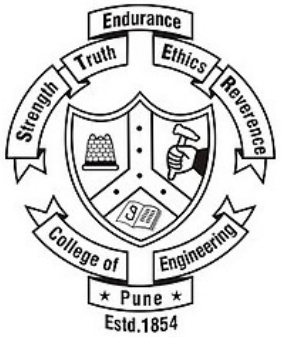

College of Engineering Pune

Software Engineering
Mini Project Stage-II

Project Report

EDUCATIONAL INSTITUTE GOVERNANCE SYSTEM

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Problem statement

- Every educational institute has to go through the chaotic process of gathering information of every student and faculty. They have to use different web portals for that purpose which is a tedious task.
  Our platform will deal with all the day-to-day matters of governance of the institute. The matters included will be related to personal and academical information of student and it will also include the professional information of teachers as well.

Objectives

1. To provide the Institute all the Facilities .
2. To provide Student-Institute connections.
3. To provide Institute the facility of Registrations and Maintenance of data of faculty and students.
4. Data will mostly include - information of students which will be personal information and also will be academic. information and professional information of teachers will also be included.
5. To provide Analytic of the performance of particular student.

Motivation

- With an aim to solve of problem every Educational Institute to find single platform to get all required functionality they need to get a better management of their day-to-day work , we will provide user-friendly platform where user can efficiently govern their institute properly.

MODULE

Module/Libraries that we will be using in this project are as follows:

- Tkinter
  - Tkinter is the de facto way in Python to create Graphical User interfaces (GUIs) and is included in all standard Python Distributions. In fact, it's the only framework built into the Python standard library.
- MySQL
  - MySQL is an open source relational database management system. It is used to Manage Large Data effectively.

Summary of SRS

1.1 Product Perspective

As there are many platforms available so it is becoming difficult for Educational Institutes to manage the day-to-day affairs of the Educational Institute. We provide them the best way to manage all the affairs under one framework. So that it will become easy for the Educational Institutes to manage all affairs easily.

1.2 Operating Environment

VS CODE and other text editors
Ubuntu 20.04

Windows 10, 11
Project will work on other operating systems also.
Front End Tkinter module python
Back End Application Software's: - MySQL(database)

1.3 Design and Implementation Constraints

Hardware Constraints:

1. Regular desktop/PC

2. Minimum 4 GB RAM and decent CPU

Software Constraints:

1. Frontend

Tkinter

2. Backend

MySQL database

1.4 User Classes and Characteristics

There are two modes:
1)Admin : Can manage all the institute related affairs.
2)Student : Can only access their own information.

1.5 System Feature 1 - Admin Access:

1.5.1 Description and Priority

Admin will have the most access to the framework and the database of the Institute.This is our highest priority feature which will help the Institute for there management.

1.5.2 Stimulus/Response Sequences

In this Feature the Institute will have the utmost reliability as the framework has highest priority of work for it.

1.5.3 Functional Requirements

Tkinter module of Python to manage the Front end of the Framework and SQLite for managing the Data of all the access of Admin.

1.6 System Feature 2 - Student Access:

1.6.1 Description and Priority

Student will be having authority to access there Personal and Academics details.This is our Medium priority after the admin of the institute.

1.6.2 Stimulus/Response Sequences

In this Feature the Students will be able to track their information in their respective login.

1.6.3 Functional Requirements

Frontend(Tkinter) will help the student to retrieve their data from the Database(SQLite) easily.

1.7 Other Nonfunctional Requirements

1.7.1 Performance Requirements

We will try to follow Gantt chart as per deadline so that we can achieve our performance requirements in efficiency, effectiveness and productive way. Apart from this path of Gantt chart we need a performance requirement as skills, scope and stability for productive completion of project.

1.7.2 Security Requirements

We will be trying to protect the data of the user by enabling the encryption.We will be ensuring the Passwords and other login Methods are secure enough for both Admin and the Students. In working Framework, we will provide confidentiality and integrity so that our framework go in the right path.

1.7.3 Software Quality Attributes

As data update dynamically, we need to keep it consistence in database and so that we can operate concurrent function in very effective way.The maintenance of the framework will be easy as the Front end is designed in the effective manner to accompanied with the Database.

ER Diagram

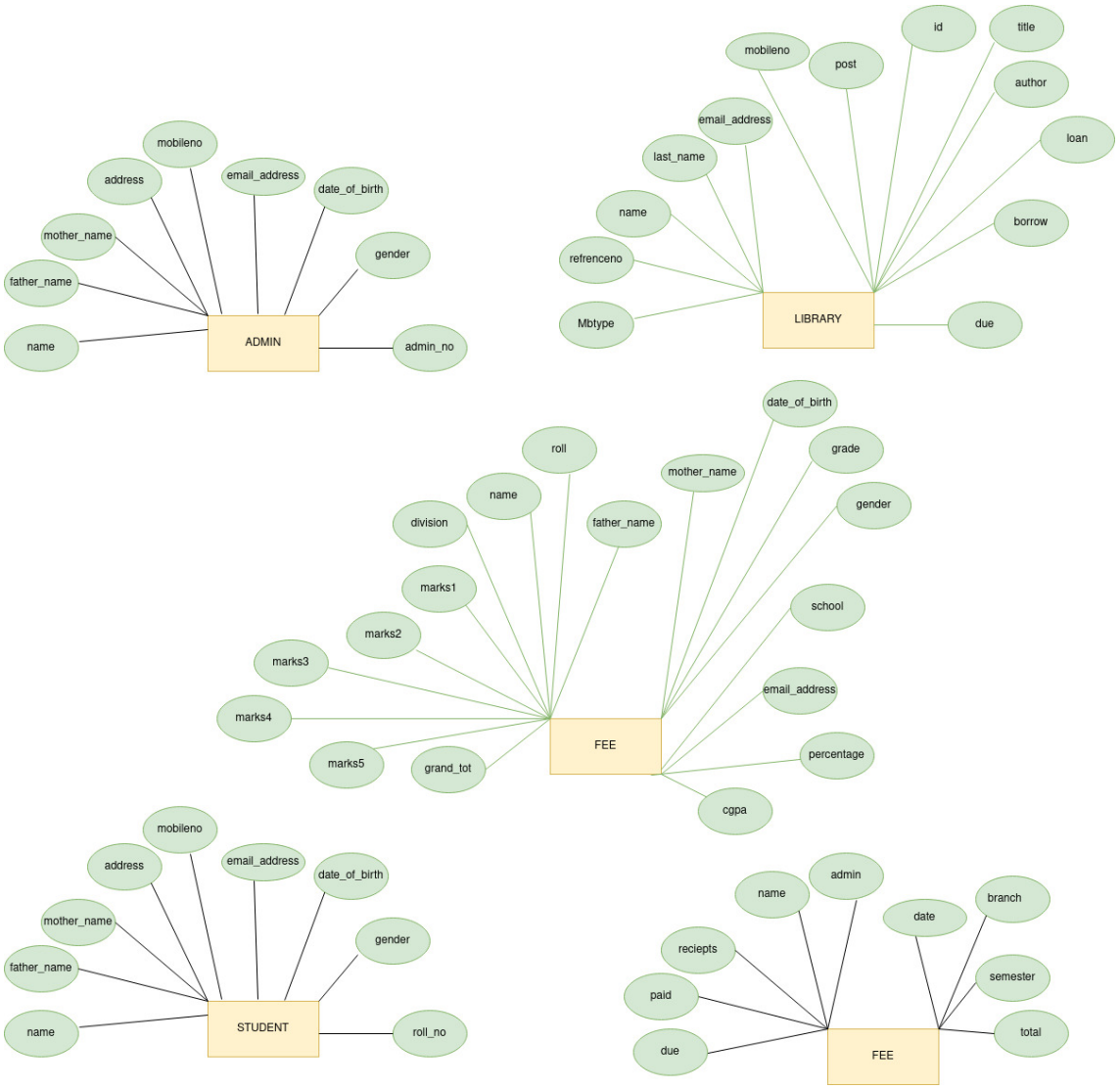

Figure 1.1: ERD

UML Diagram

Use Case

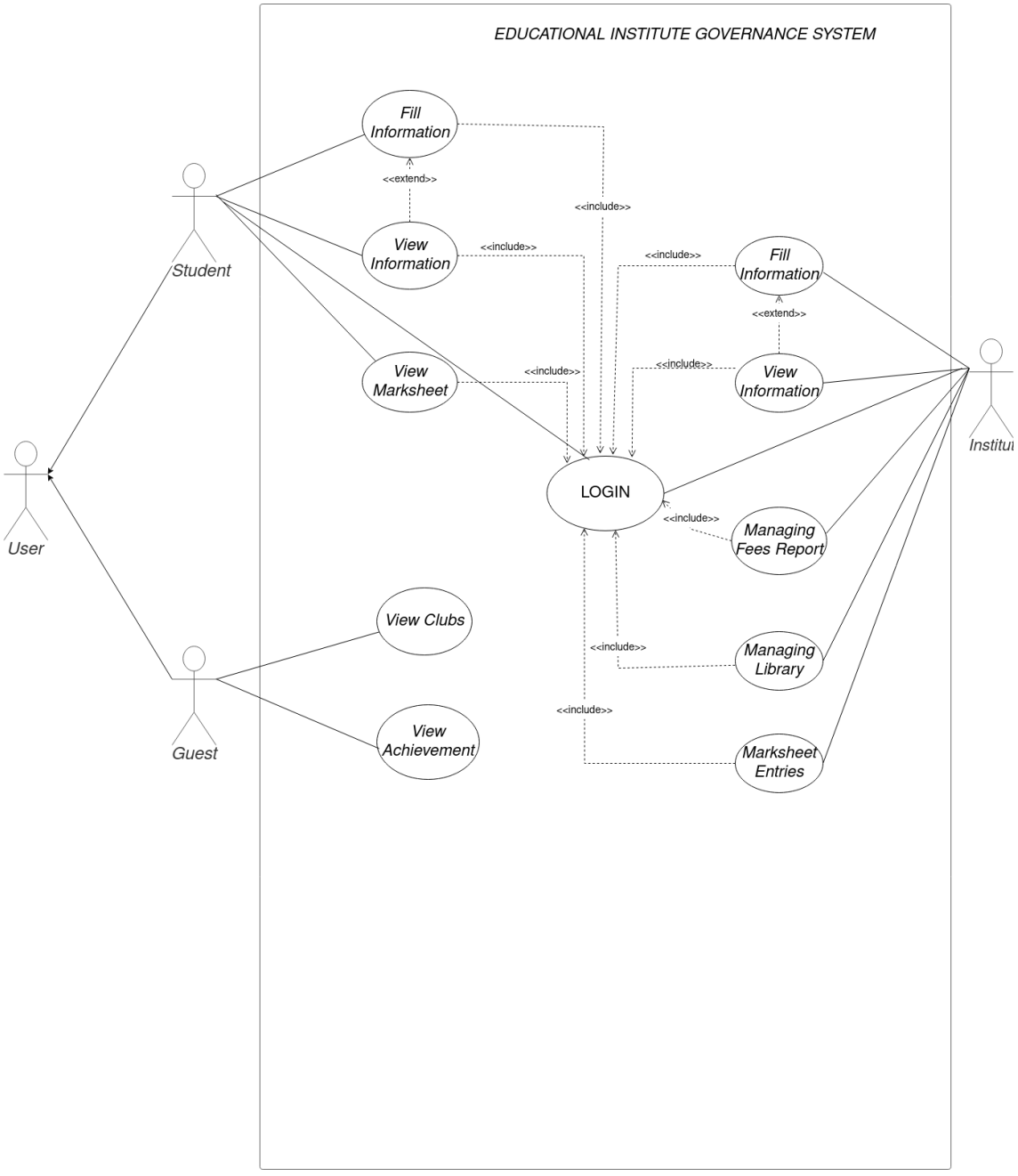

FIGURE 1.2: USE CASE

Class Diagram

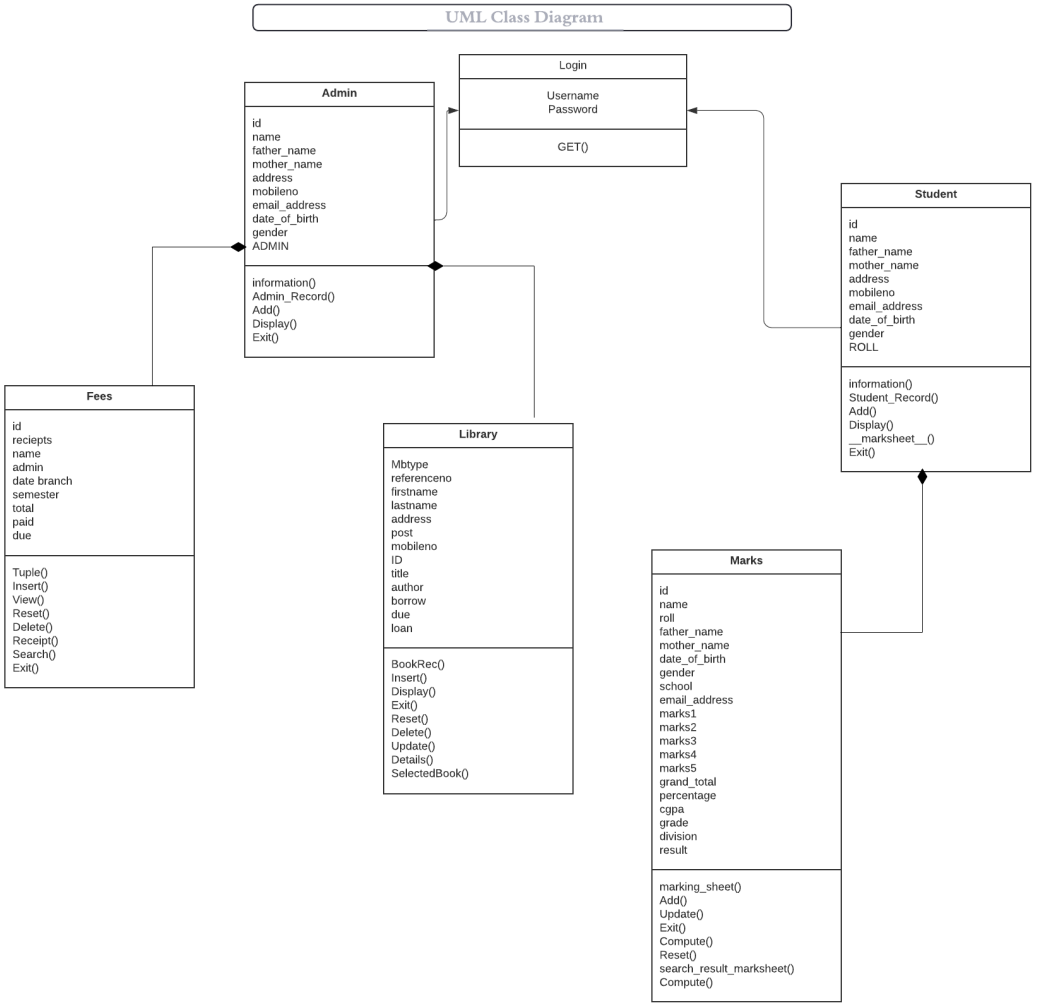

FIGURE 1.3: CLASS DIAGRAM

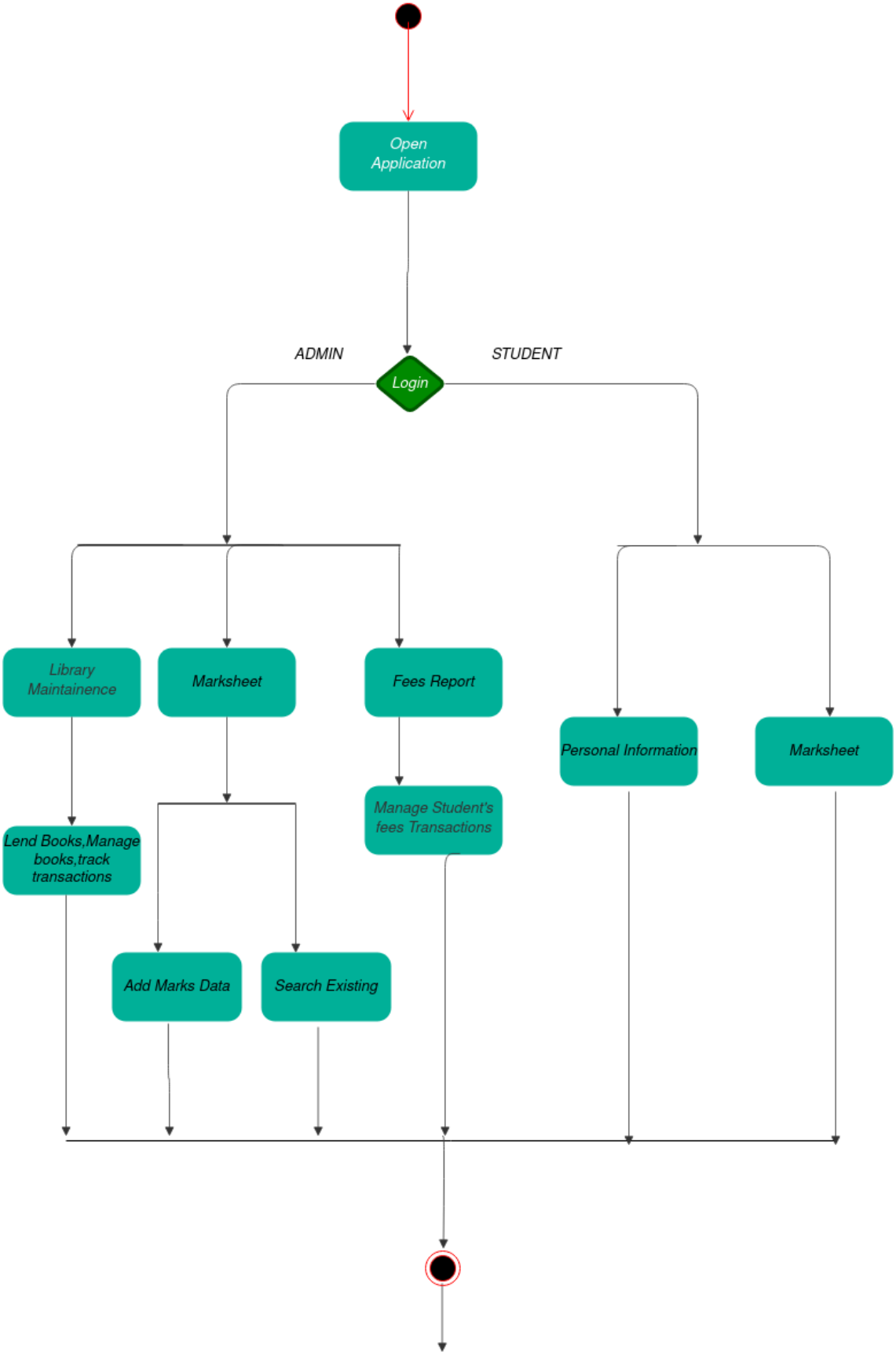

FIGURE 1.4: ACTIVITY DIAGRAM

1.8 Testing(Approach used and Bugs identified)

We haven't created a testing program yet, but we intend to use black box testing, with output as our primary focus.

1.9 Conclusion

In this project, we created an GUI which displays the functionalities related with Educational Institute. Because the admin data is sensitive, we have made sure that the students and guets cannot access it and for that we have protected it password. To handle such a big amount of data we have created databases for each need.

1.10 Github project URL

https://github.com/Vipin22875/SOFTWARE-ENGINEERING-II