# Project Name: E-Desk

## Project Member:-


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## Abstract:-


The Project is developed with keeping in mind to make the process more smooth as compared with the physical one. The process where people are supposed to go the office & lodge a complaint in the respective Department. There were many incidents which makes it clear that there is no proper communication between the government and public & there is also a lack of efficient way to solve the public problems. The problems of public gets enrolled in the files and travels from desk to desk, office to office.

We want to develop an we application for complaint management system where public can register complaints for street light, water pipe leakage, rain water drainage, road reconstruction and garbage system. To transform the existing manual compliant management system into an automate system.

Our web application is a way to overcome this problem by providing grievances to the government. It will reduce the dependency of people on the government officials to forward their complains & they will be able to keep track of the status of their complaints. It will also help the officials to look into the matter in the brief period of time. It acts as interface to register one's complained and follow it up and also it provides a complaint module which helps entering text information along with the complaint.

# Implementation Technologies:

## 1. Spring Framework:

Spring Framework is a Java platform that provides comprehensive infrastructure support for developing Java applications. Spring handles the infrastructure so you can focus on your application.

Spring enables you to build applications from "plain old Java objects" (POJOs) and to apply enterprise services non-invasively to POJOs. This capability applies to the Java SE programming model and to full and partial Java EE.

### 1.1. Features of Spring Framework:

1. **Lightweight**

   Spring is modular lightweight framework which allows you to selectively use any of its modules on the top of Spring Core.

2. **Inversion of Control (IOC)**

   This is another top feature of Spring framework where application dependencies are satisfied by the framework itself. Framework creates the object in runtime and satisfies application dependencies.

3. **Aspect Oriented Programming (AOP)**

   Aspect Oriented Programming (AOP) is very popular in programming world and in Spring it is well implemented. Developer can use Aspect Oriented Programming (AOP feature of Spring to develop application in which business logic is separated from system services.

4. **Container**

   Spring provides their own container for managing the bean lifecycle.

5. **MVC Framework**

   Spring MVC Framework is used for developing MVC based web applications.

6. **Transaction Management**

   Spring framework provides generic Transaction Management layer which can be used with or without J2EE(JEE) environment.

7. **JDBC Exception Handling**

   Spring provides their own abstraction of JDBC exception which further simplifies the exception handling in program.

## 1.2. Advantages of Spring Framework:

### 1. Solving difficulties of Enterprise application development

Spring is solving the difficulties of development of complex applications, it provides Spring Core, Spring IoC and Spring AOP for integrating various components of business applications.

### 2. Support Enterprise application development through POJOs

Spring supports development of Enterprise application development using the POJO classes which removes the need of importing heavy Enterprise container during development. This makes application testing much easier.

### 3. Easy integration other frameworks

Spring designed to be used with all other frameworks of Java, you can use ORM, Struts, Hibernate and other frameworks of Java together. Spring framework do not impose any restriction on the frameworks to be used together.

### 4. Application Testing

Spring Container can be used to develop and run test cases outside enterprise container which makes testing much easier.

### 5. Modularity

Spring framework is modular framework and it comes with many modules such as Spring MVC, Spring ORM, Spring JDBC, Spring Transactions etc. which can used as per application requirement in modular fashion.

### 6. Spring Transaction Management

Spring Transaction Management interface is very flexible it can configure to use local transactions in small application which can be scaled to JTA for global transactions.

# 2. MySQL

MySQL, the most popular Open Source SQL database management system, is developed, distributed, and supported by Oracle Corporation.

## a. Features of MySQL:

### 1. MySQL is a database management system.

A database is a structured collection of data. It may be anything from a simple shopping list to a picture gallery or the vast amounts of information in a corporate network. To add, access, and process data stored in a computer database, you need a database management system such as MySQL Server. Since computers are very good at handling large amounts of data, database

management systems play a central role in computing, as standalone utilities, or as parts of other applications.

2. **MySQL databases are relational.**

   A relational database stores data in separate tables rather than putting all the data in one big storeroom. The database structures are organized into physical files optimized for speed. The logical model, with objects such as databases, tables, views, rows, and columns, offers a flexible programming environment.

3. **MySQL software is Open Source.**

   Open Source means that it is possible for anyone to use and modify the software. Anybody can download the MySQL software from the Internet and use it without paying anything.

4. **The MySQL Database Server is very fast, reliable, scalable, and easy to use.**

   MySQL Server was originally developed to handle large databases much faster than existing solutions and has been successfully used in highly demanding production environments for several years. Although under constant development, MySQL Server today offers a rich and useful set of functions. Its connectivity, speed, and security make MySQL Server highly suited for accessing databases on the Internet.

5. **MySQL Server works in client/server or embedded systems.**

   The MySQL Database Software is a client/server system that consists of a multithreaded SQL server that supports different back ends, several different client programs and libraries, administrative tools, and a wide range of application programming interfaces (APIs).

## 3) Hardware and Software Requirements (Minimum):

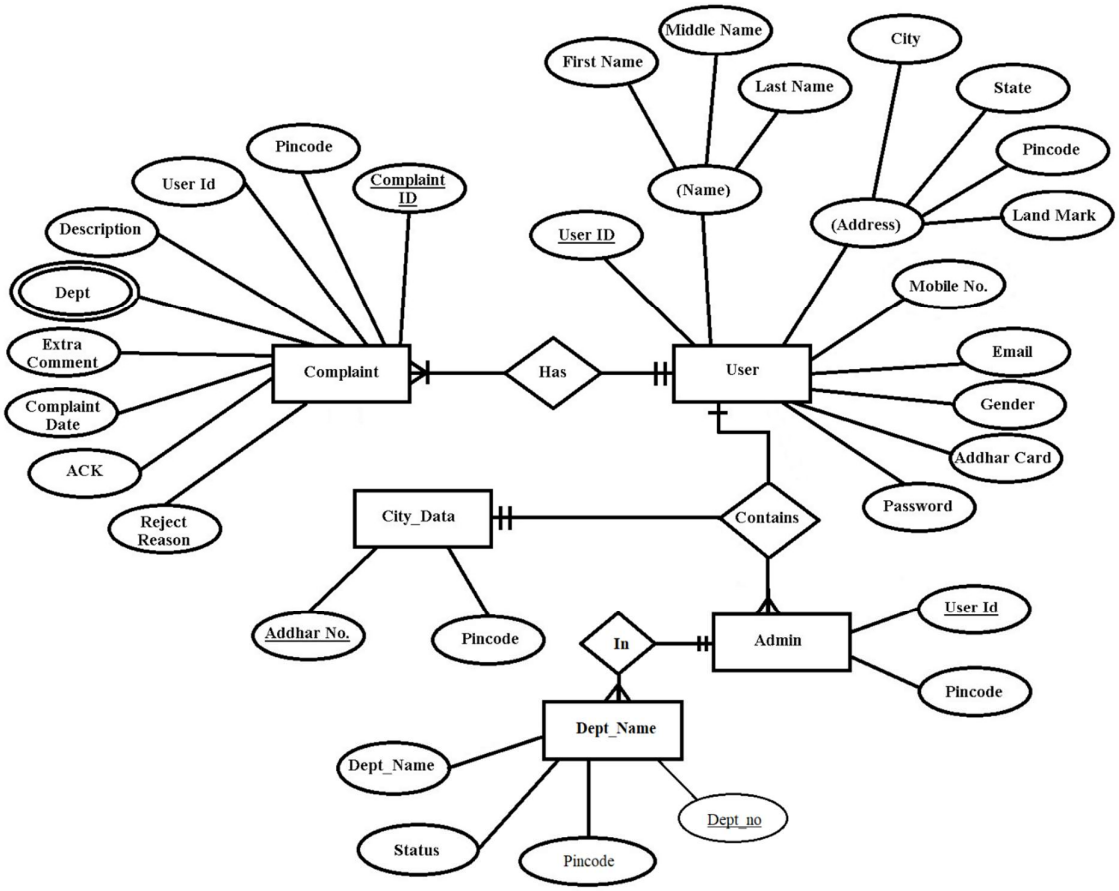
### Hardware:

1. Intel i3 processor 3rd generation or later / AMD Ryzen 200 2nd generation or later
2. 2 GB ddr3 ram.
3. Windows 7 Home edition or later.
4. 200 GB Sata HDD Space
5. Data Connection 200 kbps

### Software:

1. Eclipse 4.7 Oxygen
2. MySQL 5.7 with Workbench 8.0
3. Google Chrome version 79.0
4. Apache Tomcat Server 8.5
5. Maven Dependencies

## 4) ER Diagram:



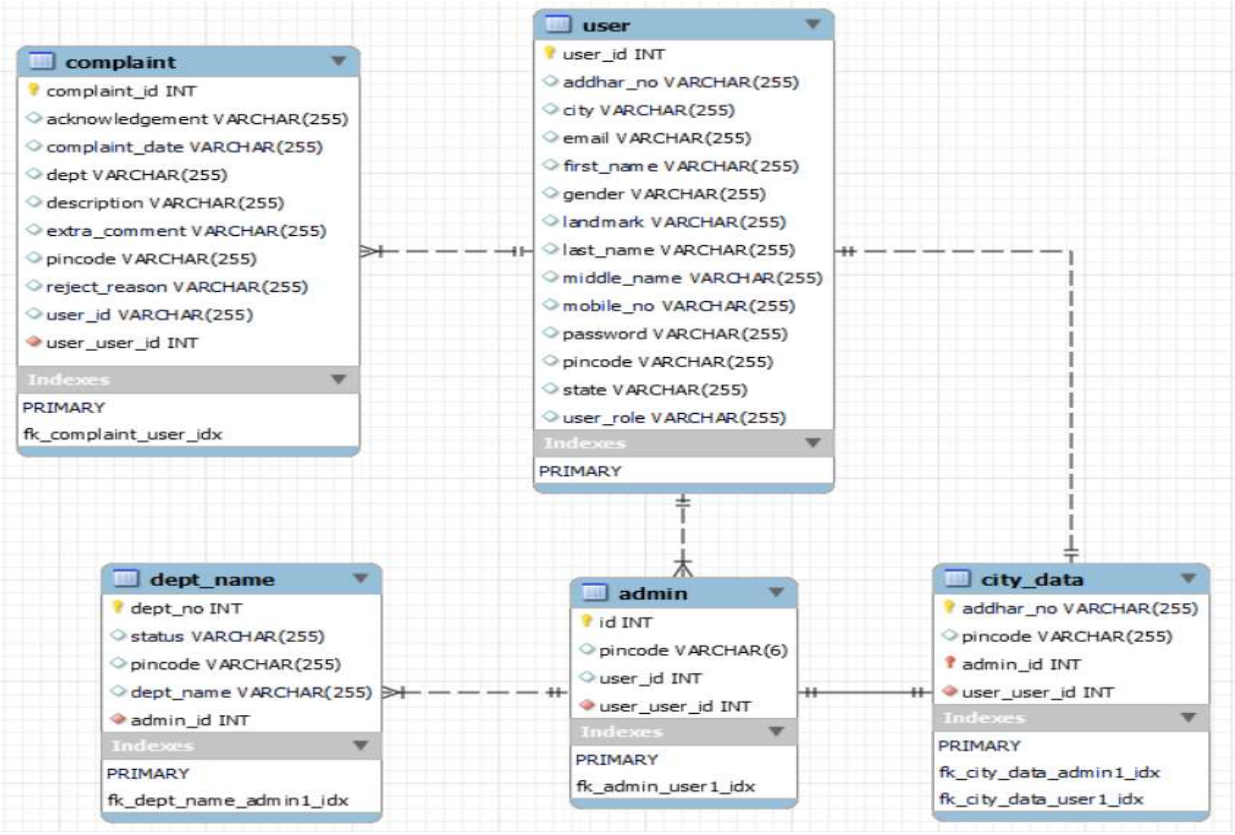




Figure 1: ER Diagram

## 5) Table Structures:

1. **Table name: User**

| Column name | Type | | | |
|---|---|---|---|---|
| User_id | int | NO | PRI | auto_increment |
| Addhar_no | varchar(12) | YES | UNI | |
| City | varchar(30) | YES | NN | |
| Email | varchar(50) | YES | UNI | |
| First_Name | varchar(50) | YES | NN | |
| Middle_Name | varchar(50) | YES | NN | |
| Last_Name | varchar(50) | YES | NN | |
| Gender | varchar(6) | YES | | |
| Landmark | varchar(255) | YES | | |
| Mobile_No | varchar(10) | YES | | |
| Password | varchar(30) | YES | NN | |
| Pincode | varchar(6) | YES | | |
| State | varchar(30) | YES | | |
| User_role | varchar(30) | YES | NN | |

2. **Table name: Admin**

| Column name | Type | | | |
|---|---|---|---|---|
| Id | int | NO | PRI | auto_increment |
| Pincode | varchar(6) | YES | | |
| User_id | varchar(10) | YES | | |

3. **Table name: Complaint**

| Column name | Type | | | |
|---|---|---|---|---|
| Complain_Id | int | NO | PRI | auto_increment |
| Acknowledgement | varchar(20) | YES | | |
| Complaint_date | date | YES | | |
| Dept | varchar(50) | YES | | |
| Description | varchar(255) | YES | | |
| Extra_comment | varchar(255) | YES | | |
| Pincode | varchar(6) | YES | | |
| Reject_reason | varchar(255) | YES | | |
| User_id | int | YES | | |

4. **Table name: Dept_Name**

| Column name | Type | | | |
|---|---|---|---|---|
| Dept_no | int | NO | PRI | auto_increment |
| Status | varchar(100) | YES | | |
| Pincode | varchar(6) | YES | | |
| Dept_Name | varchar(50) | YES | | |

5. **Table name: City_Data**

| Column name | Type | | |
|---|---|---|---|
| Addhar_no | int | NO | PRI |
| Pincode | varchar(6) | YES | |

## 6) UML Diagrams:

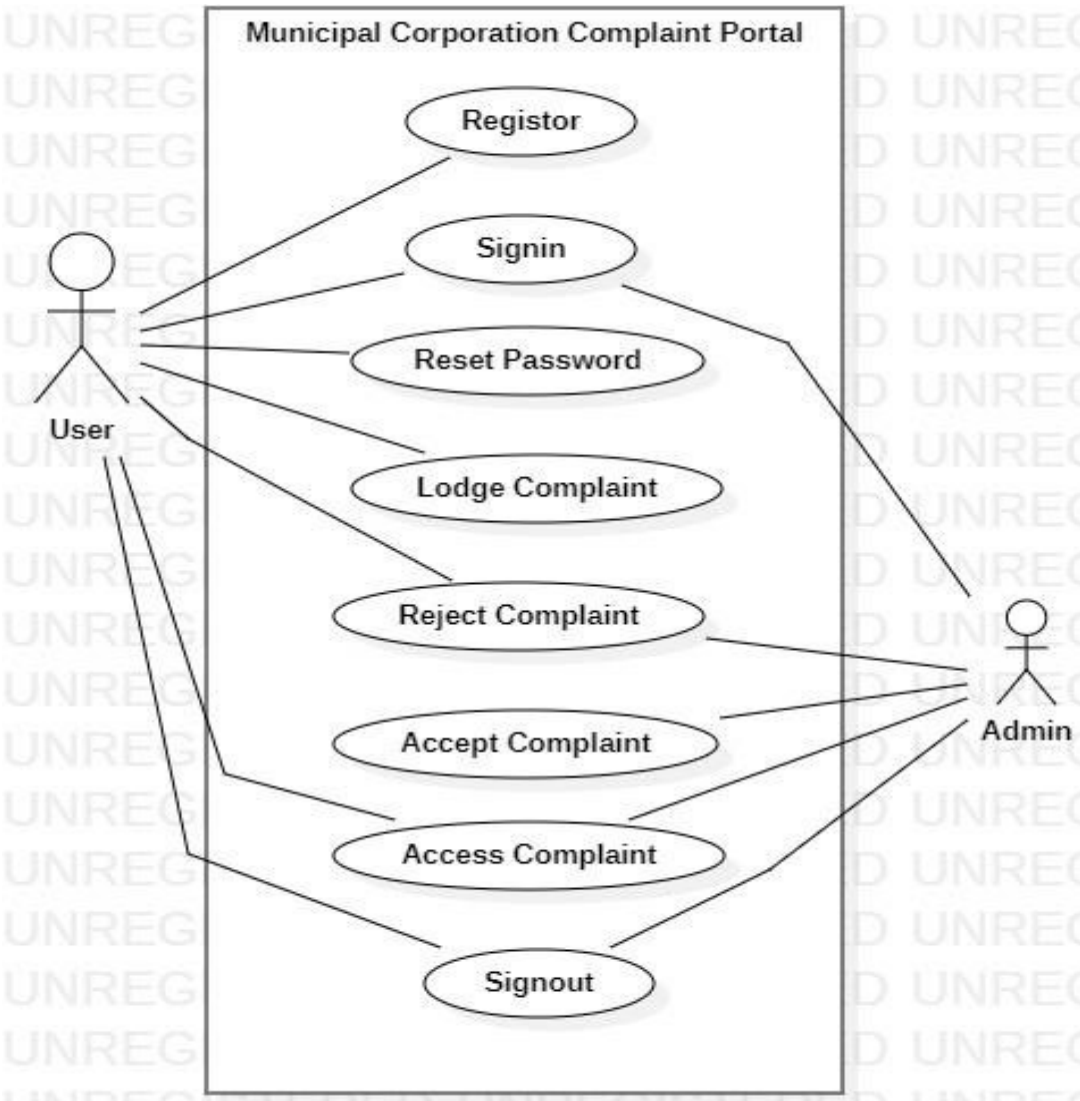



Figure 2: Use Case

## (A) Activity Diagram For User:

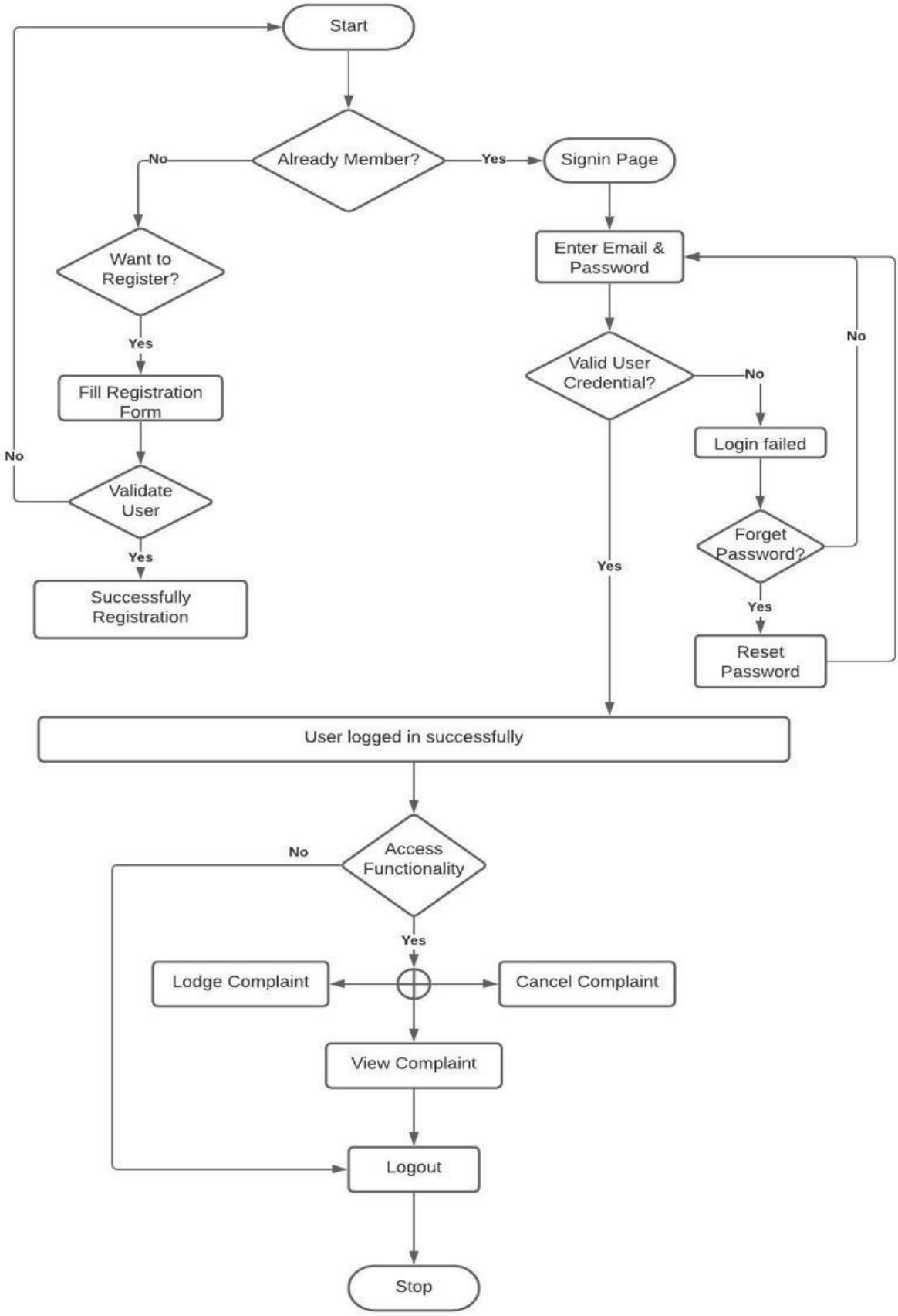



Figure 3: Active diagram for User

## (B) Activity Diagram For Admin: -

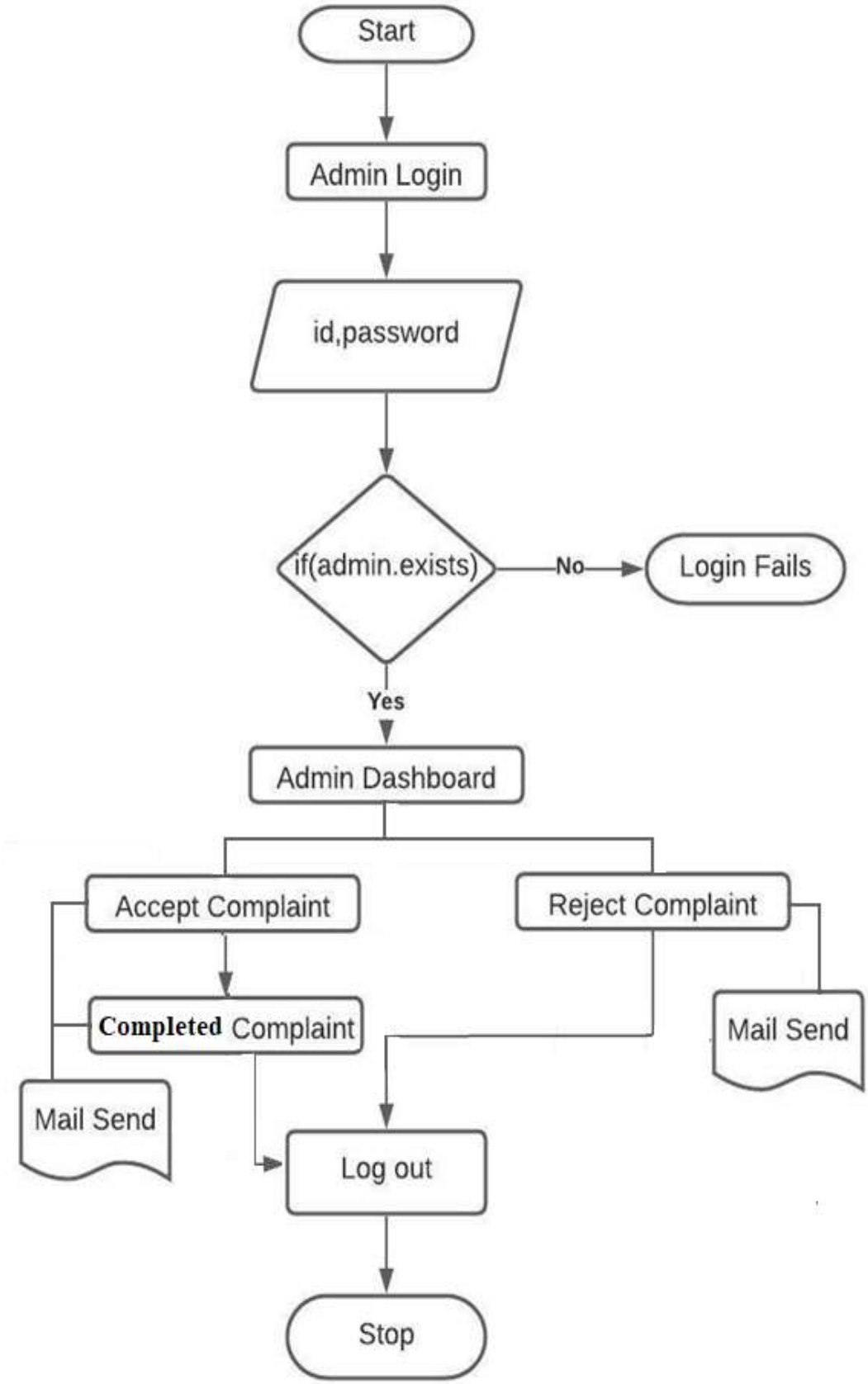



Figure 4: Active diagram for Admin

# 7) Sequence Diagram : -

## A) Sequence Diagram for User

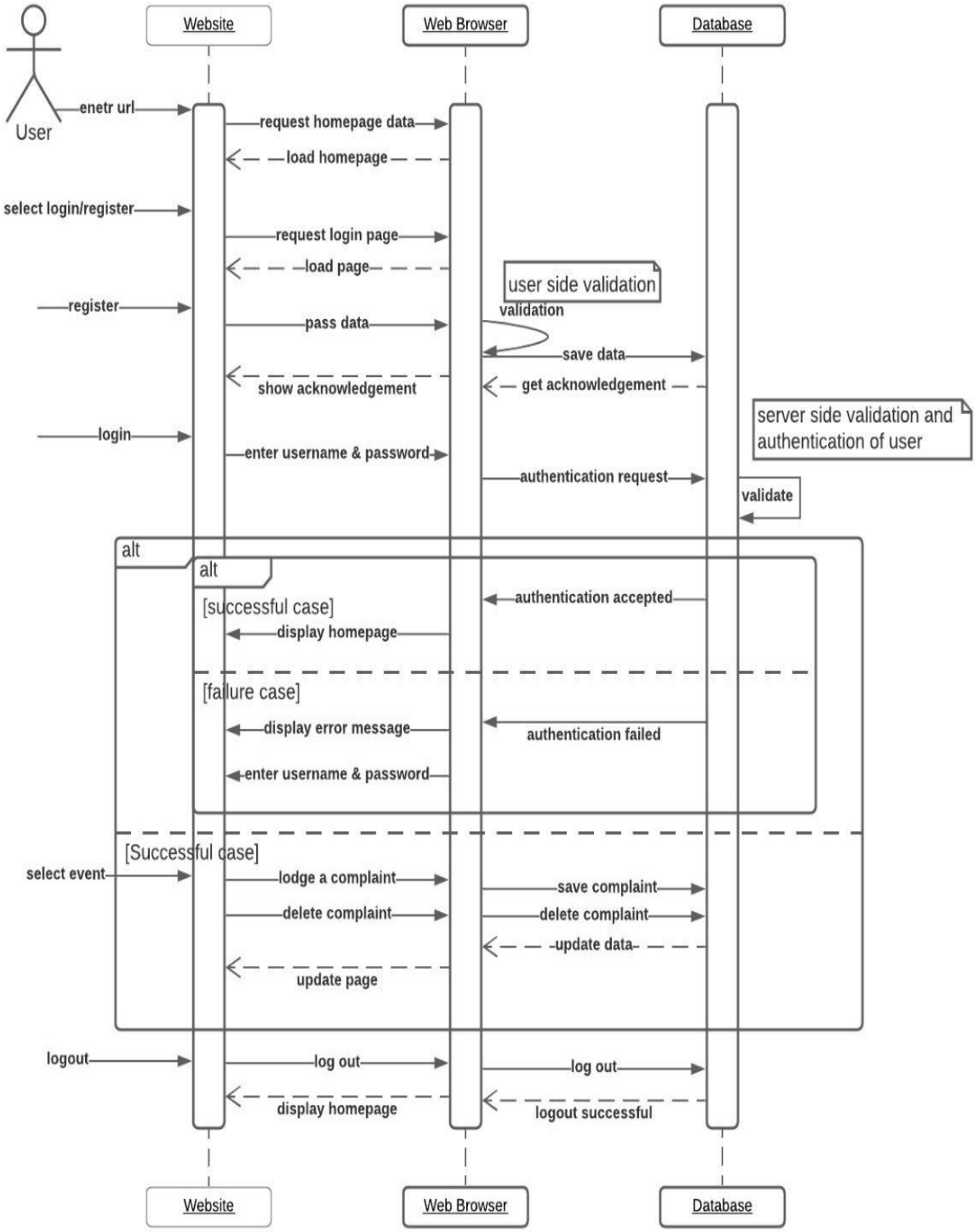



Figure 5: Sequence diagram for User

## B) Sequence Diagram for Admin

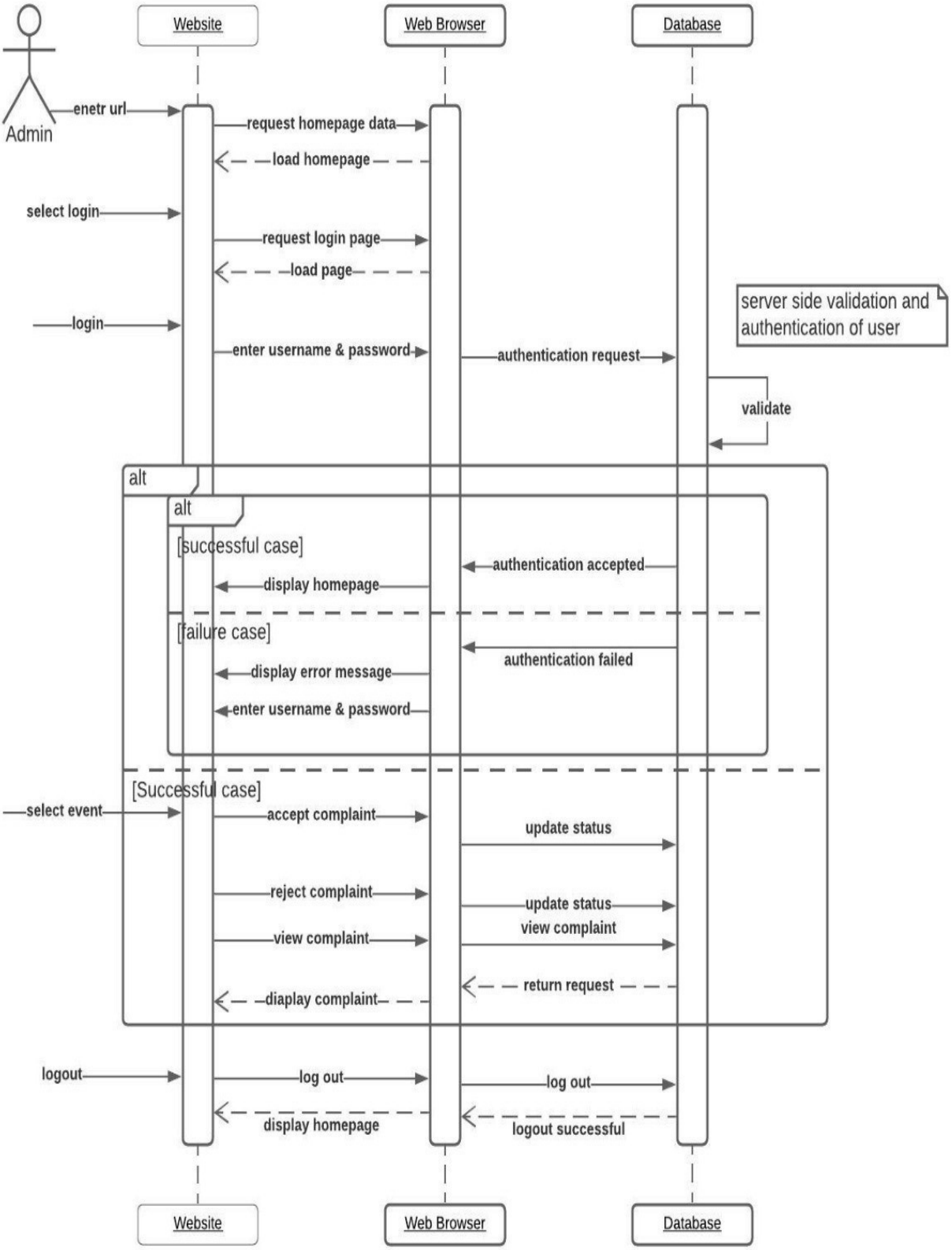



Figure 6: Sequence diagram for Admin

# 8) Architectural Design :

## A) User Part

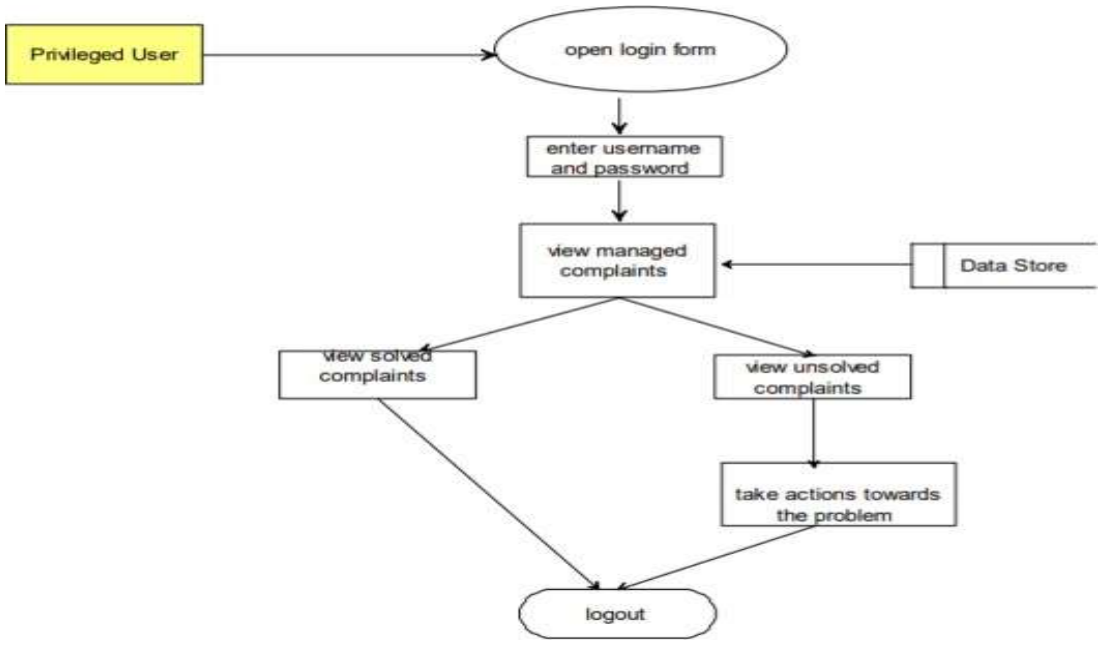



Figure 7: Architectural of User

## B) Admin Part

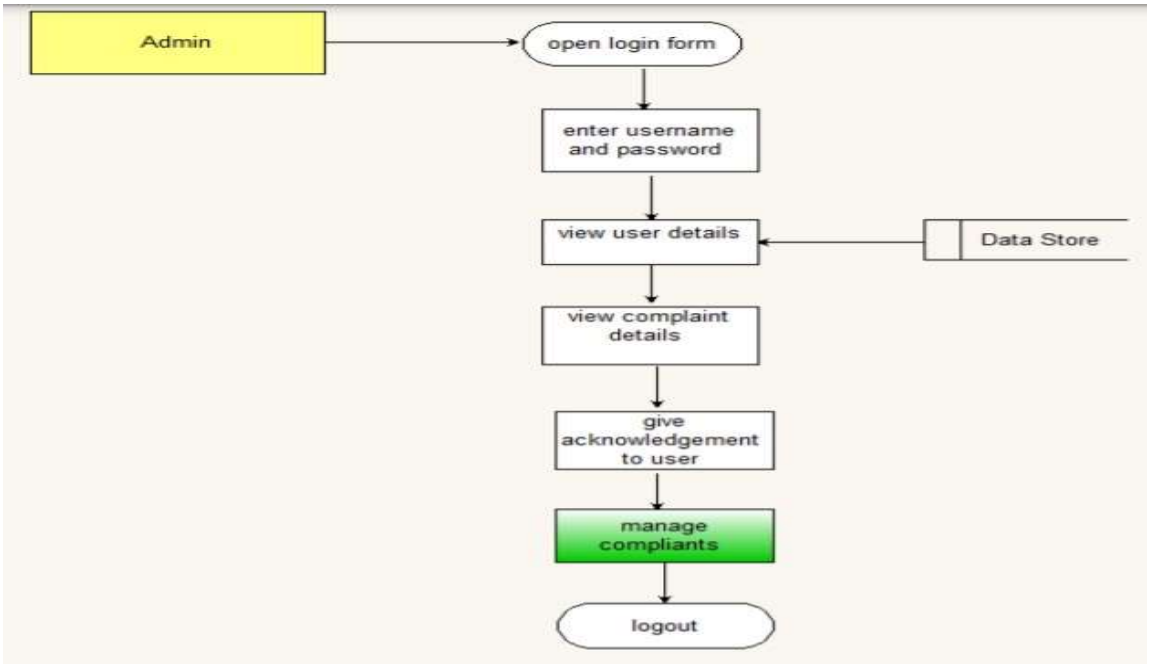



Figure 8: Architectural of Admin

## 9) Function Requirement:

1. Functional Requirements

System will generate E-mail after Credential will matched, later mail will be sent on the registered email.

1.1.Login of User

- The system will allow the user to enter the e-mail and password.
- The system will allow the register at first and will get confirmation.

1.2.Login of Admin

- The system will allow the administrator to select "complaints" and check their details.
- The system will allow administrators to forward the complaints to respective departments head.
- The system will allow the administrator to view the list of complaints being fulfilled or no.
- The system will allow the administrator to view the complaint, and will be able to check status of the complaint.

**E-Desk** Forum is an electronic way of filing queries through a network-driven application. The user must enter his Aadhaar number and a valid email, and he will receive a registered Email to ensure that the valid user has been registered.

User to launch the web and try to login. He/she enters the in web and enter Aadhaar number and clicks submit. Check whether the internal code Aadhaar is correct, the system sends OTP through the voter's email, and then he enters the to next process. Incorrect email and password, it gives an invalid ID message and goes to the login page.

## 10) End to End Flow of Application:

**User:**

ii. User will login to the portal or will have to register if he is not a registered user.

iii. After registration User will login and Dashboard page will be displayed to him which will display the previous complains and its status if any.

iv. From that page can User can click on the '**file new complain'** button and reach the complaint details form page.

v. In the complaint details page the User has to pick a category among the **Five** predefined categories and brief about the problem with affected area (address).

vi. A '**summary report'** will be displayed on the Website showing all the details of the complaint.

vii. User will only be able to see his complaint after the complaint has been '**Received'** or either '**Resolved'** by the respective admin of the category chosen.

**Admin:**

i. Admin will login as Admin from the '**login**' page and will be able to see his share of Complains filed by the Users of a particular area.

ii. Admin can Review the complaint and after understanding it Admin will '**Receive'** the complaint.

iii. It is the job of Admin to assign appropriate contractor or service person to resolve the matter at the hand as soon as possible to avoid disturbance among the public.

iv. After conforming about the completion/resolving of the problem, Admin will check the status of the problem as '**Resolved'** and After completed complaint send the E-mail for User.

## 11) Future Scope of Project

Future Scope:

- The E-DESK can be made more secure by using Password Changing.
- The user can be given the privilege of changing the password. So it helps to increase the security of the system.
- Very much Feasible for authorities to pass the complaints to workers.

# Thank You!