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# ACADEMIX

## 1. Inception

### Introduction

Inception is the beginning phase of requirements engineering. It defines how a software project gets started and the scope and nature of the problem to be solved. The goal of the inception phase is to identify concurrence needs and conflict requirements among the stakeholders of the ACADEMIX project. To establish the groundwork, we have worked with identifying stakeholders, recognizing multiple viewpoints, and working towards collaboration.

### Identifying Stakeholders

Stakeholder refers to any person or group who will be affected by the system directly or indirectly. To identify the stakeholders, we consulted with university management and asked questions regarding who pays for the project, who uses the outcomes, and whose work is affected .

We identified the following stakeholders for our ACADEMIX system:

1. **Super Admin (Project Owner):** The Super Admin has the final authority over system-level configurations and administrative oversight. Their position empowers them to manage global settings.
2. **Department Admin:** As the head of operational management, the Department Admin has direct authority over academic verification and scheduling within their specific department.
3. **Teacher:** Teachers interact directly with the software to manage courses, attendance, and assessments.
4. **Student:** Students will directly interact with the software to access materials and track performance.
5. **System Administrator (IT):** Responsible for infrastructure health and security protocols to ensure the system is maintained.
6. **University Management:** They require high-level strategic oversight and analytics to ensure the project meets organizational goals.

## Recognizing Multiple Viewpoints

Each stakeholder has specific requirements and expectations:

**1. Super Admin Viewpoints:**

a) System Control: Needs to manage departments, academic years, and global configurations.

b) Account Management: Requires tools to oversee all user accounts and roles.

c) Audit Compliance: Needs access to system logs and activity records for security.

**2. Department Admin Viewpoints:**

a) Scheduling: Needs to create conflict-free class routines and exam schedules.

b) Academic Verification: Must verify and lock internal marks before publication.

**3. Teacher Viewpoints:**

a) Classroom Management: Needs real-time student lists and attendance marking tools.

b) Assessment Control: Requires a platform to post assignments and collect submissions.

**4. Student Viewpoints:**

a) Information Access: Needs easy access to routines, notices, and course materials.

b) Progress Tracking: Wants clear visibility of attendance and academic results.

c) Submission Utility: Needs a reliable portal for digital assignment hand-ins.

**5. System Administrator (IT) Viewpoints:**

a) Infrastructure Health: Needs to monitor XAMPP performance and database status.

b) Security Protocols: Ensures hashing, sanitization, and session security are active.

## Working Towards Collaboration

Every stakeholder has their own requirement. In this step, we merged these requirements by identifying common and conflicting requirements and prioritizing them.

**Common Requirements:**

a) User-friendly and efficient system.

b) Role-based access to functionality.

c) Accessible via the Internet.

**Conflicting Requirements:**

a) Open access for students vs. Strict security protocols by IT.

b) Detailed analytics for Management vs. Simple interface for Students.

Final Requirements:

After prioritizing, we finalized the following requirements:

1. Error-free system for mark calculation.
2. Allow valid users to login and logout.
3. Restrict access to functionality based on user roles (Admin, Teacher, Student).
4. Allow Department Admins to configure class routines and verify marks.
5. Allow Teachers to create assignments and track attendance.
6. Allow Students to view results, attendance, and submit assignments.

# 2. Elicitation

## Introduction

Elicitation is a task that helps the customer to define what is required. To help overcome problems of scope and understanding, we worked with the Eliciting requirements activity in an organized manner.

## Collaborative Requirements Gathering

Many different approaches to collaborative requirements gathering have been proposed. We completed the following steps:

The meetings were conducted with the academic registrars and department heads. The stakeholders were questioned about their requirements and expectations from the ACADEMIX system. Finally, we selected our final requirement list from the meetings.

## Quality Function Deployment (QFD)

Quality Function Deployment is a technique that translates the needs of the customer into technical requirements for software.

## Normal Requirements

Normal requirements consist of objectives and goals that are stated during the meeting with the customers.

1. **Role-Wise Access:** Restrict access to functionality based upon user roles.
2. **CRUD Operations:** Complete Create, Read, Update, Delete for departments, users, and courses.
3. **Attendance:** Allow Teachers to track attendance and generate summary reports.
4. **Mark Management:** Allow automatic calculation of results and mark management.
5. **Notice Board:** Allow valid users to view official announcements.

## Expected Requirements

These requirements are implicit to the system and may be so fundamental that the customer does not explicitly state them. Their absence will be a cause for dissatisfaction.

1. **Responsive Design:** The user interface should follow standard web practices and be fully responsive.
2. **Security:** The system shall ensure secure data handling (SQLi, XSS, CSRF protection).
3. **Navigation:** The user interface shall be easy to use and include intuitive navigation.
4. **Calculations:** The system shall automatically compute GPA/CGPA according to university rules.
5. **Authentication:** The system shall allow the user to log in based upon an assigned login ID and password.

## Exciting Requirements

These requirements are features that go beyond the customer's expectations and prove to be very satisfying when present.

1. **Notifications:** The system shall automatically send notifications for attendance drops or result releases.
2. **Analytics:** Graphical analytics for department-wide performance comparison.
3. **Version Tracking:** Version tracking for student assignment submissions.
4. **Bulk Import:** The system shall enable Admins to add users via CSV/Excel import.

## Usage Scenarios

At first, a user authenticates in our system. If a user already has an account, he/she will log in to the system with his/her own password and username.

**In case of a Teacher:**

If the user is a Teacher, the system will allow them to access the classroom management dashboard. The teacher selects a specific course and takes attendance on their device; the system immediately updates the records in the database. The teacher can also create an assignment with a deadline.

**In case of a Student:**

If the user is a Student, the system will verify their enrollment status. The student checks their dashboard to see attendance percentage and eligibility. If an assignment is pending, the student uploads the file. The system changes the status of the submission to "Submitted" in our database.

**In case of Department Admin:**

The Department Admin logs in to verify marks. The system checks for any conflict in the exam schedule. If no conflict is found, the routine is published to the notice board database.

## Elicitation Work Product

Our elicitation work product includes:

1. A statement of requirements for the ACADEMIX system.
2. A bounded statement of scope for our system.
3. A list of stakeholders who participated in requirements elicitation.
4. A set of usage scenarios.

# 3. Scenario Based Modeling

## 3.1 Use Case Modeling

### 3.1.1 Use Case Scenario Summary (Table)

Table 1. ACADEMIX system use cases by abstraction level and actors

| Level - 0 | Level - 1 | Level - 2 | Actors |
|---|---|---|---|
| **ACADEMIX System** | **Authentication** | Login / Logout | All Users |
| | | Change Passwords | All Users |
| | | Update Profile Data | All Users |
| | **Governance** | Manage Departments | Super Admin |
| | | Manage Academic Years | Super Admin |
| | | Configure System Settings | Super Admin |
| | **Academic Setup** | Create Course Catalog | Super Admin, Dept Admin |
| | | Offer Courses | Dept Admin |
| | | Assign Faculty | Dept Admin |
| | | Generate Class Routine | Dept Admin |
| | **Classroom** | Mark Attendance | Teacher |
| | | Post Course Materials | Teacher |
| | | Create Assignments | Teacher |
| | **Student Portal** | Course Registration | Student |
| | | Submit Assignments | Student |
| | | View Attendance Stats | Student |
| | **Assessments** | Grade Submissions | Teacher |
| | | Enter Mid/Final Marks | Teacher |
| | | Verify & Lock Marks | Dept Admin |
| | | Publish Results | Dept Admin |
| | | Download Transcript | Student |

### 3.1.2 Detailed Use Case Descriptions (Textual)

**01. Authentication**

**i.**

**Use case: Login/Logout**
**Primary Actors:** All users
**context:** To enter in the system
**Precondition:**

1. System has been programmed for add new user
in database
2. System has interface for registration

**Scenario:**

1. Visit the register page
2. Input required information
3. Check availability for username & check validity of Password
4. Authentication and Robot checking
5. E-mail sent to user e-mail address
6. User confirm from his/ her e-mail address
7. Confirmation message showed

**Exception:**

1. User in not authorized for registration
2. Ambiguous Input
3. Authentication Fail

**Priority:** Essential, must be implemented
**When Available:** First increment

**ii.**

**Use case: Sign In**

**Primary Actors:** Student, Faculty, Administrator, Librarian

**Goal in context:** To enter the system.

**Precondition:** Must be registered

**Triggers:** Need to log in the system

**Scenario:**

1. Visit the login page
2. Input Username & Password
3. Proceed to the next activity

**Exception:**

1. Unrecognized Username
2. Wrong Password
3. User is blocked

**Priority:** Essential, must be implemented

**When Available:** First increment

**iii.**

**Use case: Sign Out**

**Primary Actors:** Student, Faculty, Administrator, Librarian

**Goal in context:** To exit from the system

**Precondition:** Must be logged in

**Triggers:** Need to log out from the

system

**Scenario:**

1. Click the logout button

**Priority:** Essential, must be implemented

**When Available:** First increment

**iv.**

**Use case: Change Password**

**Primary Actors:** All Users

**Goal in context:** To change the existing password to a new password

**Precondition:** System has been programmed for a password

**Triggers:** Super admin, Dept. admin, Teacher and Student have a need to change the existing password to a new one .

**Scenario:**

2. Visit the login page and login
3. Click on Edit button
4. Change Password
5. Proceed to the next activity

**Exception:** Weak Password: Password length is too short

**Priority:** Essential, must be implemented

**When Available:** First increment

## 02. Governance

**i.**

**Use case: Manage Departments**

**Primary Actors:** Super admin

**Goal in context:** To manage the Departments.

**Precondition:** Must be logged in as Super admin

**Triggers:** The Super admin has to modify and moderate everything of the departments

**Scenario:**

1. Visit login page and login
2. Click the Edit department button
3. Select the option
4. Click on the Edit button
5. Change the type for the selected option
6. Proceed to the next activity

**Priority:** Essential, must be implemented

**When Available:** First increment

**ii.**

**Use case: Manage Academic Years**

**Primary Actors:** Super Admin

**Goal in context:** To select the system for individual years and semesters

**Precondition:**

1. Must be logged in as Super Admin
2. System has been programmed for editing the academic functions

**Triggers:** The super admin has a need to configure the years and semesters.

**Scenario:**

1. Visit Login page and Login
2. Click on Manage session
3. Select the year
4. Click on required option
5. Change the function
6. Proceed to the next activity

**Exception:**

1. Option Unavailable: Requested item does not exist
2. Ambiguous Input

**Priority:** Expected

**When Available:** Second increment

**iii.**

**Use case: Configure System Setting**

**Primary Actors:** Super Admin

**Goal in context:** To configure internal systems

**Precondition:**

1. Must be logged in as Super admin
2. System has been programmed for editing the internal issues

**Triggers:** The Super admin has a need to configure the internal system.

**Scenario:**

1. Visit Login page and Log in
2. Click on System
3. Click on Configure the system for Department
4. Click on Update button
5. Proceed to the next activity

**Exception:** Ambiguous Input

**Priority:** Expected

**When Available:** Second increment

## 03. Academic Setup

i.

**Use case: Create Course Catalog**

**Primary Actors:** Super Admin, Dept. Admin.

**Context:** To create and delete course

**Precondition:**

1. System has been programmed for adding or deleting item in database
2. Must be logged in as Super admin or dept. admin

**Trigger:** The super admin or dept admin has a need to configure the courses

**Scenario:**

1. Visit Login page and Log in
2. Click on Create course or delete course
3. Click on Add Item button to add new item
4. Click on Delete Item button to remove old item
5. Enter the new Item data and confirm changes
6. Proceed to the next activity

**Exception:** While deleting: Item is not found in the database

**Priority:** Essential, must be implemented

**When Available:** First increment

**ii.**

**Use case: Offer Courses**

**Primary Actors:** Dept. Admin

**Goal in context:** To offer courses

**Precondition:**

1. System has been programmed for offering courses saved in database
2. Must be logged in as dept. admin

**Trigger:** The dept. admin has to exhibit the courses

**Scenario:**

1. Visit Login page and Log in
2. Click on Courses
3. Search and Select the Offer
4. Proceed to the next activity

**Exception:**

1. Does not exist: Requested item does not exist in the database
2. Ambiguous Input

**Priority:** Essential, must be implemented

**When Available:** First increment

iii.

**Use case: Assign Faculty**

**Primary Actors:** Dept. admin

**Context:** To assign course instructors and stuffs

**Precondition:**

1. System has been programmed to assign the needs as required
2. Must be logged in as dept. admin

**Trigger:** The dept. admin has a need to change and redesign the format of a department.

**Scenario:**

1. Visit Login page and Log in
2. Click on Maintain Character
3. Search and Select the Item to assign
4. Confirm changes
5. Proceed to the next activity

**Exception:** Does not exist: Requested item or character does not exist in the database

**Priority:** Essential, must be implemented

**When Available:** First increment

iv.

**Use case: Generate Class Routine**

**Primary Actors:** Dept.

admin

**context:** To change routine

according to needs and times

**Precondition:**

1.System has been programmed to assign the needs as required
2.Must be logged in as dept. admin

**Trigger:** The dept. admin has a need to change and redesign the format of a department.

**Scenario:**

1. Visit Login page and Log in
2. Click on Change Routines
3. Select courses and times
4. Confirm changes
5. Proceed to the next activity

**Exception:** Does not exist: Requested item does not exist in the database

**Priority:** Essential, must be implemented

**When Available:** First increment

04. Classroom

**i.**

**Use Case: Mark Attendance**

**Primary Actors:** Teacher

**Goal in context:** To stalk performance

**Precondition:** Users must be enroll to courses

**Trigger:** The Teacher has a need to track their students

**Scenario:**

1. Visit Login page and Log in
2. Click on Visit Courses
3. Click on Take Attendance
4. Mark the Present ones
5. Save the attendance
6. Proceed to the next activity

**Priority:** Essential, must be implemented

**When Available:** First increment

**ii.**

**Use Case: Post Course Materials**

**Primary Actors:** Teacher

**Goal in context:** To see the previous reports

**Precondition:**

1. The data must be saved in the database
2. Must be logged in as Teacher

**Triggers:** Teacher has a need to see the previous course recording.

**Scenario:**

1. Database is automatically checked
2. Share the course information with the next class
3. Select Change button
4. Update database
5. Proceed to the next activity

**Exception:** Error: Empty data

**Priority:** Essential, must be implemented

**When Available:** First increment

iii.

**Use Case: Create Assignments**

**Primary Actors:** Teacher.

**Context:** To create

Assignment

**Precondition:**

1. System has been programmed to add new assignments on saved courses
2. Must be logged in as Teacher

**Trigger:** The Teacher has a need to give assignments on the selected courses to the learners.

**Scenario:**

1. Visit Login page and Log in
2. Click on My Courses
3. Click Upload file
4. Confirm upload
5. Proceed to the next activity

**Exception:** Error: Systematically failed

**Priority:** Essential, must be implemented

**When Available:** First increment.

## 05. Student Portal

**i.**

**Use Case: Course Registration**

**Primary Actors:** Student

**context:** To apply for the registration of the courses

**Precondition:** System has been programmed for completing the registration

**Triggers:** The student needs to go through the registration process to be moderated by course instructors.

**Scenario:**

1. Visit the main page
2. Search the courses.
3. Enter data and information.
4. Click on the Submit button
5. Proceed to the next activity

**Exception:**

1. Search item does not exist
2. User is not eligible for searching that item

**Priority:** Essential, must be implemented

**When Available:** First increment

**ii.**

**Use case: Submit Assignments**

**Primary Actors:** Student

**Context:** To issue an item

**Precondition:**

1. User must be eligible for taking action
2. Assignments should be provided

**Trigger:** Students need to submit the assignment.

**Scenario:**

1. Visit Login page and Log in
2. Click on My Profile
3. Search for Due Assignment
4. Click on Upload file button
5. Click on Submit button
6. A message is displayed
7. Proceed to the next activity

**Exception:**

1. Invalid User: User status is not supported for this event
2. Time has ended

**Priority:** Essential, must be implemented

**When Available:** First increment

**iii.**

**Use Case: View Attendance Stats**

**Primary Actors:** Student

**Context:** To view the status of percentage over one's attendance

**Precondition:**

1. Valid User
2. Valid and Available data

**Triggers:** The student has the right to focus on classes.

**Scenario:**

1. Visit the login page and login
2. Go to My Profile
3. Select Course button
4. Click on My Attendance
5. Proceed to next activity

**Exception:**

1. Not approved for the course
2. Error : Systematically failed

**Priority:** Essential, must be implemented

**When Available:** First increment

## 06. Assesments

**i.**

**Use Case: Grade Submissions**

**Primary Actors:** Teacher

**Context:** To submit the grades for individual courses at that particular time.

**Precondition:**

1. Valid User
2. Availability of that courses in the database

**Triggers:** The teacher has a need to grade the students according to obtained marks.

**Scenario:**

1. Visit the login page and log in
2. Click on My Courses
3. Click on Students
4. Search the result
5. Click on Give Grade
6. Click on Submit
7. Proceed to the next activity

**Exception:** Absent

**Priority:** Essential, must be implemented

**When Available:** First increment

**ii.**

**Use Case: Enter Mid/Final Marks**

**Primary Actors:** Teacher

**Context:** To submit the marks for individual student at that particular time.

**Precondition:**

1. Valid User
2. Availability of that courses in the database

**Triggers:** The teacher has a need to grade the students according to obtained marks.

**Scenario:**

1. Visit the login page and log in
2. Click on My Courses
3. Click on Students
4. Search the result
5. Click on Give Marks
6. Click on Submit
7. Proceed to the next activity

**Exception:** Absent

**Priority:** Essential, must be implemented

**When Available:** First increment

**iii.**

**Use Case: Verify & Lock Marks**

**Primary Actors:** Dept. Admin

**Context:** To verify the marks for individual courses at that particular time.

**Precondition:**

1. Valid User
2. Availability of that courses in the database

**Triggers:** The Dept. admin has a need to recheck the marks of the students according to obtained marks.

**Scenario:**

1. Visit the login page and log in
2. Click on Courses
3. Click on Students
4. Search the result
5. Check the obtain marks
6. Click on Lock Mark
7. Changed the save
8. Proceed to the next activity

**Exception:** Absent

**Priority:** Essential, must be implemented

**When Available:** First increment

**iv.**

**Use Case: Publish Results**

**Primary Actors:** Dept. Admin

**Context:** To publish the results at that particular time.

**Precondition:**

1. Valid User
2. Availability of that courses in the database

**Triggers:** The Dept. Admin needs to publish the results at that particular time.

**Scenario:**

1. Visit the login page and log in
2. Click on Sessions
3. Select the Year
4. Click on Publish
5. Proceed to the next activity

**Exception:** Postponed

**Priority:** Essential, must be implemented

**When Available:** First increment

**v.**

**Use Case: Download Transcript**

**Primary Actors:** Student

**Context:** To get the hard copy at any places.

**Precondition:**

1. Valid User
2. Availability of that transcript in the database

**Triggers:** The student has a need to get the transcript for further purposes.

**Scenario:**

1. Visit the login page and log in
2. Click on My Profile
3. Click on Results
4. Search year/semester
5. Click on Show Grade
6. Click on Download
7. Proceed to the next activity

**Exception:** Data is not found

**Priority:** Essential, must be implemented

**When Available:** First increment

# UML DIAGRAM

### 3.1.3 Use Case Diagrams (Level 0, Level 1 & Level 2)

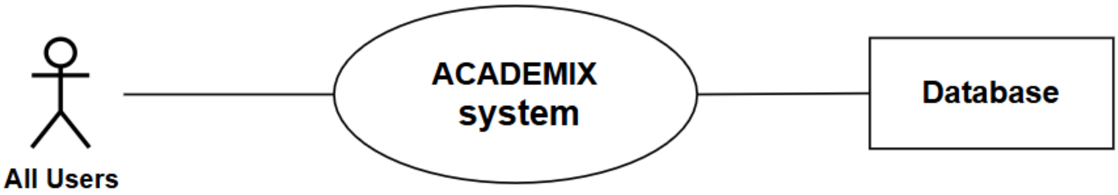


Fig : Level 0 for ACADEMIX system

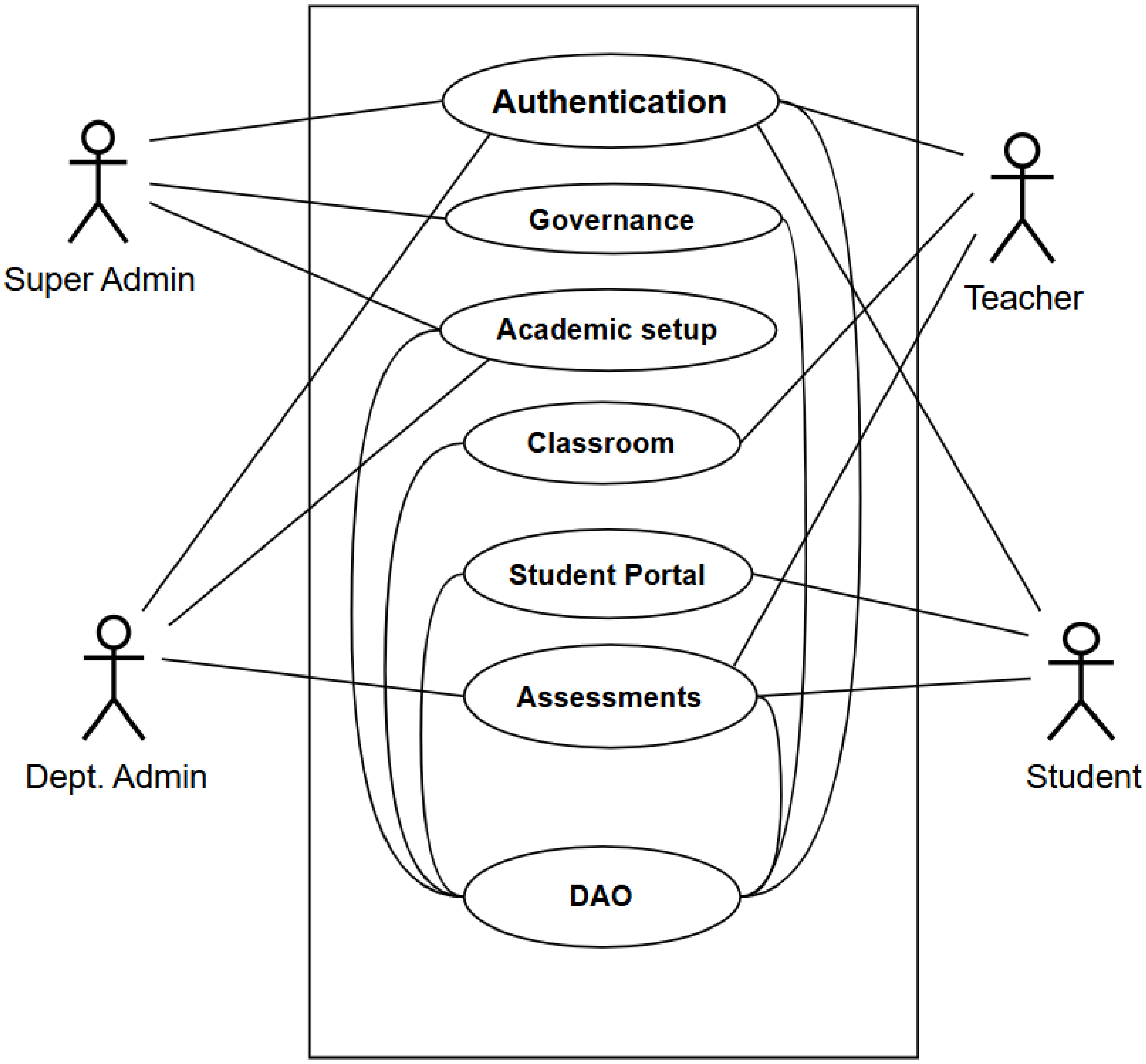


**Fig : Level 1 for ACADEMIX system**

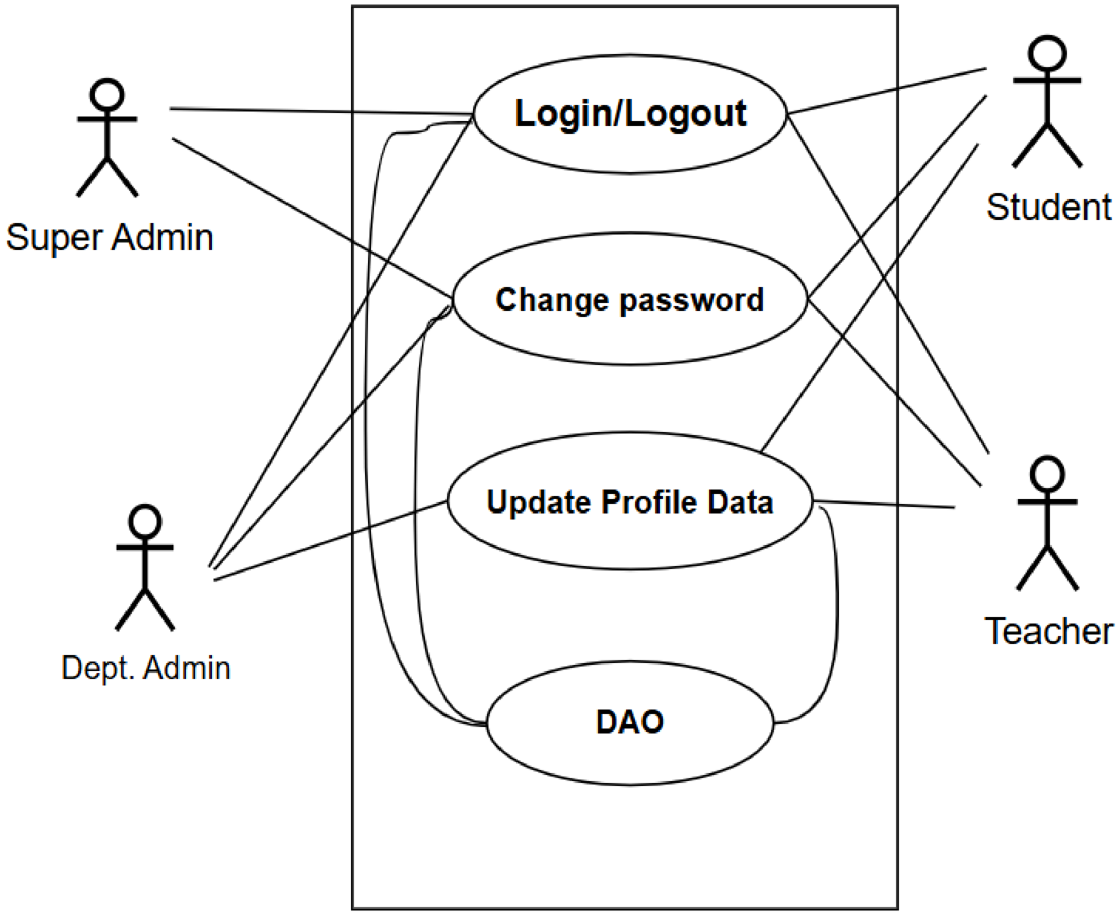


**Fig : Level 2.1 for ACADEMIX system**

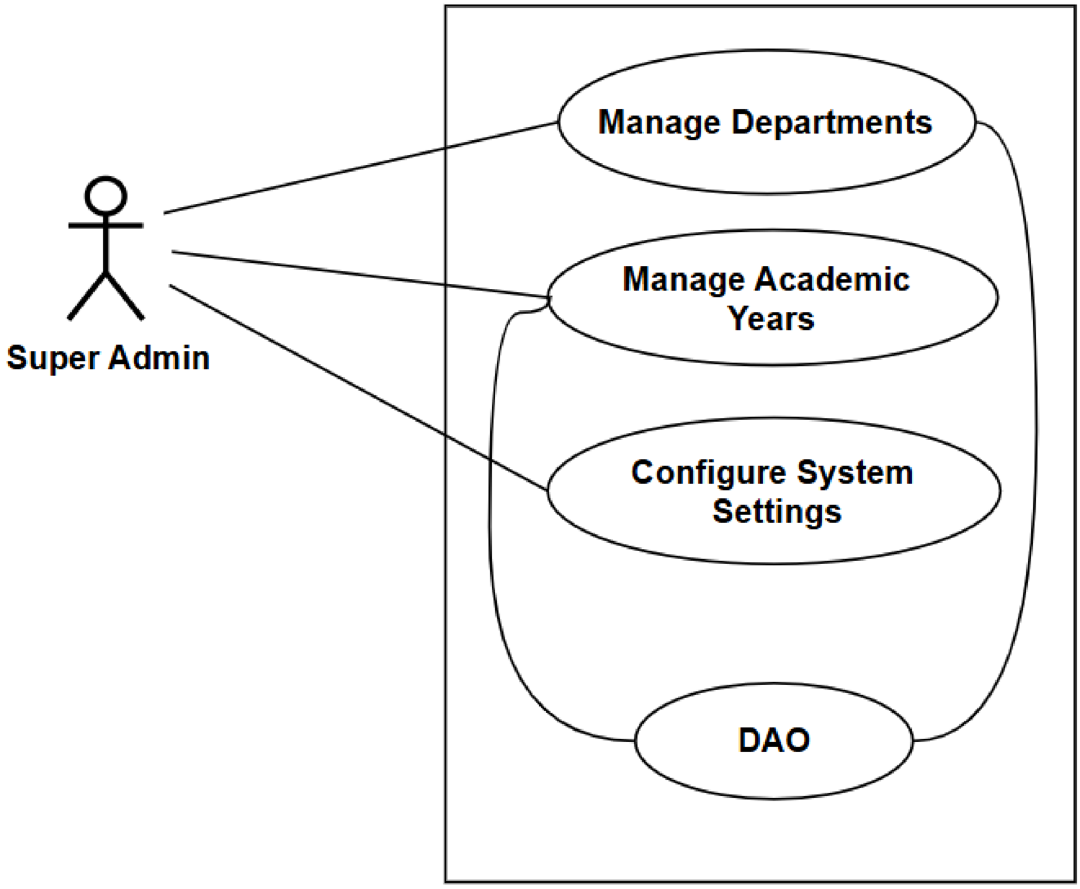


Fig : Level 2.2 for ACADEMIX system

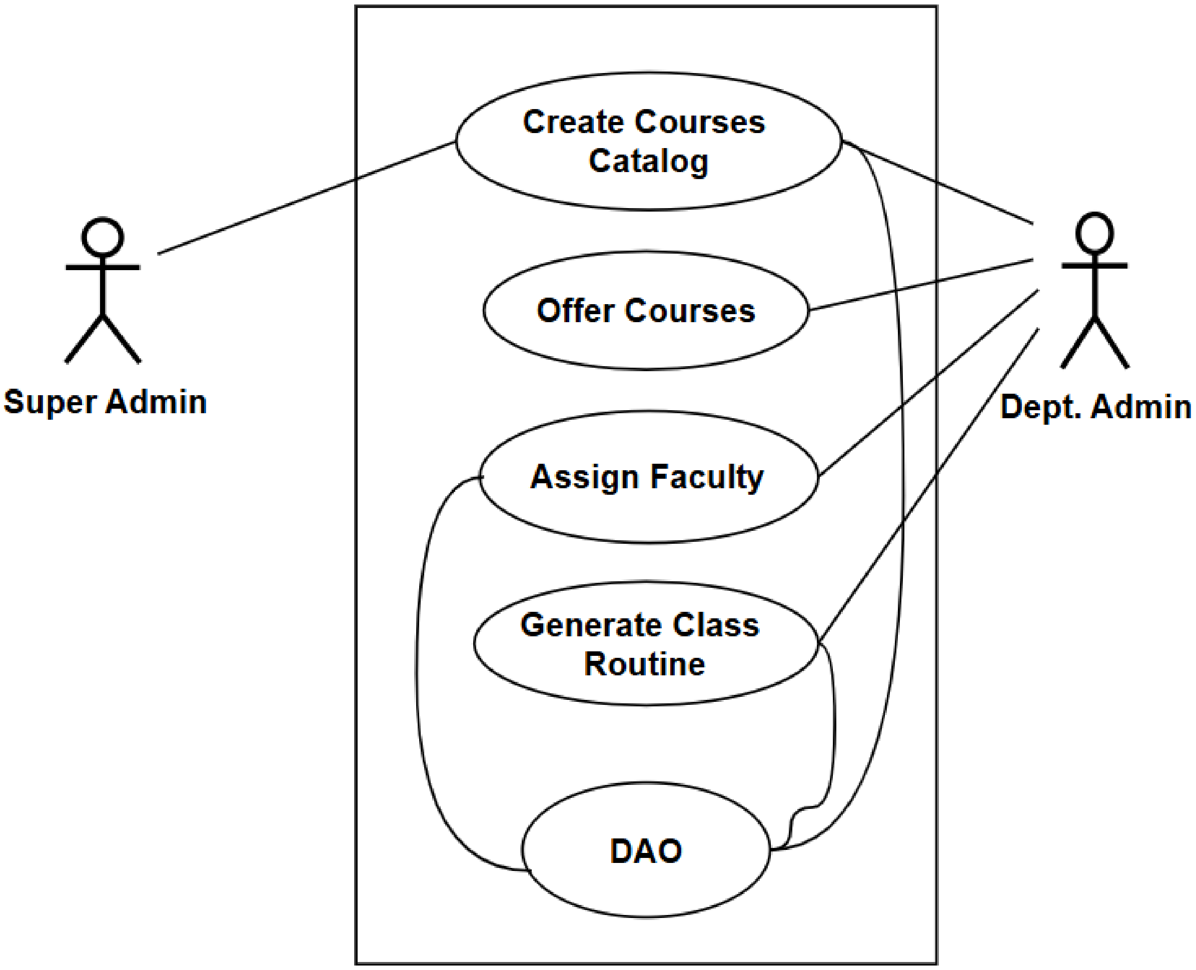


Fig : Level 2.3 for ACADEMIX system

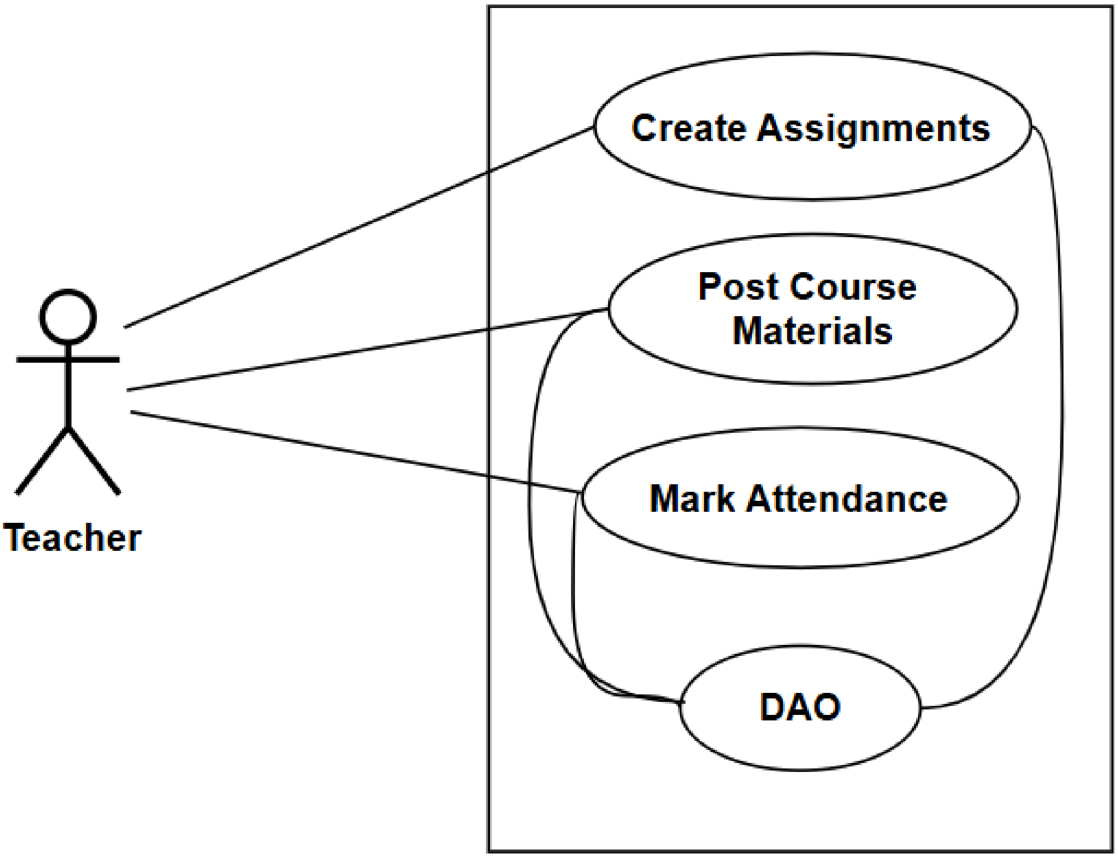


**Fig : Level 2.4 for ACADEMIX system**

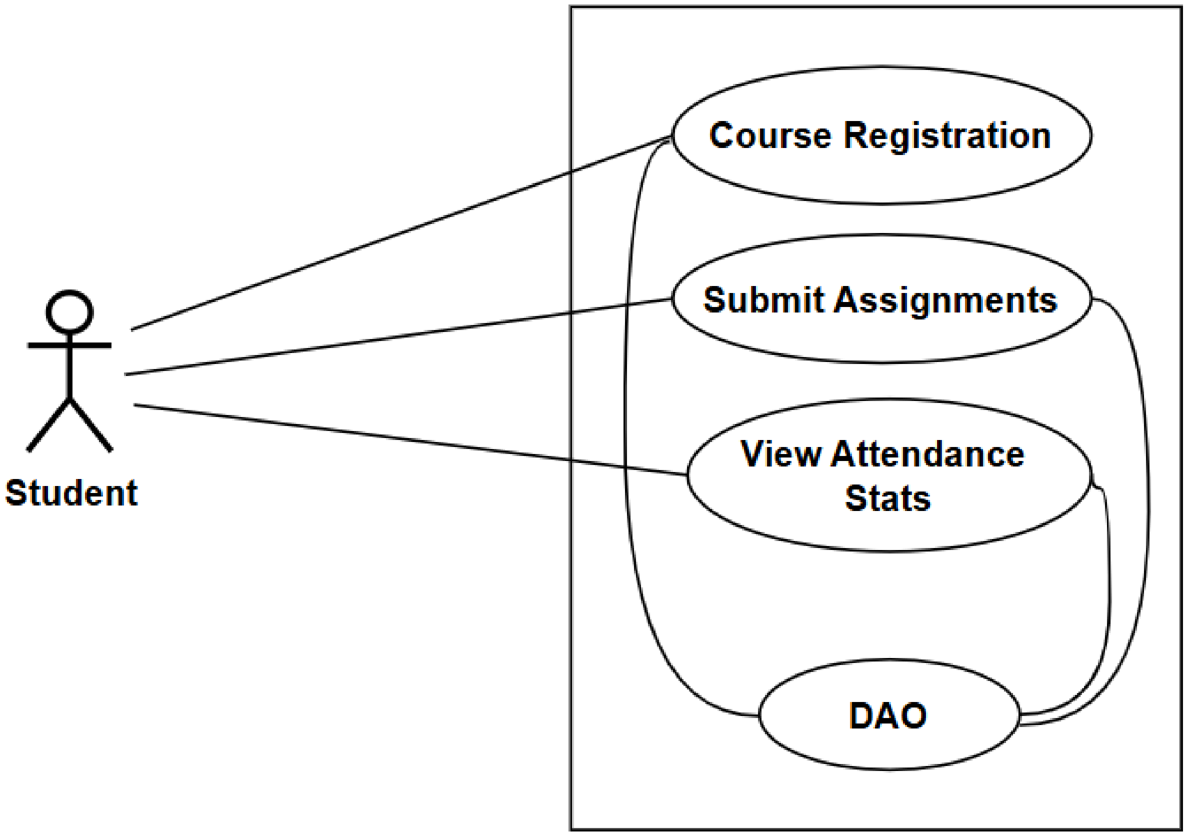


**Fig : Level 2.5 for ACADEMIX system**

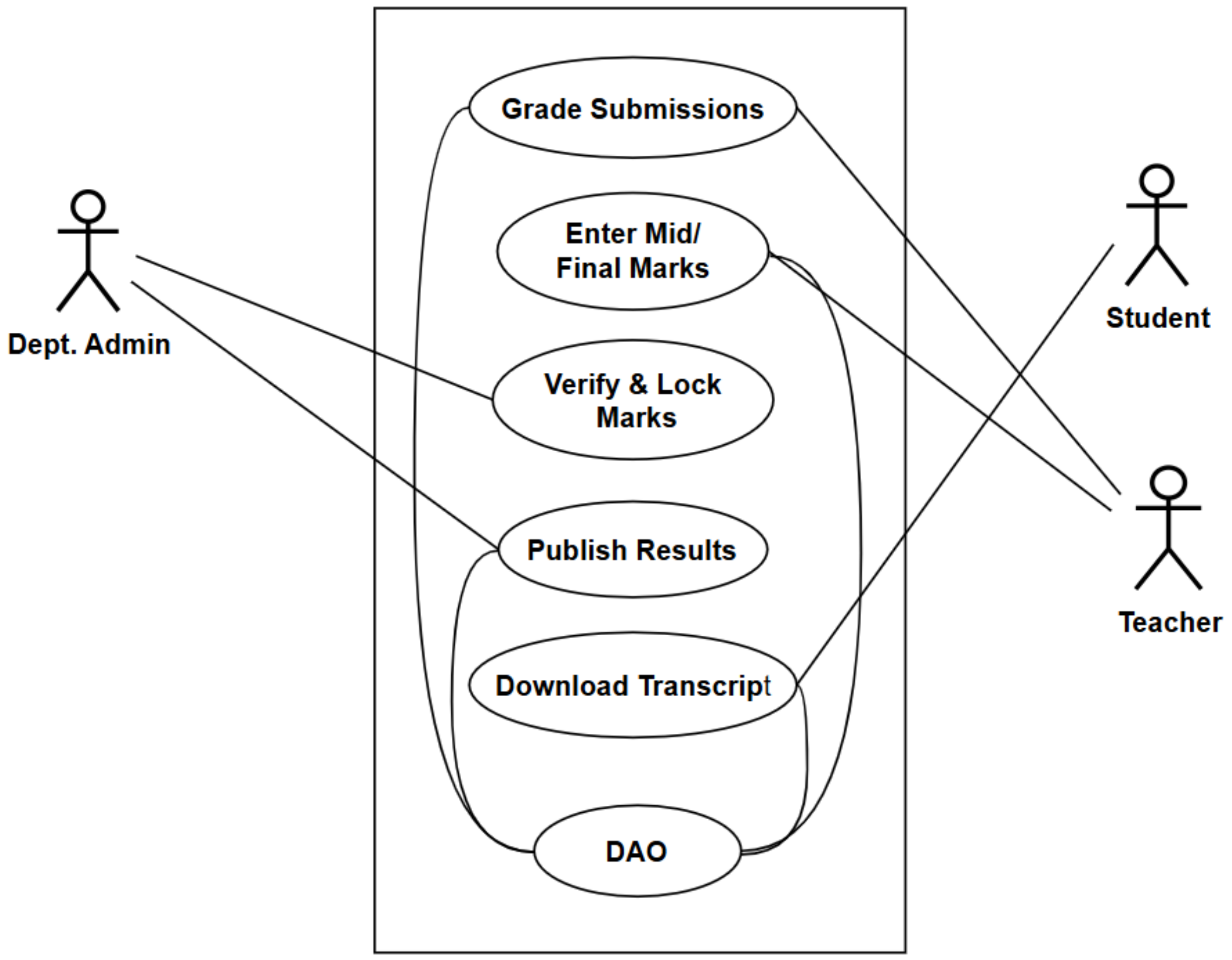
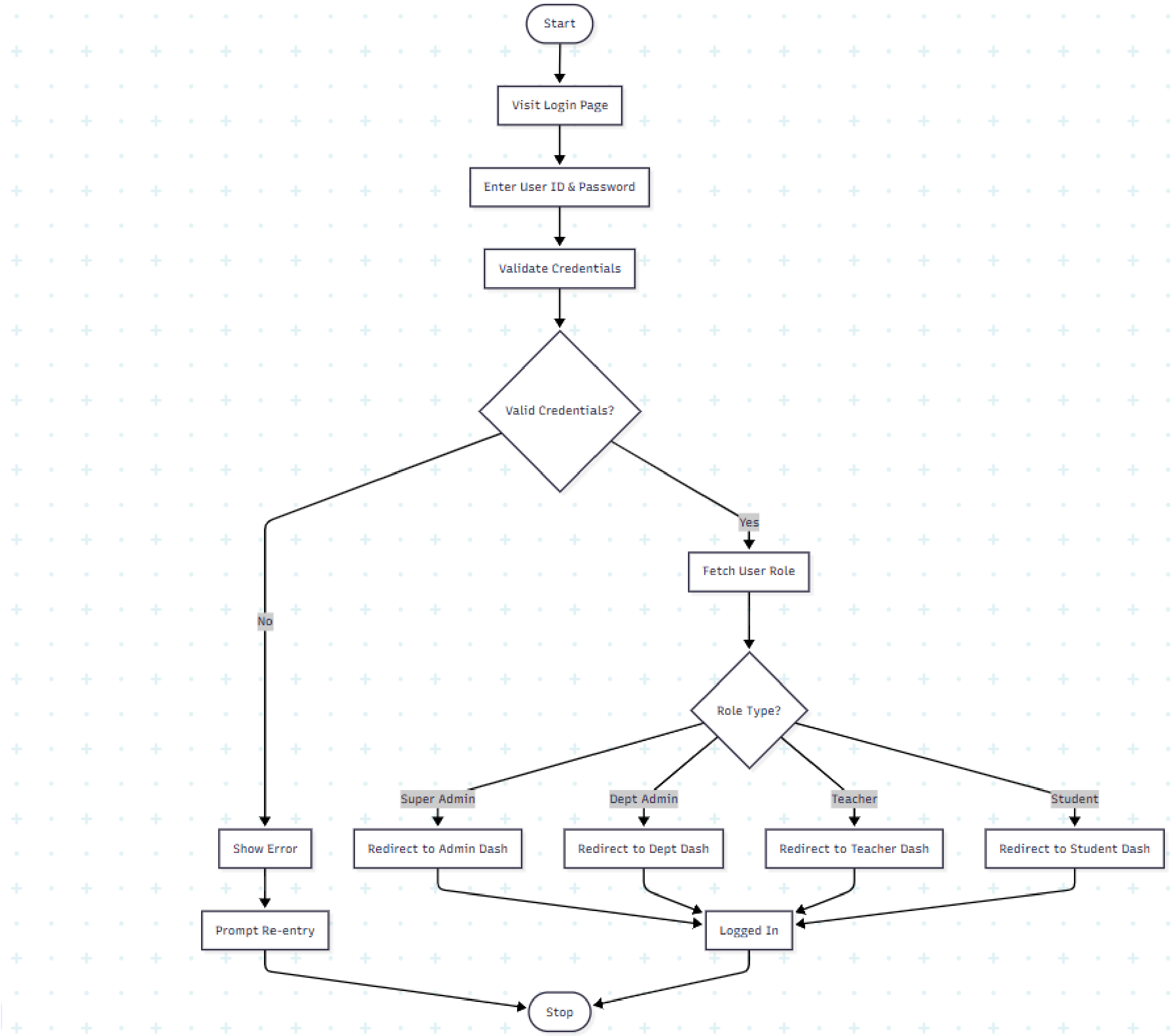


**Fig : Level 2.6 for ACADEMIX system**

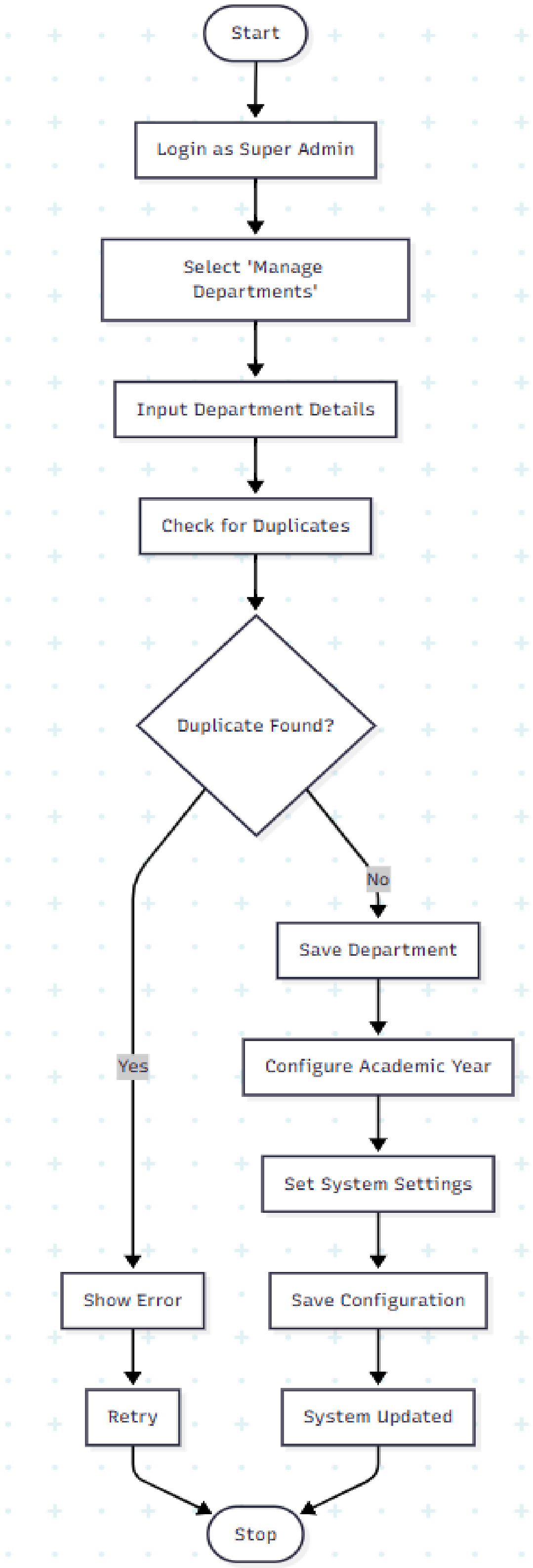
# 3.2 Activity Modeling

## 3.2.1 Activity Diagrams (Process Flows)

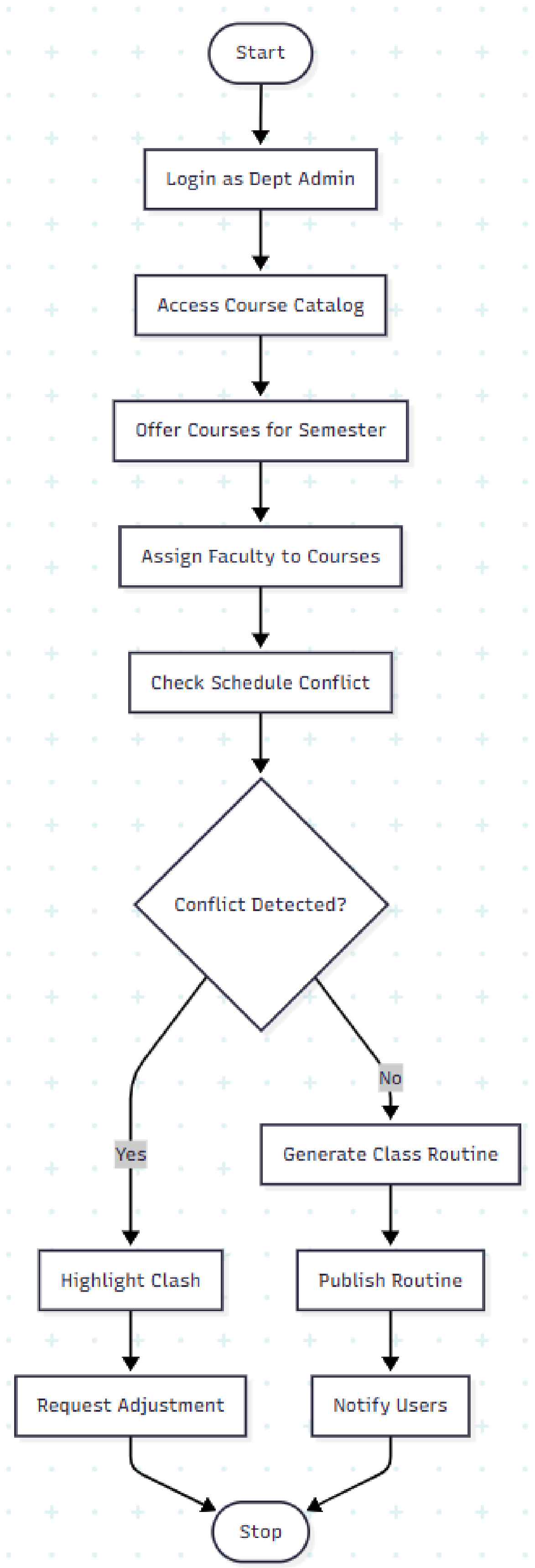
Use Case 1: Authentication & Session Management



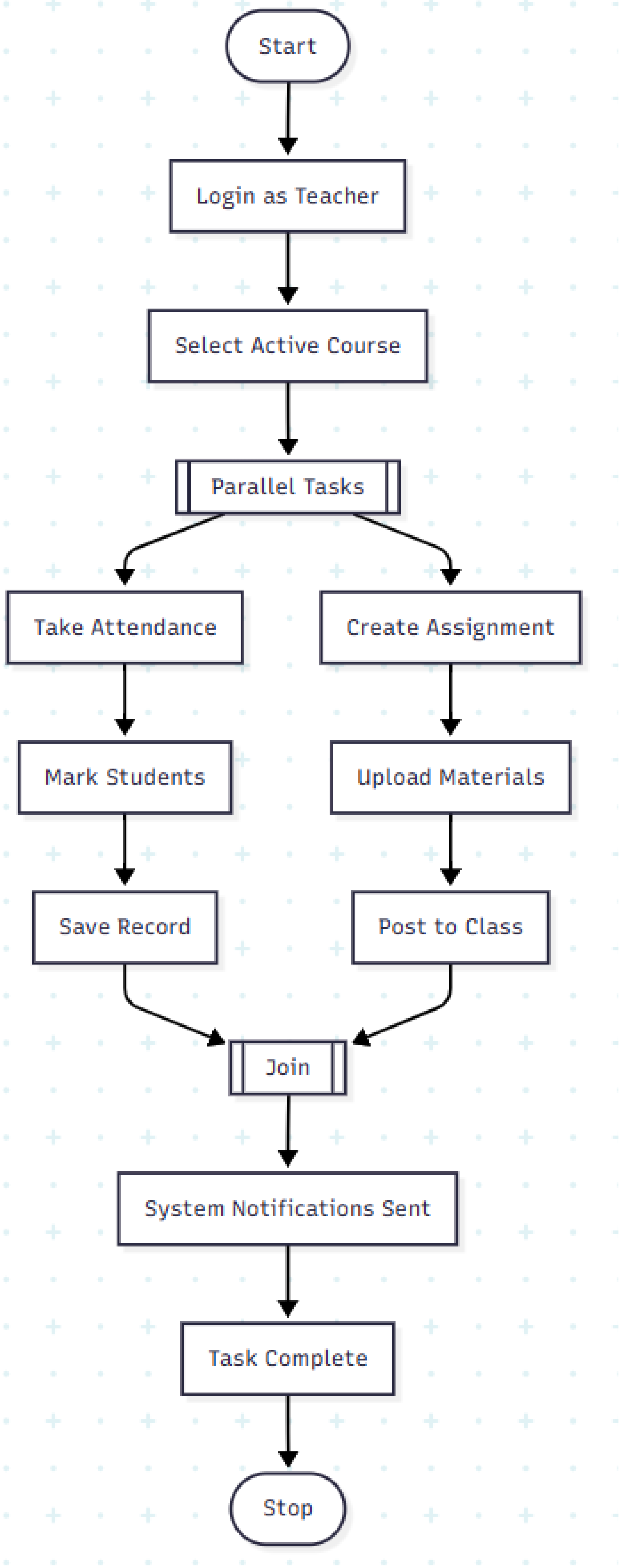
Use Case 2: Governance Management (Super Admin)



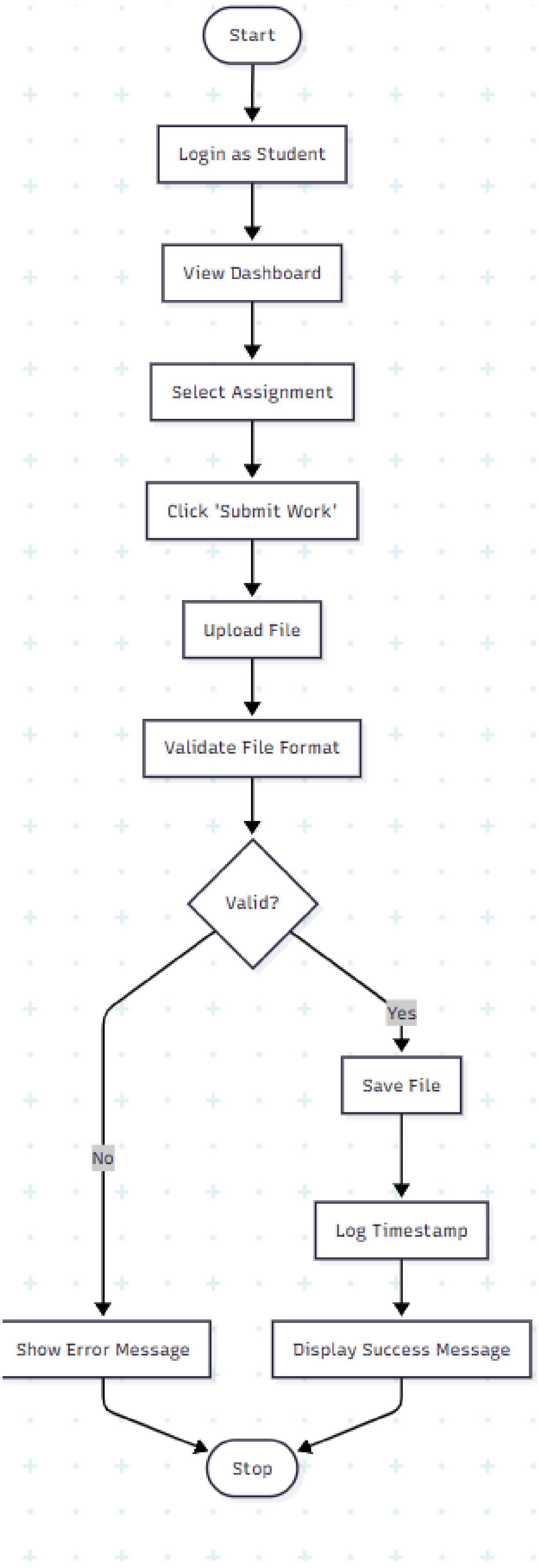
Use Case 3: Academic Setup (Dept Admin)



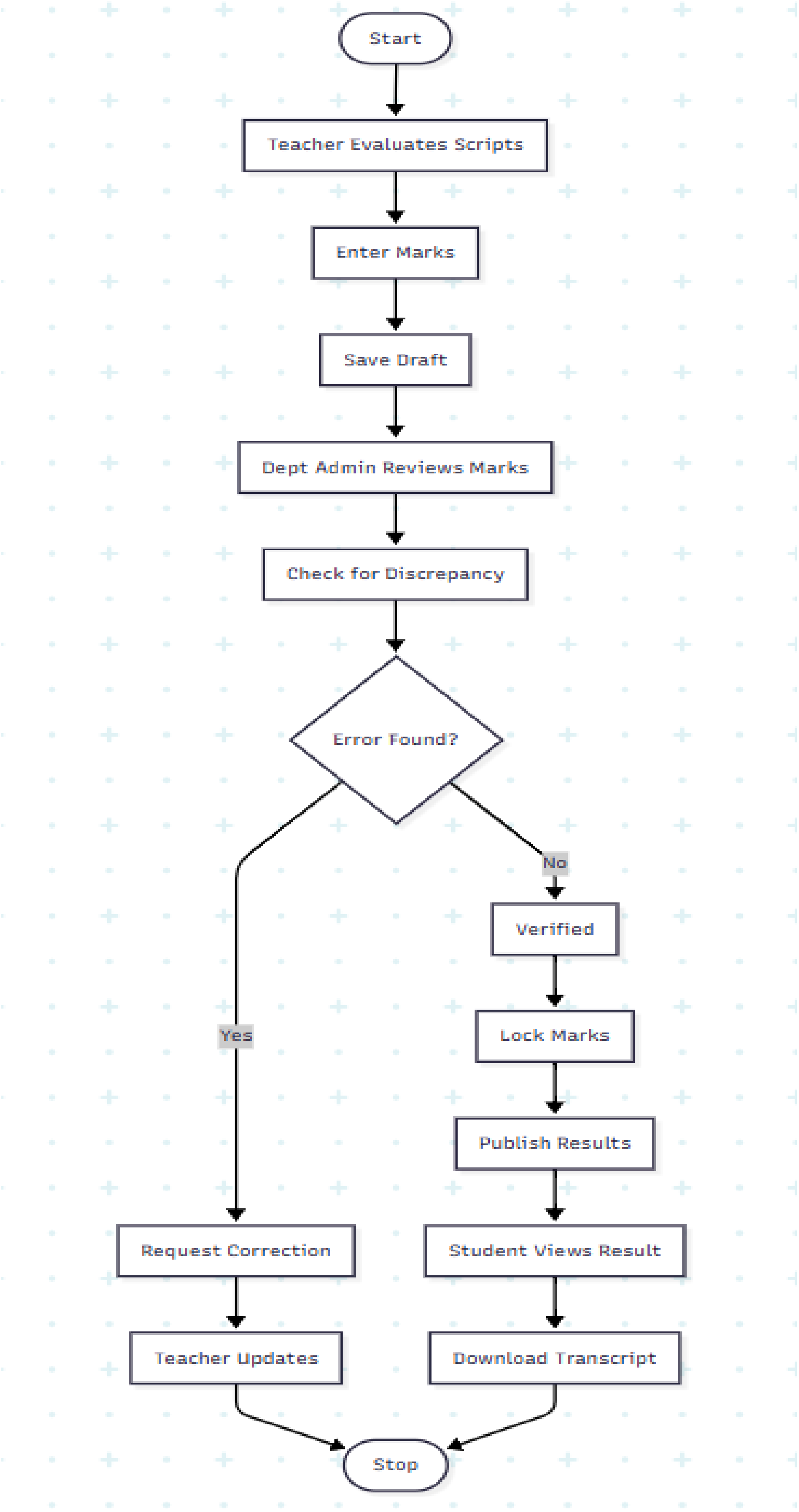
Use Case 4: Classroom Management (Teacher)



Use Case 5: Student Portal (Student)



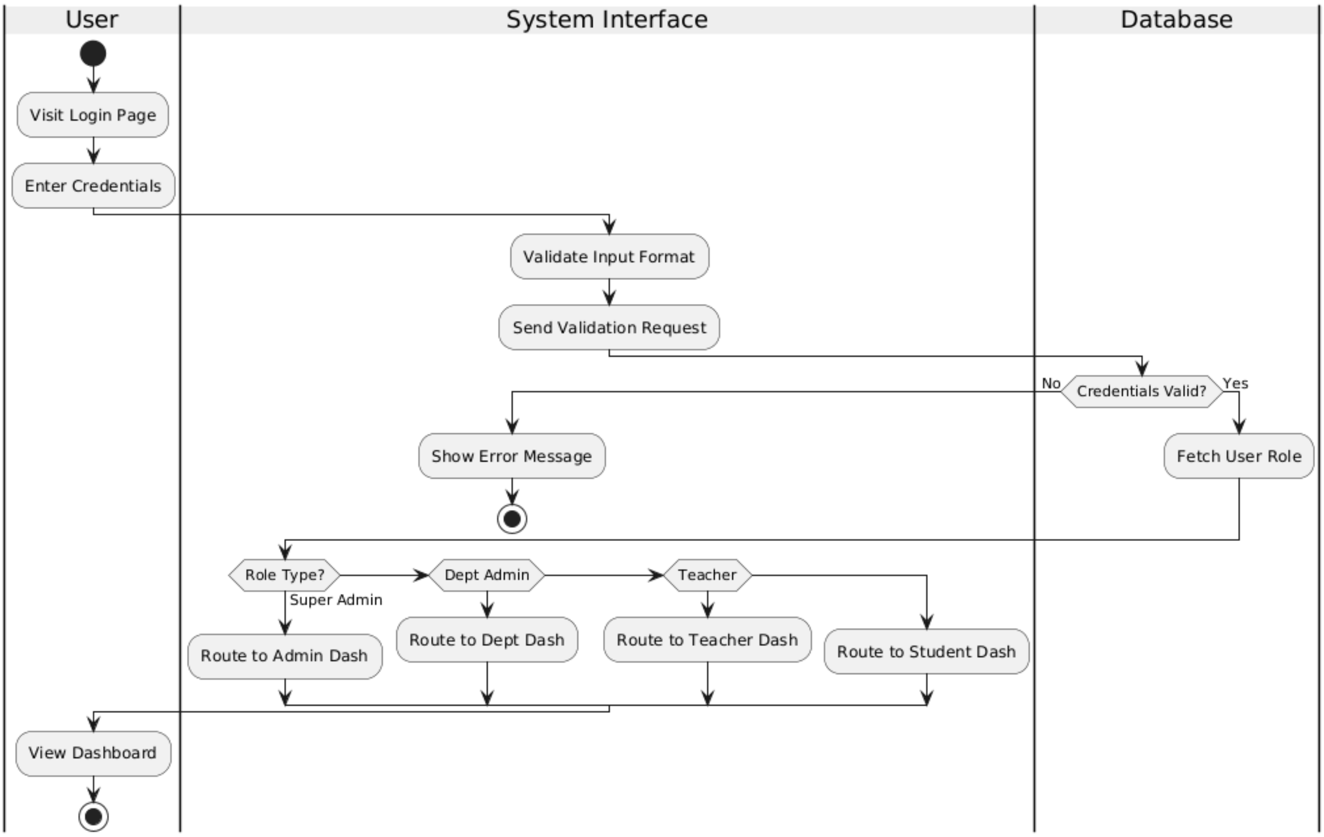
Use Case 6: Assessments & Result Processing



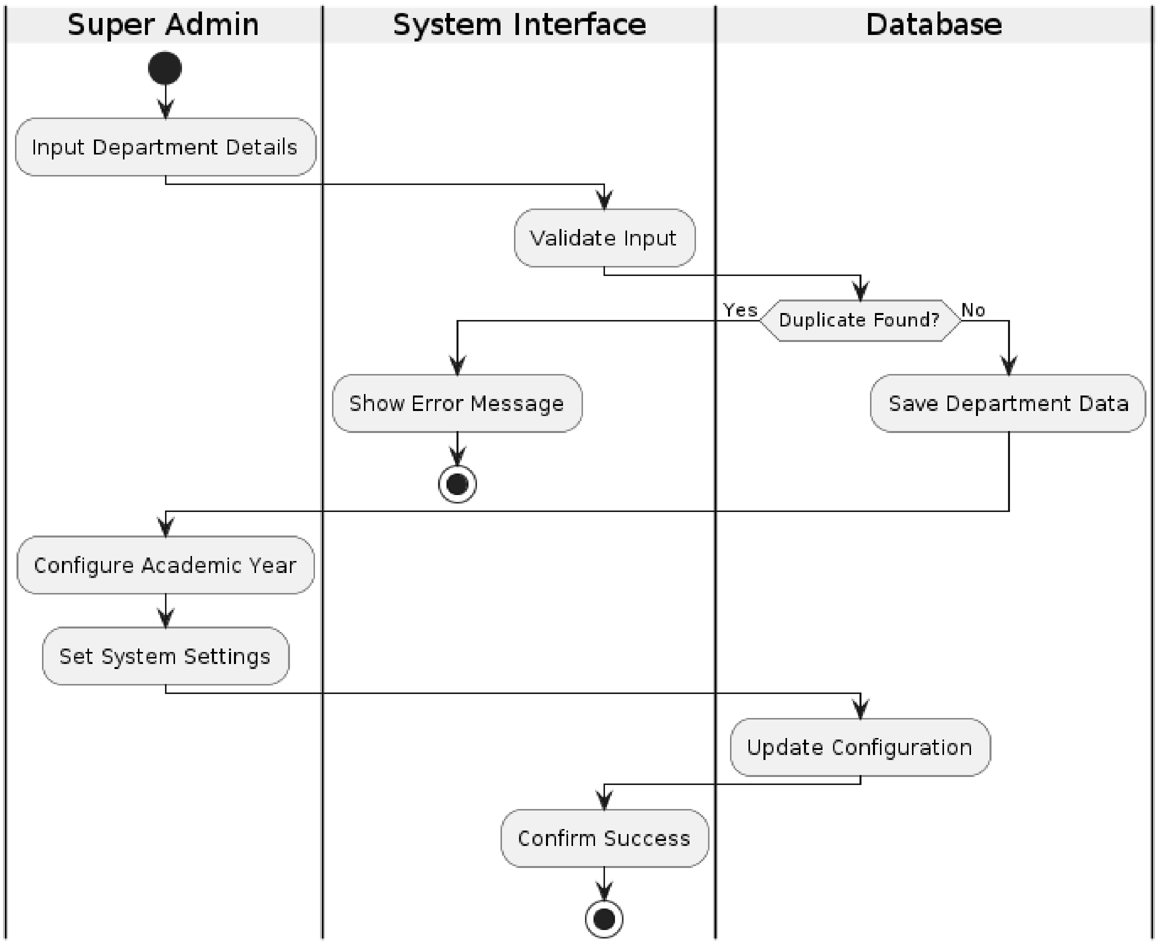
## 3.3 Swimlane Modeling

### 3.3.1 Swimlane Diagram

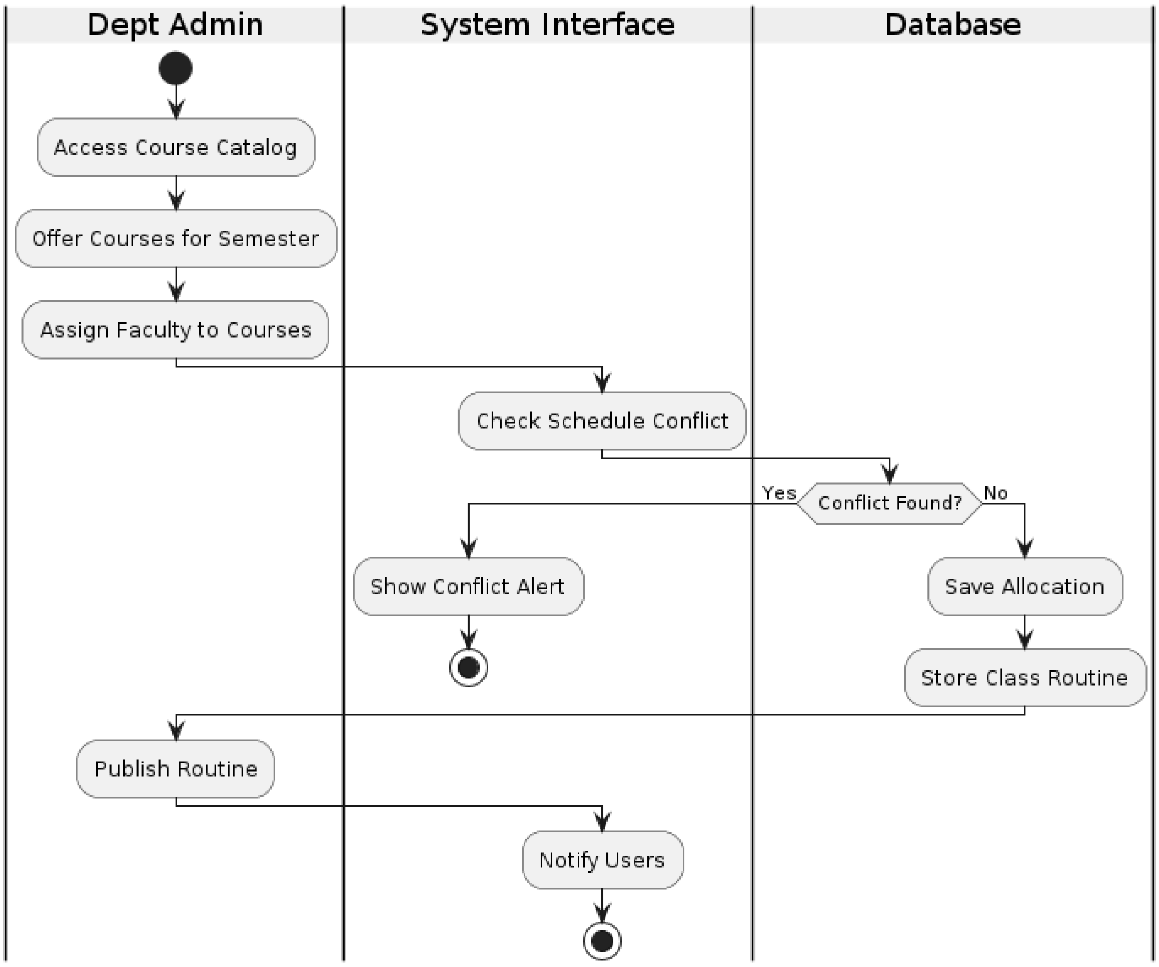
Use Case 1: Authentication & Session Management



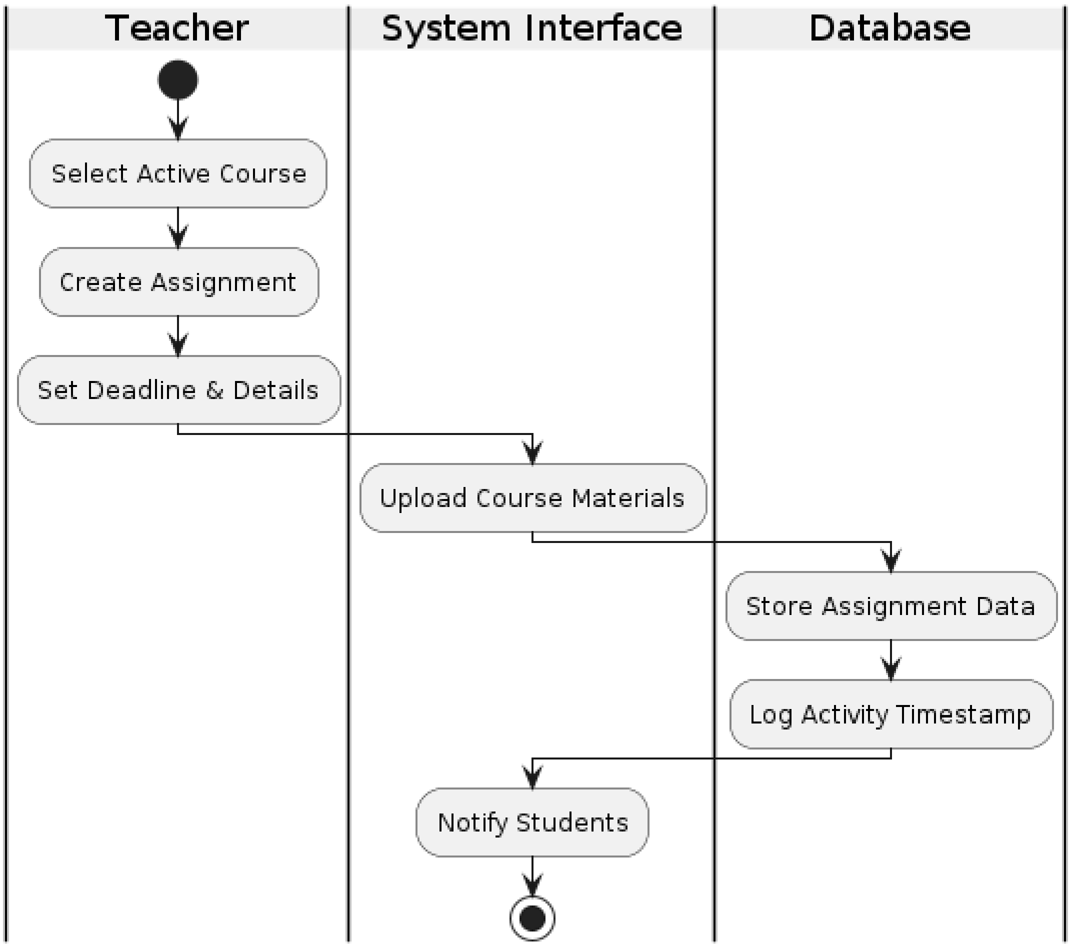
Use Case 2: Governance Management



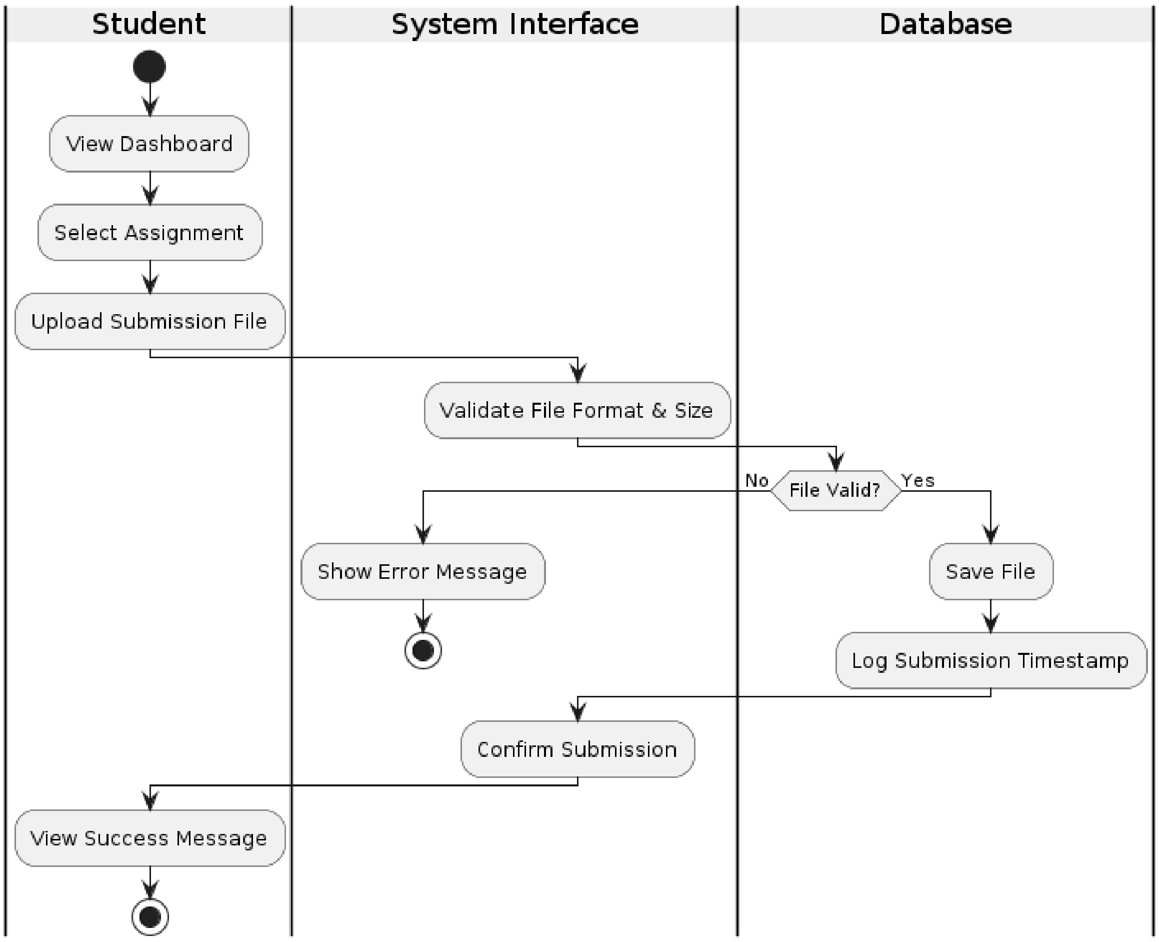
Use Case 3: Academic Setup



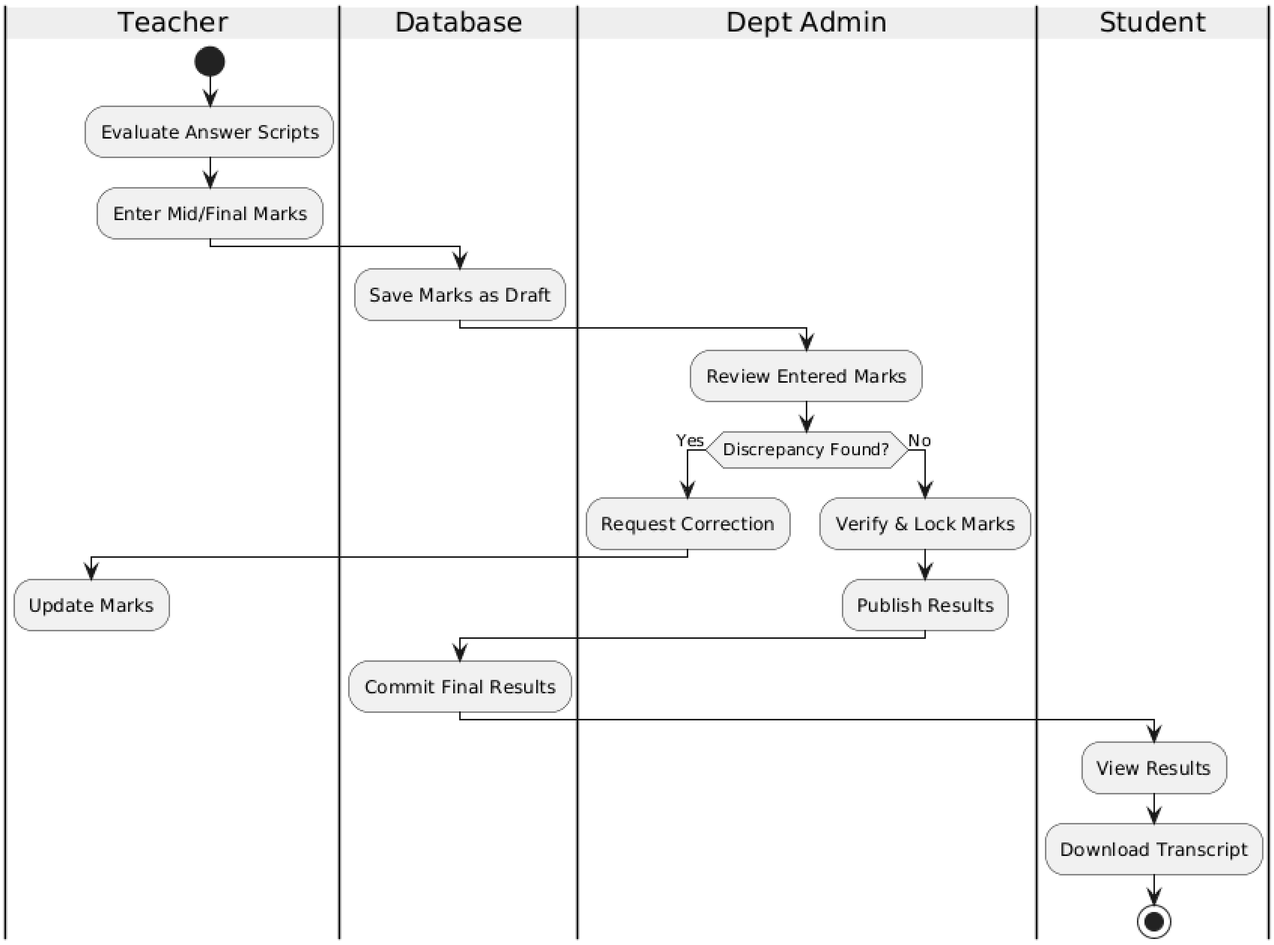
Use Case 4: Classroom Management



Use Case 5: Student Portal

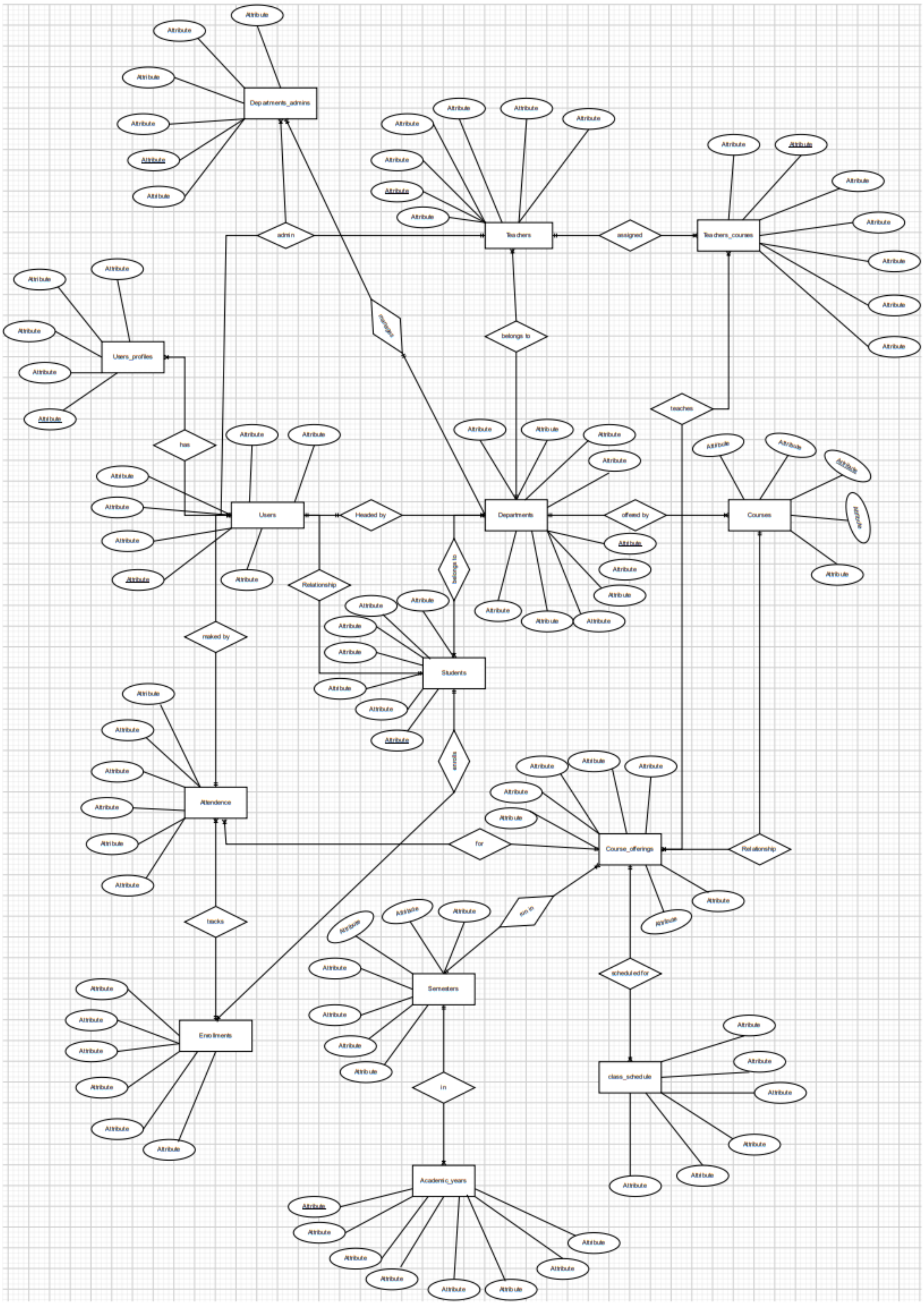


Use Case 6: Assessments & Results



# 4. Data Modeling

## 4.1 Entity Relationship Diagram (ERD)



# 5. Class Based Modeling

## 5.1 Identify Class and Attributes

**Step-1:** Identifying and categorize all nouns

| | |
|---|---|
| External Entities | Student, Teacher, Super Admin, Department Admin, User, University, Institute |
| Things | Course, Department, Batch, Semester, Class Routine, Attendance, Assignment, Grade, Result, Admit Card, Certificate, Document, Notice, Event, Syllabus, Lecture Note, Study Material, Profile, Notification, Report, Analytics, Dashboard |
| Occurrence or events | Login, Logout, Attendance Taking, Assignment Submission, Assignment Grading, Result Publishing, Document Issuing, Re-issuing, Revoking, Course Assignment, Class Reschedule, Notification Trigger |
| Roles | Super Admin, Department Admin, Teacher, Student |
| Organizational units | University, Department, Batch, Semester, Course |
| Places | Classroom, Department Office, Online System, Database |
| Structures | ACADEMIX System, Server, Database, Cloud Storage, Security Log, Backup System |

**Step-2:** Selection of potential class

1. Retained information
2. Needed services
3. Multiple attributes
4. Common attributes
5. Common operations
6. Essential requirements

| **Potential Class** | **Characteristic Number That Applies** |
|---|---|
| Student | Accepted: all apply |
| Teacher | Accepted: all apply |
| Super Admin | Accepted: all apply |
| Department Admin | Accepted: all apply |
| User | Accepted: all apply |
| Department | Accepted: all apply |
| Course | Accepted: all apply |
| Batch | Accepted: all apply |
| Semester | Accepted: all apply |
| Class Routine | Accepted: 1,2,3,5,6 apply |
| Attendance | Accepted: all apply |
| Assignment | Accepted: all apply |
| Result | Accepted: all apply |
| Grade | Accepted: 1,2,3,6 apply |
| Admit Card | Accepted: all apply |
| Certificate | Accepted: all apply |
| Document | Accepted: all apply |
| Notice | Accepted: 1,2,5,6 apply |
| Event | Accepted: 1,2,5,6 apply |
| Notification | Accepted: 1,2,5,6 apply |
| Syllabus | Accepted: 1,3,6 apply |
| Study Material | Accepted: 1,3,6 apply |
| Profile | Accepted: 1,3,4,6 apply |
| Analytics | Accepted: 1,2,6 apply |
| Report | Rejected: 3 fails |
| Interface | Rejected: 1,4,5 fails |
| Button | Rejected: 1,3,5,6 fails |

| | |
|---|---|
| Password | Rejected: 3 fails |
| Login | Rejected: 3 fails |
| Update | Rejected: 3 fails |
| Server | Rejected: 3 fails |
| Internet | Rejected: 3 fails |
| Database | Rejected:2,3, 4, 5, 6 fails |
| System | Rejected:1, 3, 4, 5, 6 fails |

## 5.2 Class Diagram

### 5.2.1 Class Structure & Relationships

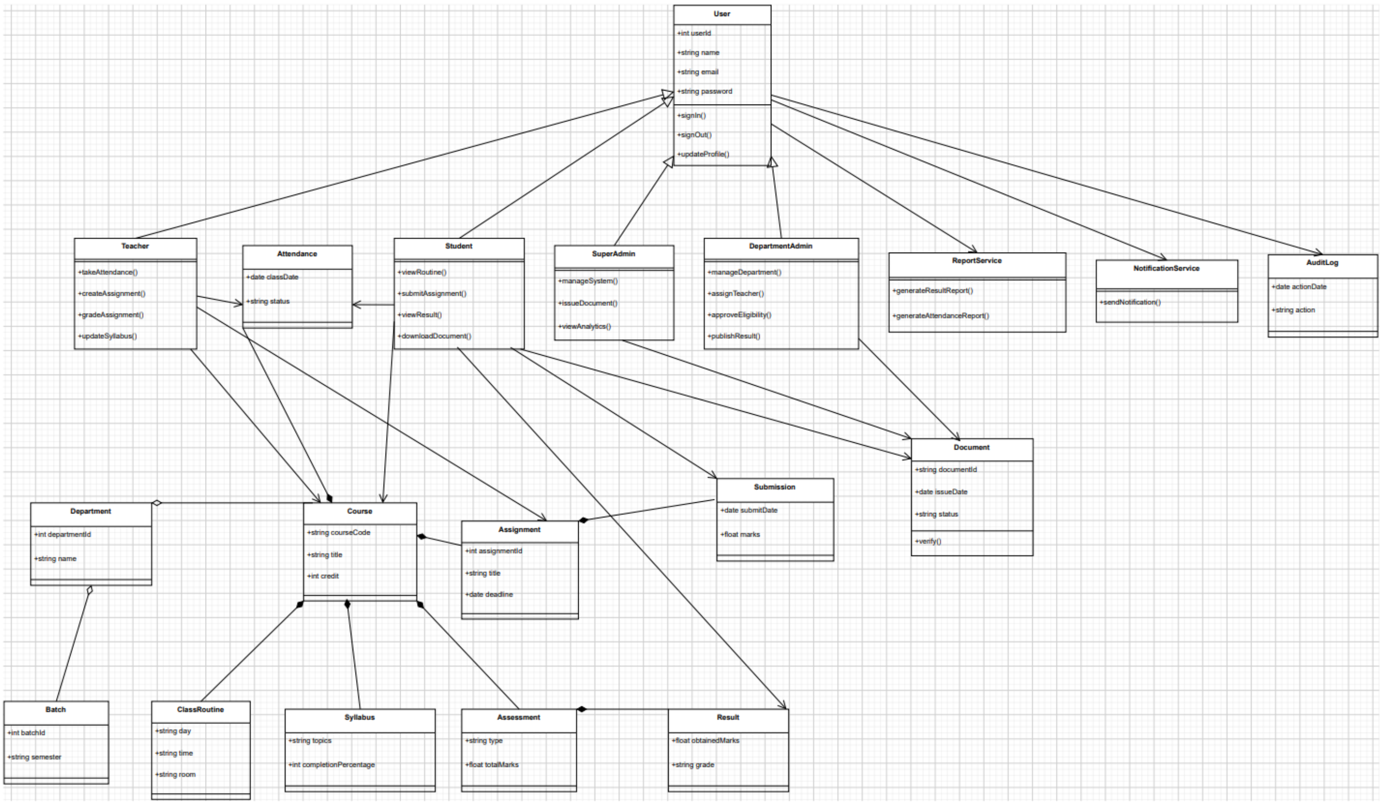


Fig: Class Based Model for ACADEMIX System

# 6. Flow Oriented Modeling

## 6.1 Data Flow Diagrams (DFD)

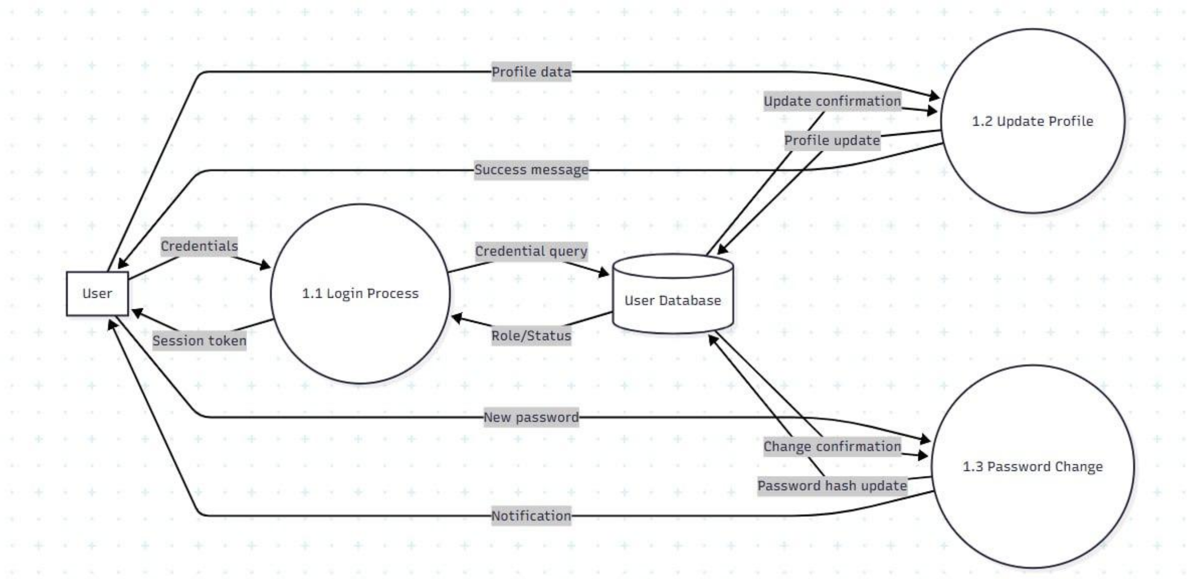


Figure: Level 0 for ACADEMIX system

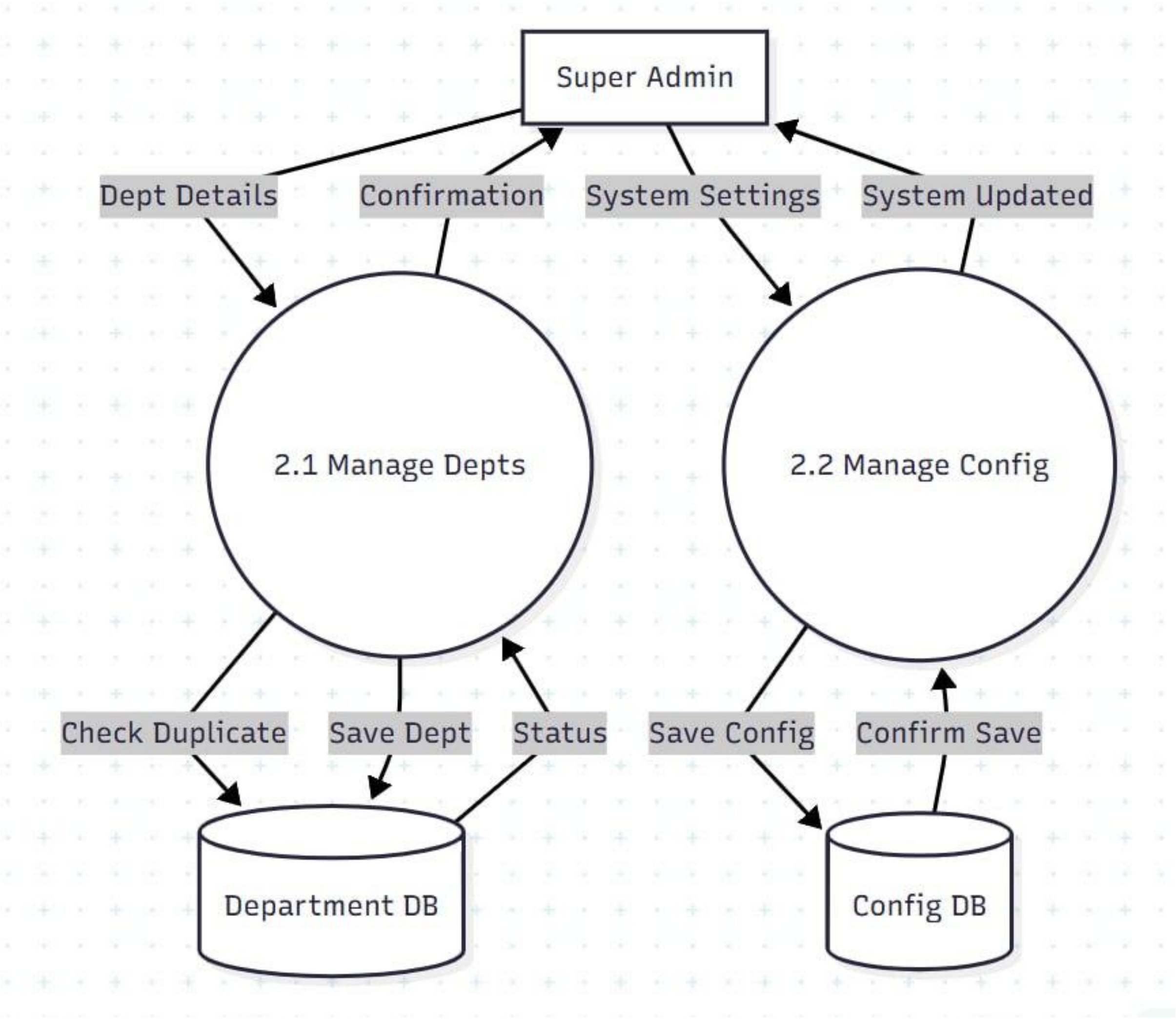


Figure: Level 1.1(Super Admin) for ACADEMIX system

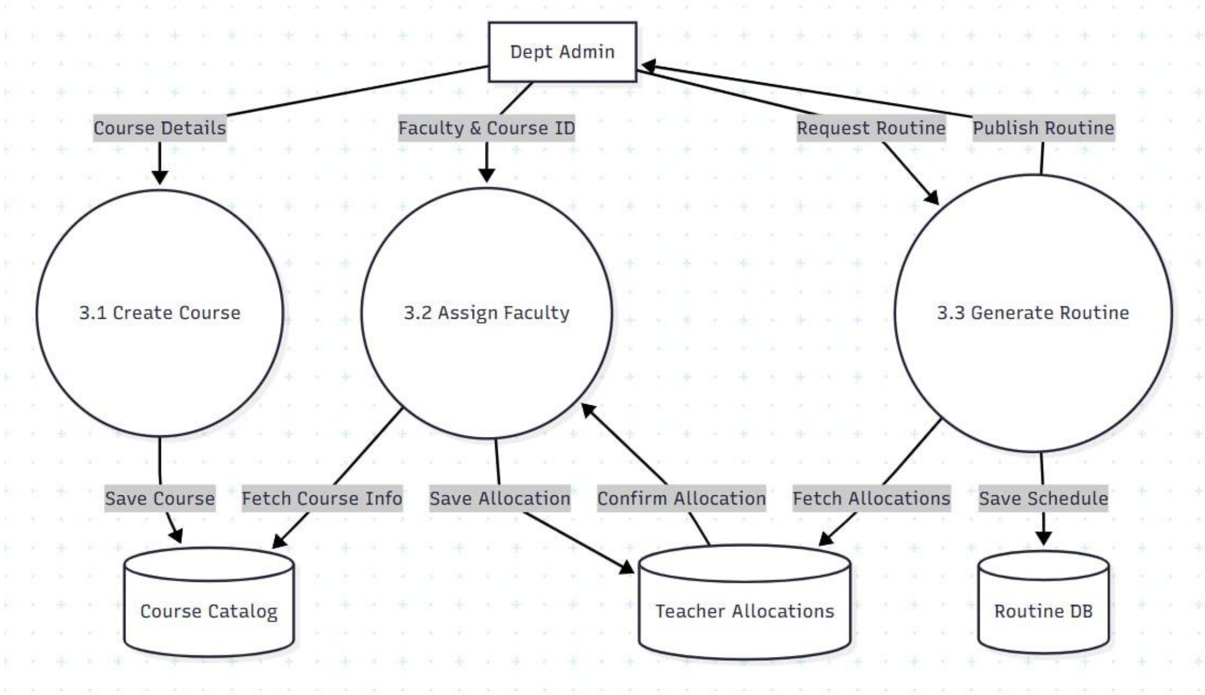


Figure: Level 1.2(Dept Admin) for ACADEMIX system

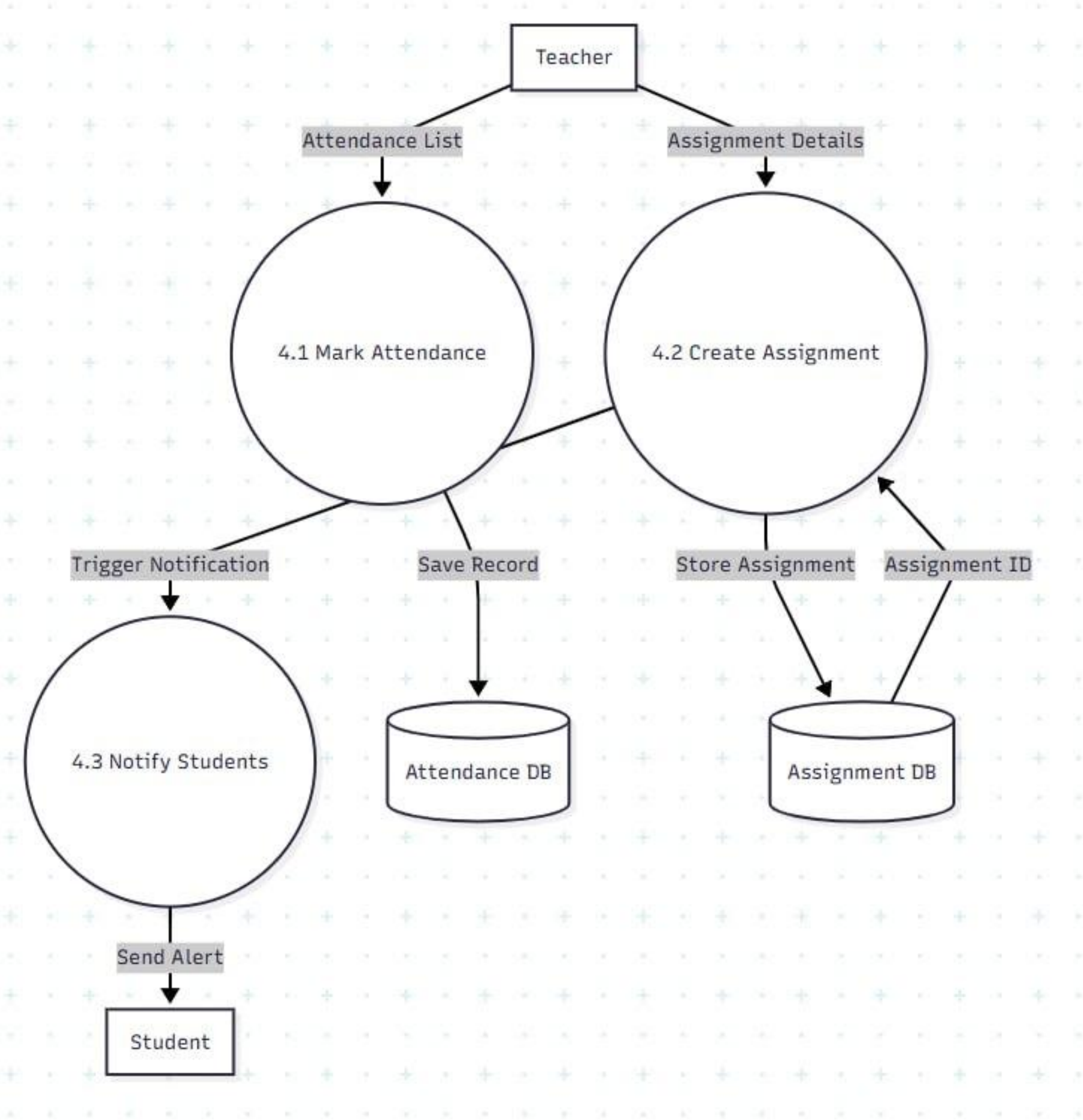


Figure: Level 1.3(Teacher) for ACADEMIX system

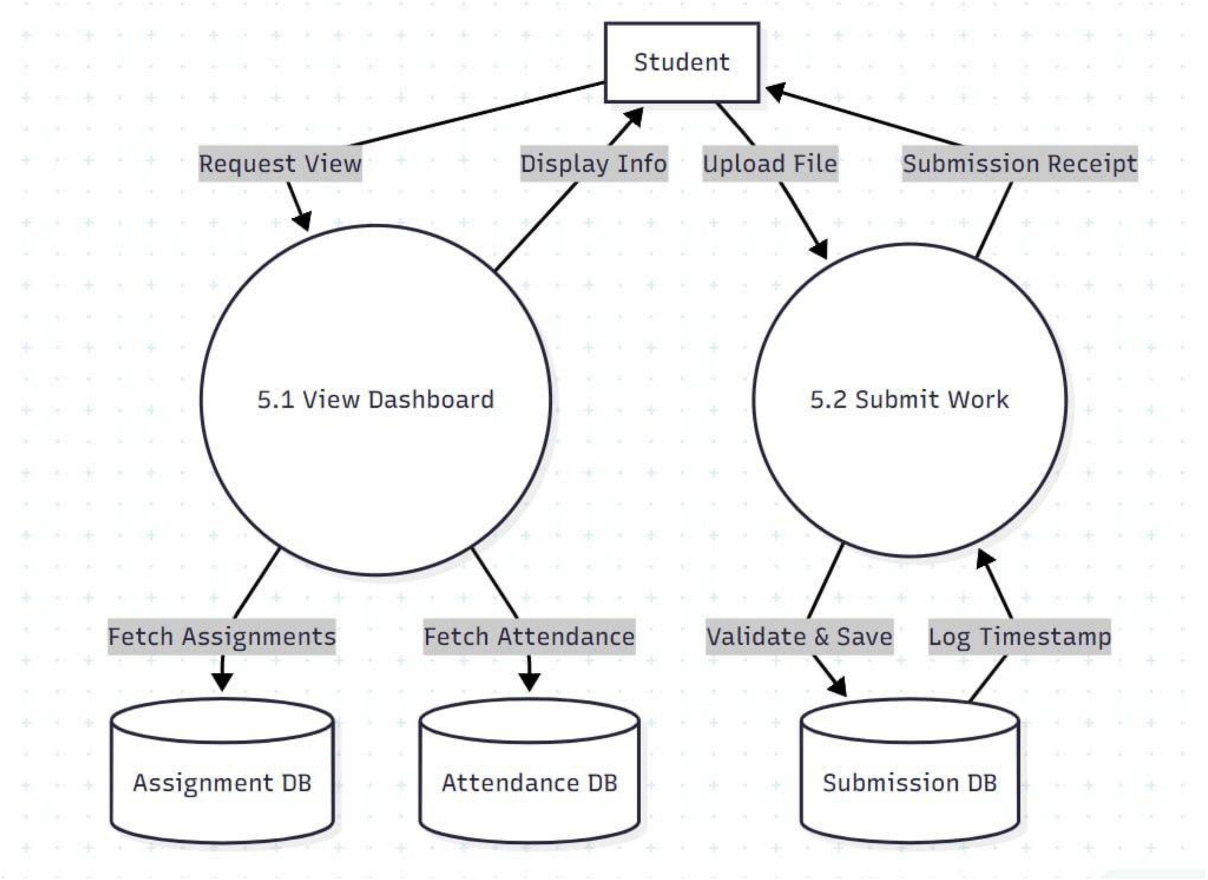


Figure: Level 1.4(Student) for ACADEMIX system

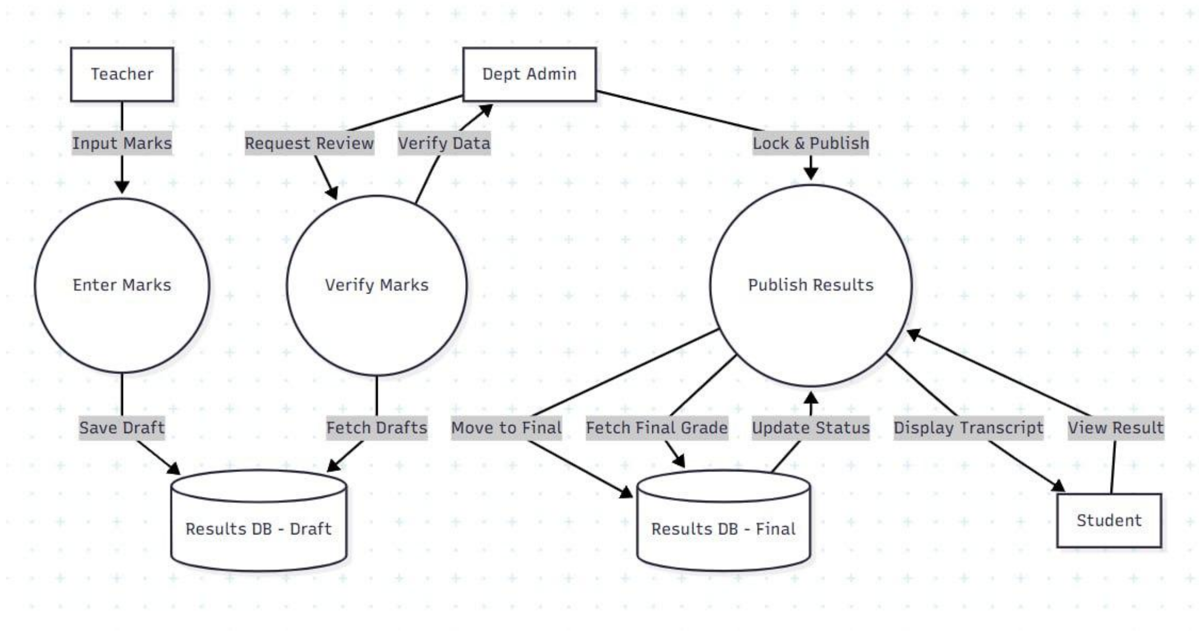


Figure: Level 2.1(Teacher) for ACADEMIX system

# 7. Behavioral Modeling

## 7.1 State Transition Modeling

### 7.1.1 State Transition Diagram

ID: 01
Name: Authentication

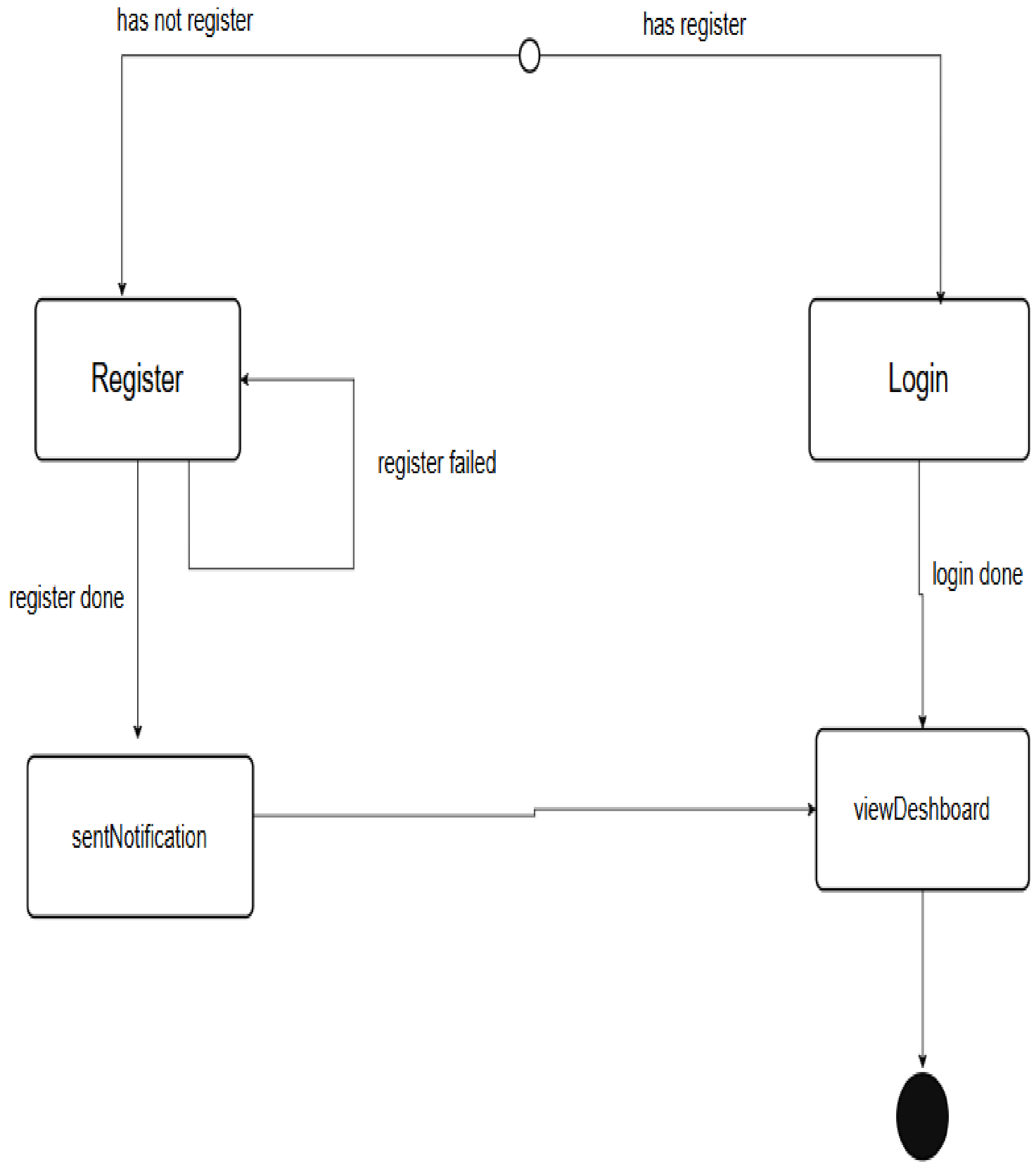


**Fig:** Authentication

ID: 02

Name: Super Admin

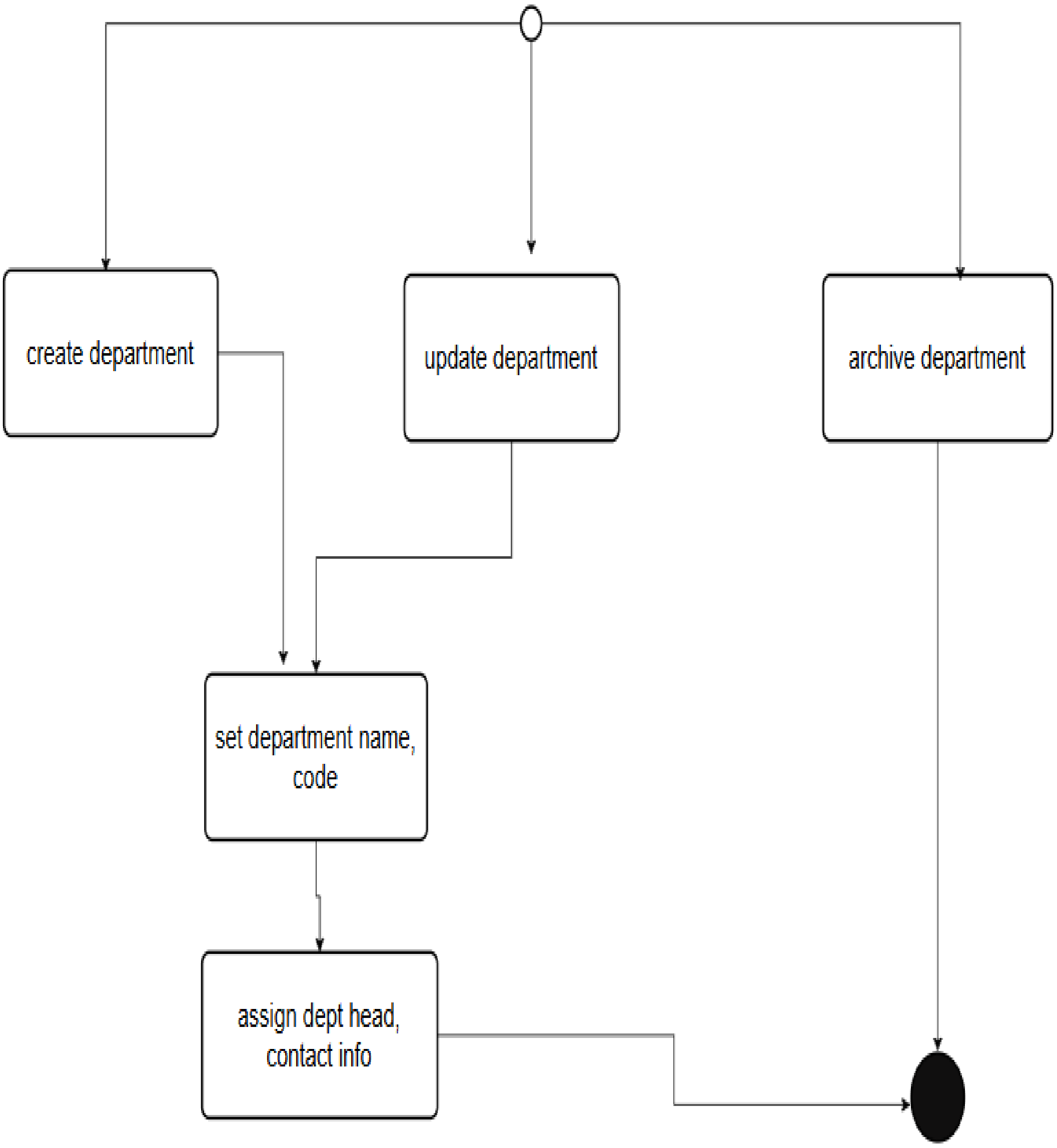


**Fig**: Super Admin

ID: 03
Name: Schedules

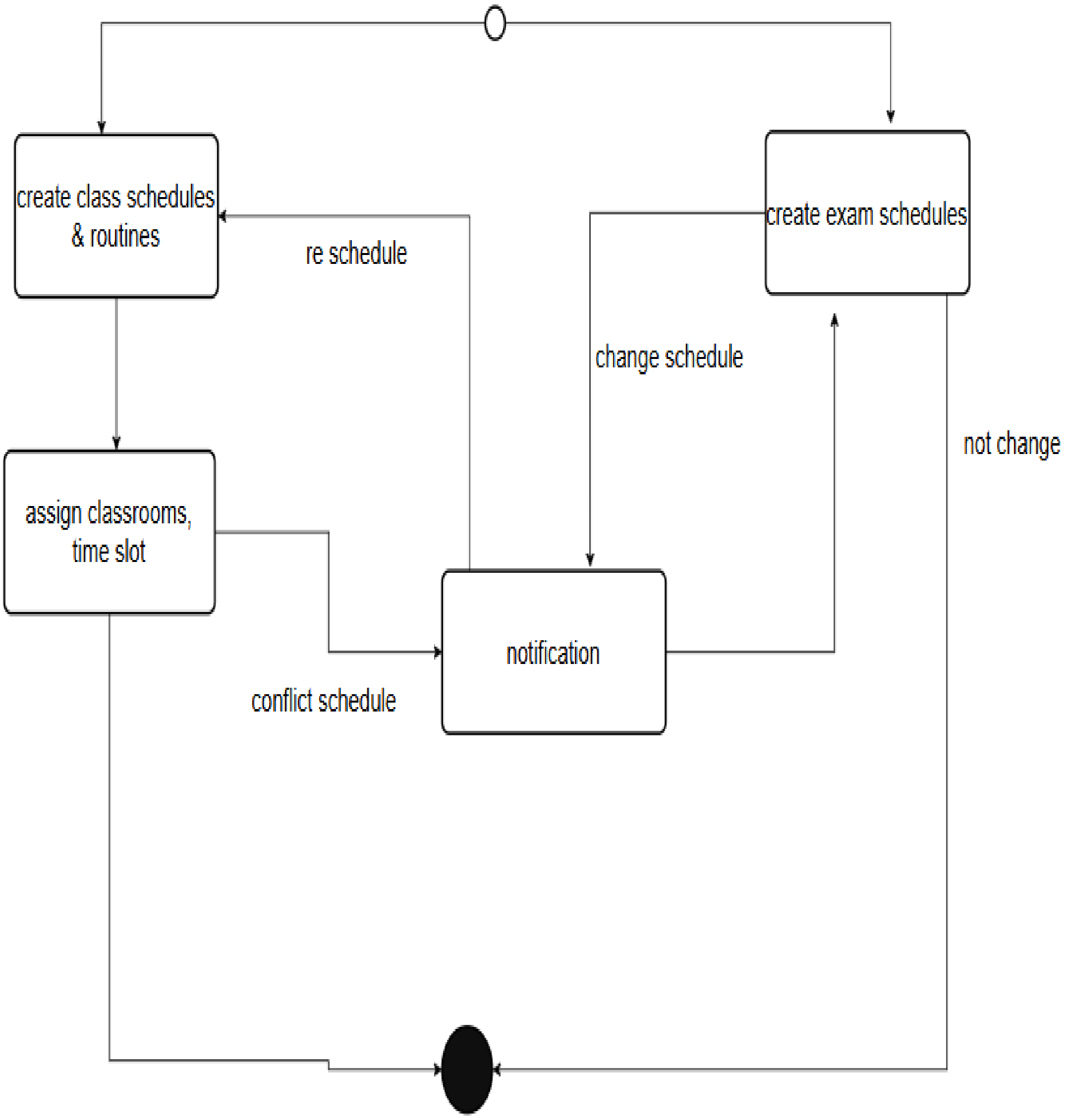


**Fig**: Schedules

ID: 04

Name: Syllabus

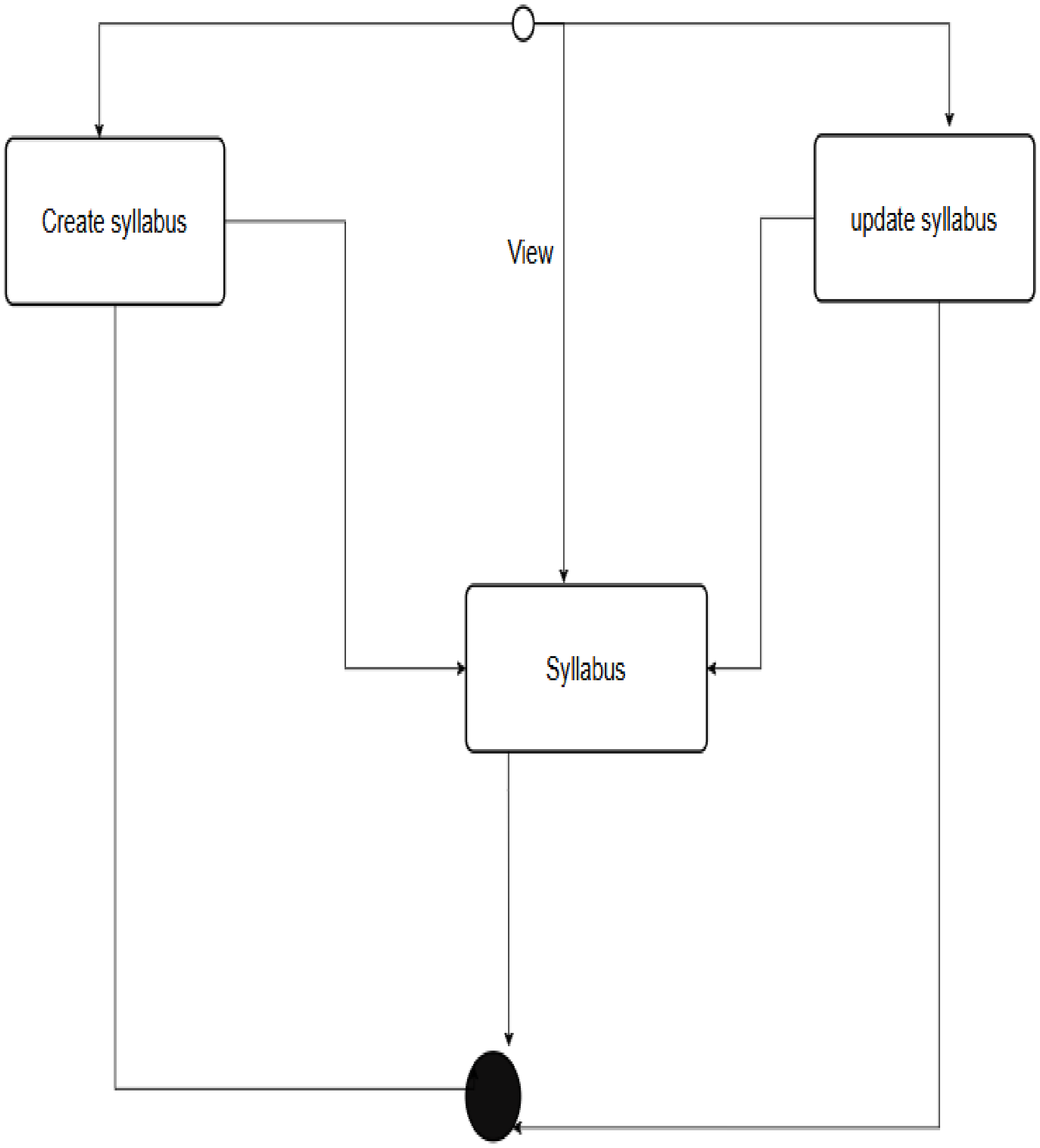


**Fig:** Syllabus

ID: 05

Name: Student Performance

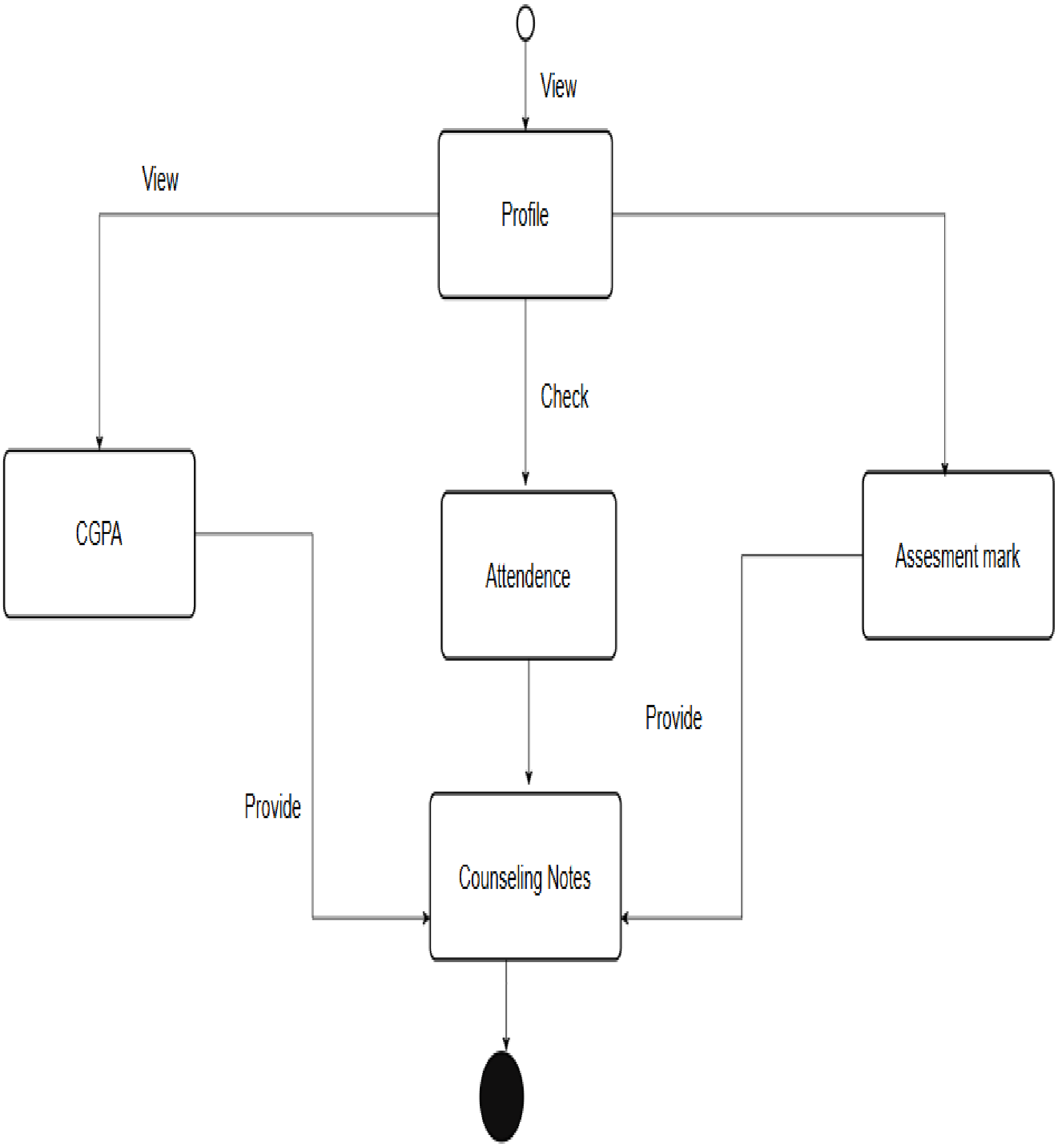


**Fig**: Student Performance

ID: 06

Name: Course Information

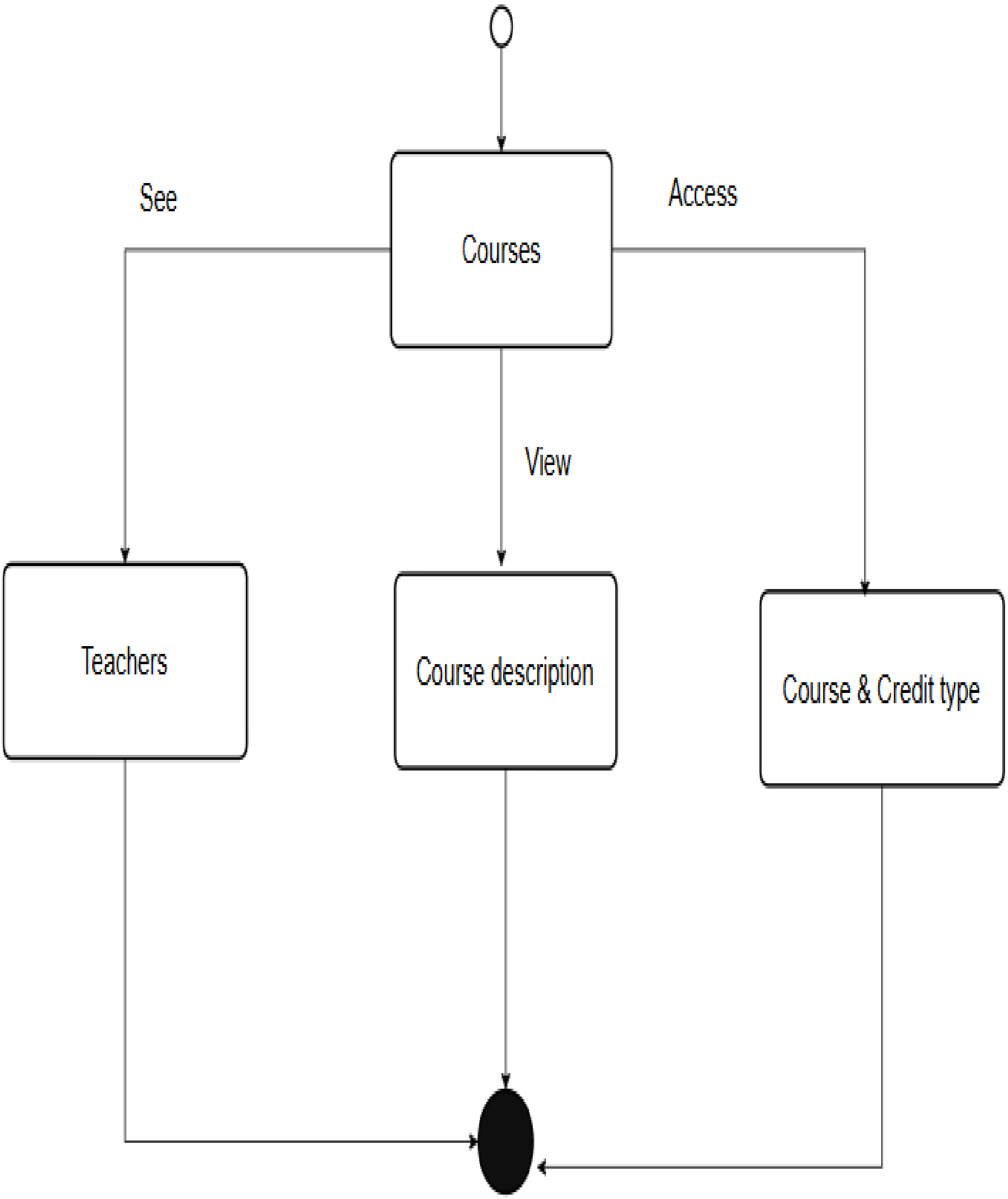


**Fig**: Course Information

ID:07

Name: Assignments

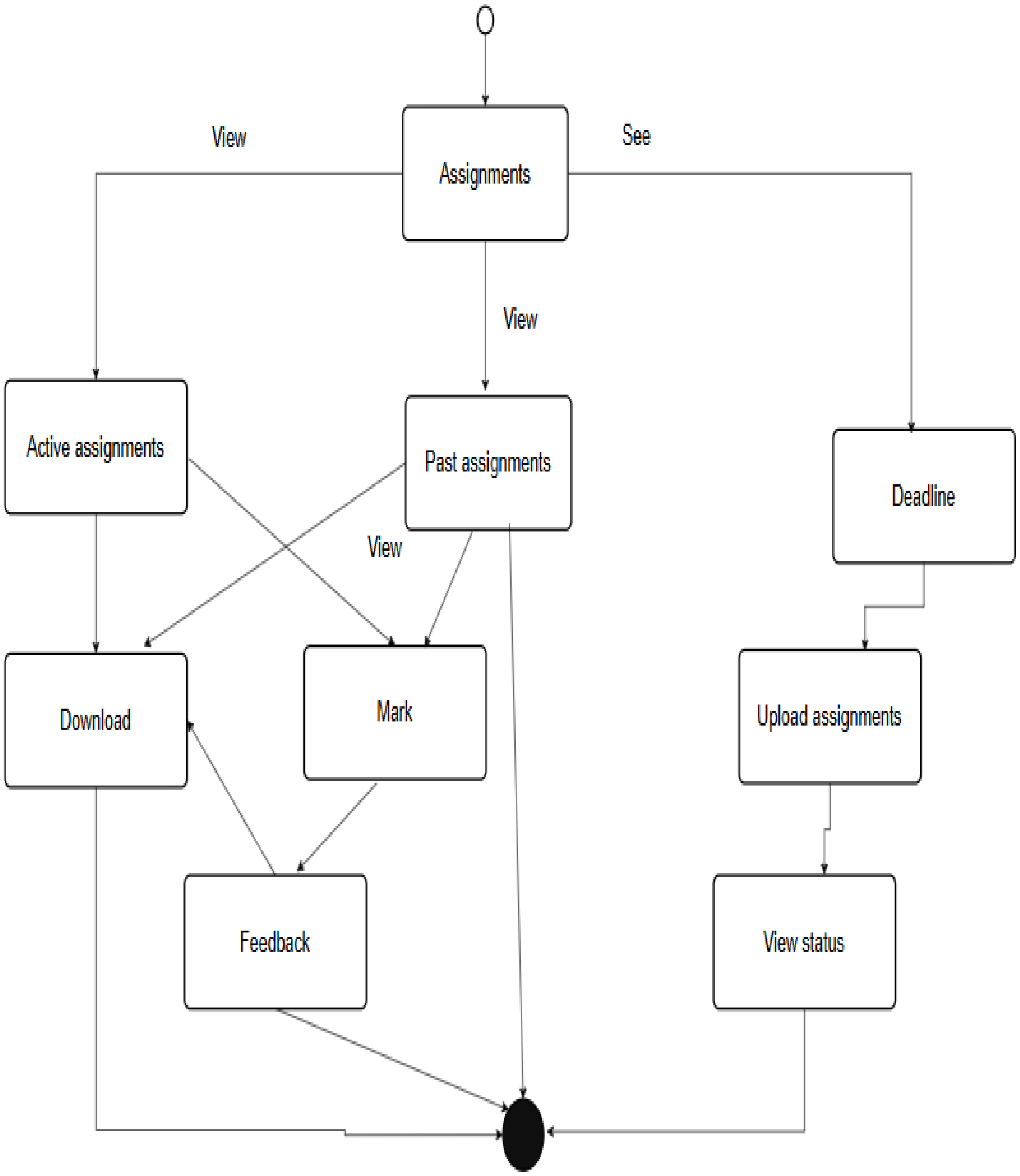


**Fig**: Assignments

ID:08

Name: Marks

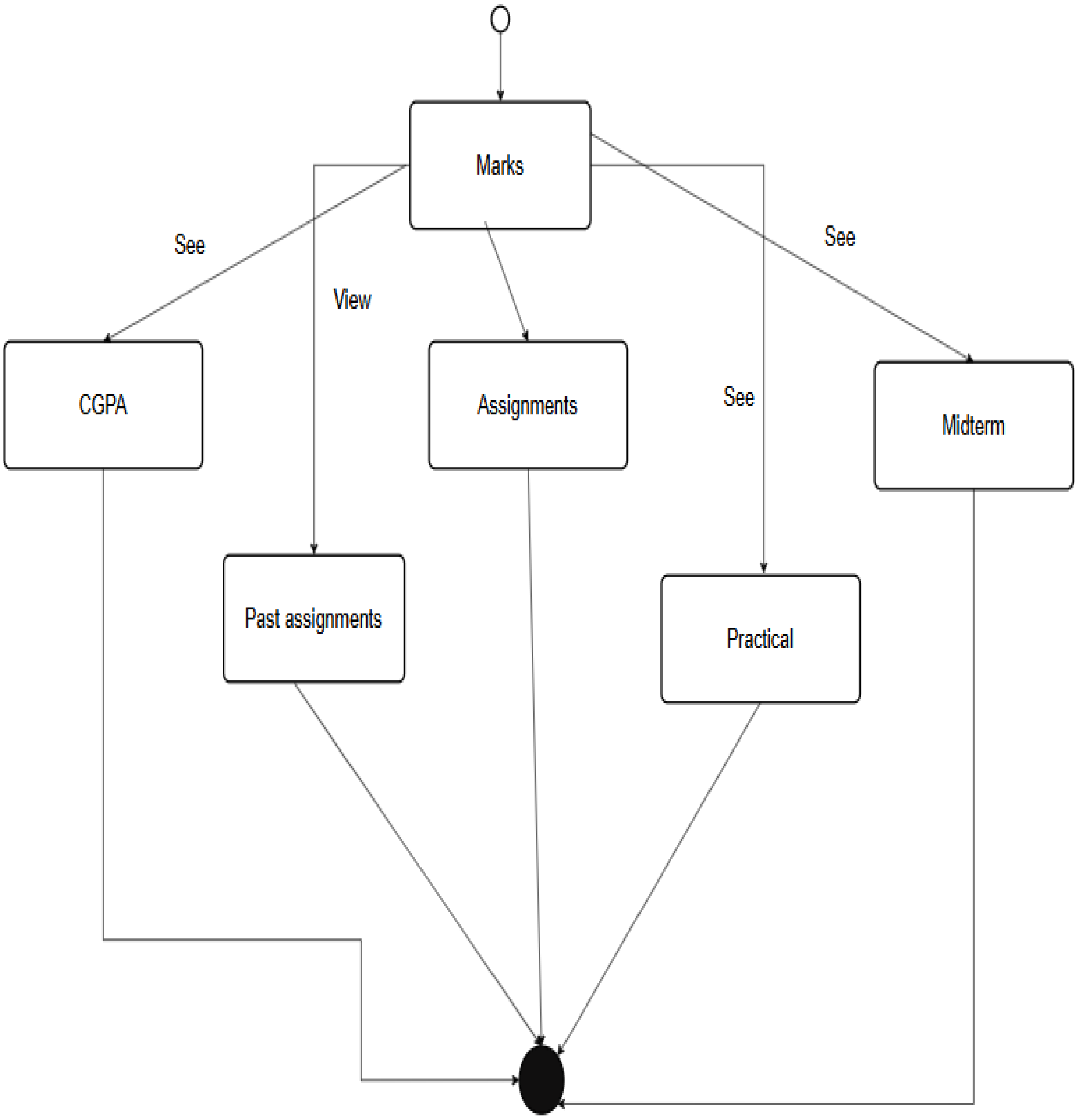


**Fig**: Marks

ID:09

Name: Examination

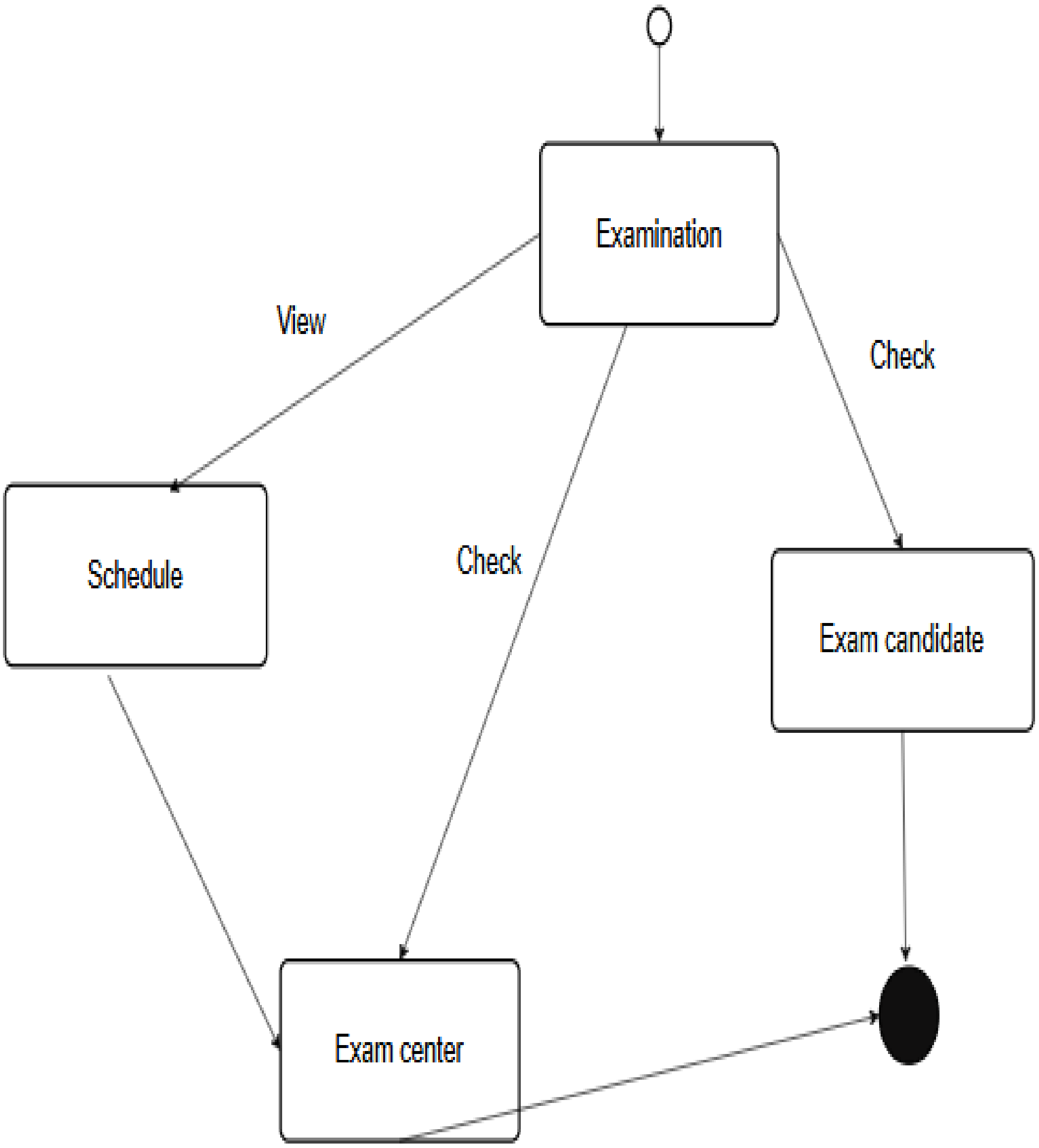


**Fig**: Examination

# 8. Sequence Modeling

## 8.1 System Sequence Diagrams (Interaction Flows)

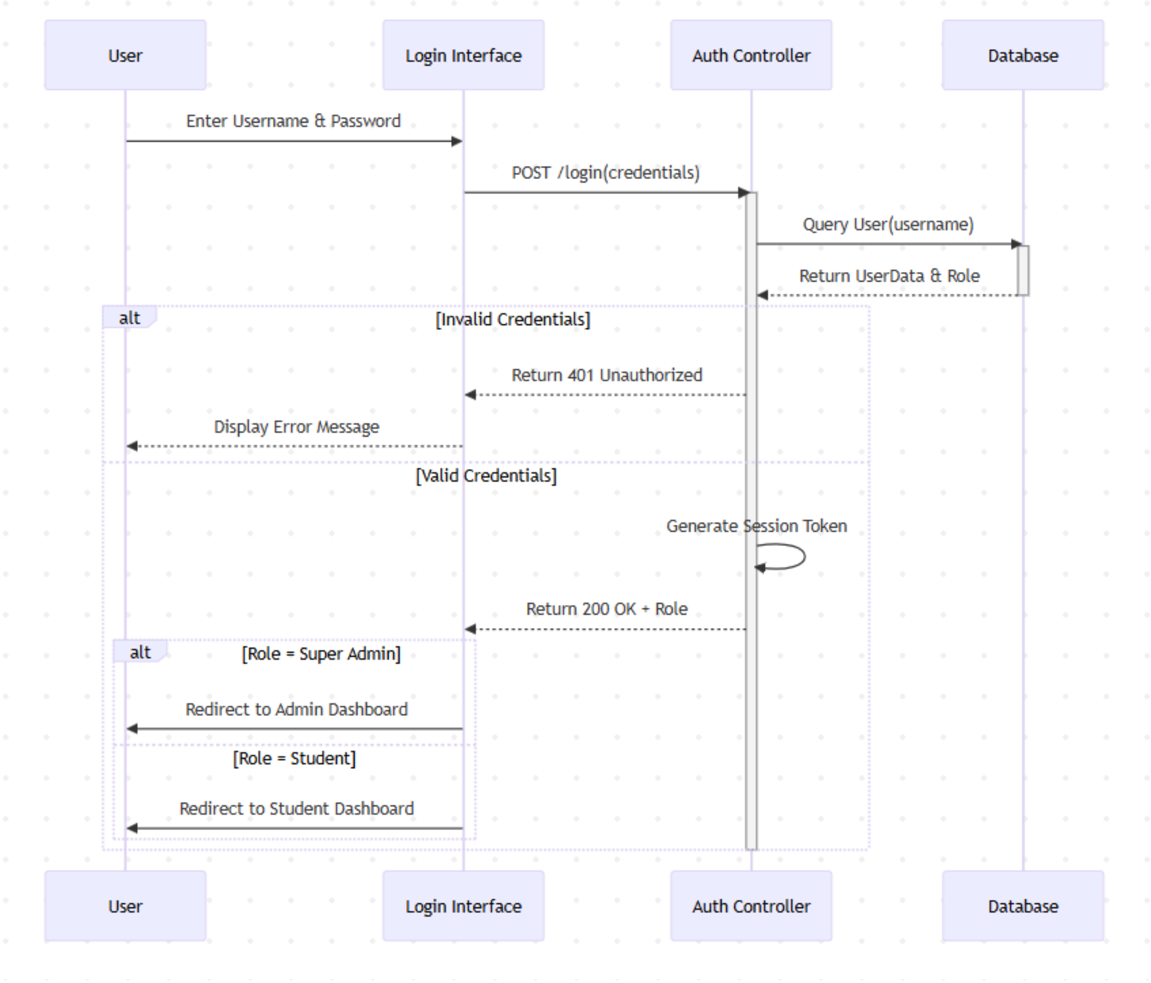


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Figure:Sequence diagram(Authentication)

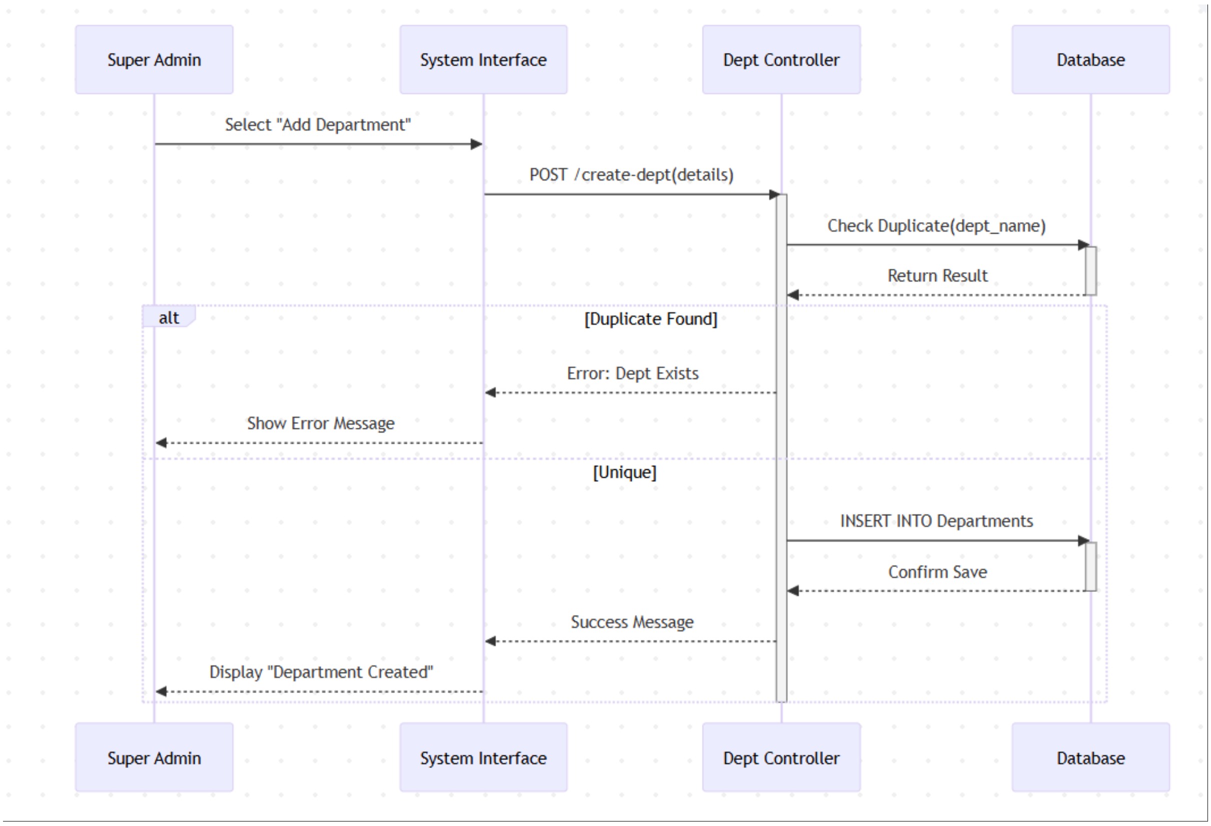

Figure: Sequence diagram (Governance Management)

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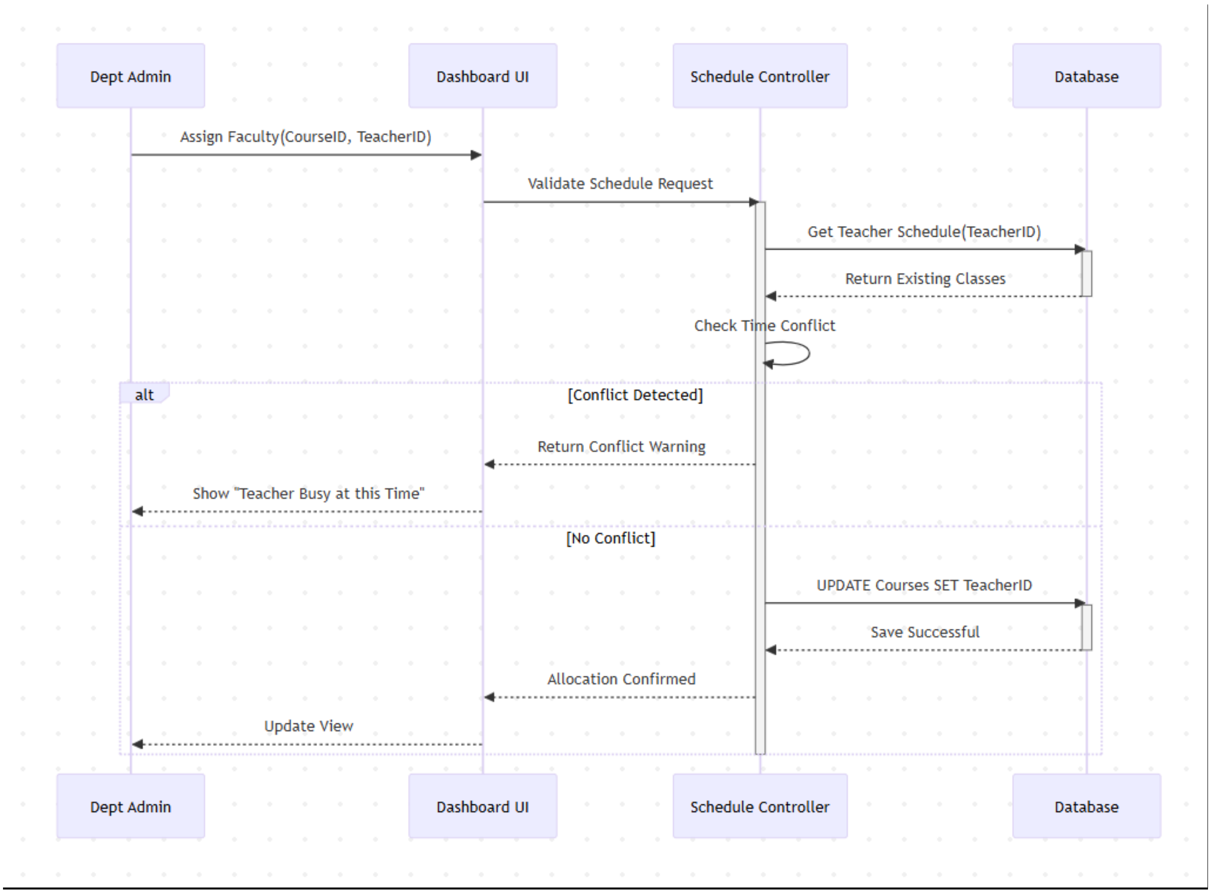

Figure: Sequence diagram (Academic Setup)

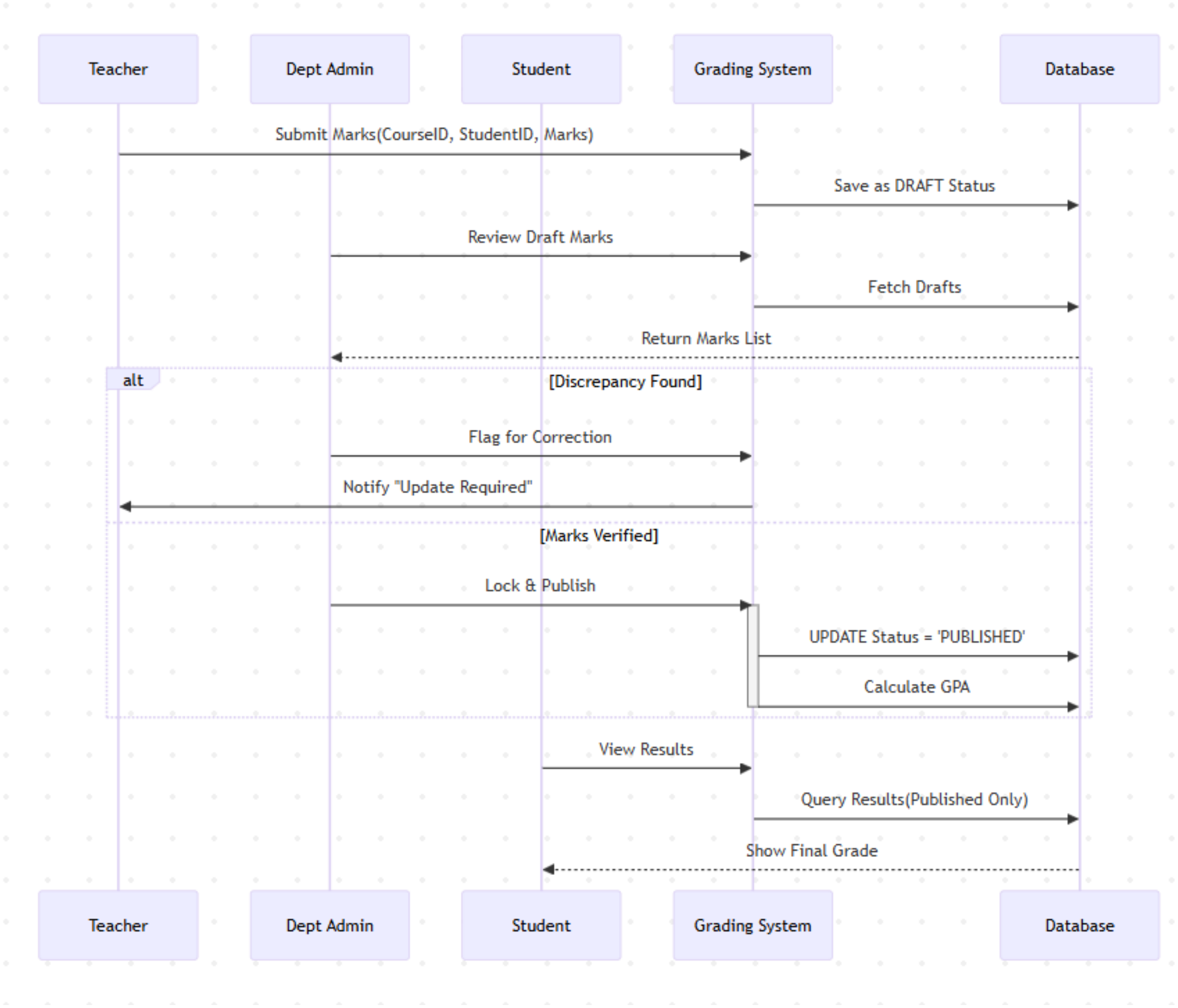

Figure: Sequence diagram (Classroom management)

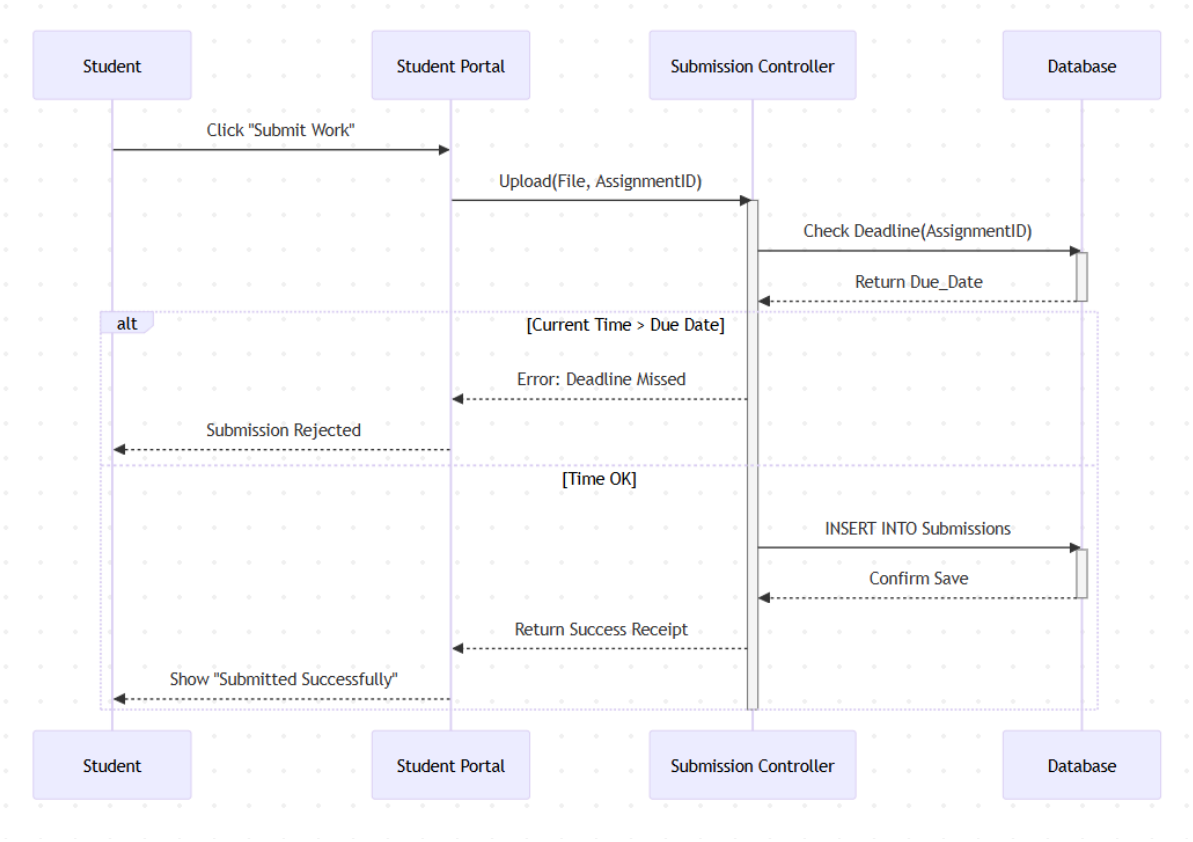

Figure: Sequence diagram (Student portal)

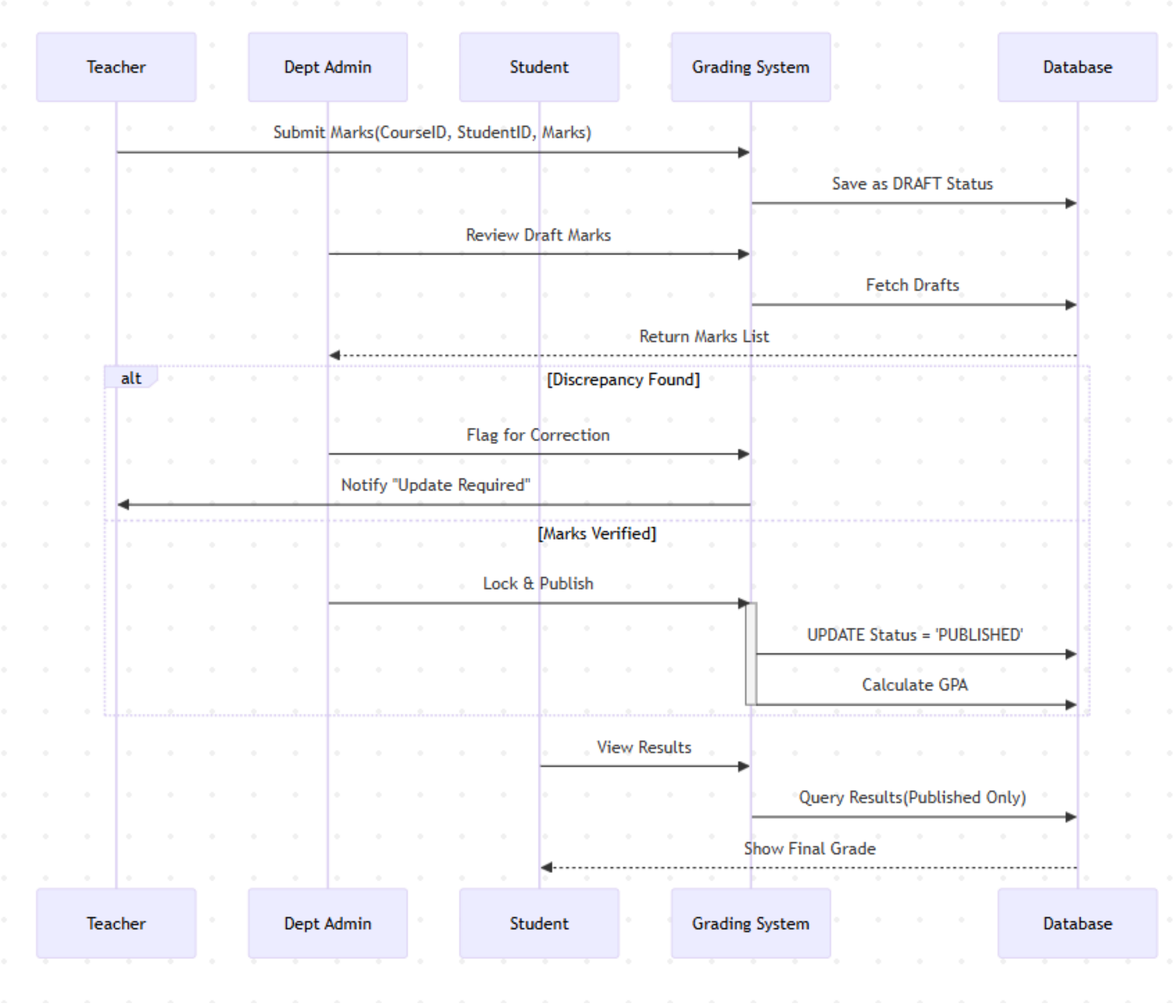

Figure: Sequence diagram ( Assesments & Results)