

Society Management System

A PROJECT REPORT

Submitted by

Nency Patel (19BECE30126)

Vishwa Patel (19BECE30207)

Hetvi Shah (19BECE30069)

Mitali Shah (19BECE30116)

In fulfillment for the award of the degree

of

BACHELOR OF ENGINEERING

in

Computer Engineering



LDRP Institute of Technology and Research, Gandhinagar

Kadi Sarva Vishwavidyalaya

April, 2023

***LDRP INSTITUTE OF TECHNOLOGY AND
RESEARCH
GANDHINAGAR***

CE-IT Department



CERTIFICATE

This is to certify that the Project Work entitled **“Society Management System”** has been carried out by **Nency Patel [19BECE30126]** under my guidance in fulfillment of the degree of Bachelor of Engineering in Computer Engineering Semester-8 of Kadi Sarva Vishwavidyalaya University during the academic year 2022-2023.

Dr. Hitesh Patel
Assistant professor
CE & IT Department
LDRP-ITR, Gandhinagar

Dr. Sandip Modha
H.O.D.
CE Department,
LDRP-ITR, Gandhinagar

***LDRP INSTITUTE OF TECHNOLOGY AND
RESEARCH
GANDHINAGAR***

CE-IT Department



CERTIFICATE

This is to certify that the Project Work entitled **“Society Management System”** has been carried out by **Vishwa Patel [19BECE30207]** under my guidance in fulfillment of the degree of Bachelor of Engineering in Computer Engineering Semester-8 of Kadi Sarva Vishwavidyalaya University during the academic year 2022-2023.

Dr. Hitesh Patel
Assistant professor
CE & IT Department
LDRP-ITR,Gandhinagar

Dr. Sandip Modha
H.O.D.
CE Department,
LDRP-ITR,Gandhinagar

***LDRP INSTITUTE OF TECHNOLOGY AND
RESEARCH
GANDHINAGAR***

CE-IT Department



CERTIFICATE

This is to certify that the Project Work entitled “**Society Management System**” has been carried out by **Hetvi Shah [19BECE30069]** under my guidance in fulfillment of the degree of Bachelor of Engineering in Computer Engineering Semester-8 of Kadi Sarva Vishwavidyalaya University during the academic year 2022-2023.

Dr. Hitesh Patel
Assistant professor
CE & IT Department
LDRP-ITR, Gandhinagar

Dr. Sandip Modha
H.O.D.
CE Department,
LDRP-ITR, Gandhinagar

***LDRP INSTITUTE OF TECHNOLOGY AND
RESEARCH
GANDHINAGAR***

CE-IT Department



CERTIFICATE

This is to certify that the Project Work entitled **“Society Management System”** has been carried out by **Mitali Shah[19BECE30116]** under my guidance in fulfillment of the degree of Bachelor of Engineering in Computer Engineering Semester-8 of Kadi Sarva Vishwavidyalaya University during the academic year 2022-2023.

Dr. Hitesh Patel
Assistant professor
CE & IT Department
LDRP-ITR,Gandhinagar

Dr. Sandip Modha
H.O.D.
CE Department,
LDRP-ITR,Gandhinagar

ACKNOWLEDGEMENT

With immense pleasure I would like to present this report on my topic “E-Society.” We thankful to all that have helped us a lot for the successful completion of our project and providing us encourage for completing the work.

We also express our gratitude to our Head of the Department **Dr. Sandip Modha** and my internal faculty guide **Dr. Hitesh Patel**, for providing guidance throughout my work giving us their valuable time.

At last, we would like to thank my parents and friends who have directly or indirectly helped me in making the project work successfully.

Nency Patel [19BECE30126]

Vishwa Patel [19BECE30207]

Hetvi Shah [19BECE30069]

Mitali Shah [19BECE30116]

ABSTRACT

The project is digital and secure society automation. It is an android based application that can be used to create an ethical medium to provides a system to the society. There is problem that personcan be store as physical information. There is possibility to remove anytime. Here the user can be viewing all notification about upcoming events, society function, maintenance cheques date notice- board details and other society problems.

LIST OF FIGURES

Sr. No	Figures	Page
4.4	Class Diagram	12
4.5	Use case Diagram	13
4.5.1	Use case Diagram for registration	14
4.5.2	Use case Diagram for login	14
4.5.3	Use case Diagram for update profile	15
6.2	Entity relationship Diagram	21
6.3	Dataflow Diagram	22
6.3.1	DFD Level 0 Diagram	23
6.3.2	DFD Level 1 Diagram	23
6.3.3	DFD Level 2 Diagram	24
6.4.1	Activity Diagram (User)	25
6.4.2	Activity Diagram (Admin)	26
6.5	Sequence Diagram	27

LIST OF TABLES

Sr. No	Tables	Page
6.1.1	Society	19
6.1.2	User	20
6.1.3	Visit	20

TABLE OF CONTENT

Sr. No	Index	Page
I	Acknowledgement	V
II	Abstract	VI
III	List of Figures	VII
IV	List of Tables	VIII
V	Table of Content	IX
1	Introduction	1
1.1	Introduction to System.	1
1.2	Objective of the new system	1
1.3	Project Definition	1
1.4	Market Survey	2
1.5	Limitation of Existing System	4
2	Technology And Literature Review	5
2.1	HTML	5
2.2	CSS	5
2.3	Java Script	5
2.4	AJAX	6
2.5	BOOTSTRAP	6
2.6	PYTHON	6
3	System Requirement Study	7

3.1	User Characteristic	7
3.2	Software And Hardware Requirements	7
	3.2.1 Software Requirements	7
	3.3.2 Hardware Requirements	7
3.3	Function And Non-function Requirements	7
3.4	Constraints	8
3.5	Assumptions And Dependencies	9
	3.5.1 Assumptions	9
	3.5.2 Dependencies	9
4	SYSTEM ANALYSIS	10
4.1	Study Of Current System	10
4.2	Module And Functionality Of The Proposed System	10
4.3	4.3.1 Feasibility Study	10
	4.3.2 Technical Feasibility	10
	4.3.3 Economic Feasibility	10
	4.3.4 Organization Feasibility	11
4.4	Class Diagram	12
4.5	Use Case Diagram	13
	4.5.1 Use Case Diagram For Registration	14
	4.5.2 Use Case Diagram For Login	14
	4.5.1 Use Case Diagram For Update Profile	15
5	Project Planning – Estimation And Scheduling	16

5.1	Estimation	16
	5.1.1 FP Based Effort and cost estimation	16
	5.1.2 COCOMO based effort and cost estimation	16
6	System Design	19
6.1	Database Dictionary	19
6.2	Entity Relationship Diagram	21
6.3	Data Flow Diagram	22
6.4	Activity Diagram	25
6.5	Sequence Diagram	27
7	Testing	28
7.1	Black Box Testing	28
7.2	Test Cases	29
8	Bibliography	32
8.1	Bibliography	32
9	Conclusion	33

1. INTRODUCTION

1.1 INTRODUCTION TO SYSTEM

Today's modern society needs much modern solutions for its proper management, which can replace the human efforts. Any co-operative society needs an efficient Society management system for managing its day-to-day activities which can even manage society's accounting work also. Society management software is one stop solution for all worried faced in managing any society.

The project is digital and secure society automation. It is an android based application that can be used to create an ethical medium to provide a system to the society. There is a problem that person can be store as physical information. There is possibility to remove anytime. Here the user can be viewing all notification about upcoming events, society function, maintenance cheques date, notice-board details and other society problems. These all-process's data managed by only the authorized user, and it will provide helpline secure number.

1.2 OBJECTIVE OF THE NEW SYSTEM

- Maintenance Payment: Using this feature, the management committee members can quickly send generate payment schedule to collect maintenance dues from all apartment owners.
- The payment collection can be done by online payment system.
- All Urgent Connections: Online Society management Solution is the best solution in the situation of emergency and any problems at any time.
- Publish Notice: Secretary can publish notice and reach all members instantly. Admin can also see how many members have read the notice. Society members will get the notification and email to read and follow instruction mentioned in the notice through the application.
- Mobile App: In today's world everyone is having smart phone. This system can quickly track every information of the society management at the fingertips. Online Society Management Solution is best managed today's modern society.

1.3 PROBLEM DEFINITION

The project is digital and secure society automation. It is an android based application that can be used to create an ethical medium to provide a system to the society. There is a problem that person can be store as physical information. There is possibility to remove anytime. Here the user can be viewing all notification about upcoming events, society function, maintenance cheques date, notice-board details and other society problems. There is possibility to chat with one to another. These all-process's data managed by only the authorized user, and it will provide helpline secure number.

1.4 MARKET SURVEY

Application – 1

Name:SocietyNMore

Category: Web Application

URL: <https://www.softwaresuggest.com/societynmore>

About:

Societynmore (SNM) is an online Society Management & administration and Society Accounting solution which can be to use by Cooperative Societies their benefit for effective administration of the Society affairs.

Our online technology helps bring in efficiency and transparency in way society affairs are to be managed and contribute towards building a Greener Society by promoting paperless administration and Management of Societies. One of the best solutions for the housing society accounting and billing managed. Our billing software can accommodate all kinds of a maintenance bill settings as may be required by different Societies and that accounts postings are automated to minimize accounting efforts. It's an automated accounting software which promotes digitization of complete books of account.

Features:

- Accounting
- Asset & Property Tracker
- Classifieds
- Contact Manager
- Content Publisher
- Discussion Forum
- Document Management
- Email Marketing / SMS Marketing
- Event Calendar
- Facility Booking System
- Gatekeeper
- Groups
- Help Desk
- Income Tracking
- Inventory Management
- Maintenance Staff Management
- Meeting Management
- Members Details
- Mobile Support
- Notice Board
- Parking Lot Management
- Payment Gateway Integration
- Penalty Calculation
- Polling Booth / ballot
- Quotation & Estimates
- Reminders
- Society Photo Gallery
- Staff Attendance Tracker

Application – 2

Name: ADDA

Category: Web Application

UXDDRL: https://contact.adda.io/my-society-gate-management-security/?utm_term=society%20visitor%20management&utm_campaign=Competitors&utm_source=adwords&utm_medium=ppc&hsa_acc=7680515076&hsa_cam=12612509514&hsa_grp=120138885539&hsa_ad=509199093750&hsa_src=g&hsa_tgt=kwd-766312446365&hsa_kw=society%20visitor%20management&hsa_mt=b&hsa_net=adwords&hsa_ver=3&gclid=aIQobChMIu_vayYSc8gIVgU0rCh051AT4EAAYAAEgIhavD_BwE

About:

ADDA is a web application for society management. We can automate our society using ADDA and say goodbye to the time-consuming applications and manual processes.

Connect With Community Residents

- Online Notices and Discussion Forums:
Residents Constantly Updated with Latest Community Information
Make the Best of Neighborhood Facilities
- Easy Payment of Maintenance Dues:
Higher Collection with Integrated Payment Gateway
Immediate Assurance with Instant Payment Receipt.
- Automate Building Management
Helpdesk: Raise Maintenance Service Requests
Track Progress Status of Complaints
Record Faster Complaint Resolution
- Lessen Gate Queueing with Contact-less Visitor Check-In/Out
- RFID Boom Barrier Integration to Record All Vehicle Movement in Premises
- Offline Functionality Allows Data Entry in Zero/Low Connectivity
- Community/Private Staff Attendance Management
- Contactless Entry
- Panic Alert Button to Alert Friends/Family when Calls are Difficult
- Emergency Numbers Specifically Servicing User's Neighborhood

Features:

- Integrated Accounting & Billing
- 100% Automated Accounting & Auto-Invoicing
- Identify Defaulter & Levy Late Payment Charges
- Automated Maintenance Payment Reminders; Reduce Defaulter Rate to as low as 5%
- Add, Update, Approve/Deactivate Users
- Provision of Limited System Access to Staffs & Other Members
- Track Progress Reports of Complaints/Queries.

- Set Task Owners, Escalation Matrix, Automate Workflow
- Auditor Approved Chart of Accounts Format
- Balance Sheet and P&L Statements for Easy Bank Reconciliation
- Data migration from Tally, Common floor and other society management software's
- AMC Intelligent Reports
- Save up to 40% cost on AMC
- 150+ Customized Action Oriented Reports to Boost ROI
- Statistics based Reports assists in Taking Informed Management Decisions

1.5 LIMITATION OF EXISTING SYSTEM

There are some societies related application in the market, but they have some limitations

- This old way certainly has some limitations and disadvantages. Many operations like daily notices, monthly meetings, cultural events, security alerts are being handled manually which lacks transparency, time consumption & need lot more labour.
- In this new application, there is an online payment options for maintenance. Also, there a separate complain box in which members can easily put their problems and can be handle smoothly by admin. There are some emergency contact numbers for any kind of emergencies regarding society. And some others.

2. TECHNOLOGY AND LITERATURE REVIEW

2.1 HTML:

- Hyper Text Markup Language (HTML) is the main markup language for creating web pages and other information that can be displayed in a web browser.
- HTML is written in the form of HTML elements consisting of tags enclosed in angle brackets (like), within the web page content. HTML tags most commonly come in pairs like and , although some tags, known as empty elements, are unpaired, for example Error! Filename not specified.. The first tag in a pair is the start tag, the second tag is the end tag (they are also called opening tags and closing tags). In between these tags web designers can add text, tags, comments and other types of text-based content.
- The purpose of a web browser is to read HTML documents and compose them into visible or audible web pages. The browser does not display the HTML tags, but uses the tags to interpret the content of the page.
- HTML elements form the building blocks of all websites. HTML allows images and objects to be embedded and can be used to create PHP forms. It provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items. It can embed scripts written in languages such as JavaScript which affect the behavior of HTML web pages.

2.2 CSS:

- CSS is designed to enable the separation of presentation and content, including layout, colors, and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple web pages to share formatting by specifying the relevant CSS in a separate .css file which reduces complexity and repetition in the structural content as well as enabling the .css file to be cached to improve the page load speed between the pages that share the file and its formatting.
- Separation of formatting and content also makes it feasible to present the same markup page in different styles for different rendering methods, such as on-screen, in print, by voice (via speech-based browser or screen reader), and on Braille-based tactile devices. CSS also has rules for alternate formatting if the content is accessed on a mobile device.

2.3 Java Script (JS):

- JavaScript (JS) is a lightweight, interpreted, or just-in-time compiled programming language with first-class functions. While it is most well-known as the scripting language for Web pages, many non-browser environments also use it, such as Node.js, Apache CouchDB and Adobe Acrobat. JavaScript is a prototype-based, multi-paradigm, single-threaded, dynamic language, supporting object-oriented, imperative, and declarative (e.g. functional programming) styles. Read more about JavaScript.
- This section is dedicated to the JavaScript language itself, and not the parts that are specific to Web pages or other host environments. For information about API specifics to Web pages, please see Web APIs and DOM.

2.4 AJAX:

- AJAX stands for Asynchronous JavaScript And XML. In a nutshell, it is the use of the XMLHttpRequest object to communicate with servers
- It can send and receive information in various formats, including JSON, XML, HTML, and text files.
- AJAX is a technique for creating fast and dynamic web pages. AJAX allows web pages to be updated asynchronously by exchanging small amounts of data with the server behind the scenes. This means that it is possible to update parts of a web page, without reloading the whole page.

2.5 BOOTSTRAP:

- Bootstrap is the most popular CSS Framework for developing responsive and mobile-first websites.
- Bootstrap is a free, open source front-end development framework for the creation of websites and web apps. Designed to enable responsive development of mobile-first websites, Bootstrap provides a collection of syntax for template designs.
- Bootstrap is a giant collection of handy, reusable bits of code written in HTML, CSS, and JavaScript. It's also a frontend development framework that enables developers and designers to quickly build fully responsive websites.

2.6 PYTHON:

- Python is an interpreted, object-oriented, high-level programming language with dynamic semantics developed by Guido van Rossum.
- Python is a computer programming language often used to build websites and software, automate tasks, and conduct data analysis. Python is a general-purpose language, meaning it can be used to create a variety of different programs and isn't specialized for any specific problems.
- The python language is one of the most accessible programming languages available because it has simplified syntax and not complicated, which gives more emphasis on natural language. Due to its ease of learning and usage, python codes can be easily written and executed much faster than other programming languages.

3. SYSTEM REQUIREMENT STUDY

3.1 USER CHARACTERISTICS

Our project is the college-based project this site can be used by different type of users. We can deal in project with various institutes users, general users, admin, faculties, and students.

3.2 SOFTWARE AND HARDWARE REQUIREMENTS

3.2.1 Software Requirements

- Desktop
- Wi-Fi
- HTML
- CSS
- JavaScript
- Python
- AJAX
- Bootstrap
- PyCharm
- SQLYog

3.2.2 Hardware Requirements

- 4-GB Ram
- Intel Core i3 or Higher Processor
- 500 GB Hard disks
- Webcam
- 2-GB Graphic Card

3.3 FUNCTIONAL AND NON-FUNCTIONAL REQUIREMENTS

- Registration
- Authentication
- Upload Notes
- Download Notes
- Send Complain
- Sent notice
- Change lecture time
- Get an appointment of faculty

Non-Functional Requirements

A non-functional is a requirement that specify criteria that can be used to judge the operation of a system, rather than specific behavior. Non-functional requirements define how a system is supposed to be.

A. Reliability:

The online voting system shall be robust enough to have a high degree of fault tolerance, for example, if there is an invalid entry, the system should not crash and shall identify the invalid input and produce a suitable error message.

B. Security:

The system should implement strategies to counter hacking and access by unauthorized persons. The application needs to be secure enough and should enable users to access it depending on the level of the user. E.g., An administrator will be register voters, an authorized voter will only be allowed to vote. The election system must be sufficient robust to withstand a variety of fraudulent behaviors and must be sufficient transparent and comprehensible that voters and candidates can accept the results of an election.

C. Performance:

Response time of e-vote should be less than 5 seconds most of the time. Response time refers to the time that user should wait for before getting a response from the system after querying it.

D. Integrity:

Only administrator has the right to register vote. The system should be logically and physically secure to protect database. Also, administrator should be authenticated.

E. Scalability:

System will be able to match the expand for future needs and will not change its purpose.

F. Usability:

User should be able to understand the options and menu provided in the system Interface should be interactive and easy to understand.

G. Availability and accessibility:

It should be up and running whenever needed.

H. Interoperability:

The system should be able to work with existing system. It should ensure forward and backward compatibility.

3.4 CONSTRAINTS

3.4.1 Parallel Operations

The project is on basis of multi-user. This is used for carrying out updating as well as entry by preventing the redundancy of the data.

3.4.2 Reliability Requirements

The system shall have a minimum uptime of 99% excluding time pre-scheduled for maintenance and/or upgrades. The system designed has a very simple database which will store user's name, email and contact. It is tested for all constraints at development stage.

3.4.3 Criticality of the application

The system can stop working on computers with very low internet connection. Other than that, there won't be any issue. apart from this the system should be able to make updates at regular time intervals

3.4.4 Safety and security considerations

All the system data must be backed up every day and backup copies stored in another server at different location for disaster recovery. only legitimate users are allowed to use the application. If the legitimate users share the information, then the system is open to outsiders.

3.4.5 Hardware limitations

Display size: 4.5 inches or higher recommended.

Processing speed: 2.4 GHz minimum or higher recommended. Memory size: 1 GB RAM or higher recommended.

Screen resolution: 1024 x 768 pixels or higher recommended.

3.4.6 General Constraint

Internet availability is the major requirement for all the end users to successfully access the application. Use not having knowledge of computer system and proper setup to run the system.

3.5 ASSUMPTIONS AND DEPENDENCIES

3.5.1 Assumptions

While cost estimation of the proposed system it has been assumed that the cost hardware and for license of Operating System and back end will be met by client (the organization). Hence only the cost incurred for the proposed software is included therein.

3.5.2 Dependencies

The followings are identified as some of the potential risk factors or dependencies:

- non-availability of required resources.
- Power cuts.
- Each user must have a name, email address and contact number.
- There is only one Administrator.
- Internet connection speed.

4 SYSTEM ANALYSIS

4.1 STUDY OF CURRENT SYSTEM

- There is no old system exactly like our project.
- There is a system to find batches of different products within mall
- It takes batch number as an input and shows its location inside go down.

4.2 MODULE AND FUNCTIONALITY OF THE PROPOSED SYSTEM

- By browsing clothes, it will provide location of store which contains it within mall.
- Need of finding clothes manually by wandering is eliminated.
- So, it will save time in advance.
- Searching will be through web application so its handy.
- Virtual assistant will provide better intelligence.
- No additional hardware implementation is required.
- Virtual assistant can also search through speech and can provide speech assistance.
- Image uploading can be done to find matching product as same as image

4.3 FEASIBILITY STUDY

A feasibility study is used to determine the viability of an idea, such as ensuring a project is legally and technically feasible as well as economically justifiable.

4.3.1 Technical Feasibility

Technical feasibility deals with finding whether technology to implement the system is currently available or the resource currently being used should be upgraded.

If the system using the application meets the system requirements as mentioned below then application could run efficiently –

- 1 GB Ram
- Snapdragon 310 or higher processor
- KitKat 4.4 or higher android OS

We have an enough experience to carry out the project with the association of Cloud technology. We have an enough consultant to help us. The project size is considered minimal risk & less timing. The processes and the procedures are conducive to project success.

4.3.2 Economic feasibility

The economic feasibility study is done by calculating the Cost Benefit Analysis (CBA). In this ROI (Return on Investment), BEP (Break-Even Point), NPV (Net Present Value) will be calculated.

Through which we must find the following answer to this question.

1. Is this tool having a good chance to improving the finance?
2. Is this tool going to the economic feasibility perspective or not?

4.3.3 Organizational Feasibility

1. For an organizational perspective,
2. The project is low risk.
3. It should take high demand among users.
4. board members should provide high motivation & interest for the compilation of the system.
5. It should produce a better and efficient outcome for an organization which should be a fruitful outcome.

4.4 CLASS DIAGRAM

Class diagram is a static diagram. It represents the static view of an application. Class diagram is not only used for visualizing, describing, and documenting different aspects of a system but also for constructing executable code of the software application.

Class diagram describes the attributes and operations of a class and also the constraints imposed on the system. The class diagrams are widely used in the modelling of object oriented systems because they are the only UML diagrams, which can be mapped directly with object-oriented languages.

Class diagram shows a collection of classes, interfaces, associations, collaborations, and constraints. It is also known as a structural diagram.

The purpose of the class diagram can be summarized as –

- Analysis and design of the static view of an application.
- Describe responsibilities of a system.
- Base for component and deployment diagrams.
- Forward and reverse engineering.

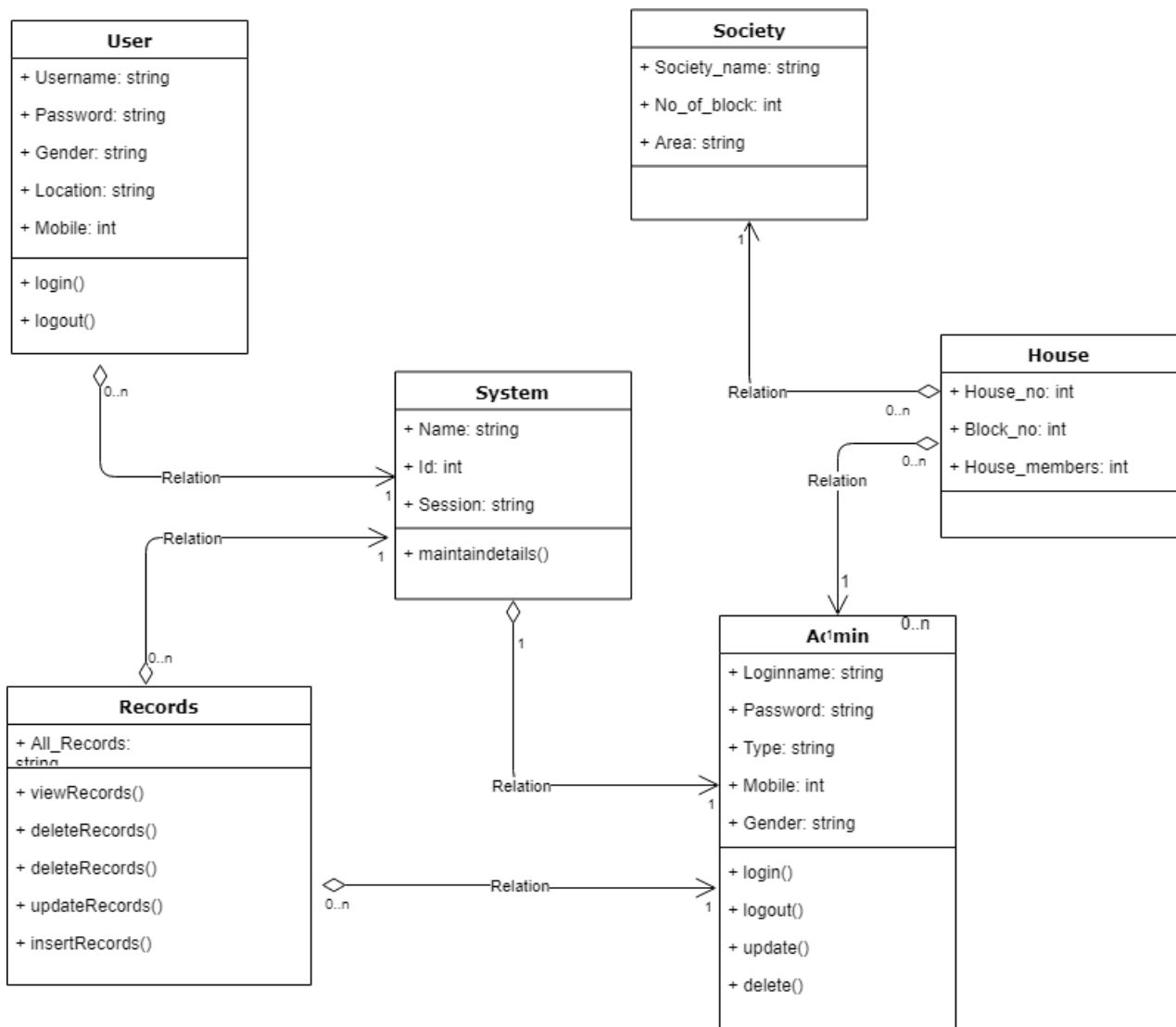


Fig. 4.4 Class Diagram

4.5 USE CASE DIAGRAM

Use case diagrams are used to represent the interaction of an actor with several use cases in which the actor is involved.

There are three actors in the proposed system – User, Admin

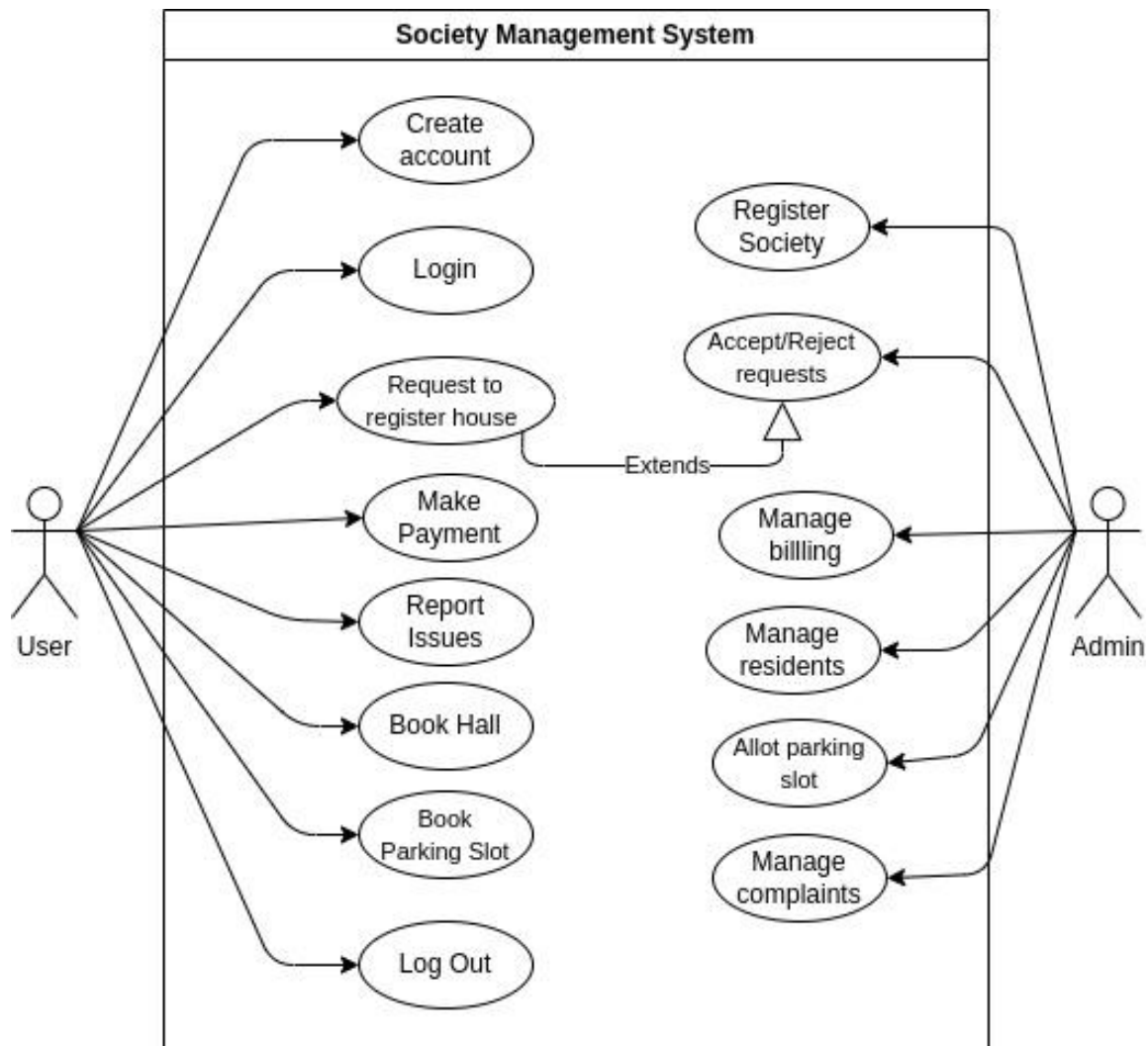
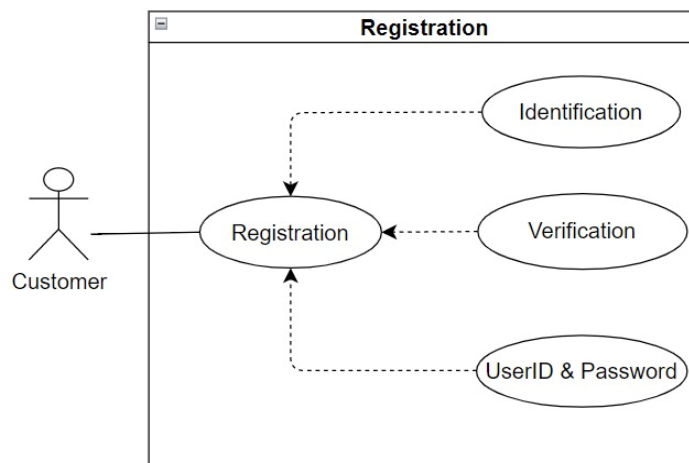


Fig. 4.5 Use Case Diagram

4.5.1 Use Case diagram for registration



Scenario for Registration:

1. Registration

1.1 Introduction: This is use case describe to registration in this application.

1.2 Actor: Resident.

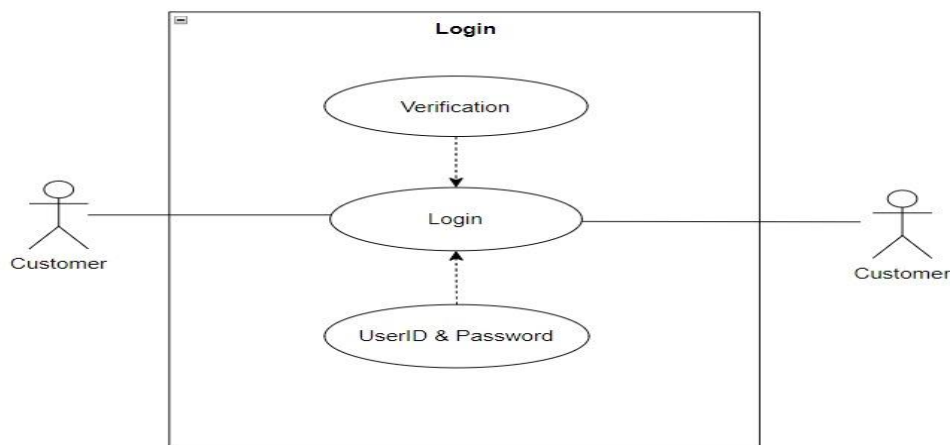
1.3 Precondition: User have UserId, Password.

1.4 Postcondition: Verification.

1.5 Basic flow: This use case starts when the resident opens the application.

- Enter UserId, basic information and password.
- Get verified.
- Get registration.

4.5.2 Use Case diagram for login



2. Login

2.1 Introduction: This is use case describe to login in this application.

2.2 Actor: Admin, resident.

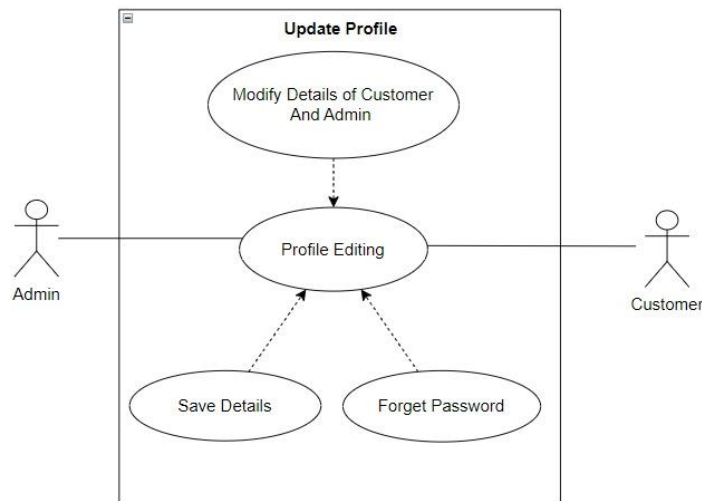
2.3 Precondition: User must have registered and have User id and password.

2.4 Postcondition: None.

2.5 Basic flow: This use case starts when the customer/admin is registered in the application.

- Enter user id and password.
- Get authenticated.
- Get logged in.

4.5.3 Use Case diagram for update profile



3. Profile Editing

3.1 Introduction: This is use case describes profile editing of candidate and voter in this application.

3.2 Actor: admin, resident.

3.3 Precondition: resident and admin must have registered and requested for profile editing.

3.4 Postcondition: None.

3.5 Basic flow: This use case starts when the admin wants to change profile.

- Enter new details.
- Save details.

5. PROJECT PLANNING - ESTIMATION AND SCHEDULING

5.1 ESTIMATION

There are two types of models that have been used to estimate cost: cost models and constraint models. Cost models provide direct estimates of effort. These models typically have a primary cost factor such as size and the number of secondary adjustment factors or cost drivers.

Cost drivers are characteristics of the project, process, products, or resources that influence effort. Cost drivers are used to adjust the preliminary estimate provided by the primary cost factor.

5.1.1 FP based effort and cost estimation

For Computation of FPA, we need input by the Expert and User Requirements. Further, to acquire function point and estimation, we need some Complexity adjustment factor variables illustrated in Table 3.2. These variables comprise of fourteen parts that give general application attributes to the software process, which affect programming profitability. The need and relevance of these variables are resolved on the premise of level of impact (DI) that reaches from zero (not present or no impact) to five (in number impact all through). The value of CAF [is computed by summing the score of fourteen different complexity factors based on their degree of influence (DI) and is mathematically represented as,

$$CAF = 0.65 + 0.01 \times \sum (1 \leq i \leq 14) F_i$$

5.1.2 COCOMO based effort and cost estimation

software product	a0	b0	c0	d0	Select
Organic	2.4	1.05	2.5	0.38	
Semi detached	3.0	1.12	2.5	0.35	
Embedded	3.6	1.20	2.5	0.32	

$$\text{Effort} = a * (\text{KLOC})^b \text{ PM}$$

5.1.2.1

Here we have KLOC= 80

So, Effort is $3 * (80)^{1.12} = 576.53$ PM Developer Time = $c * (\text{Effort})^d$ Months

5.1.2.2

Developer Time = $2.5 * (576.53)^{0.35} = 23$ Months Average Staff Time = Effort/Developer Time

5.1.2.3

Average Staff Time= $576.53/23 = 25$ Person Productivity= KLOC/Effort

5.1.2.4

Productivity= $80/576.53 = 0.14$ KLOC/PM

Consider, per month the developer gets 9000 Rupees as a trainee. Then the total cost will be $23 \times 9000 = 207000$ Rupees for developing the software. Transportation and hardware and other cost have not been included.

COCOMO model can be used to estimate the effort, development time and the cost for developing the software. Staffing is very important after these estimates. In this project, there are 25 members, and the work is done by all equally in all the phases of development.

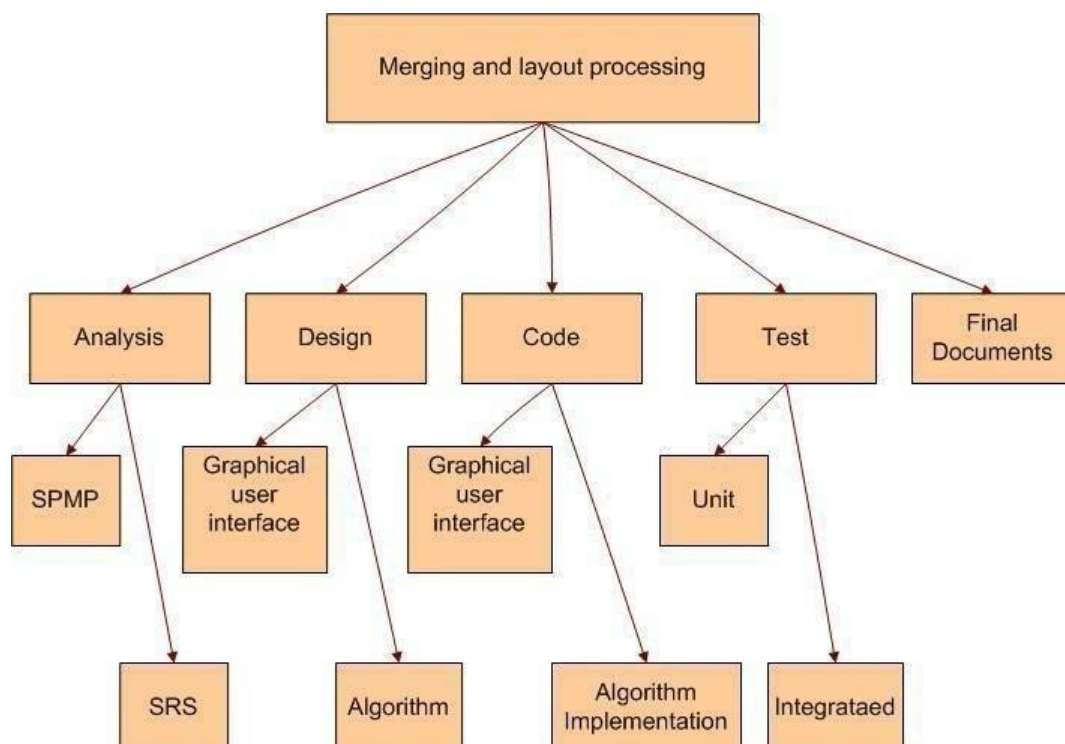
4.1 Project Scheduling and Timeline Chart

Project scheduling involves separating the total work in a project into separate activities and judging the time required to complete these activities. Usually, some of these activities are carried out in parallel.

Work Breakdown Structure

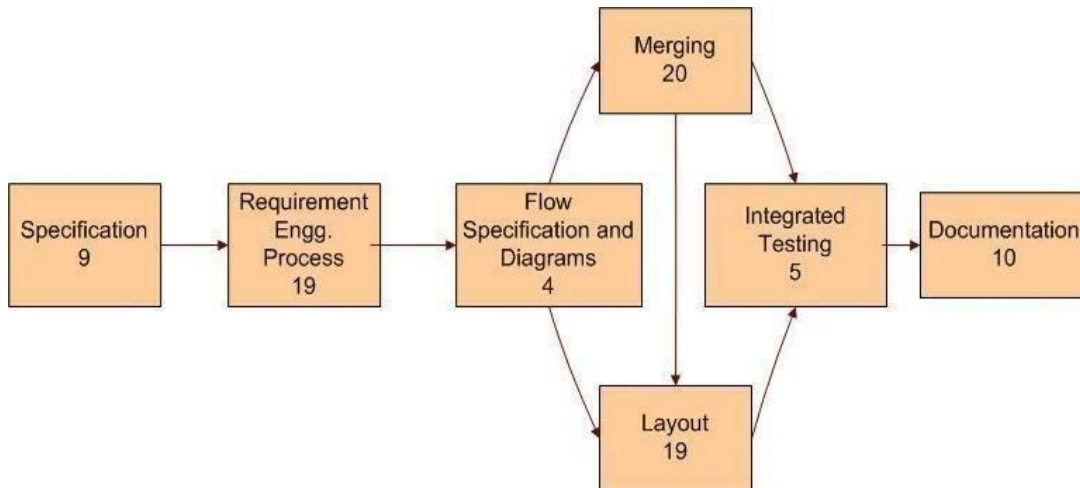
Work Breakdown Structure is used to decompose a given task set recursively into small activity.

Structure of Work Breakdown



Activity Network Requirements

- An activity network shows the different activities making of a project, their estimated duration and interdependencies.



6. SYSTEM DESIGN

6.1 DATABASE DICTIONARY

Table 6.1.1 Society

Sr. No	Field	Data type	Description
1.	Name	String	Name of society
2.	Address	String	Address of society
3.	City	String	City of society
4.	District	String	District of Society
5.	PostalCode	Number	Postal Code of area in number
6.	Admin	String	True or False
7.	NoticeBoard	Array	
8.	EmergencyContacts		
9.	PlumbingService	String	Default : Not added by admin
10.	MedicineShop	String	Default : Not added by admin
11.	Ambulance	String	Default : Not added by admin
12.	Doctor	String	Default : Not added by admin
13.	FireStation	String	Default : Not added by admin
14.	Guard	String	Default : Not added by admin
15.	PoliceStation	String	Default : Not added by admin
16.	MaintenanceBill		
17.	SocietyCharges	Number	Default : 186
18.	RepairsAndMaintenance	Number	Default : 1415
19.	SinkingFund	Number	Default : 240
20.	WaterCharges	Number	Default : 150
21.	InsuranceCharges	Number	Default : 30
22.	ParkingCharges	Number	Default : 150

Table 6.1.2 User

Sr. No	Field	Data type
1.	Validation	String
2.	IsAdmin	Boolean
3.	SocietyName	String
4.	FlateNumber	String
5.	FirstName	String
6.	LastName	String
7.	PhoneNumber	Number
8.	Complaints	Array
9.	LastPayment	Number
10.	MakePayment	Number

Table 6.1.3 Visit

Sr. No	Field	Data type	Description
1.	Count	Number	This field auto count Visit of user

6.2 ENTITY-RELATIONSHIP DIAGRAM

The ER or (Entity Relational Model) is an abnormal state applied information model graph. Entity Relation model depends on the thought of genuine elements and the connection between them.

ER displaying encourages you to investigate information necessities efficiently to create a well-structured database. In this way, it is viewed as a best practice to finish ER displaying before actualizing your database.

Entity relationship outline shows the connections of element set put away in a database. In other words, we can say that ER graphs help you to clarify the coherent structure of databases. From the outset look, an ER graph looks fundamentally the same as the flowchart. Be that as it may, ER Diagram incorporates many specific images, and its implications make this model one of a kind.

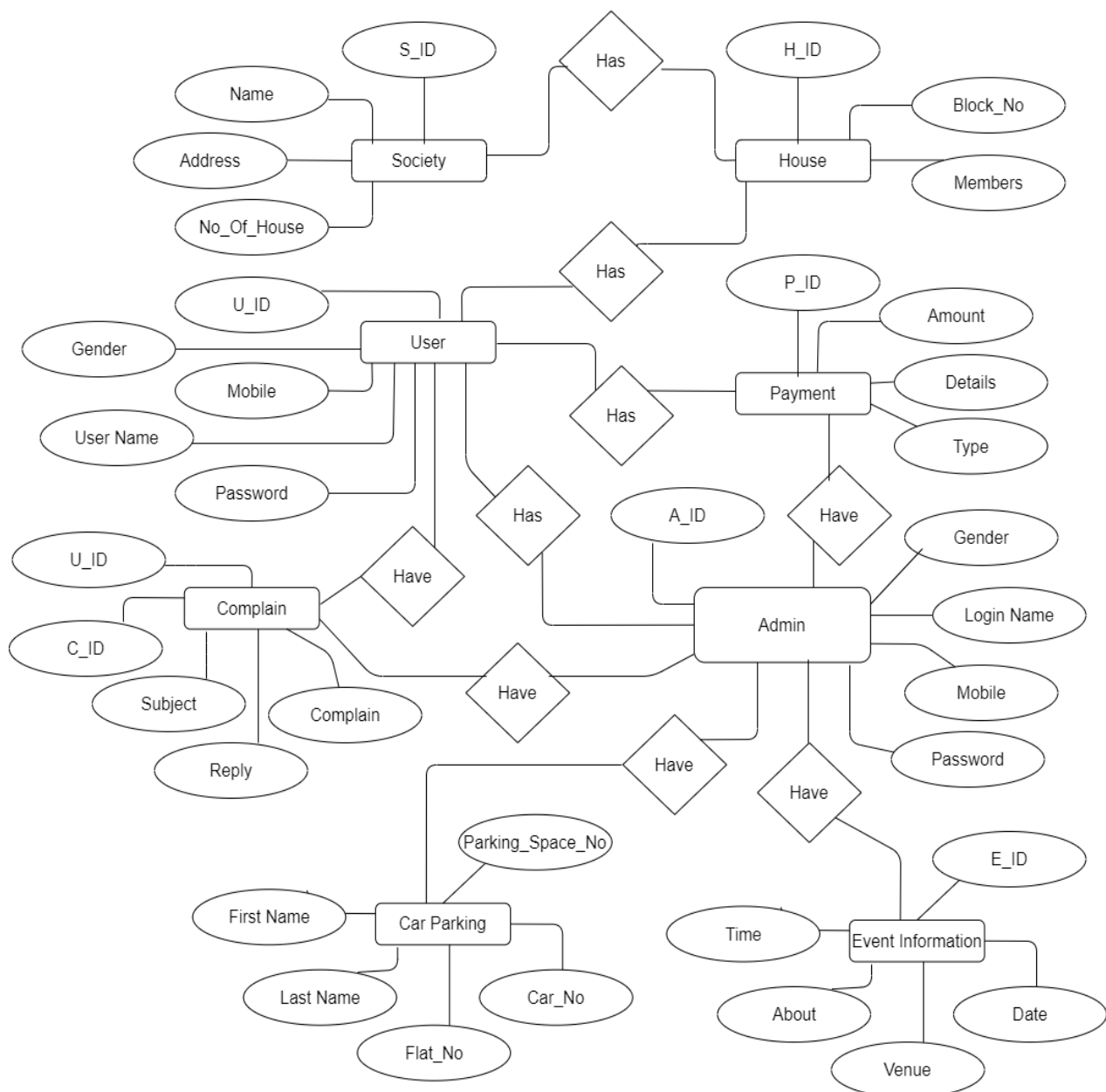


Fig. 6.2. E-R Diagram

6.3 DATA FLOW DIAGRAM

The data flow diagrams depict the information flow and the transforms that are applied on the data as it moves from input to output. The data flow diagrams are used to represent the system of any level of abstraction. The DFD can be partitioned into levels that represent increase in information flow and detailed functionality.

The level 0 DFD is called “fundamental system model” or “context model”. In this model the entire software system is represented by bubble withy input and output indicated by incoming and outgoing arrows. Each process shown in level 1 represents the sub functions of overall system. The number of levels in DFD can be increased until every process represents the basic functionality.

- Level 0

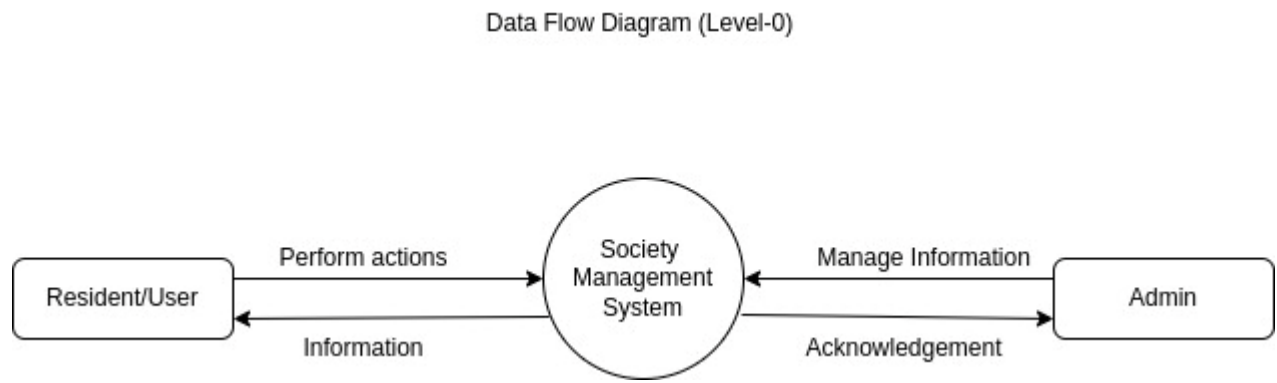


Fig. 6.3.1 DFD Level 0 Diagram

- Level 1

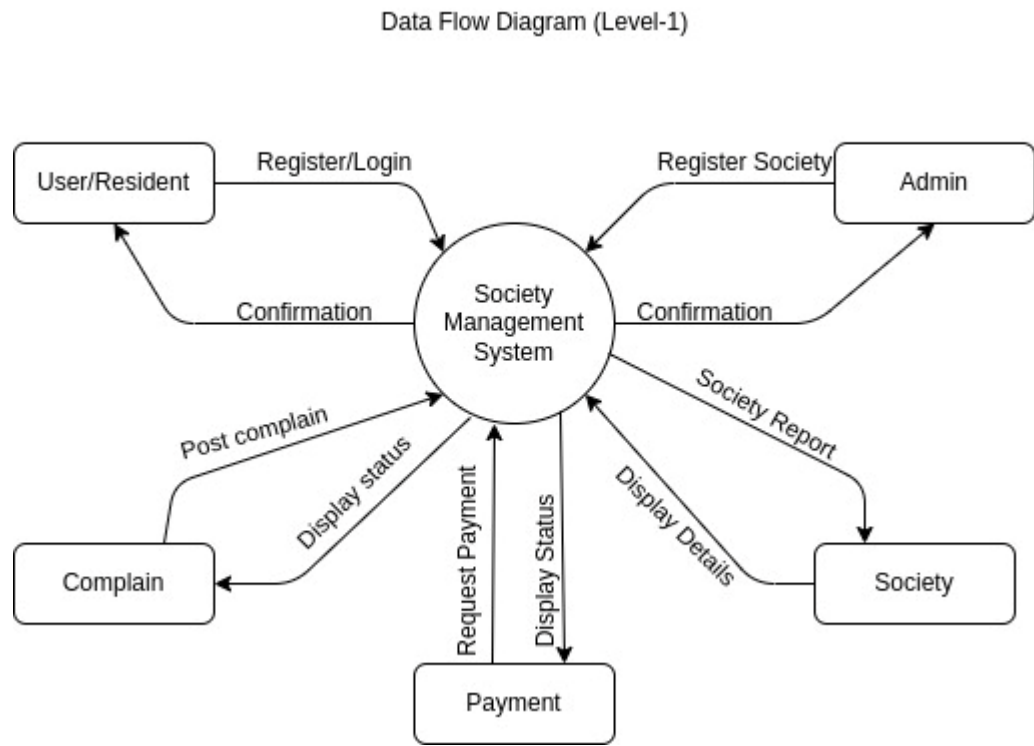


Fig. 6.3.2 DFD Level 1 Diagram

- Level 2

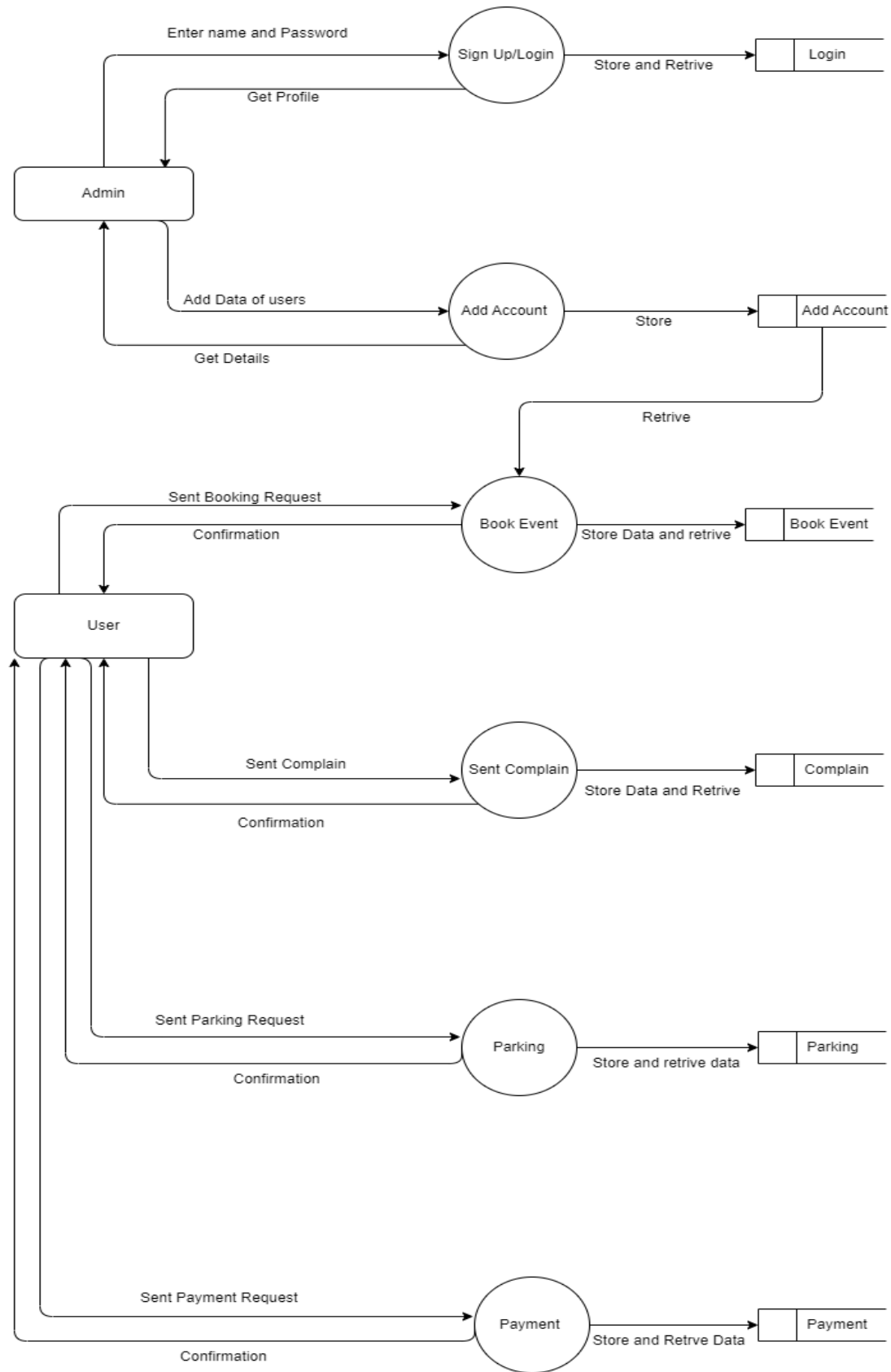


Fig. 6.3.3 Level 2 Diagram

6.4 ACTIVITY DIAGRAM

Activity diagram is another significant chart in UML to depict the dynamic parts of the system. Activity diagram is fundamentally a flowchart to speak to the stream starting with one movement then onto the next action. The movement can be portrayed as an activity of the system. The control stream is attracted starting with one activity then onto the next.

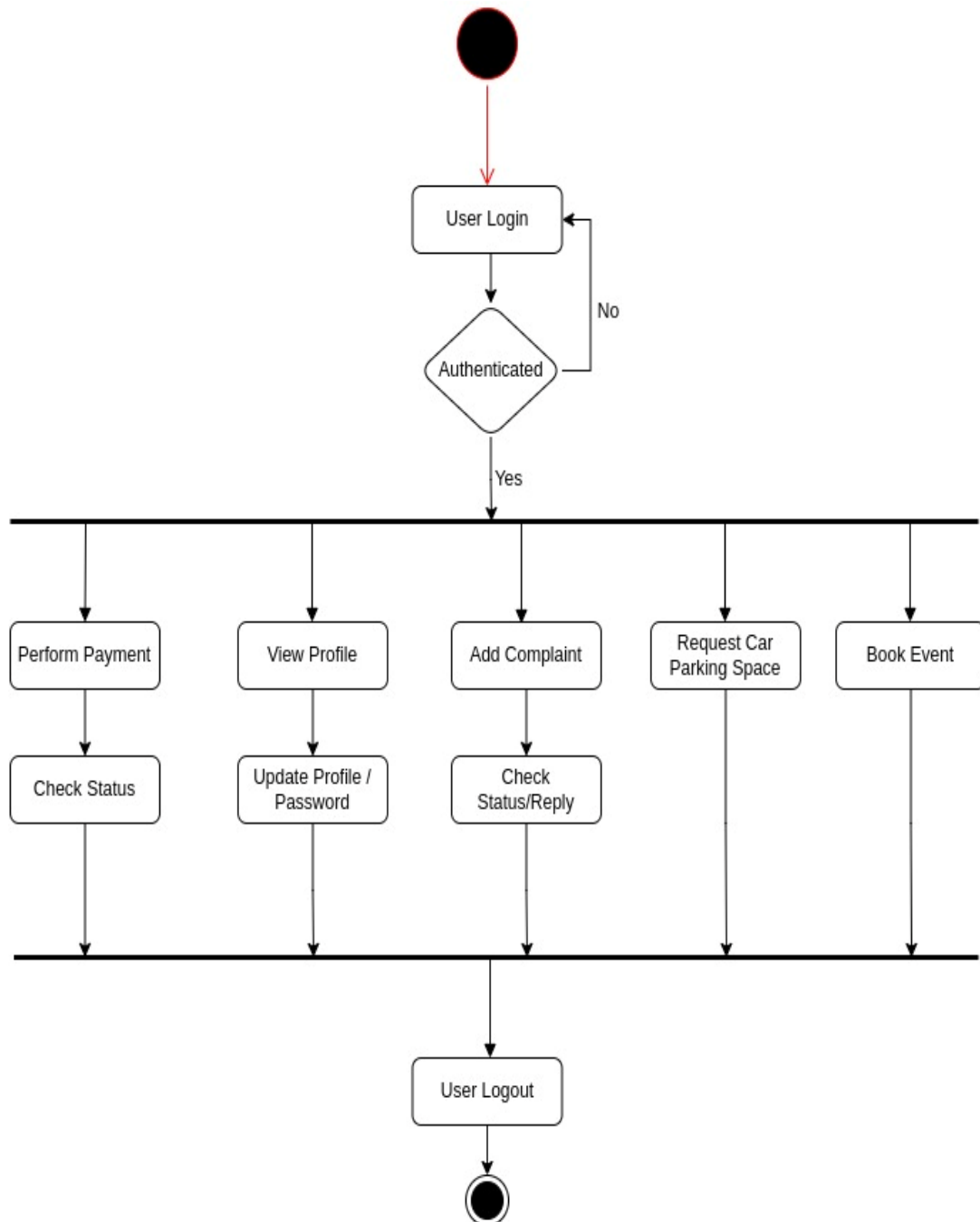


Fig. 6.4.1 Activity Diagram

- Admin

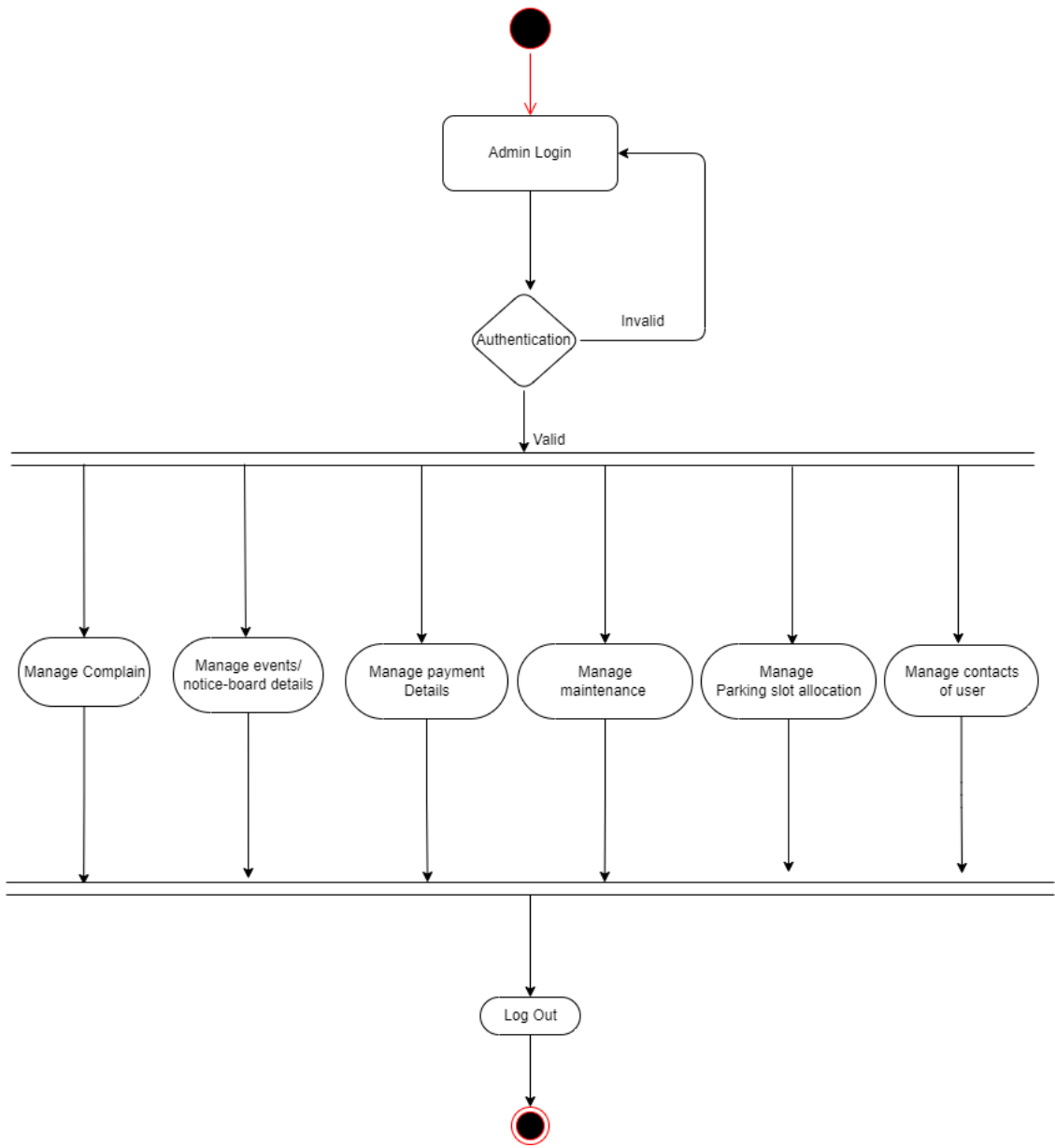


Fig.6.4.2 Activity Diagram (Admin)

6.5 SEQUENCE DIAGRAM

A sequence diagram just portrays connection between objects in a consecutive request for example the request where these communications happen. We can likewise utilize the terms event diagrams or event scenarios to allude to a grouping outline. Arrangement outlines portray how and in what request the articles in a framework work. These outlines are generally utilized by specialists and programming engineers to report and comprehend prerequisites for new and existing system

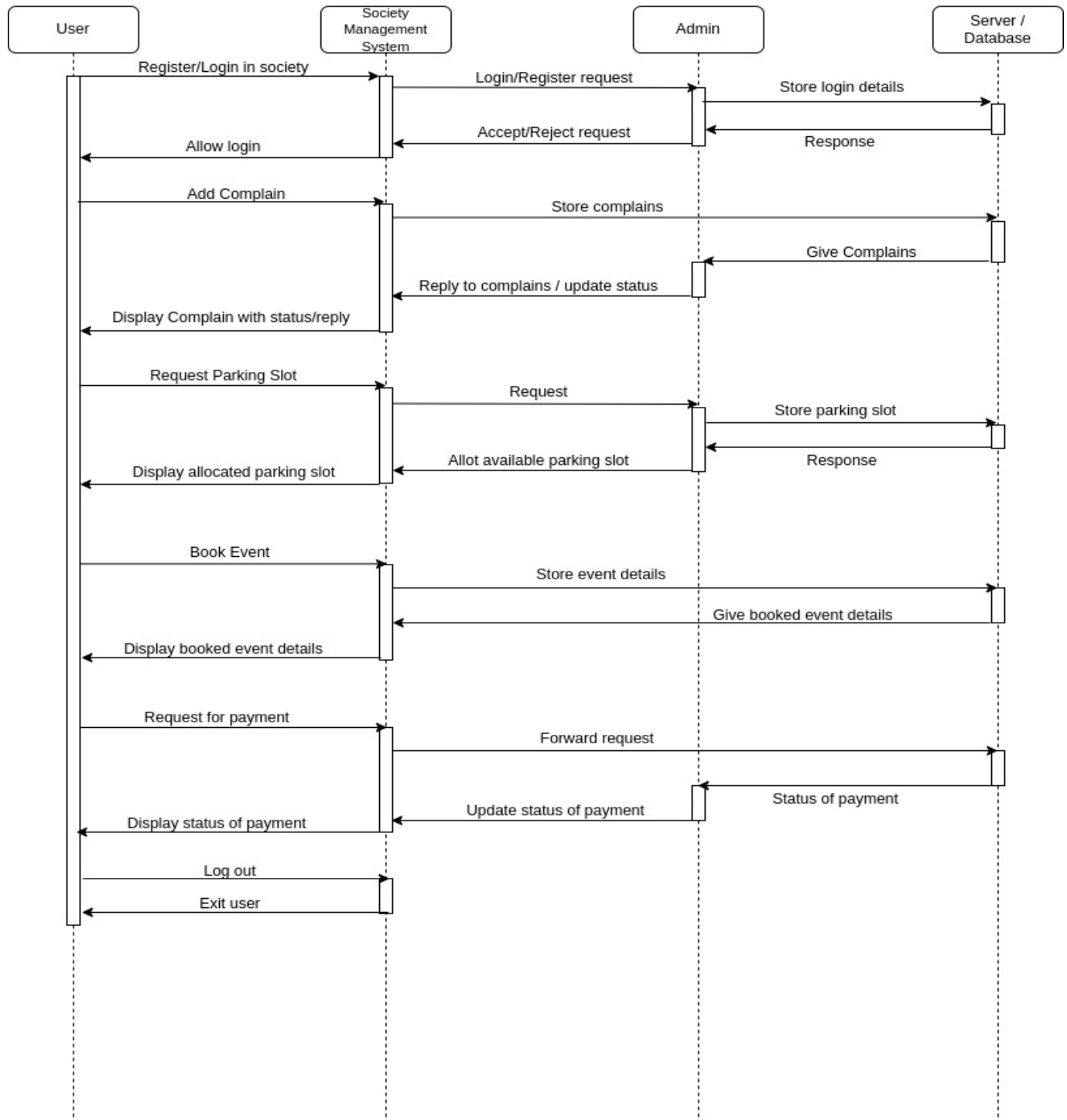


Fig. 6.5. Sequence Diagram

7. TESTING

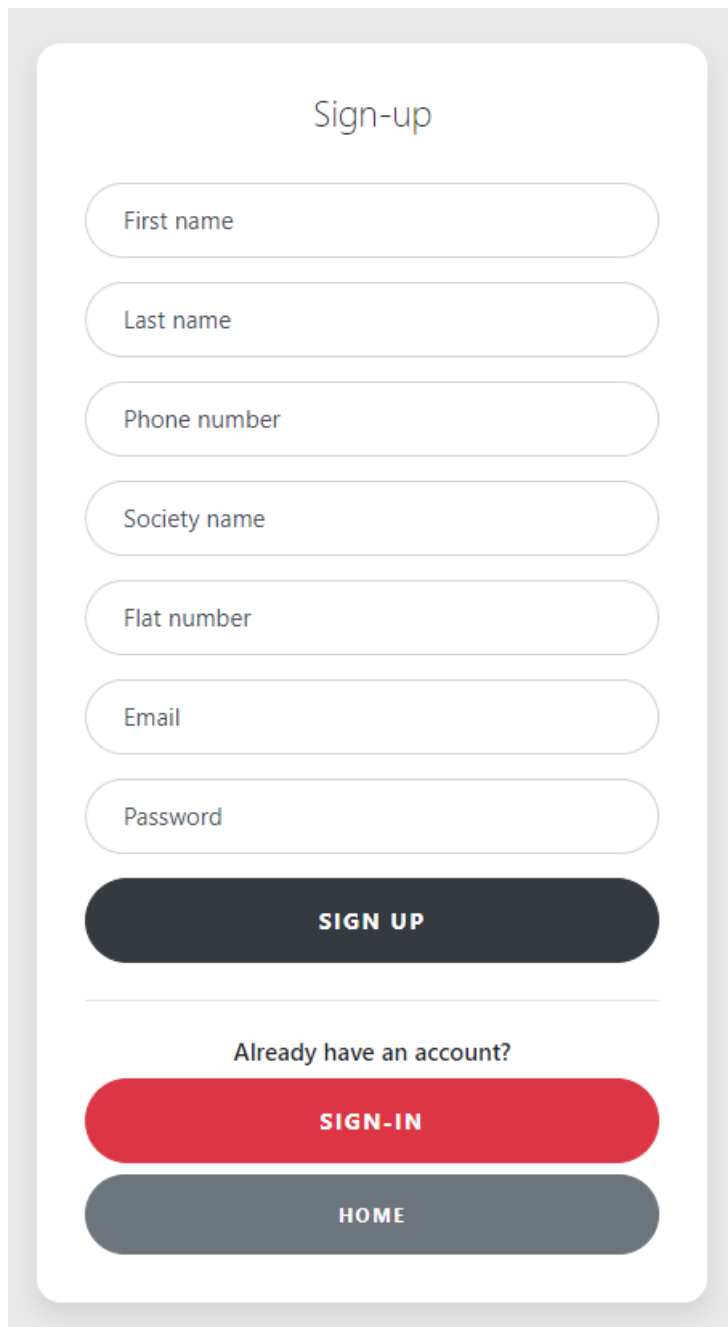
7.1 BLACK BOX TESTING

Black box testing, which is also known as behavioral, opaque-box, closed-box, specification-based or eye-to-eye testing, is a Software Testing method that analyses the functionality of a software/application without knowing much about the internal structure/design of the item that is being tested and compares the input value with the output value. Majority of the applications are tested by black box method. We need to cover most test cases so that most of the bugs will get discovered by a black box method. Types of Black Box Testing

- **Functional testing** - This black box testing type is related to the functional requirements of a system; it is done by software testers.
- **Non-functional testing** - This type of black box testing is not related to testing of specific functionality, but non-functional requirements such as performance, scalability, usability.

Table 7.1 Registration Module Testing

SR. No.	Functional Test Cases	Negative/Positive/ UI Testing
1	Verify that all the specified fields are present on the registration page.	UI Testing
2	Verify that tab functionality is working properly or not.	Positive
3	Verify that Enter key works as a substitute for the Submit button.	Positive
4	Verify that text fields have proper placeholder.	UI Testing
5	Verify that system does not accept when entered existing username.	Negative
6	Verify that not filling the mandatory fields and clicking submit button will not be accepted by the system.	Negative
7	Check validation on date, email field and password by entering wrong format of data.	Negative
8	Check validation on alphabetic fields by entering numbers and special characters.	Negative
9	Verify that clicking submit button after entering all the required fields, submits the data to the server.	Positive

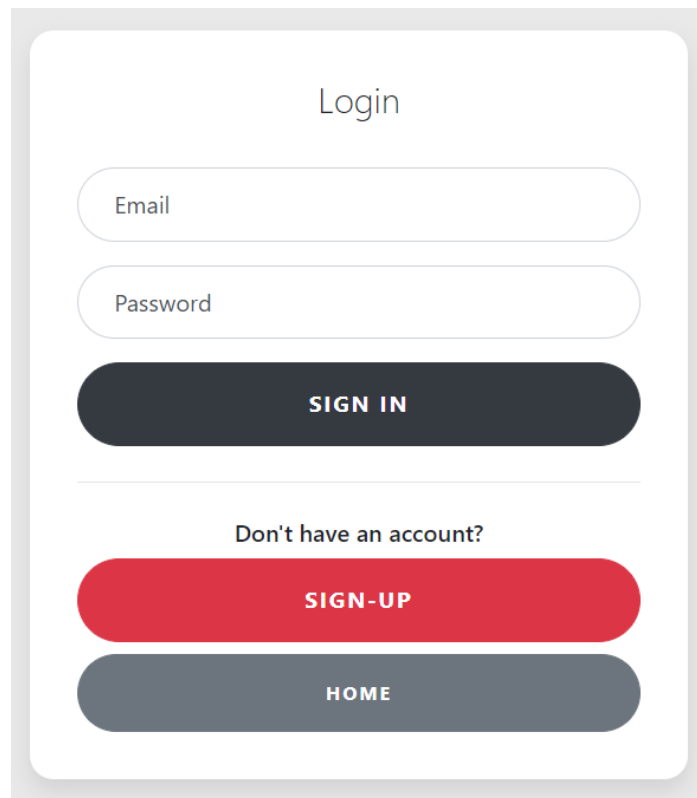


The image shows a mobile app registration screen. At the top, the title 'Sign-up' is centered. Below it are seven rounded rectangular input fields, each with a placeholder label: 'First name', 'Last name', 'Phone number', 'Society name', 'Flat number', 'Email', and 'Password'. Below the input fields is a dark grey button with the text 'SIGN UP' in white. A horizontal line separates this from the bottom section. Below the line, the text 'Already have an account?' is centered. Underneath are two more buttons: a red button with 'SIGN-IN' in white, and a dark grey button with 'HOME' in white.

Fig. 7.1 Registration Page Testing

Table 7.2 Login Module Testing

SR. No.	Functional Test Cases	Negative/Positive/ UI Testing
1	Verify if a user will be able to login with a valid username and valid password.	Positive
2	Verify if a user will not be able to login with a valid username and valid password.	Negative



The image shows a login page for a Society Management System. It features a white card with rounded corners on a light gray background. At the top, the word "Login" is centered. Below it are two input fields: "Email" and "Password", each with a light gray border and rounded ends. A dark gray button with the text "SIGN IN" in white is positioned below the input fields. A horizontal line separates this section from the next. Below the line, the text "Don't have an account?" is centered. Underneath are two more buttons: a red button with "SIGN-UP" in white, and a dark gray button with "HOME" in white.

Fig. 7.2 Login Page Testing

Table 7.3 Admin Module Testing

SR. No.	Functional Test Cases	Negative/Positive/UI Testing
1	Verify that admin can successfully add member.	Positive
2	Verify that admin can successfully add photos of gallery.	Positive
3	Verify that admin can successfully add chairman's message.	Positive
4	Verify that admin can successfully add payment of maintenance.	Positive
5	Verify that admin can successfully add monthly receipt.	Positive
6	Verify that admin can successfully add details of booking.	Positive
7	Verify that admin can successfully add notice.	Positive
8	Verify that admin can successfully add meeting update.	Positive
9	Verify that admin can successfully add documents.	Positive
10	Verify that admin can successfully add staff information.	Positive
11	Verify that admin can successfully view feedback.	Positive
12	Verify that admin can successfully view complains.	Positive
13	Verify that admin can successfully view public wall.	Positive
14	Verify that admin can successfully view member details.	Positive

ResidentsNoticeboardBillHelpdeskEmergencyProfileLogout

Edit Profile

First name :

Meet

Last name :

Guna

Phone number :

9510817189

Flat number :

1

Society address :

Punagam

City :

Surat

District :

Chorasi

Postal code :

395010

Save

Cancel

Fig 7.3 Admin Module Testing (1)

ResidentsNoticeboardBillHelpdeskEmergencyProfileLogout

New Notice

Subject

Details

Submit Notice

Cancel

Fig 7.4 Admin Module Testing (2)

8. BIBLIOGRAPHY

8.1BIBLIOGRAPHY

1. <http://esociety.co.in/>
2. <http://rits-esoc.tech/>
3. <https://www.quora.com/What-are-some-project-ideas-that-would-be-useful-for-society>
4. <https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.scribd.com%2Fdocument%2F327293291%2FProject-Report-Format-MSc&psig=AOvVaw0xTuMmkYSVHe4U410edGol&ust=1665650320650000&source=images&cd=vfe&ved=0CA0QjhxqFwoTCMDjkZCl2voCFQAAAAAdAAAAABAE>
5. <https://www.coursehero.com/file/59142566/30423298-project-report-on-credit-flow-in-co-operative-societydocx/>

9. CONCLUSION

9.1 CONCLUSION

Basically, our project for particular a residential building or society. If a person leave in that and that person want to know about charges and rules than it provides that along with that society member also see notice board and their profile in this website. Moreover, all events which planned by society and their expand information and bill's pdf also provide

In our project, we will develop a platform to manage all work of any society secretary and also for their residents make their visual clear about their share and notice.