4	Enter course Id	Course Id is not in the specified format
TC ₃	Scenario 2 – create new course alternate flow: invalid entry	OE311	-	All	Optional	3	4	Enter course name	Course name is not in the specified format
TC ₄	Scenario 2 – create new course alternate flow: invalid entry	OE311	Economics	-	Optional	3	4	Branch not selected	Branch is not in the specified format
TC ₅	Scenario 2 – create new course alternate flow: invalid entry	OE311	Economics	All	-	3	4	course type not selected	Course type is not in the specified format
TC ₆	Scenario 2 – create new course alternate flow: invalid entry	OE311	Economics	All	Optional	-	4	Year not selected	Year is not in the specified format
TC ₇	Scenario 3 – create new course alternate flow : Course already exists	CO301	Economics	All	Optional	3	4	Course already exist	Similar course is already in database