

ATTENDANCE MANAGEMENT SYSTEM

Object Oriented Software
Engineering
Subject Code: BIT 260

Presented to:
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IGDTUW

INTRODUCTION

- the problem we have taken up here basically emphasis on improving the traditional methods of taking attendance and switch to an easier and efficient way. the current system for taking attendance has certain degrees of inaccuracies and a lot of manual work, including the maintenance of heavy files, slow computation and many a times ambiguity.
- the managers need to maintain a bulky and easily manipulative records register.
- there are high chances of missing a genuine attendee's attendance.
- the final computation of the attendance may give incorrect results due to improper storage of attendance.
- a regular analysis cannot be generated for attendees in the form of consolidated report/graph.
- high chances of redundant and inconsistent data.
- tough and time taking retrieval of the information

ACTORS INCLUDED:

- Admin module – has rights for creating new entry of faculty and student details
- User module- rights of making daily attendance, generating report on the basis of student details, date, classes etc.

SRS

- In our SRS document, we have included the following details:

1. Introduction

- i) purpose
- ii) Scope
- iii) Definitions, Acronyms, and Abbreviations
- iv) references
- v) overview

2. overall description

- i) product perspective
- ii) product functions
- iii) user characteristics
- iv) assumption and dependencies

3. external interface requirements

- i) user interfaces**
- ii) communication interfaces**

PRODUCT PERSEPECTIVE:

- The product Student Attendance Management system, is an independent product and does not depend on any other product or system. The product will automate various tasks associated with handling student details and better organizing the stored information and optimum performance, thus helping the Colleges to ensure smooth working of these processes.

PRODUCT FUNCTIONS

Our system has two types of accessing modes:

1. Administrator

2. User

2.1 Teacher

2.2 Student

ADMINISTRATOR:

- SAMS is managed by Administrator.
- Administrator has to:
 1. update and monitor the registered student details,
 2. add a new student,
 3. provide register number for all students,
 4. assign each student a course

Administrator can update his profile, and also can give help to the teachers and students.

USER

- There are two users:
- Student: User can only view their personal details, course assigned, and edit their assigned course and can view their attendance
- Teacher: User can add them onto the portal and view their schedules, marks attendance of the students, also can view the students details in graphical order, also of a single student and about the views from the students.

USER CHARACTERISTICS:

- **Administrator:** The personnel and College administrator will have administrator access to add, delete and modify information stored in the database.
- **Authorized User:** Teaching staff will have access to only view the data stored in the database and can update the student's attendance in the form of formatted reports.

ASSUMPTIONS AND DEPENDENCIES:

- We assume that the Office personnel do all the data entry based and the correct values obtained from forms and registers.
- We assume that the computers that will use the software will be part of the college LAN.
- Users with administrator access should be careful in deleting or modifying any information knowingly or unknowingly which will lead to inconsistency of the database.
- The end users of this software are assumed to have basic level of computer knowledge i.e. point and click.

USER INTERFACES

- **GUI along with meaningful Frames and buttons**
- **Reports are generated as per the requirement**
- **When invalid inputs are given to the modules then the error messages will be popped up in order to inform the user that the input provided is not taken by the database. When incomplete information is provided by the user and the user tries to submit the form in order to store the details in the database the system will pop up a message box asking the user to enter all the details required.**
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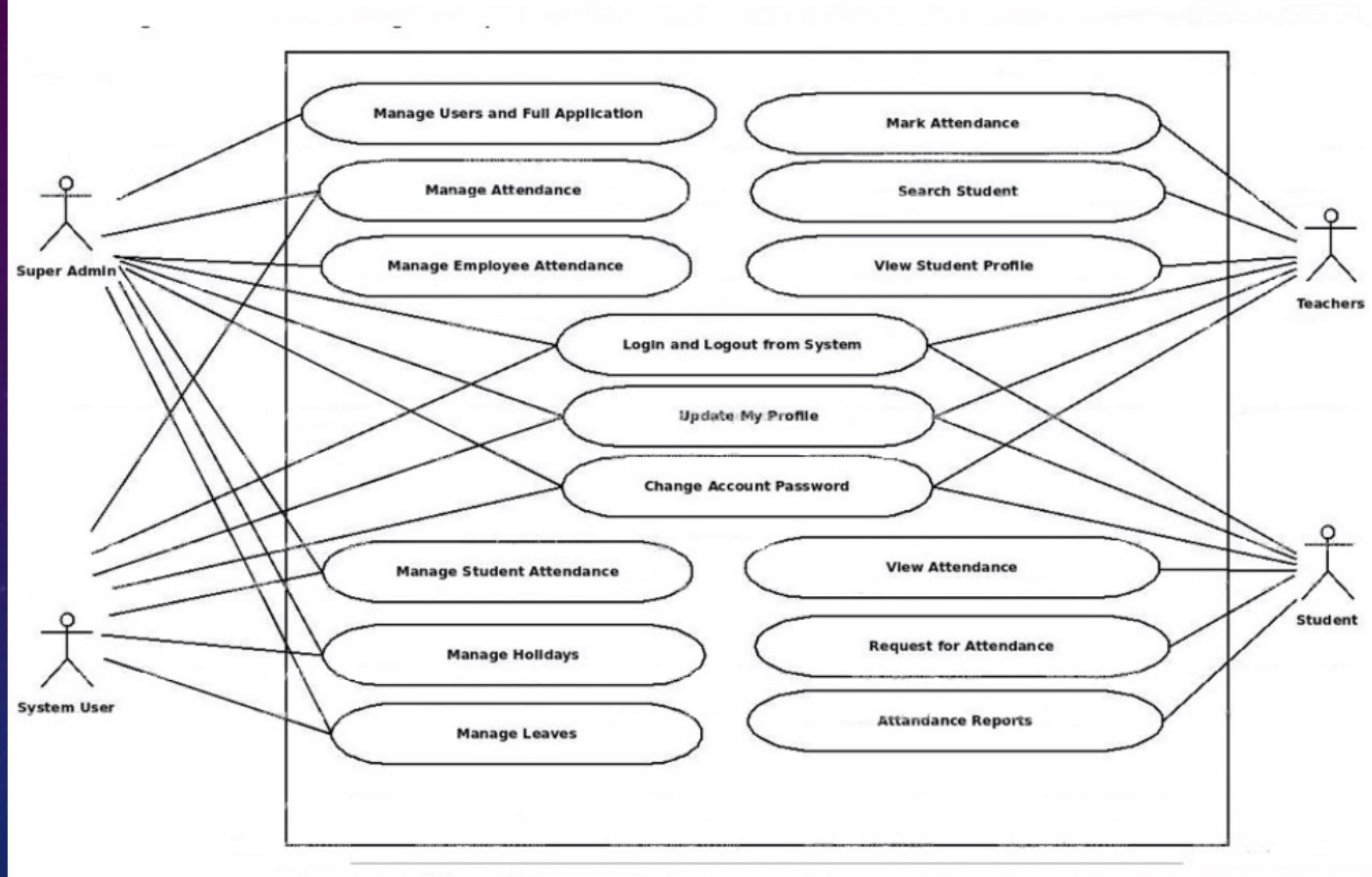
COMMUNICATIONS INTERFACES

- The machine will have to be part of the college Local area Network to access the central database.

FUNCTIONAL REQUIREMENTS

- **Student Registration:**
 - SMS provides online registration and status information to the student to view their status. - SMS provides automatic student register number generation based on course and year. - SMS provides to students to add them in their course they want to study.
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- **Student Attendance Management:**
 - Easily track attendance information of students. - Quickly produce single or multiple day attendance bulletins.
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- **Opinion Management:**
 - SMS provides a comprehensive opinion scheduling based on course. - Students can facilitate to give their opinions by giving the teacher rank.
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Use Case Diagram



NON-FUNCTIONAL REQUIREMENTS

- **Performance**
- **Easy tracking of records and updating can be done.** All the requirements relating to performance characteristics of the system are specified in the section below. There are two types of requirements.
- **Static Requirements**
- **These requirements do not impose any constraints on the execution characteristics of the system.**
- **They are:**
- **Number of Terminals:** The software makes use of an underlying database that will reside at the server, while the front end will be available online to the administrative and departmental computers as well as students and teachers.
- **Number of Users:** The number of users may vary, as this software finds applications in almost all department of the organization.
- **B. Dynamic Requirements** These specify constraints on the execution characteristics of the system. They typically include response time and throughout of the system. Since these factors are not applicable to the proposed software, it will suffice if the response time is high and the transactions are carried out precisely and quickly.

- **Reliability**

The software will not be able to connect to the centralized database in the event that the college LAN fails or in the event of the server being down due to a hardware or software failure.

- **Availability**

The software will be available only to authorized users of the colleges like teachers to mark the students attendance, student to view their enrolled course, admin to add an update students records

- **Security**

The security requirements deal with the primary security. The software should be handled only by the administrator and authorized users. Only the administrator has right to assign permission like creating new accounts and generating password. Only authorized users can access the system with username and password.

- **Maintainability**
- Backups for database are available.

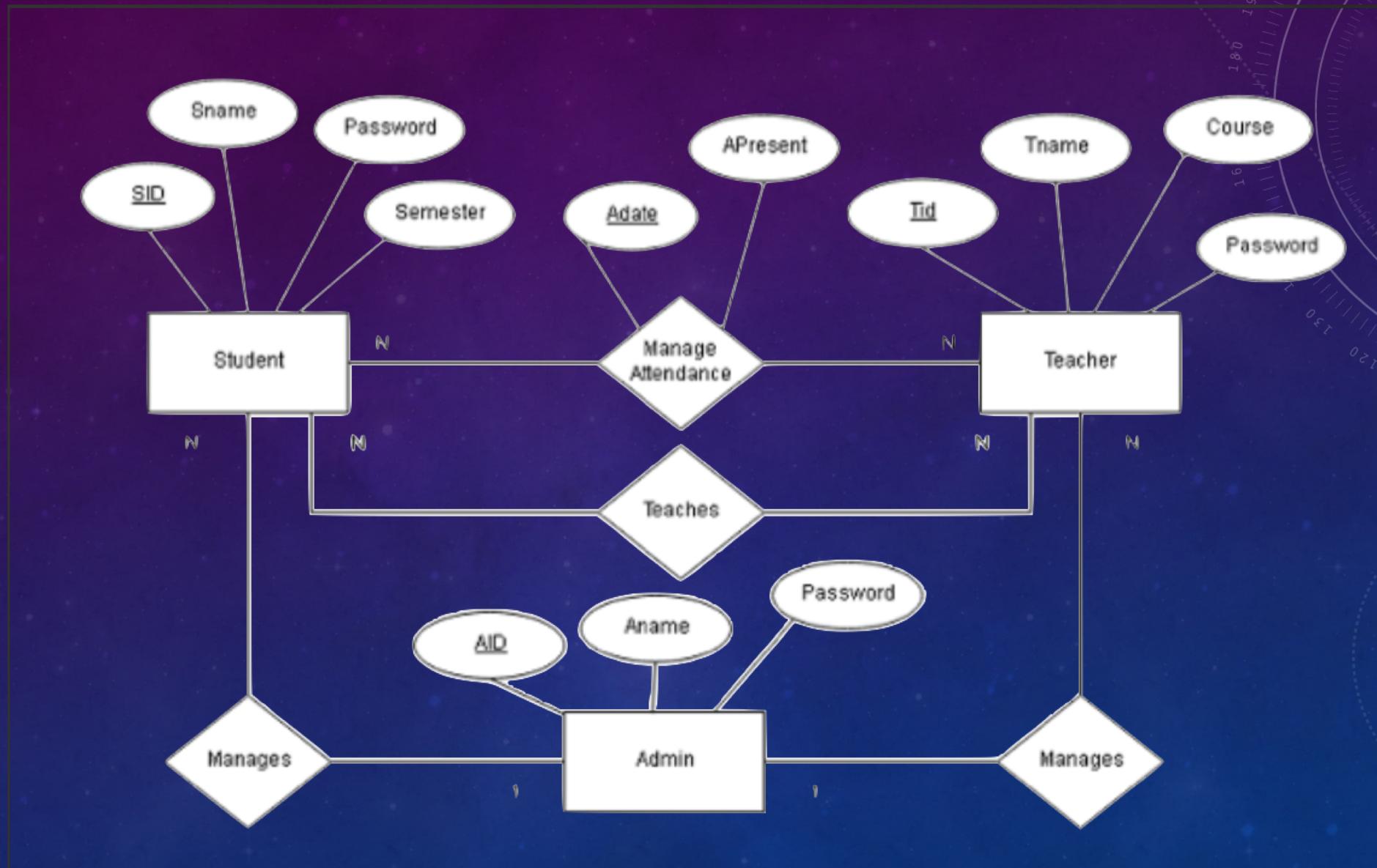
- **Portability**

The Software is a web-based application and is built in PHP and MYSQL so it is platform independent and is independent of operating system.

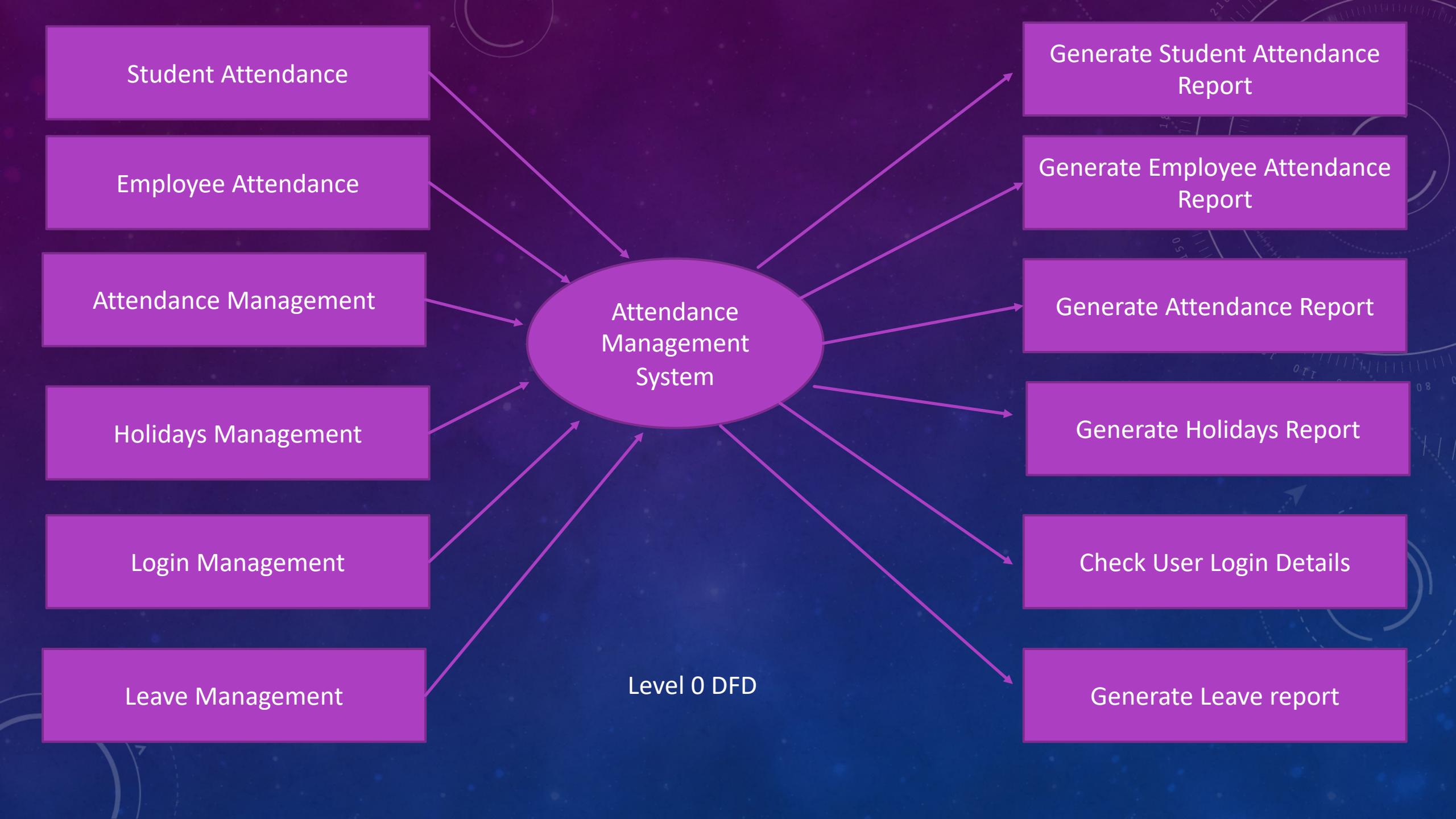
- **Design Constraints**

- This software provides security. The login form prevents the system from being misused by unauthorized users. Only an authorized operator will be granted rights to modify as per requirements. This software is also reliable and fault tolerant. The system developed is designed to handle invalid inputs. Since reliability is major area of concern the system has a backup to avoid data loss. The user should know the programming language very well that is used to develop a software.

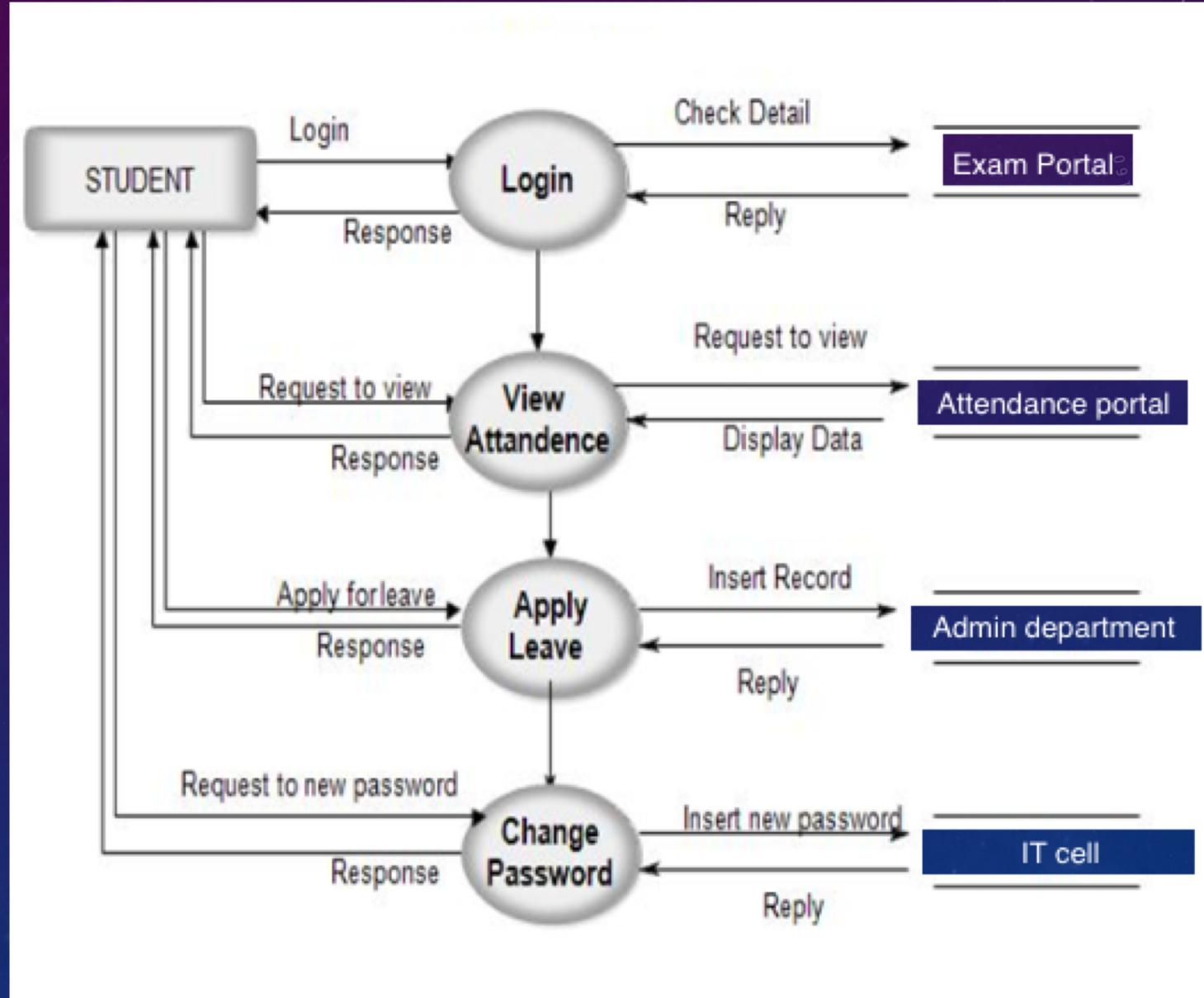
ENTITY-RELATIONSHIP DIAGRAM



DATA FLOW DIAGRAM

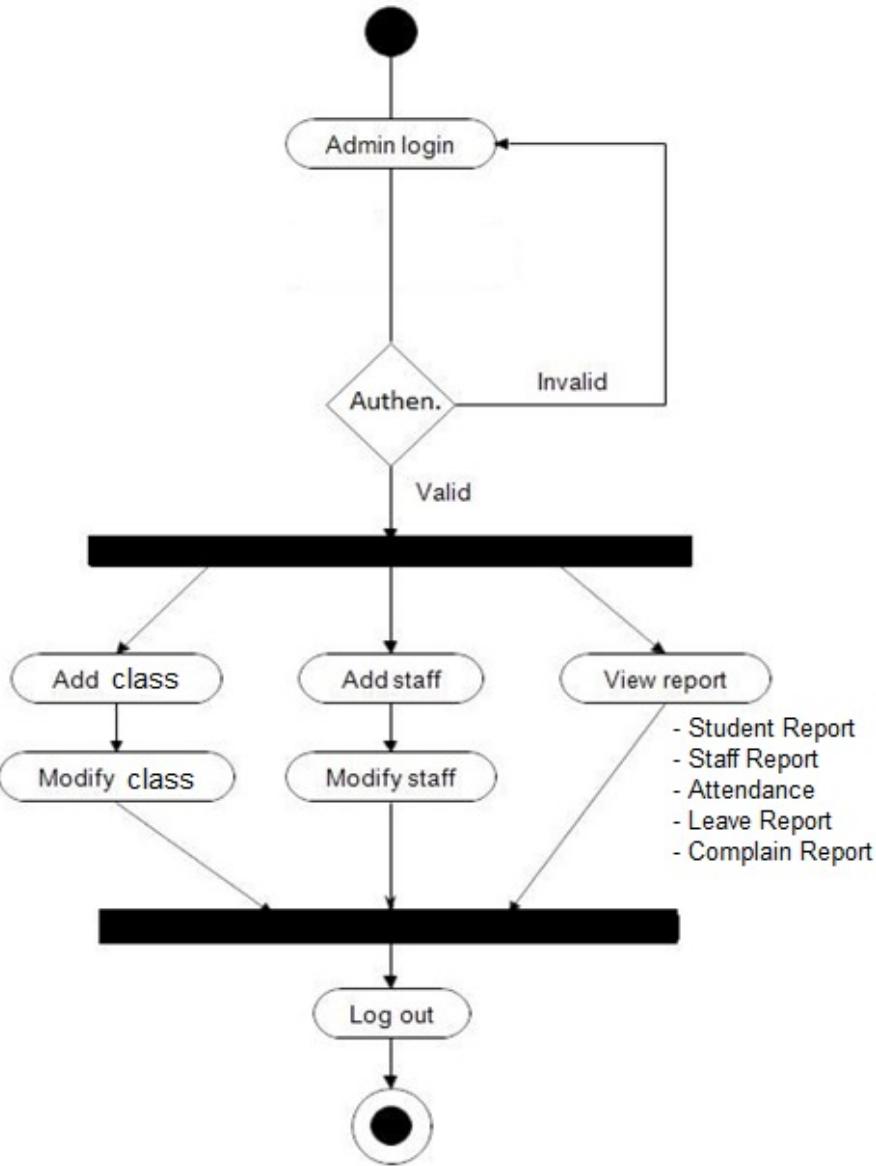


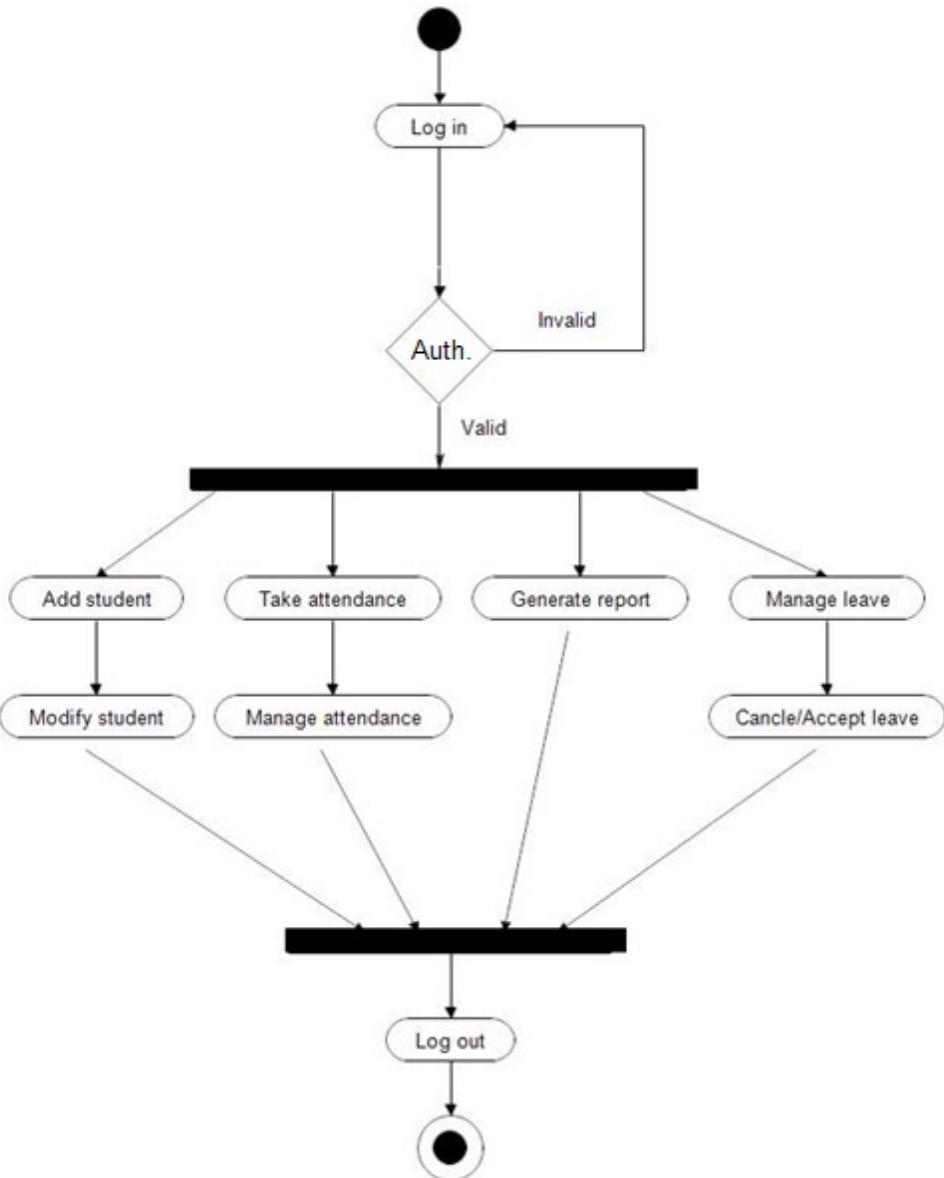
LEVEL 1 DFD:



ACTIVITY DIAGRAM

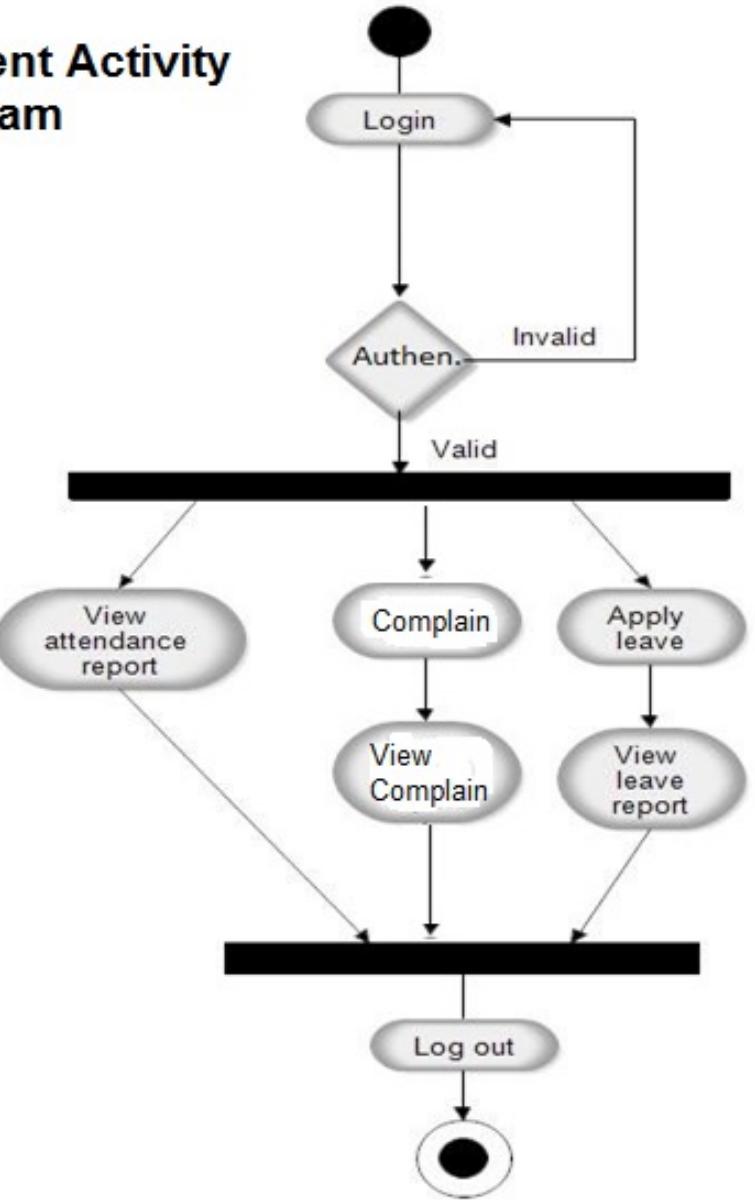
Admin Activity Diagram



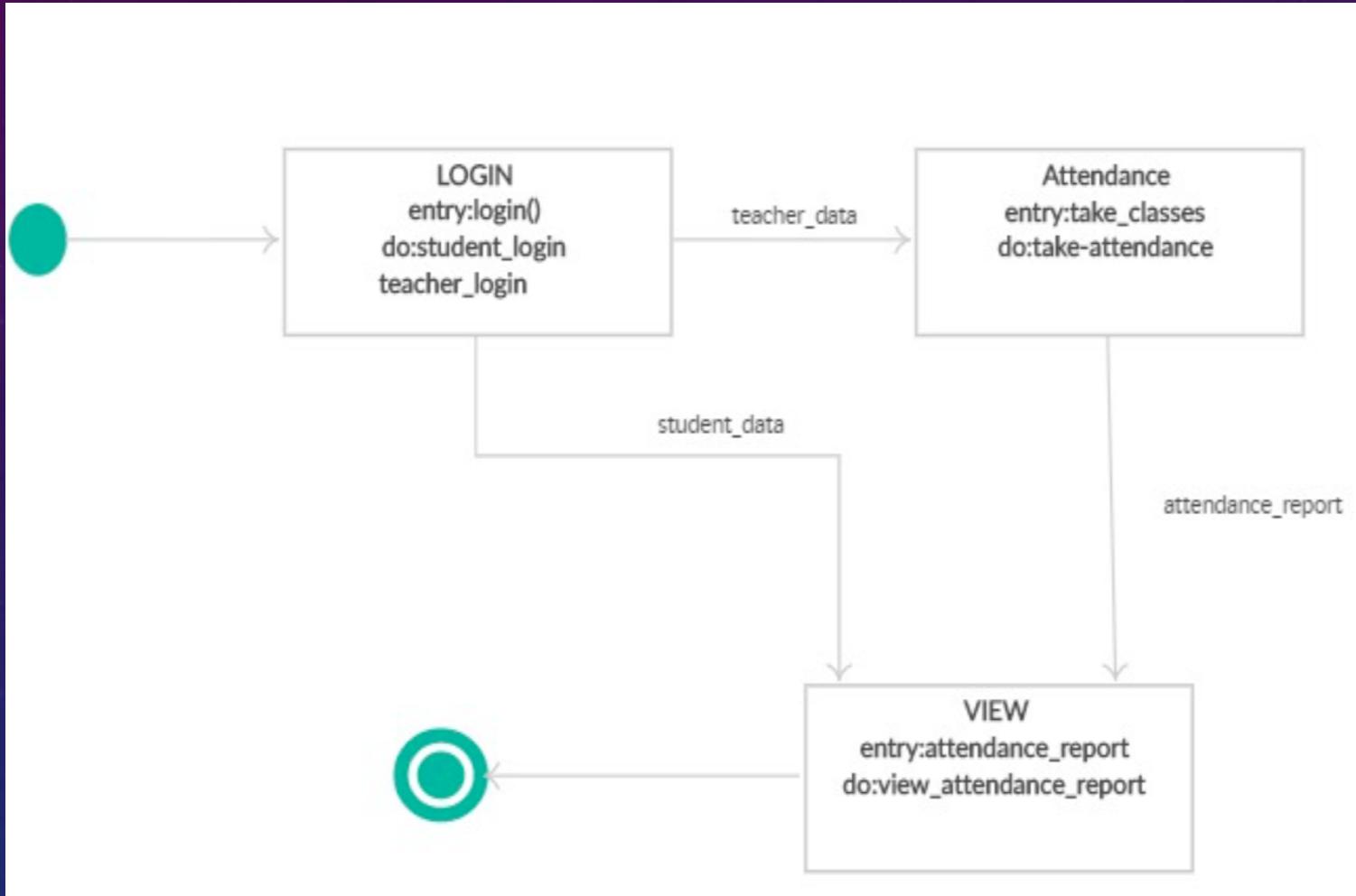


Staff Activity Diagram

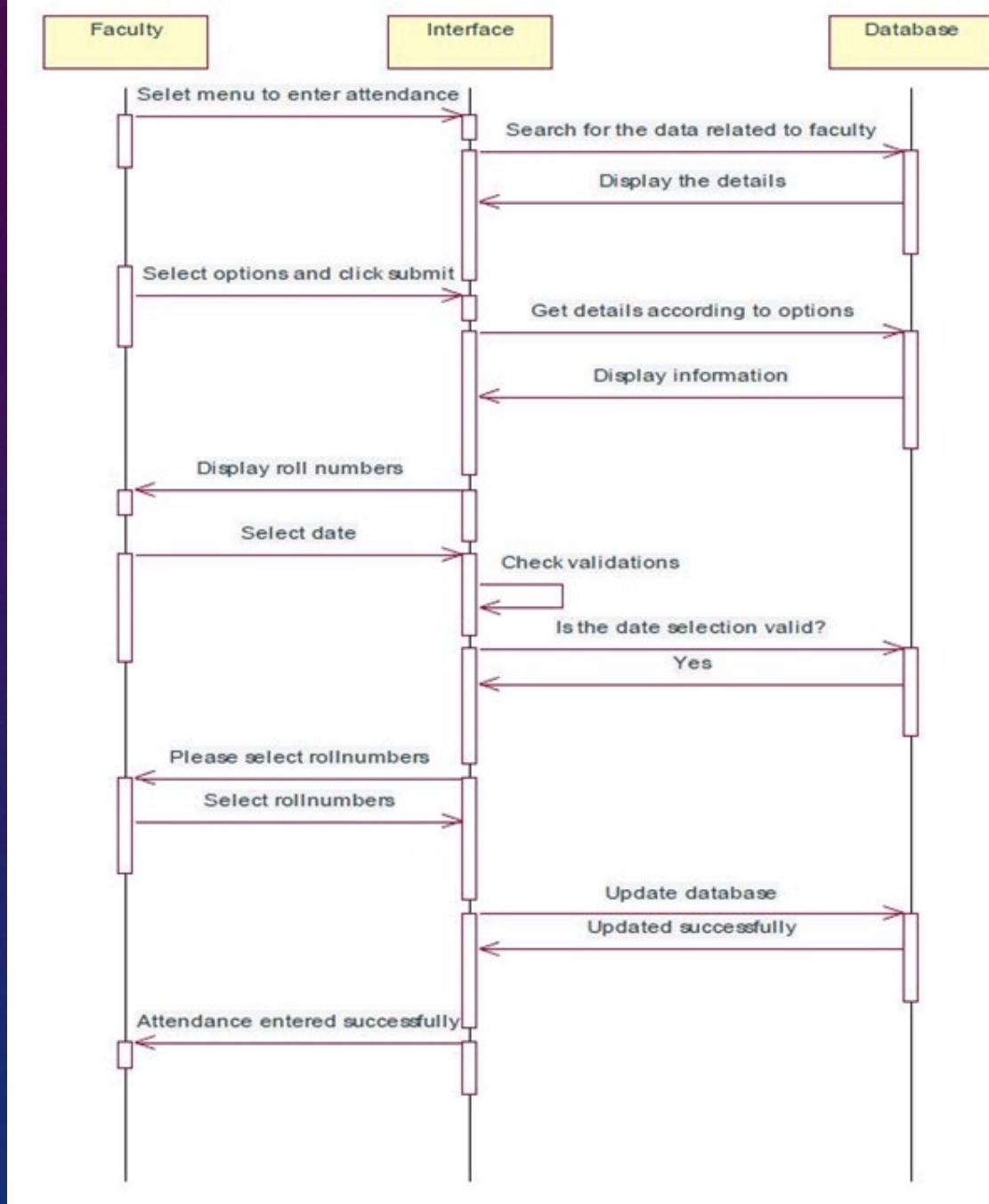
Student Activity Diagram



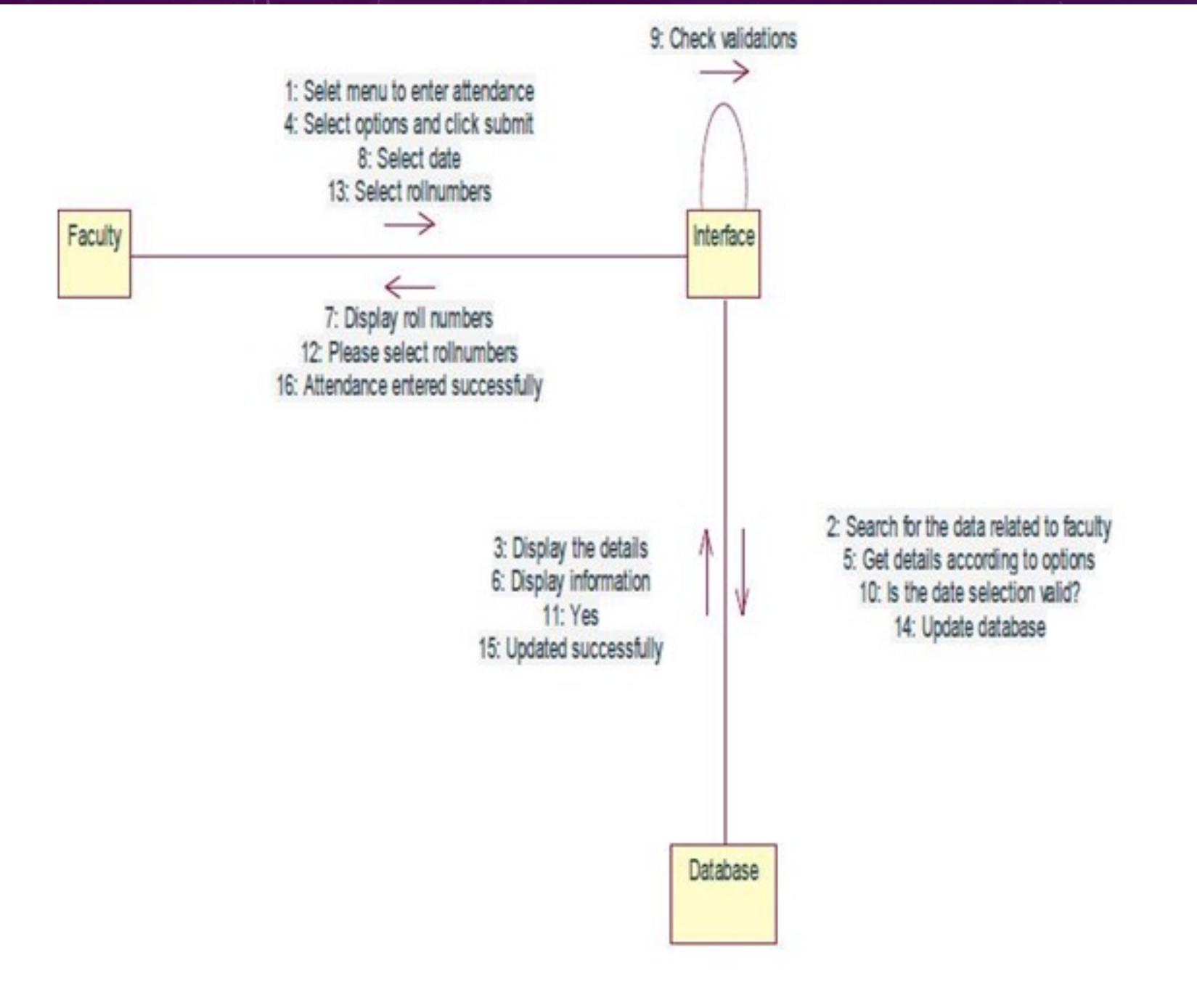
STATE CHART DIAGRAM



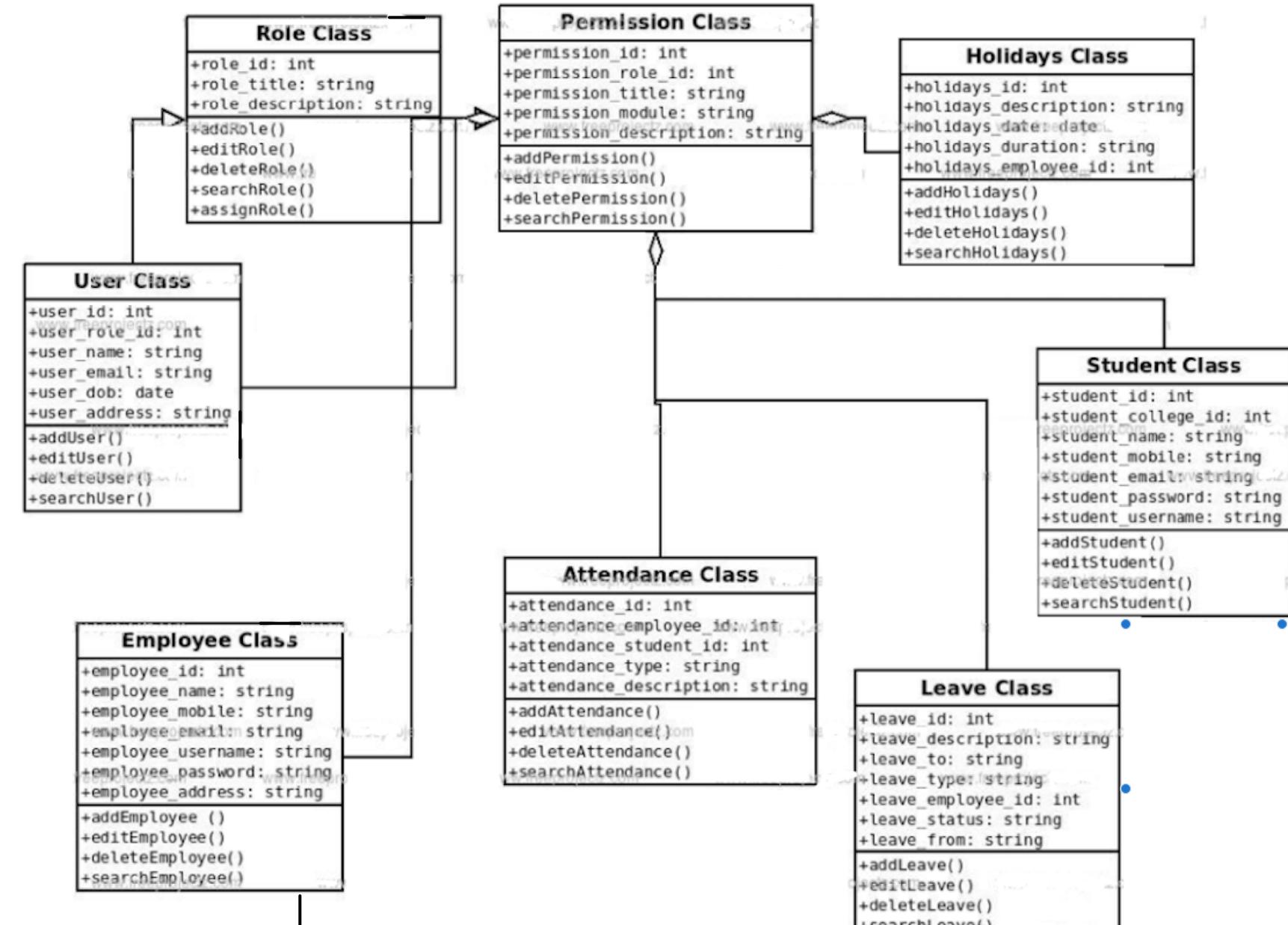
SEQUENCE DIAGRAM



COLLABORATION DIAGRAM



CLASS DIAGRAM



OUR CURRENT DEVELOPMENT IN THE PROJECT :

We have started to build the project using react native platform, so that we can release it on both IOS, android and web environments. Till now, we have decided upon the basic outlook of the app, including the welcome page, and login menu. We have also coded the basic modules for different authorizations of the naïve users and the administrators.

The Sign Up page



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Enter the details here

First_Name

Last_Name

email ID

Aadhar Card No.

Submit It

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Enter the details here

Sneha

Last_Name

Aggarwal

Submit It

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Enter the details here

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Elements Console Sources Network >

top Filter Default levels

[HMR] Waiting for update signal from WDS... log.js:24

▶ {FirstName: "Sneha ", LastName: "Aggarwal", emailId: "sneha059btece18@igdtu
w.ac.in", AadharId: "787e08"}

HOW WE PLAN TO EXTEND OUR PROJECT:

- We are next planning to create a pseudo database of the students and teachers, along with the administrators. Next we will develop message passing mechanism for the information that passes on between different modules.
- Also we will then look into the display of the attendance in form of pie charts, graphs, calculating the total days where we can actually take leaves before our attendance falls below 75%, etc.
- Last but not the least, once we are thorough with the entire working, we plan to work on a strict authorization procedure (in addition to the 2 way locking) so that the students can not manipulate their attendance.

TEAM -3

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THANKYOU 😊