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# C-DAC Portal with Integrated Quiz App



सी डैक  
CDAC  
PORTAL

**Submitted to  
CDAC Mumbai  
By  
Team- 13  
Batch- Sept21**

## **INDEX**

<b>TITLE</b>	<b>Page No</b>
<b>Acknowledgement</b>	<b>5</b>
<b>Abstract</b>	<b>6</b>
<b>Introduction</b>	<b>7</b>
<b>System Analysis</b>	<b>8</b>
<b>Purpose of document</b>	<b>9</b>
<b>Proposed System</b>	<b>10</b>
<b>System Requirement Specification</b>	<b>11</b>
<b>1.1 Overview</b>	<b>11</b>
<b>1.2 Study Of the System</b>	<b>11</b>
<b>1.3 Users Of the System</b> <b>1.3.1 Admin</b> <b>1.3.2 Faculty</b> <b>1.3.3 Student</b>	<b>11</b>
<b>1.4 Security and Authentication</b>	<b>12</b>
<b>1.5 Miscellaneous Features</b>	<b>13</b>

<b>Software and Hardware Requirement</b> <b>2.1 Software Requirement</b> <b>2.2 Hardware Requirement</b>	<b>14</b>
<b>System Design</b> <b>3.1 E-R Diagram</b> <b>3.2 UML Diagrams</b> <b>3.3 Use Case Diagrams</b> <b>3.4 Sequence Diagram</b> <b>3.5 Data Flow Diagrams</b> <b>3.6 Activity Diagrams</b>	<b>15</b>
<b>Future Scope and Limitations</b>	<b>28</b>
<b>Conclusion</b>	<b>29</b>
<b>Bibliography</b>	<b>30</b>

## LIST OF FIGURES

<b>FIG. NO.</b>	<b>TITLE</b>	<b>PAGE. NO.</b>
<b>1</b>	<b>E-R Diagram</b>	<b>15</b>
<b>2</b>	<b>Class Diagram</b>	<b>16</b>
<b>3</b>	<b>Use Case Diagram</b> <b>3.1 Admin Use Case Diagram</b> <b>3.2 Faculty Use Case Diagram</b> <b>3.3 Student Use Case Diagram</b>	<b>17</b>
<b>4</b>	<b>Sequence Diagram</b>	<b>20</b>
<b>5</b>	<b>Data Flow Diagrams</b> <b>5.1 Admin Data Flow Diagram</b> <b>5.2 Faculty Data Flow Diagram</b> <b>5.3 Student Data Flow Diagram</b>	<b>21</b>
<b>6</b>	<b>Activity Diagrams</b> <b>6.1 Main Flow Diagram</b> <b>6.2 Admin Activity Diagram</b> <b>6.3 Faculty Activity Diagram</b> <b>6.4 Student Activity Diagram</b>	<b>24</b>

## **ACKNOWLEDGMENT**

Success will be crowned to people who made it a reality but the people whose constant guidance and encouragement made it possible will be crowned first on the eve of success.

This acknowledgement transcends the reality of formality when we would like to express deep gratitude and respect to all those people behind the screen who guided, inspired and helped us for the completion of our project work.

We consider ourself lucky enough to get such a good project. This project would add as an asset to our profile. We would like to express our thankfulness to our project guide, "**Ashwini Jadhav Ma'am**" for his constant motivation and valuable help through the project work. We also extend our thanks to **CDAC Mumbai** members for their co-operation during the course.

Finally we would like to thank our team members for their cooperation to complete this project.

## **ABSTRACT**

CDAC-Portal is a web-based examination system where quiz is taken online i.e., through the internet or intranet using computer system. The purpose of CDAC-Portal is to take Semester Quizzes in an efficient manner and no time wasting for checking the paper. The main objective of CDACPortal is to efficiently evaluate the candidate through a fully automated system that not only saves lot of time but also gives fast results. Teachers can administer quizzes using the CDAC-Portal. The system will show result after the examination is finished. A teacher has control in the question bank and is supposed to make schedule for the quiz. The system carries out the examination and auto-grading for multiple choice questions which is fed into the system. Administrative control of the whole system is provided.

The main objective of the project on MCQ Quiz Applications is to manage the details of Students, Examinations, Marks, Courses, Papers. It manages all the information about Students, Results, Papers, Students. The project is totally built at administrative end and thus only the administrator is guaranteed the access. The purpose of the project is to build an application program to reduce the manual work for Marks, Courses, Papers.

## **INTRODUCTION**

Online Examination System refers to service as conduct online examination or test. It will use for students' progress evaluation using modern computer technology. It replaced the paperwork and overcome the outcomes of traditional way of examinations using paper or pen. It is web-based platform can be used by Admin at any remote location. Online Examination System is fully developed automated system is to efficiently evaluate the candidate progress that not only save the time of Examination Controller and also gives fast result.

The Administrator of the system has authority to propose tests or papers. It is cost effective and time effective. The candidate can login through proposed computer with their Enrolment number matching the details to the student's database, then they can take the exam. Candidate can give their course's examination in specific number of questions. The questions can be appeared in MCQ (Multiple Choice Questions)

## **SYSTEM ANALYSIS**

The Proposed CDAC-Portal Integrated with Quiz-APP has the following features.

- Only registered Students and Professors can access the system.
- Students can view and download study materials (notes, ppts).
- Students are allowed to download the resources • Admin can Activate/Deactivate Students and Professors.
- Faculty can create various quizzes.
- Faculty can upload the recordings and students can access them on the portal.
- Faculty can evaluate the progress of students.
- Students are able to check their progress by analyzing graphs of results.



## **Purpose of the Document**

The purpose of this document is to enlist the software requirements and specifications for the 'CDAC-Portal Integrated with Quiz-APP' which will be very beneficial for institutes to conduct online examinations, student management and make the education resources available on portal for students.

The proposed system includes the following.

This document is intended for developers, users, testers and project managers for the purpose of understanding the design of systems in terms of different perspectives. Further, this document contains functionalities and characteristics of the system along with the working environment. It also includes other information related to systems such as external interface requirements, features and other non - functional requirements.

### **Team List:**

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## **Proposed System**

To provide official & legal links of the website from which user (students) can download resources & study materials of relevant course.

Only accessible after registering to that specific website.

To provide interaction between professor & students (users).

Students can download the soft copy of study materials.

Faculty can interact directly with students via notice and email options.

Also there will be a recordings sections where session recordings will be available to students.

The main objective of this system is to provide better convenience to students and faculty, and to provide a platform to manage everything at one single place.

# **SYSTEM REQUIREMENT SPECIFICATION**

## **Overview**

We have designed this website with the purpose of allowing the students to give exams and view their results. This site is an attempt to remove the existing flaws in the manual system of conducting exams. Students are provided the flexibility to choose among different types of aptitude and programming language tests.

## **Study of the system:**

In the flexibility of uses this interface has been developed keeping graphics concepts in mind, associated through a browser interface. The GUI's at the top level has been categorized as follows

1. Administrator Interface Design.
2. User Interface.
3. Security Authentication.
4. General end-users.

The administrative user interface will maintain the different users, the interface helps the administration with all the access states like which users should access the system and which shouldn't. And the statistics of the system in difference strategies.

## **User of the system:**

1. Administrator
2. Faculty
3. Student

## **Administrator:**

1. View details of students and faculty.
2. Can activate and deactivate accounts.
3. Can check the information of uploaded resources

## **Faculty:**

1. Faculty can upload resources
2. Can upload the recorded sessions on portal.
3. Can broadcast notices via mail or on portal.
4. Can add assignment and evaluate students' progress.
5. Faculty can create quiz of various modules.

## **Student:**

1. Students can attempt the quizzes of various modules
2. Student can download the material.
3. Can view his scores details and progress in form of charts.
4. Students can upload the assignments and edit the profile.

## **Security & Authentication:**

1. Users Login and Logout.
2. View personal Profiles, Update profiles.
3. Change Passwords through Email OTP verification
4. Forgot Password.
5. MD5Hashing.

### **Miscellaneous Features:**

- 1.Dark mode
- 2.Google drive API
- 3.Invigilation through live Webcam

## **Software Requirement and Hardware Requirement**

### **Software Requirements:**

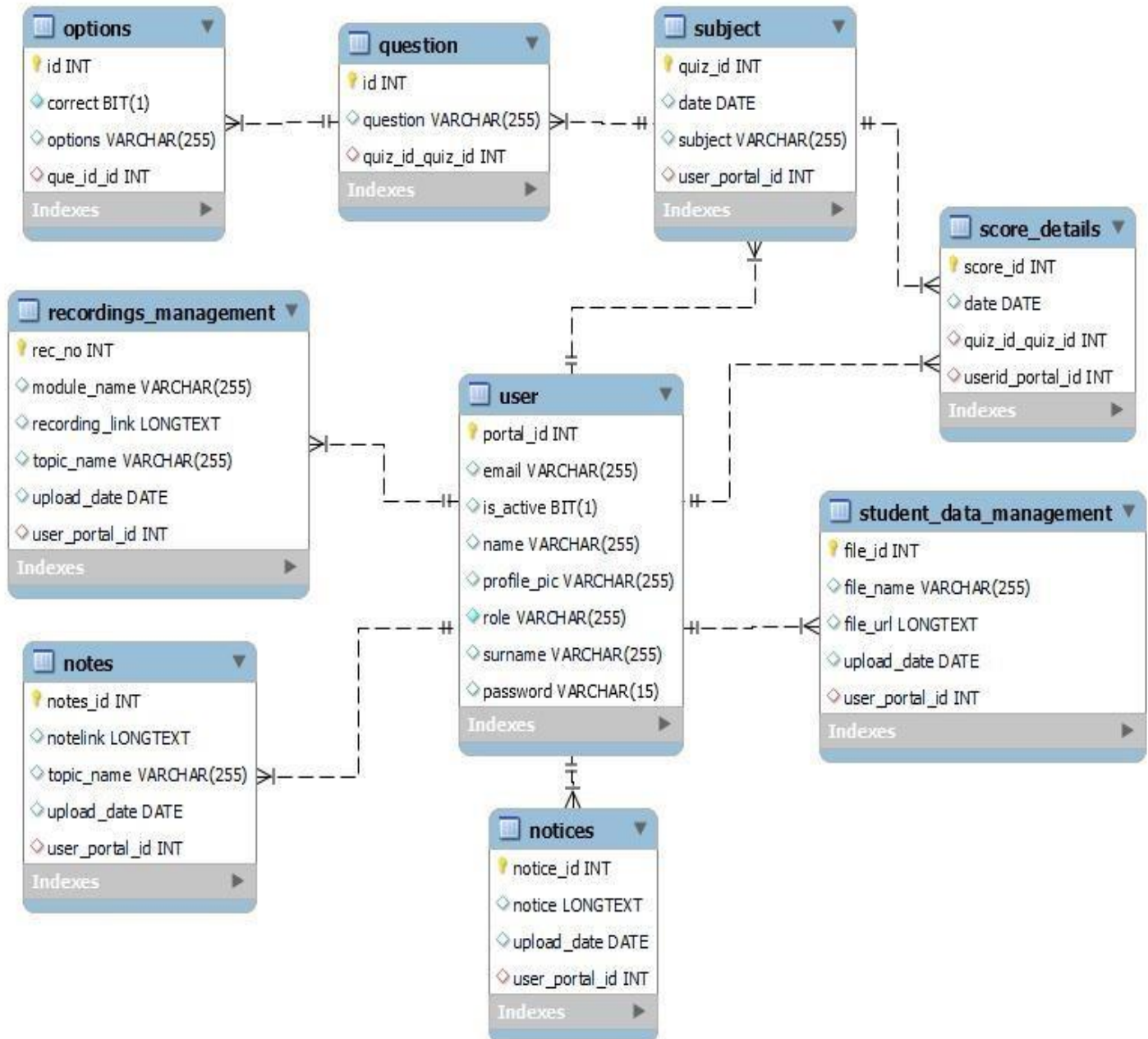
- Technology : J2SE and J2EE, Hibernate  
Spring Boot
- Web-Technologies : React, CSS, JavaScript
- Web Server : Tomcat 9.0
- Java Version : JAVA Version 11
- Backend Database : MySQL 8.0
- IDE : Eclipse

### **Hardware Requirements (Minimum):**

- Processor : Pentium IV
- RAM Capacity : 1GB
- Hard Disk : 160GB

# SYSTEM DESIGN

## 1.E-R DIAGRAM



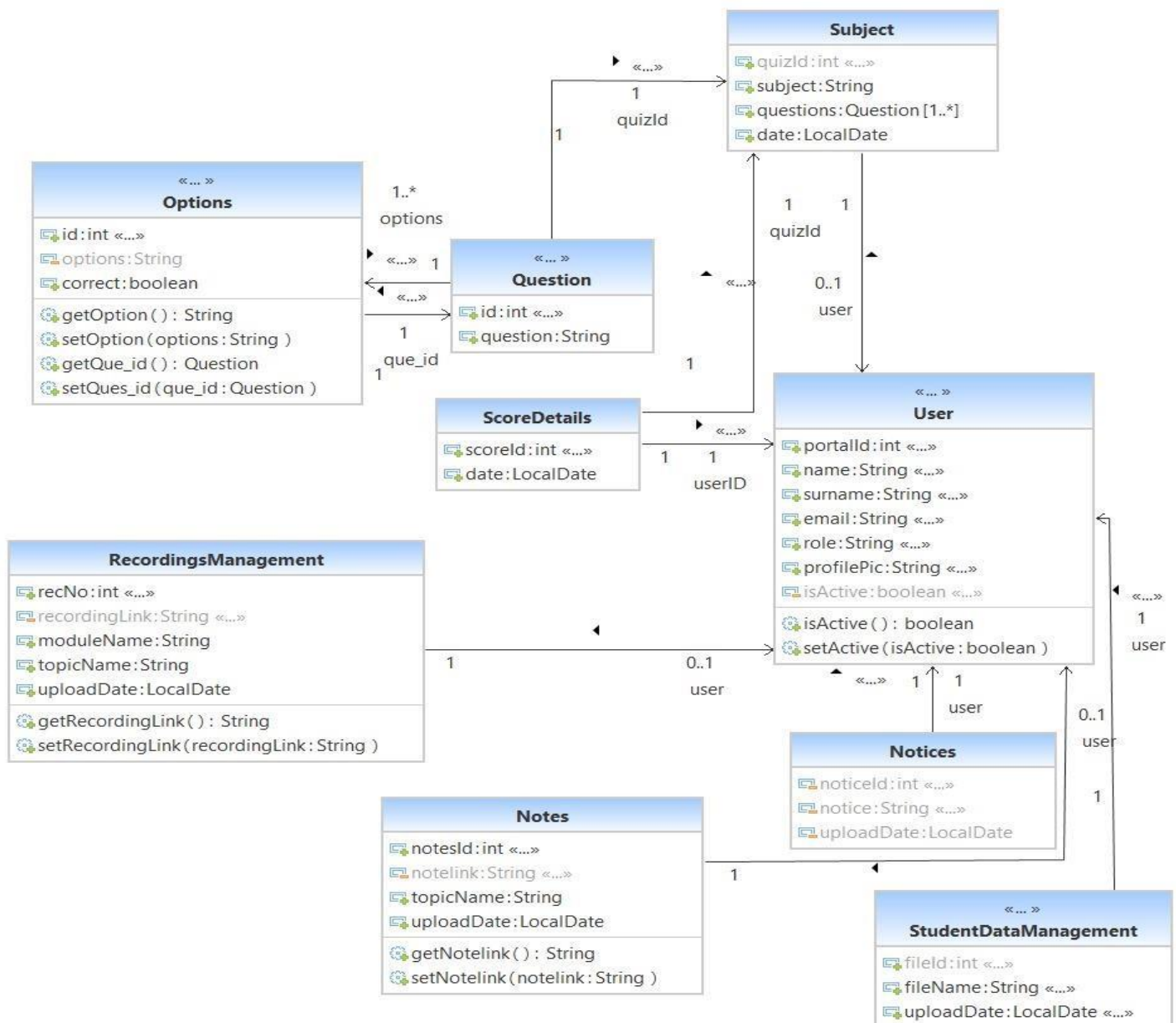
## 2.UML DIAGRAMS

### UNIFIED MODELING LANGUAGE DIAGRAMS

The unified modeling language allows the software engineer to express an analysis model using the modeling notation that is governed by a set of syntactic semantic and pragmatic rules.

A UML system is represented using five different views that describe the system from distinctly different perspective. Each view is defined by a set of diagram, which is as follows.

### 2.1. Class Diagram

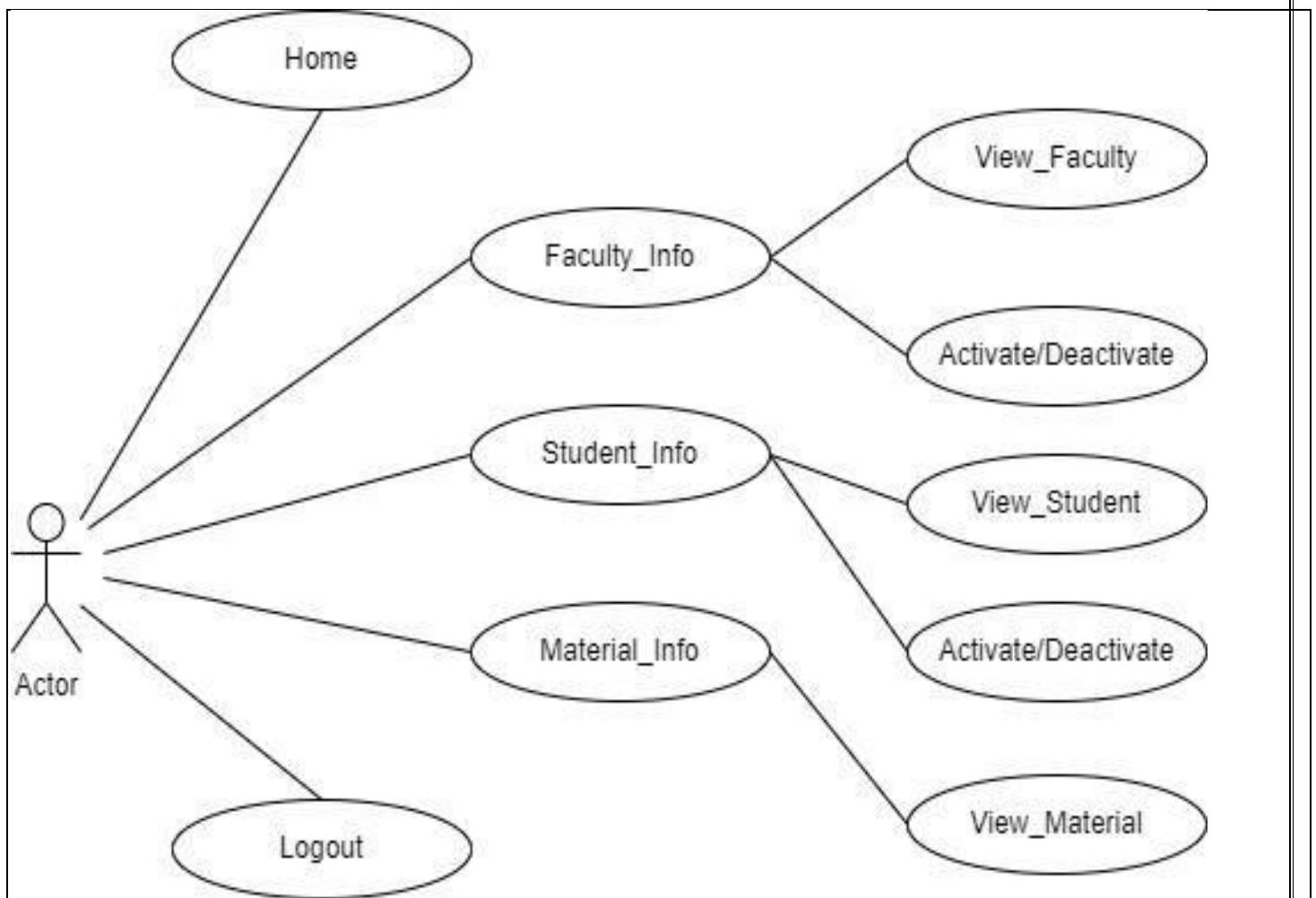




## **2.2.2.USE CASE DIAGRAMS**

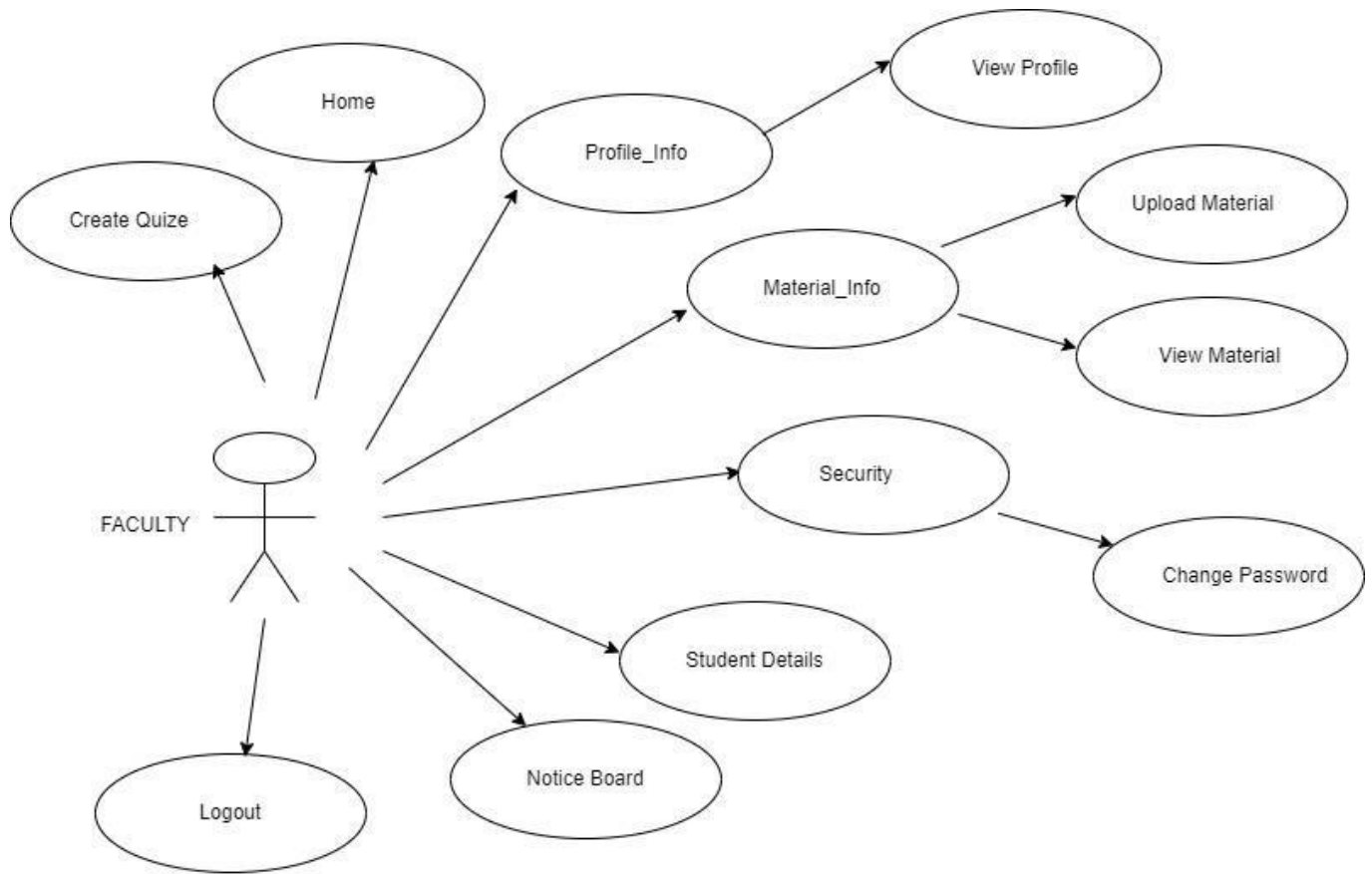
**System (Base Level) UCD:**

### **2.2.1. Admin**



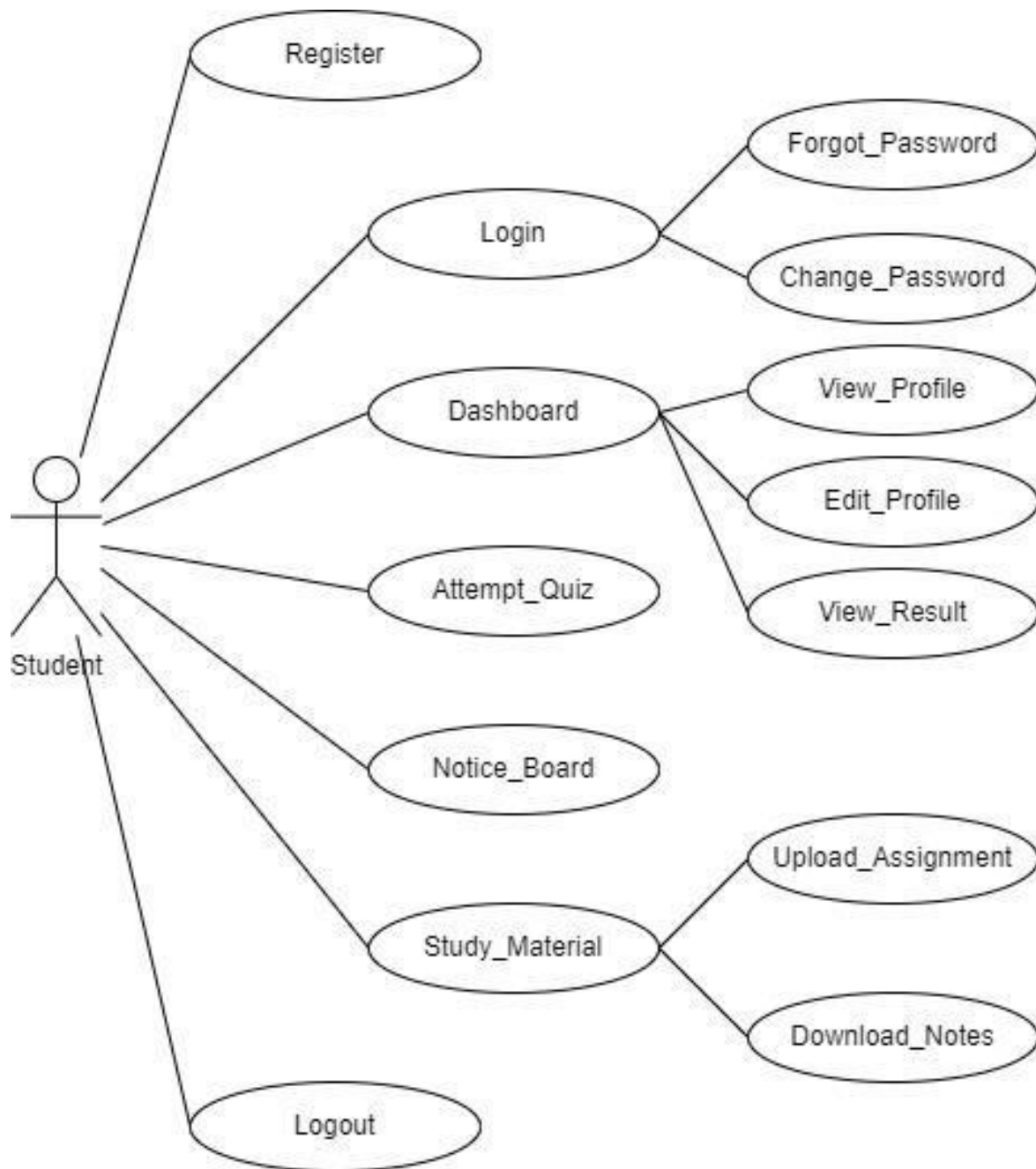
**Figure- Admin Use Case Diagram**

### 2.2.2. Faculty



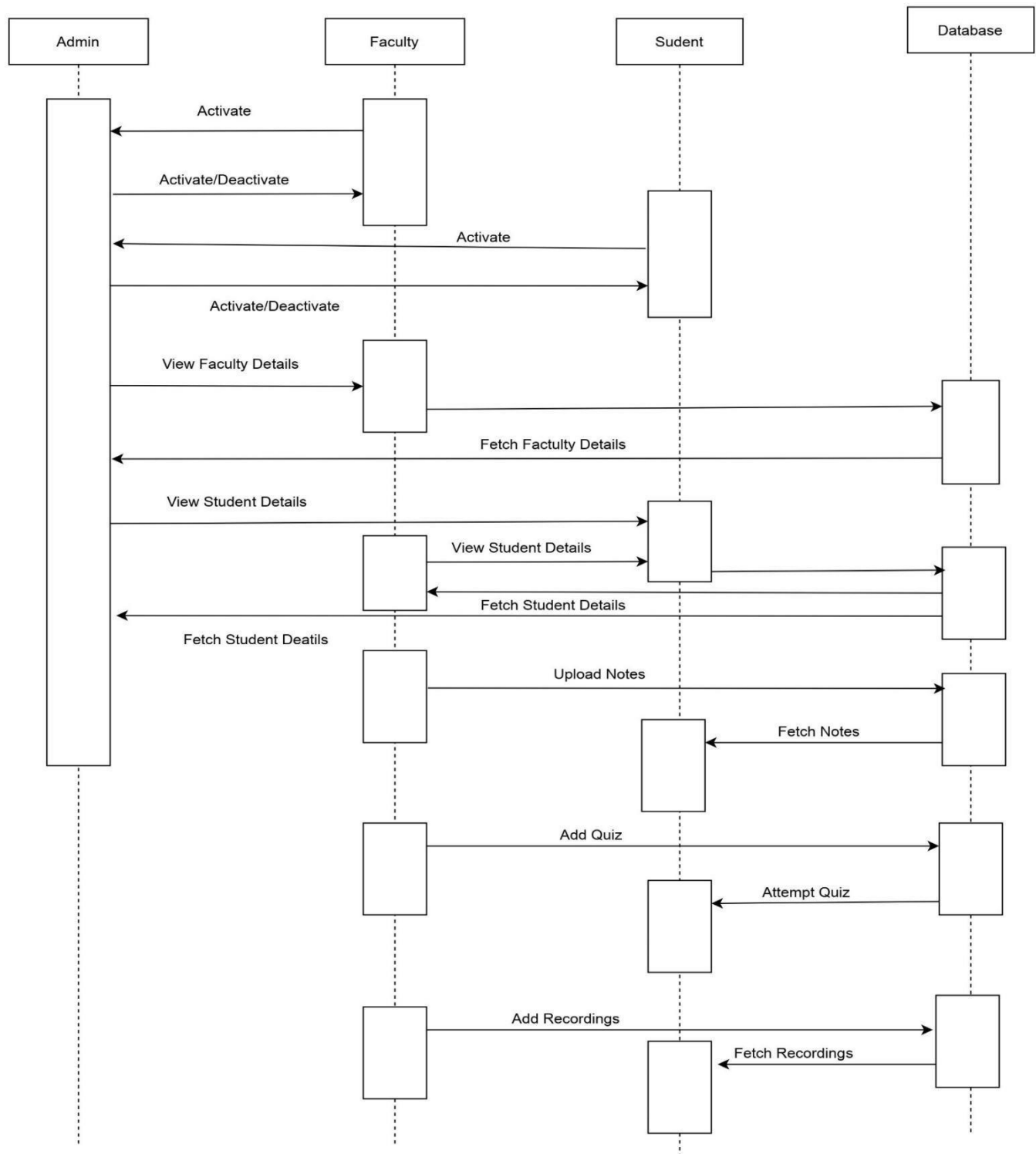
**Figure- Faculty Use Case Diagram**

### 2.2.3. Student



**Figure- Student Use Case Diagram**

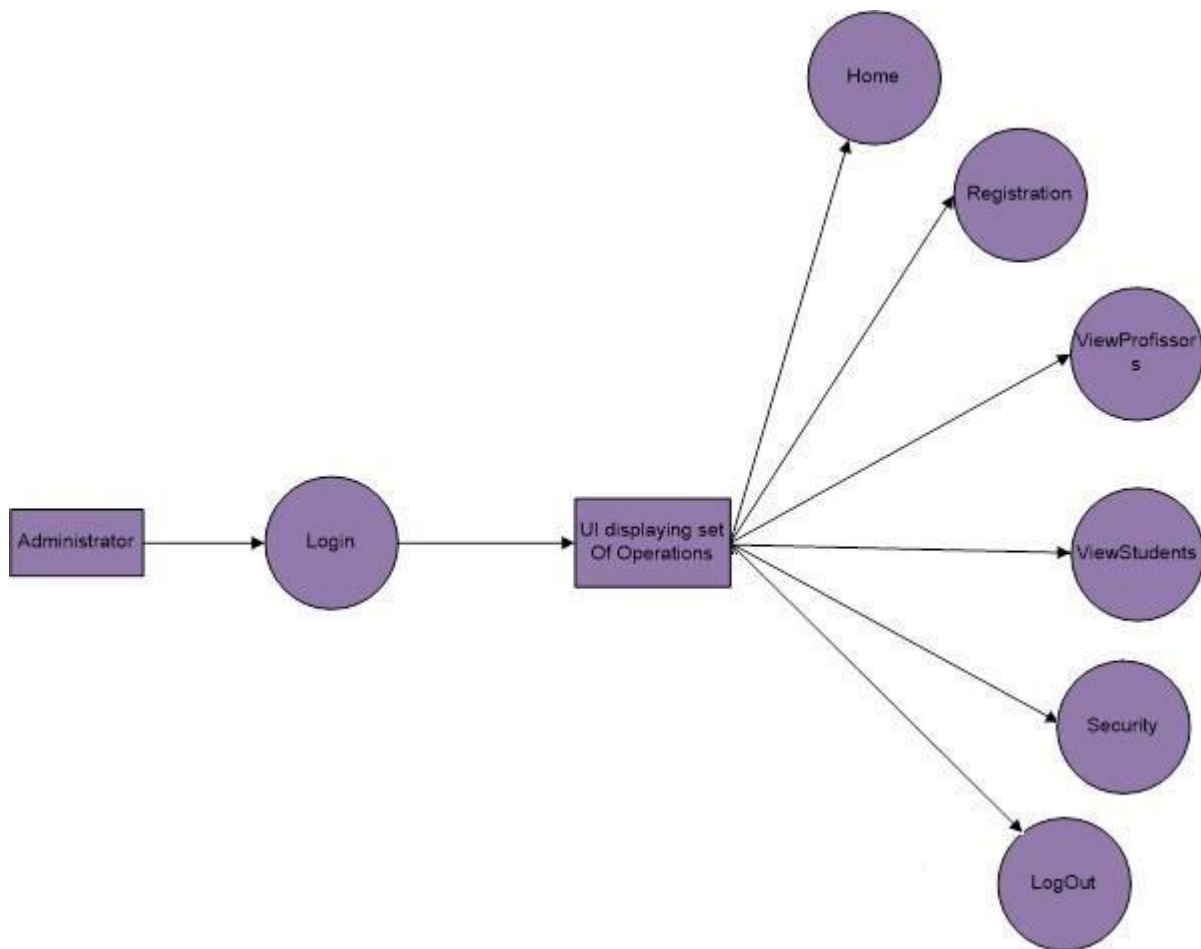
## 2.3. SEQUENCE DIAGRAMS



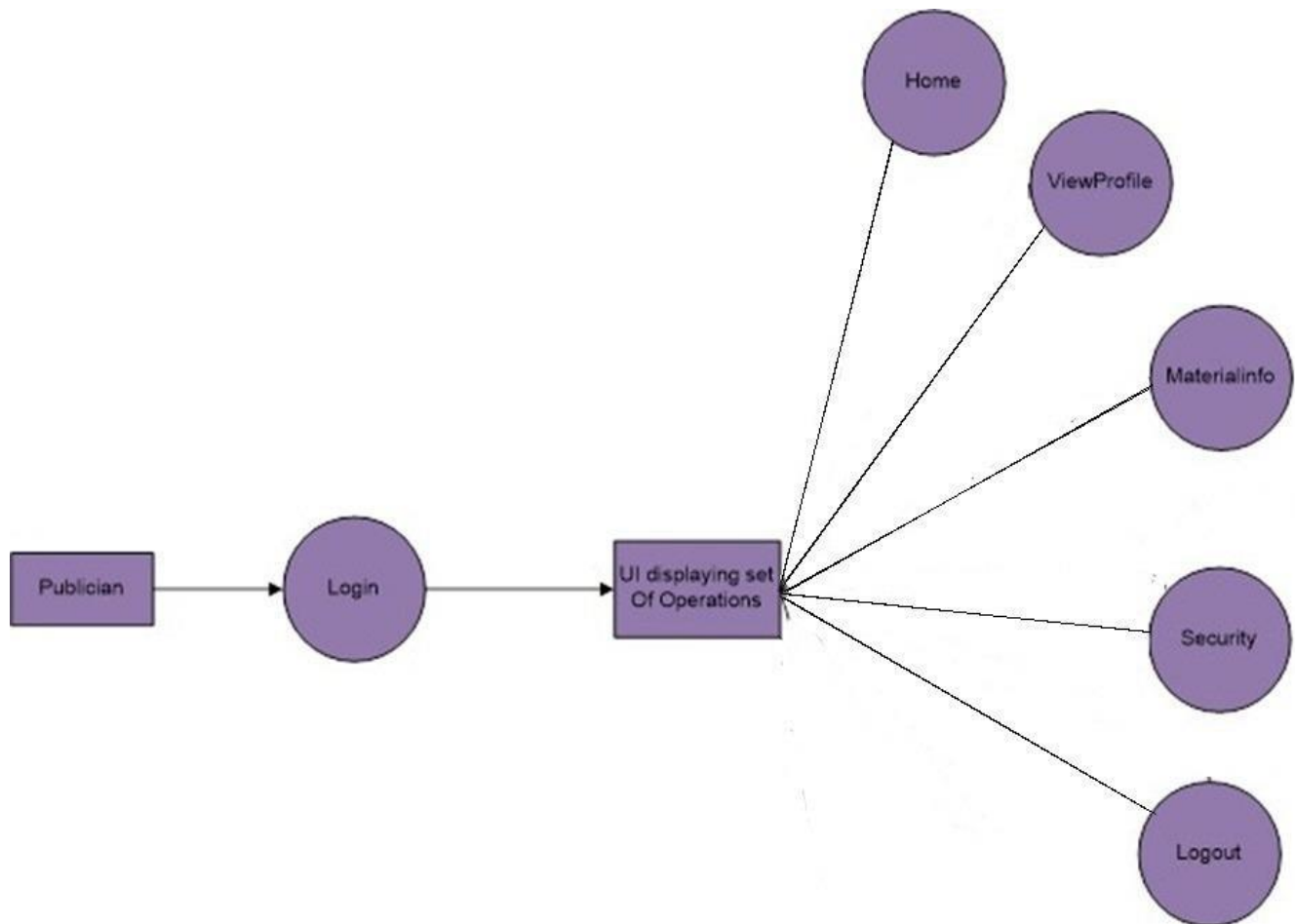
### Figure- Sequence Diagram

## 2.4.DATA FLOW DIAGRAMS

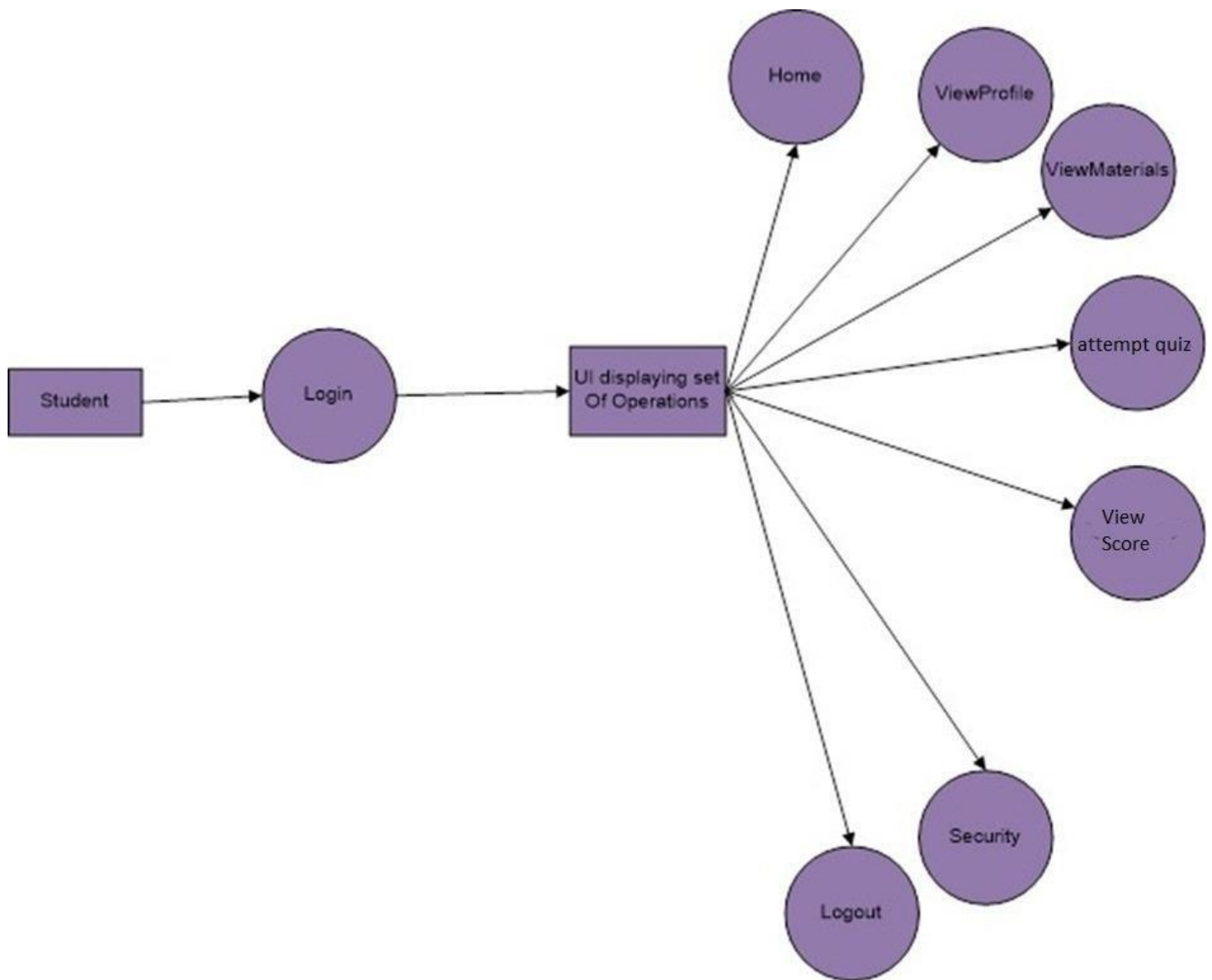
### 2.4.1. Admin DFD:



### 2.4.2. Faculty DFD:

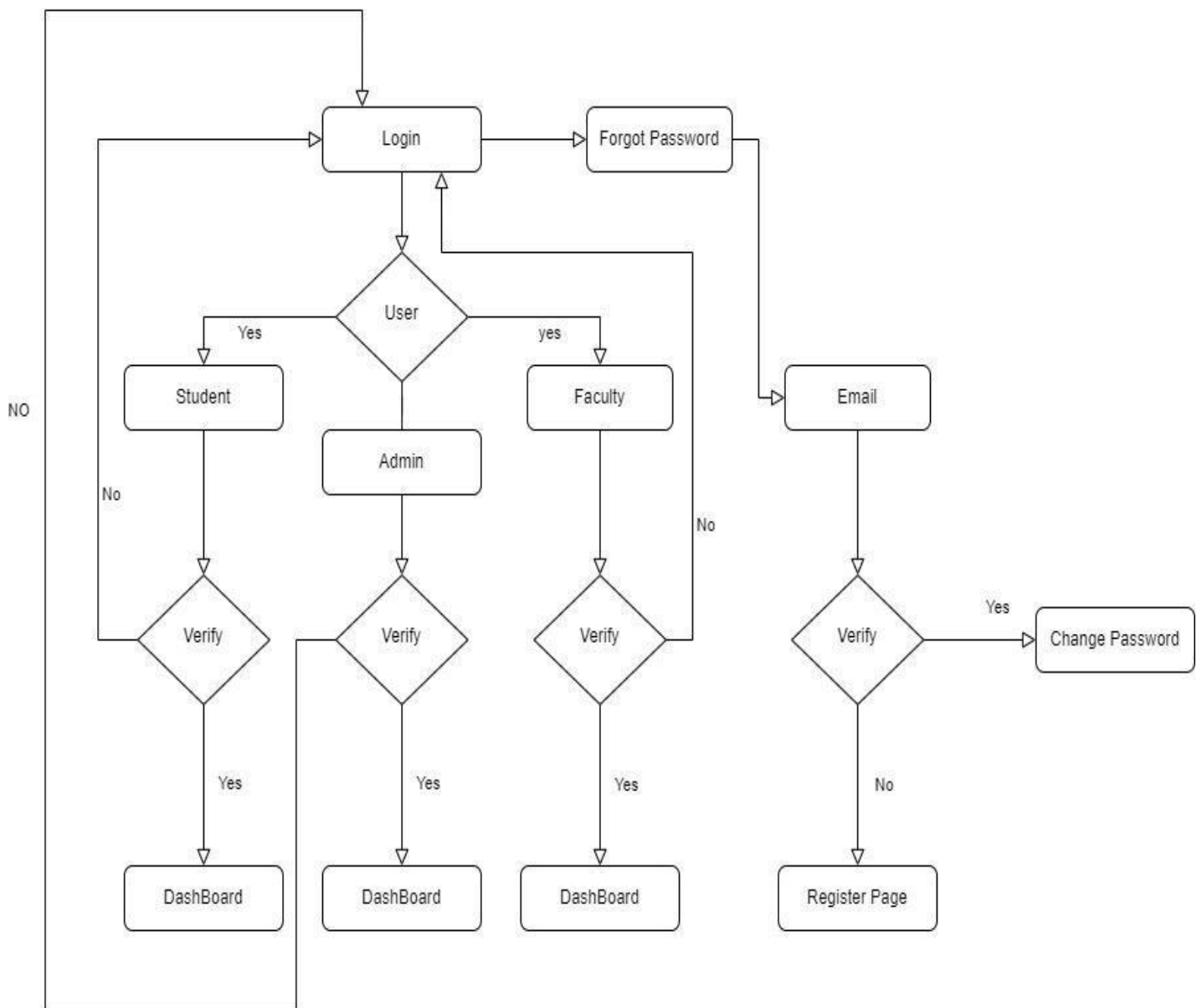


### 2.4.3. Student DFD:



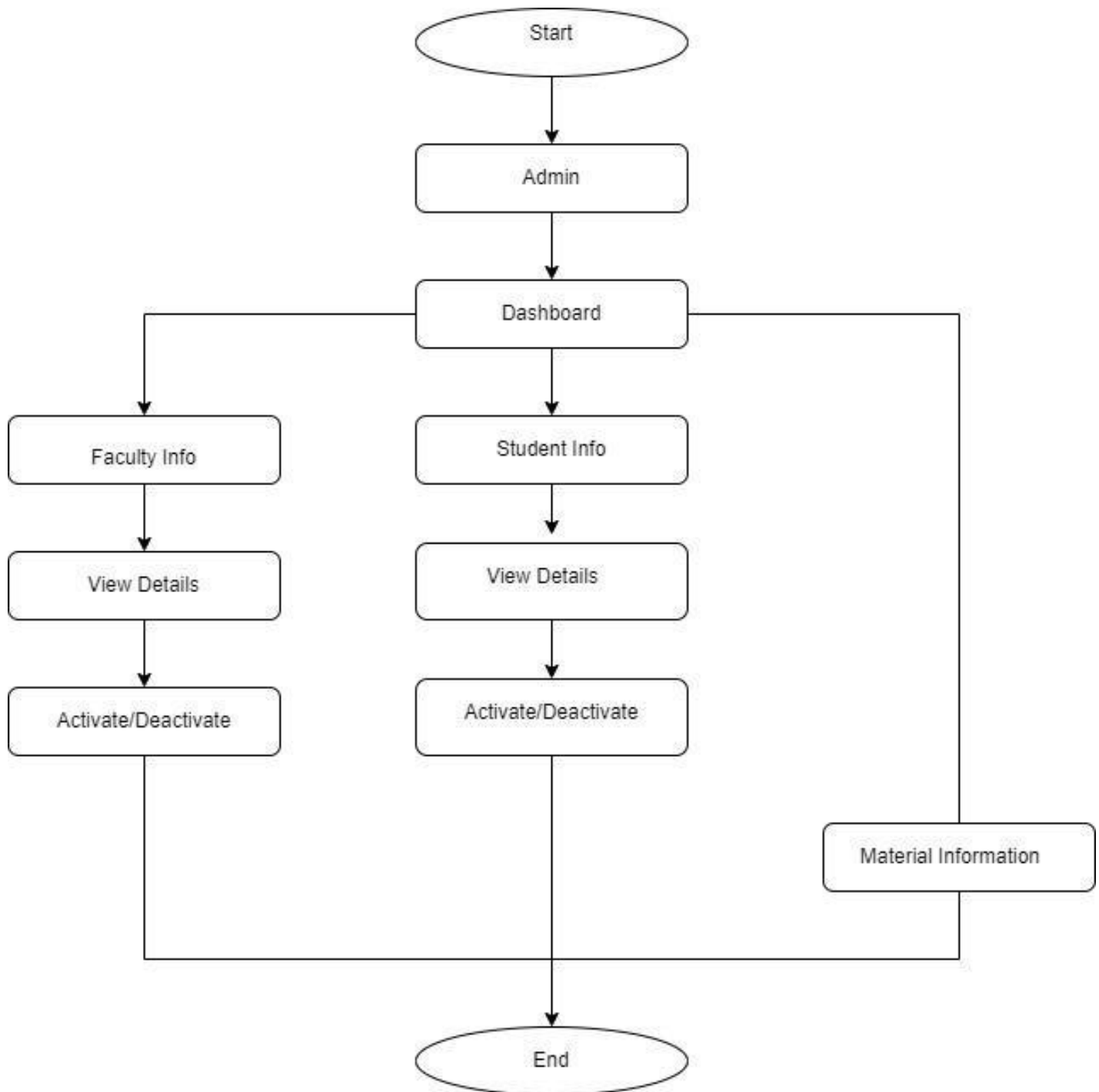
## 2.5. ACTIVITY DIAGRAMS

### 2.5.1. Main Flow Diagram

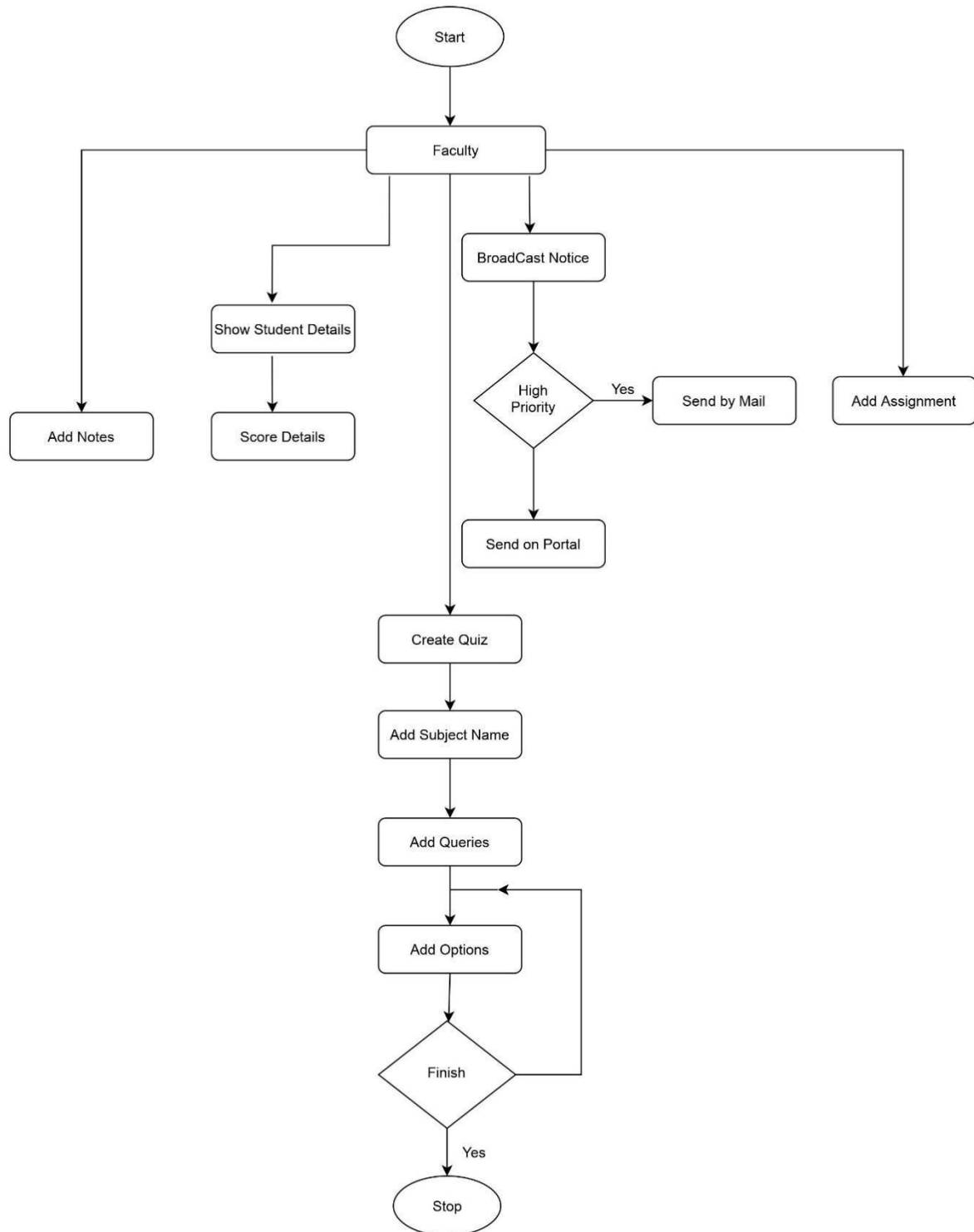




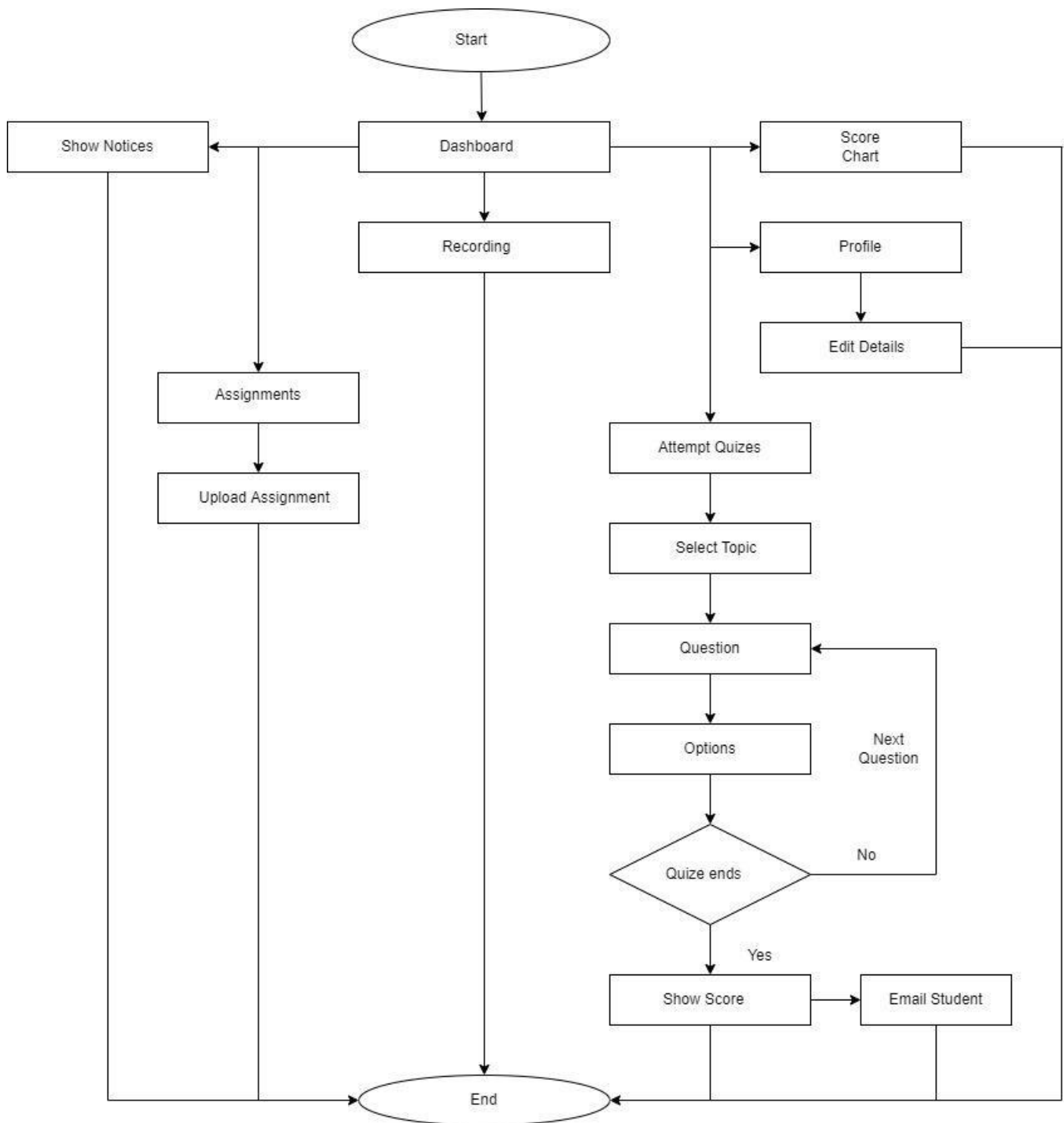
### 2.5.2. Admin Activity Diagram:



### 2.5.3. Faculty Activity Diagram:



### 2.5.4. Student Activity Diagram:



## **FUTURE SCOPE AND LIMITATIONS**

Scope of this project is very broad in terms of testing the knowledge of students and in the future, we have plan to extend it to support subjective type of questions with more functionality.

- We will track facial movements to avoid any misconduct in examination by implementing **OPEN CV-JAVA**.
- Auto-submission of test according to allotted time.
- Various themes will be available in future updates.
- Students will be able to put queries on website.
- Faculty can keep the discussion sessions to resolve students queries.
- Faculty can arrange group meetings and virtual classroom.
- Attendance management.

## **CONCLUSION**

Providing an online comprehensive solution to manage quiz system where the individuals are participating in a team. The purpose of the system is to develop Online Examination System., used to test the Domain knowledge of the students, and employees with respect to the particular technology. The manual procedure used for conducting exam is time consuming process and error prone due to human limitations. The System purpose is to completely automate the old manual procedure of conducting exam to Online Web Based Examination System. A large number of participants, with instant results of your online quiz (for the creator as well as the participants), a better overview, you're able to randomize your questions and set a timer. That all without the need of an instructor.

## **BIBLIOGRAPHY**

- (1) Java Complete Reference by Herbert S.
- (2) Database Programming with JDBC and Java by George Reese.
- (3) <https://Draw.io/>
- (4) Wikipedia, URL: <http://www.wikipedia.org>.
- (5) <https://reactrouter.com/>
- (6) Google, URL: <http://www.google.co.in>
- (7) <https://start.spring.io/>
- (8) <https://Javatpoint.com/>
- (9) <https://www.geeksforgeeks.org/>
- (10) <https://mysqltutorial.org/>