



Anekant Education Society's
**Tuljaram Chaturchand College of Arts, Science and Commerce,
Baramati**
(Empowered Autonomous)

Department of Computer Science

A
PROJECT REPORT

ON
“Grievance System”

Submitted to Savitribai Phule Pune University, Pune.

For T.Y.B.Sc.(Comp.Sci.)

By :

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UNDER THE GUIDANCE OF

Prof. Rahul Shah

Academic Year : 2024 – 2025



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CERTIFICATE

This is to certify that the project entitled "**Grievance System**" submitted by **Pansare Yash Viraj** as a part of **UCSCO368 Laboratory Course-II** in partial fulfillment of the requirement of the award of degree B.Sc.(Comp.Sci.) to Savitribai Phule Pune University, Pune has been carried out by them under my guidance satisfactorily during the academic year 2024-2025.

Date:

Project Guide	Internal Examiner	External Examiner	Head Computer Science Dept.
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Problem Definition:

In many colleges, students face issues related to **hostel, food services, library facilities, and academic matters**. However, the traditional complaint-handling process is often **manual, slow, and lacks transparency**. Students find it difficult to track the status of their complaints, while administrators struggle with **organizing and resolving grievances efficiently**.

Key Problems:

- **Lack of a structured complaint system** – Students rely on verbal communication or paper-based complaints.
- **No real-time status updates** – Students don't know the progress of their complaints.
- **Delayed resolutions** – Without a centralized system, complaint resolution takes longer.
- **No proper record-keeping** – Tracking past complaints is difficult.

To solve these problems, we propose a **grievance system** where students can **submit complaints, track status, and receive real-time updates**, while administrators can efficiently **manage and resolve grievances**.

Scope of System:

The Grievance System for Students is designed to improve grievance handling within academic institutions, making the process faster, more transparent, and organized. The system's scope covers both students and administrators, providing tailored functionalities for each role:

- **Student Module:** Allows students to register, log in, submit complaints under predefined categories (e.g., hostel, food, library), and track the status of their complaints in real-time.
- **Admin Module:** Empowers administrators to approve student registrations, view and manage complaints, update complaint statuses (e.g., Pending, In Progress, Resolved), and handle grievance resolutions efficiently.
- **Notification System:** Automatically sends email alerts to students upon registration approval and whenever complaint statuses change, ensuring they stay informed throughout the process.
- **Reporting & Analytics:** Enables admins to generate various reports (e.g., complaints by type, status-wise distribution, student-wise grievances) to analyse complaint trends and improve decision-making.
- **Data Management:** Uses Hibernate ORM with MySQL for secure and efficient storage of student, admin, and complaint data, supporting CRUD operations for easy data manipulation.

System Requirement :

1. Hardware Requirements :

- **Processor:** Intel Core i3 (or equivalent)
- **RAM:** 2GB (Minimum), 4GB (Recommend)
- **Storage(SSD/HDD):** 500MB free space
- **Internet Connection:** Required for email notifications

2. Software Requirements :

- **Operating System:** Windows 10, Linux, macOS
- **Java Runtime Environment (JRE):** JDK 21 or later
- **Database:** MySQL 5.6 or MySQL 8+
- **Dependencies:**
 - Hibernate ORM for database interaction
 - JavaMail API for SMTP-based email notifications
 - iTextPDF for report generation
- **Display Resolution:** 1024x768 or higher

Feasibility Study :

1. Technical Feasibility :

- **Uses widely available technologies** – Java, MySQL, Hibernate, and Maven.
- **Compatible with existing systems** – Works on Windows, Linux, and macOS.
- **Scalable architecture** – Can be expanded with additional features (AI chatbot, mobile app).
- **Low resource consumption** – Runs on basic hardware with minimal system requirements.

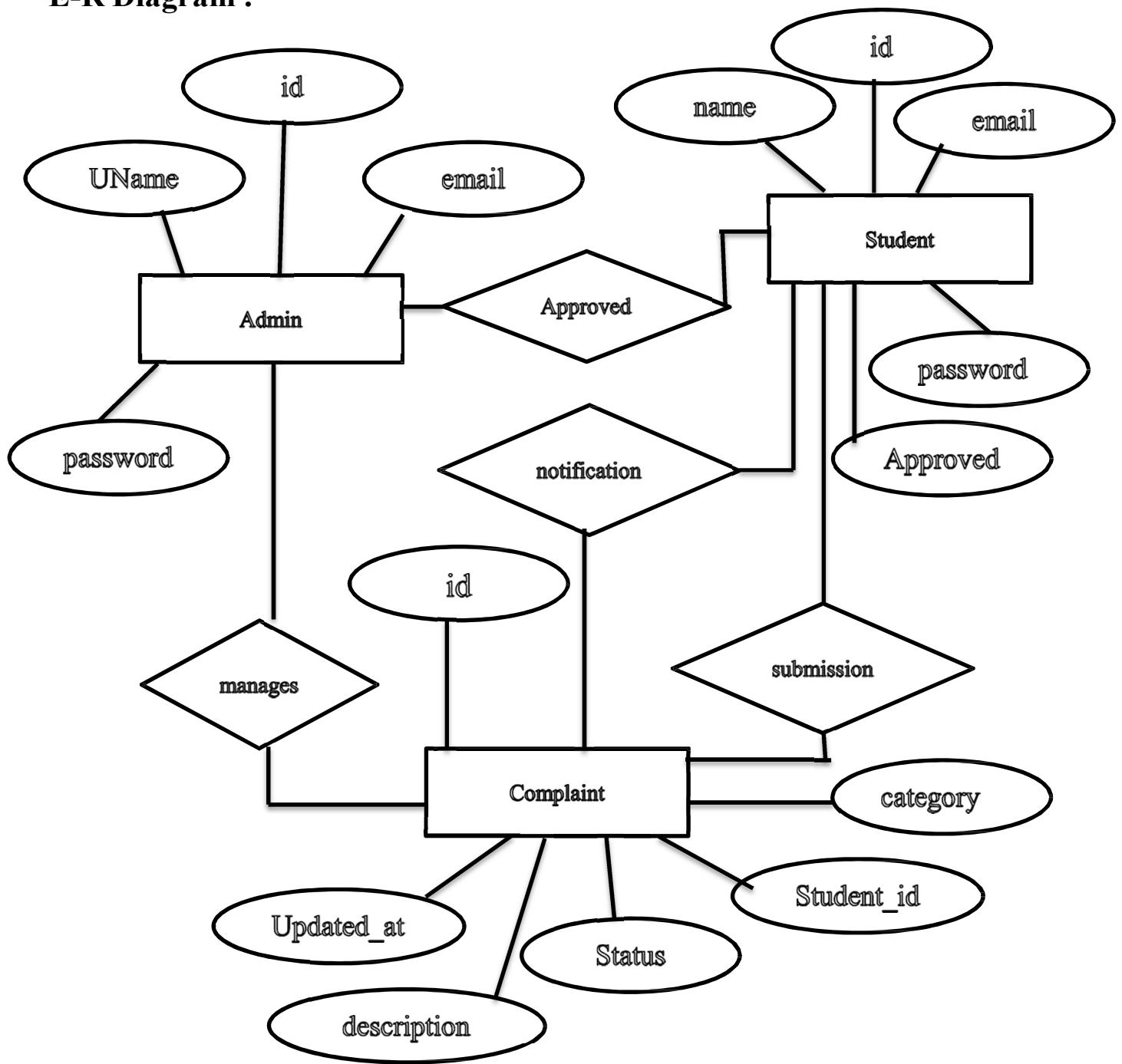
2. Economic Feasibility :

- **Cost-effective solution** – Uses open-source technologies (Java, MySQL, Hibernate).
- **No licensing fees** – No additional cost for software.
- **Reduces manual workload** – Automates complaint tracking, reducing administrative costs.
- **Long-term savings** – Eliminates paperwork, ensuring efficient resource management.

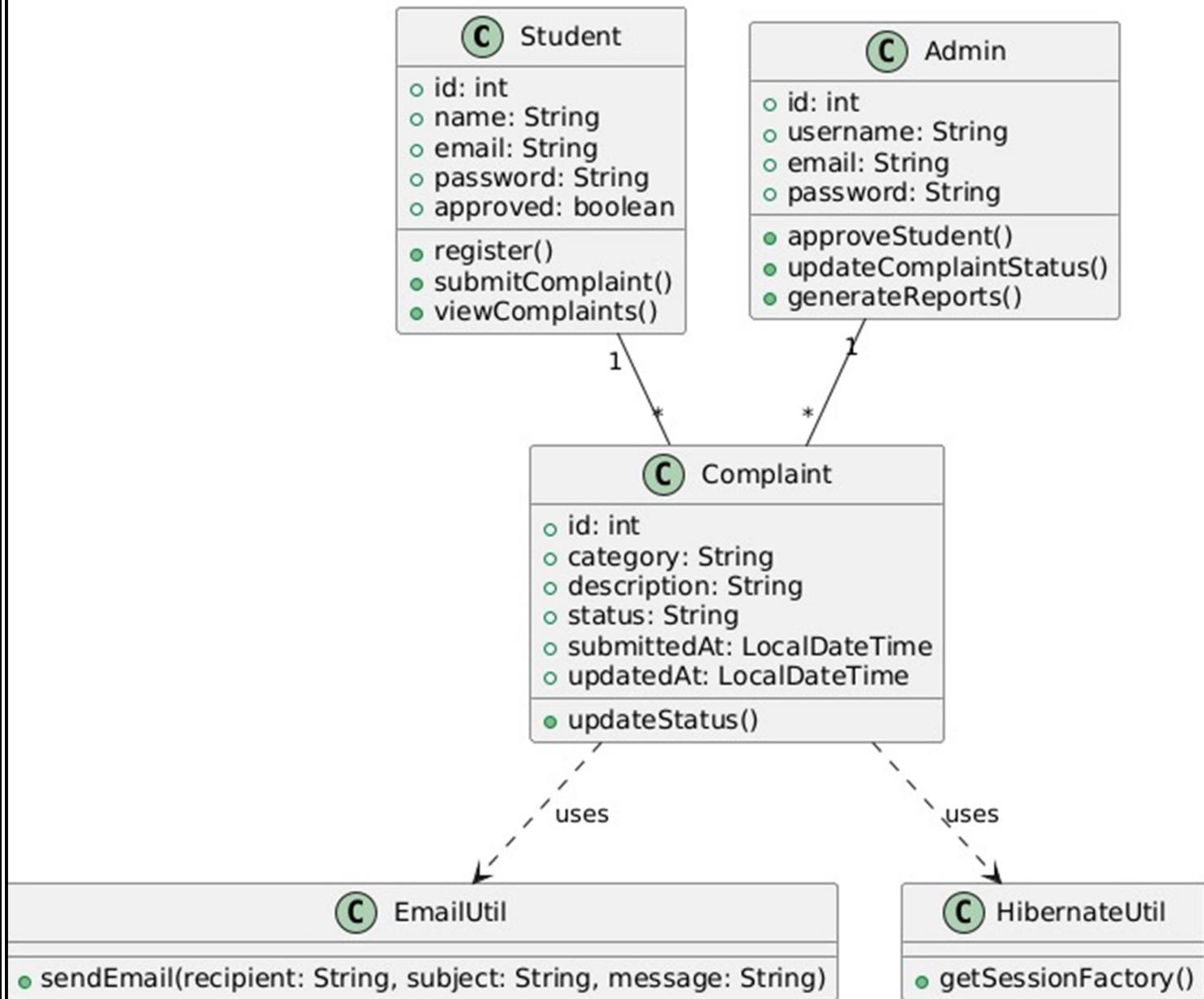
3. Operational Feasibility :

- **Easy-to-use interface** – Students can submit and track complaints with minimal training.
- **Efficient complaint handling** – Admins can manage complaints easily through a centralized dashboard.
- **Faster response time** – Real-time email notifications improve communication.
- **Role-based access** – Ensures security and structured complaint management.

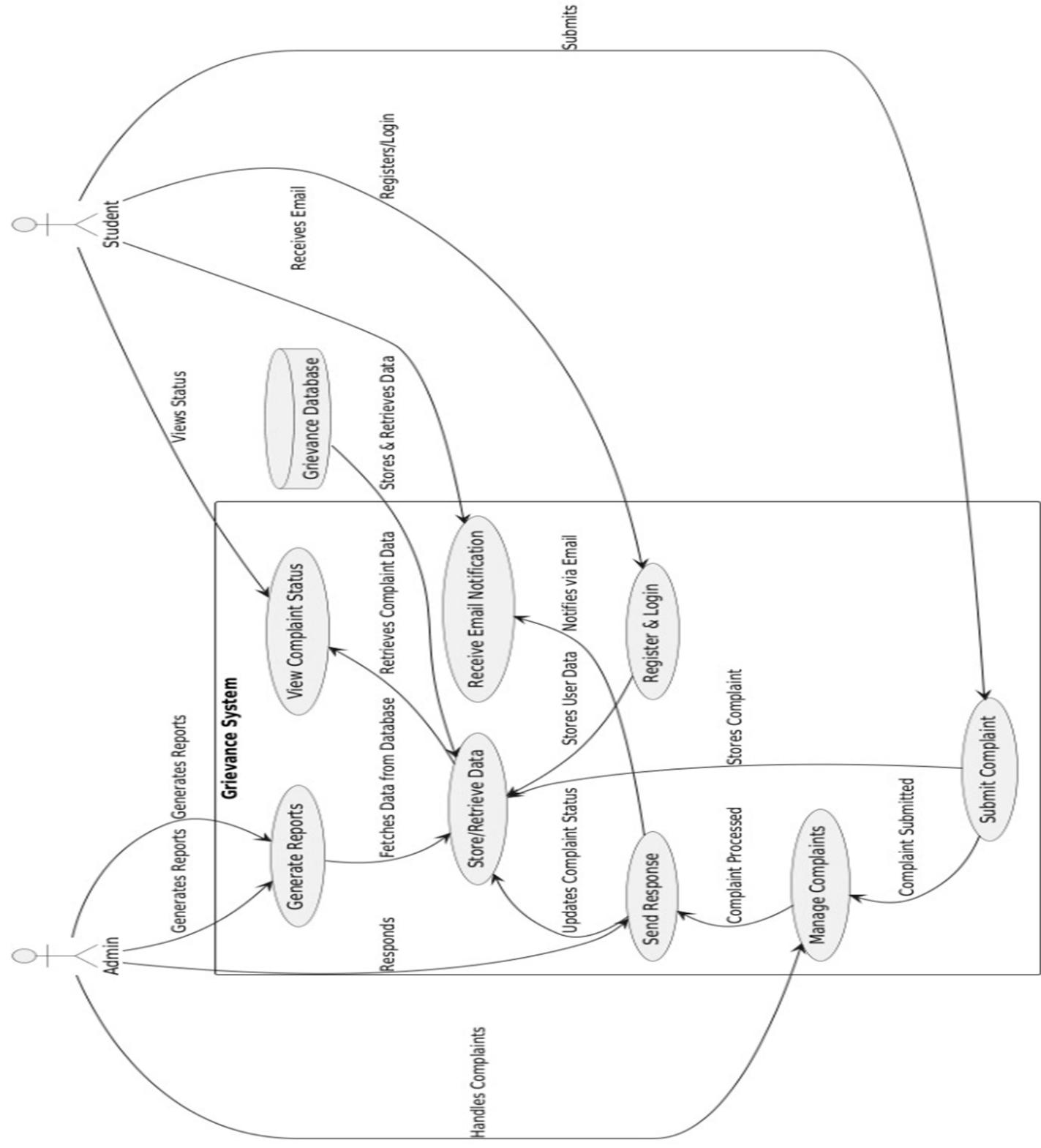
E-R Diagram :



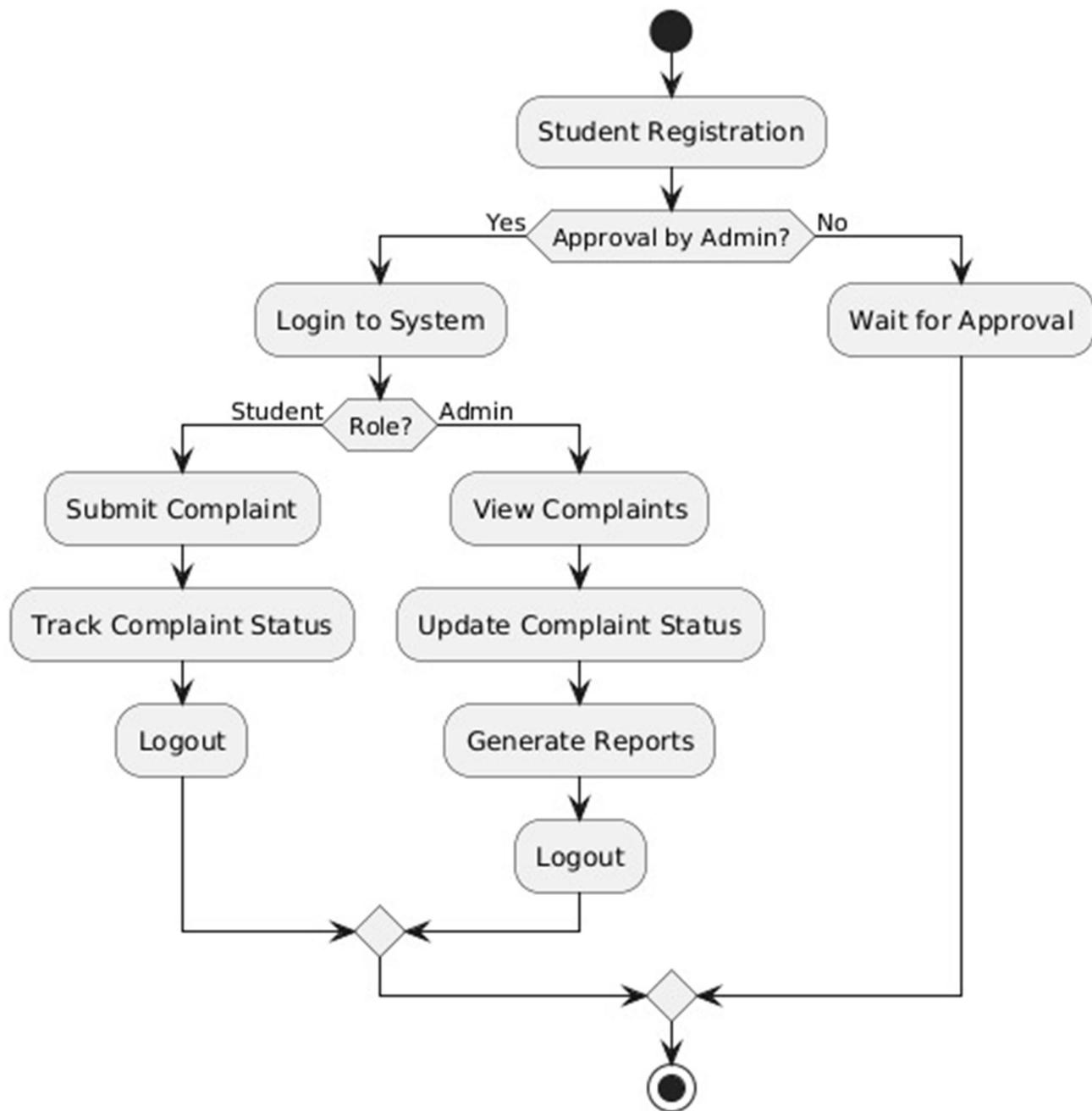
Class Diagram :



Grievance System - Use Case Diagram



Activity Diagram :



Data Dictionary :

Table Name : admin

Primary key : id

Description : This table is used to store username and password of admin

Sr.No.	Field Name	Data Type	Size	Constraints
1	Id	Int		Primary Key
2	Username	Varchar	255	NULL
3	Email	Varchar	255	NULL
4	Password	Varchar	255	NULL

Table Name : students

Primary key : id

Description : This table is used to store email and password of Student

Sr.No.	Field Name	Data Type	Size	Constraints
1	Id	Int		Primary Key
2	Name	Varchar	255	NULL
3	Email	Varchar	255	NULL
4	Password	Varchar	255	NULL
5	Approved	Bit	1	NULL
6	Updated_at	Datetime	6	NULL

Table Name : complaints

Primary key : id

Description : This table is used to stores details of Complaint

Sr.No.	Field Name	Data Type	Size	Constraints
1	Id	Int		Primary Key
2	category	Varchar	255	NULL
3	description	Varchar	255	NULL
4	status	Varchar	255	NULL
5	submitted_at	Bit	1	NULL
6	Updated_at	Datetime	6	NULL
7	student_id	Int		Foreign Key

Input Output Screens :

Registration

Register as Admin

Username:

Email:

Password:

Register

Message X

i Admin registered successfully!

OK

Login

Welcome to Grievance System

Email:

Password:

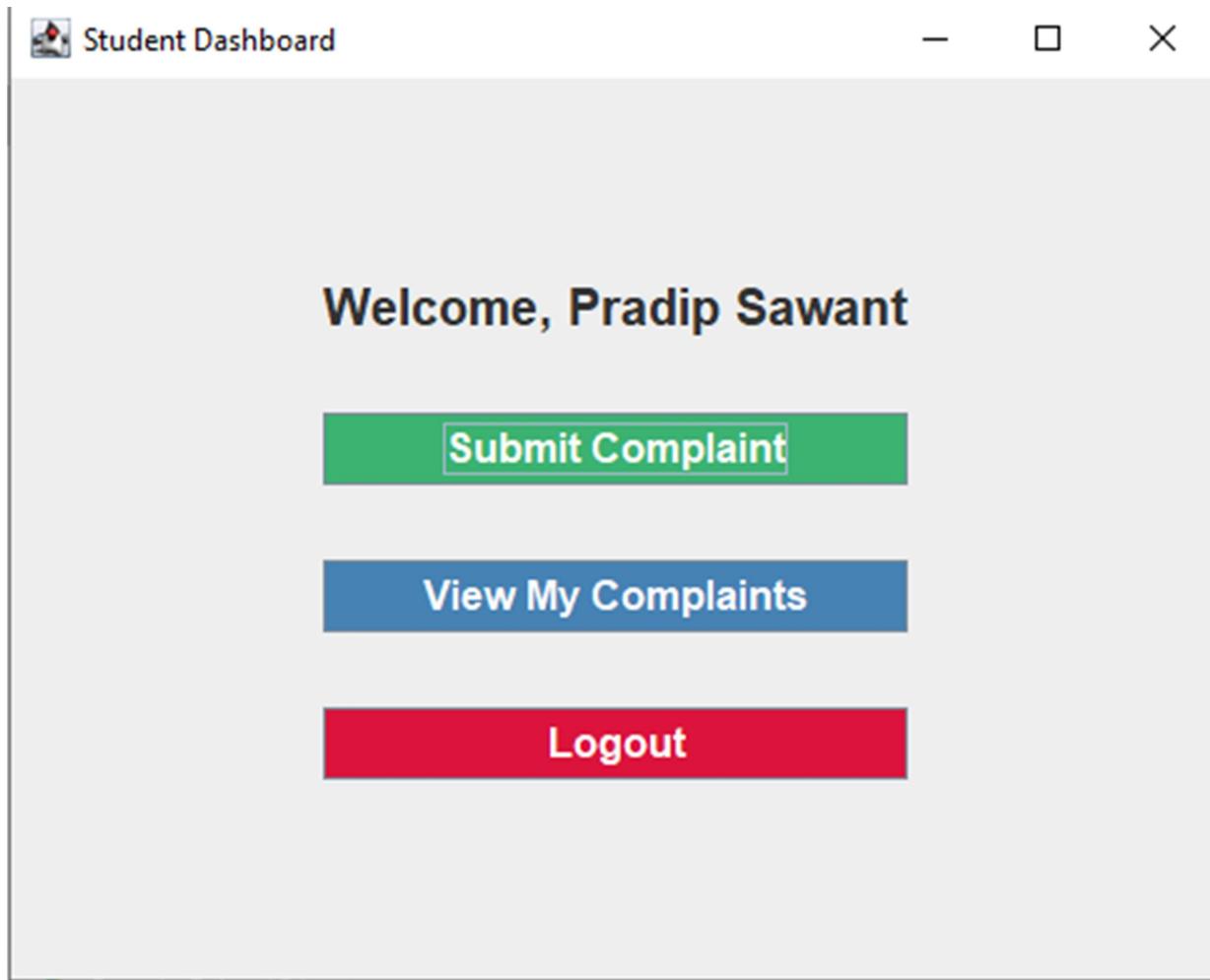
Student Admin

Student Registration

Message X

i Admin Login Successful!

Student_dashboard



View_Complaint

 My Complaints - □ ×

My Complaints

ID	Category	Description	Status	Submitted ...	Updated At
17	Food	clean the pla...	Pending	2025-03-03...	2025-03-03...

End of Complaints List Close

Complaints

Submit Your Complaint

Category: ▼

Description:

Submit Complaint

Message X

i Complaint Submitted Successfully!

Admin_Dashboard

Admin Dashboard - Complaint Management

Admin Dashboard

ID	Student Name	Email	Approved
1	Ajay Khatke	ajaykhatake7887@gmail.com	true
2	Shravani Bhandare	shravanibhandare08@gmail.com	true
4	Akshata Lahve	akshatalahve@gmail.com	true
5	Aditya Sawant	sawantaditya3636@gmail.com	true
6	Pradip Sawant	pradipsawant9696@gmail.com	true
7	Abhishek Chavan	abhi2005chavan@gmail.com	true
8	Anmol Kumbhar	anu0602kum@gmail.com	true
9	Manas Bhat	manasbhat3166@gmail.com	true
10	Avinash Bansode	avinashbansode79@gmail.com	true
11	Saif Tamboli		true
12	Avinash Zaveri		true
13	Rohan Atole		true
14	Sumit Pansare		true
15	Mahini Lavale		true
16	Omkar Hivarkar	omkarhivarkar73@gmail.com	true

Message

i Student approved successfully!

OK

Approve Student **Update Complaint Status** **View Reports** **Logout**

UpdateStatus

Update Complaint Status

Complaint ID	Student Name	Category	Description	Status
6	Abhishek Chav...	Library	Chairs Are Bro...	In Progress
7	Manas Bhat	Hostel	Toilets are Not ...	Resolved
8	Manas Bhat	Library	Extend the Libr...	In Progress
9	Saif Ta	Select new status:	Pending	Resolved
10	Sumit P			
11	Mahini	Select new status:	Pending	In Progress
12	Omkar			
13	Shrava	Select new status:	Pending	Resolved
14	Vishwajeet Patil			
15	Rohit Sudam J...	Hostel	Clean the tiles ...	Pending
16	Rohit Sudam J...	Food	Plz Well Cook t...	In Progress
17	Pradip Sawant	Food	clean the plate...	Pending

Update Status

Reports

Complaint Reports

Start Date: 2025-02-03 End Date: 2025-03-03 Select Report: Resolved Complaints

Student Name	Category	Description	Status	Updated At
Ajay Khatke	Hostel	Replace the Bulb	Resolved	25-02-17T21:1...
Shravani Bhandare	Food	Food is So Oily	Resolved	25-02-17T22:2...
Manas Bhat	Hostel	Toilets are Not Cl...	Resolved	25-02-17T22:2...
Saif Tamboli	Library	There is no Suffic...	Resolved	2025-02-17T22:2... 2025-02-26T21:0...
Omkar Hivarkar	Hostel	clean the rooms w...	Resolved	2025-02-22T15:5... 2025-02-22T15:5...

Load Report | **Print Report**

Future Enhancements :

Here are some possible improvements and additional features that can be integrated into the system in the future:

- **AI Chatbot Integration** :Implement an AI-powered chatbot to assist students in lodging complaints and tracking status.
- **Advanced Data Analytics & Reports** :Use data visualization tools to analyze complaints and generate detailed reports with graphs.
- **SMS & Push Notifications** :Notify students and admins via SMS or mobile push notifications about complaint updates.
- **Document Upload Support** :Allow students to attach images/documents as proof while submitting complaints.
- **Multi-Language Support** :Enable users to access the system in different languages for better usability.
- **Two-Factor Authentication (2FA)** :Enhance security by implementing 2FA for user logins.

Conclusion :

The **Grievance System** provides an efficient, user-friendly, and transparent platform for students to register and track their complaints related to hostel, food, and library services. The system eliminates the need for manual complaint handling by automating the process, ensuring faster resolution and better communication between students and the administration.

By integrating real-time status updates functionalities, the platform enhances user experience and ensures that grievances are addressed effectively. Additionally, the system can be further improved with future enhancements like AI-driven complaint categorization and advanced analytics.

Overall, this project contributes to creating a structured and accountable environment where students' concerns are addressed promptly, ultimately improving campus life quality.

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