

# Project Report: Society Management System

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## Project Title:

Society Management System

## System Concept Statement:

The Society Management System will replace the old register-entry method currently used by almost all societies in India. The users of this system will be each and every person who lives, manages or is involved in the day-to-day activities of a society i.e., it includes the residents, the regular helping hands, the security personnel and the manager. This system, in the form of a web or mobile application can be easily used to maintain all kinds of records ideally maintained by a society viz. visitors, parking, bills, clubhouse/gym memberships, etc. A major advantage that this system would have over the register-entry is that any record or information can be retrieved on the click of a button instead of searching through multiple hard copy registers or files, hence digitizing the entire system. The design would be such that anyone and everyone would be able to use it intuitively. **(147 words)**

# Project Report: Society Management System

## Questionnaire:

### 1. Do you have any Existing systems?

**Ans.** No, we do not have an existing system.

### 2. What difficulties did you face in the previous system?

**Ans.** My sister's society uses MyGate for society and security management. I used it while I was visiting her a few months ago. I really didn't like the red and white theme that the app follows. I found it very distracting. It also did not have features to hold virtual meetings.

### 3. Do you require an application or website?

**Ans.** We require a mobile application with all the services for all the users.

### 4. Can you describe the everyday activities at the society?

**Ans.**

- We have constant visitors visiting our society, so the security notes down each one's details and also calls the residents to inform and take permission to allow the visitor into the building
- There are daily helpers like house-maids, plumbing and electricity repairs and medical help people that visit the society often
- Every month's maintenance and clubhouse bills and dues are to be accounted for and then the print out of the same is to be circulated to each resident's doorstep
- Reminders need to be put up in case some member does not make the payment in time
- We have bi-weekly committee meetings and AGMs (annual general meetings) wherein we discuss issues or complaints given by the residents or any new resolve that we plan on implementing in the future
- The conclusion of the discussions and polls held in these meetings are put up on the notice boards so that every member of the society is aware of the same
- We celebrate all festivals and need to ask all the society members for active participation and help to put the events together

### 5. What services do you want?

**Ans.**

- Complaints / Suggestions portal for the residents to register their complaints and connect with the concerned person (e.g. the secretary)
- Society news and notice broadcast service for the society general committee to publish urgent notices and other society related issues
- Society meetings and discussions portal to raise society issues and allow virtual meetings

## **Project Report: Society Management System**

### **6. Do you want to track everyone that enters or leaves the building?**

**Ans.** Yes, Visitors Management feature which allows tracking of anyone entering and leaving the building premises as well as a portal for residents to check who wants to come to their residence. Residents should be allowed to accept/reject the visitors and also call in case it is needed.

### **7. What is the hierarchy of users? How should the access be given to the residents?**

**Ans.** I want the secretary and the committee members who generally manage the society to have access to each and every thing that goes on right from the visitors to the cctv cameras, including the member details and notices/complaints. Next come the members of the society, they should have access to feed in their details and any personal information, make payments for their bills, post complaints, read notices and all those general things which ideally anyone does when living in a society. Apart from that, the security must be able to track the visitors well as I have already mentioned earlier. Lastly, any regular or daily help person must be able to see any complaints assigned to him along with the level of urgency so that he can come and fix the issue.

### **8. What do you expect in terms of security from the product?**

**Ans.** The watchman should be able to enter details of everyone entering the society. At the same time the secretary as well as the watchman should have instant access to the cctv cameras present in the premises.

### **9. Do you want the residents to connect with everyone?**

**Ans.** I do not wish for each and every person's details to be publicly available along with his/her family members. I think just the contact details of the owner of the house should be enough incase someone needs to urgently contact the person. Apart from that, instead of the contact details, I think people should be able to have their discussions like we have chat groups. There people can exchange their ideas and concerns.

### **10. Any payment system to be patched for any services?**

**Ans.** The billing system should be available with options like UPI, Payment wallets, Credit/Debit card and netbanking. There will also be reminder scheduling and notifications options available to ensure on-time payment. The payments should be done for the following services: Society Maintenance Bill, Miscellaneous, Helpers Payment.

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## Requirements:

The services required in the mobile application are:

### 1. Hierarchical User Access

The mobile application will have user authentication and login as well as signup feature. The access to user is based on the following roles:

#### a. Secretary

The Secretary being the head of the society will have access to all the services provided. He will have access to visitors list, cctv portal, complaints and NOC acceptance and rejection, notice broadcasting service, Meetings and polls initiation, society member details and payment accounts.

#### b. General Committee

The committees will have access to member details, visitors list, complaints and NOC acceptance and rejection. Meetings and polls initiation and society member details.

#### c. Security

Security will have access to the visitors maintenance system and visitors list.

#### d. Residents

Residents will be able to access the payment portal, see their bills, accept and reject visitors or call them, register complaints and request for NOC. They can participate in meetings and even give their votes in the polls discussions. They will be able to view the notices as well.

#### e. Everyday Helpers

Everyday helpers can have access to individual payments accounts for receiving payments from the society. They will also need to send requests for visiting a house.

#### f. Visitors

New visitors will have the access to visitors portal to send requests for visiting a house.

### 2. Visitors Management

- a. The visitor has to request a particular house to allow or reject entry.
- b. The visitor's photo will be shown to the resident along with the purpose of visit.
- c. The residents can accept or reject the visitor's entry.
- d. A calling feature will also be available to talk in case of some issues.
- e. Time based calling feature is also required by the client in case the resident does not respond to the visitor's request within a specific time interval.
- f. The visitor can leave a message if the residents are not at home.

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## **3. Bill Payment**

The billing system will be available with options like UPI, Payment wallets, Credit/ Debit card and net banking. There will also be reminder scheduling and notifications options available to ensure on-time payment. Types of payment available:

- a. Society Maintenance Bill
- b. Miscellaneous
- c. Helpers Payment

## **4. Complaints / Suggestions portal**

- a. The members of the society will be able to register a complaint regarding any issues or discomforts happening to them.
- b. Also, members can provide anonymous complaints to hide their identity and elevate the issue to the society's committee.
- c. Members can request for NOC for various purposes. Also, they can provide their suggestions or viewpoints on various societal issues.
- d. Finally, the authority to accept or reject members' requests or resolve complaints lie in the hands of the designated committee of the society.

## **5. Society news and notice broadcast service**

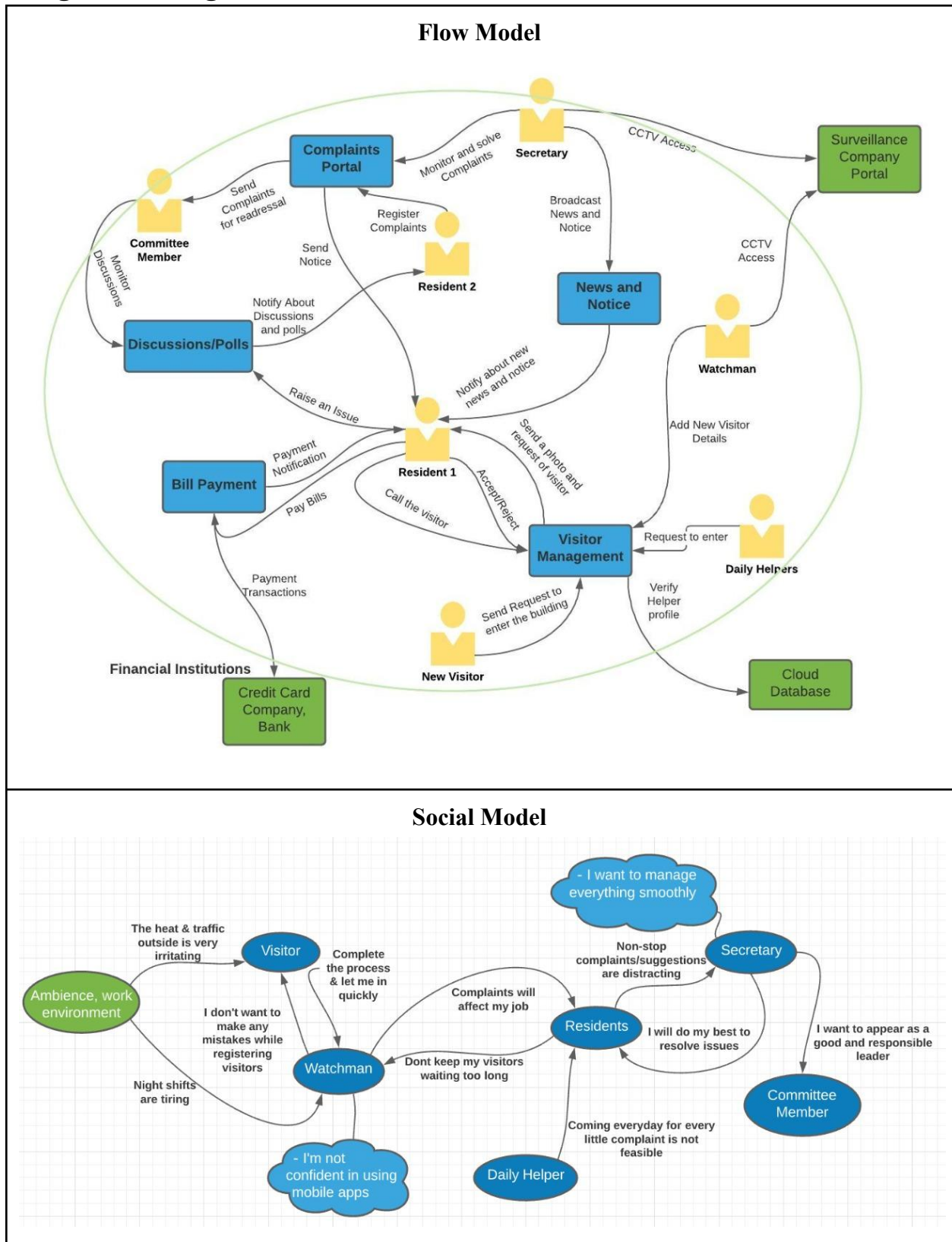
- a. The application will have a news feed section that will enclose any notices, latest updates, news related to society or issues faced by society.
- b. Also, the notices related to water shortage, reduced electric supply, etc. will be listed and notified to the members through this application.
- c. Important notifications will be broadcasted to each device connected to a particular society's network.

## **6. Society meetings and discussions portal**

- a. The decision to conduct a society meeting for a particular issue will be decided by conducting a poll on a separate section of the application, where each member can cast his/her vote.
- b. Also, the poll would have a discussion section, where the agenda and need of the meeting will be discussed among fellow members.
- c. The application will also allow a private room to conduct video meetings which will allow only the members connected within the network of the society. The authority to conduct these meetings will be in the hand of the committee.

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## Design Informing Models:



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## Task Interaction Model

### 1. Task 1:

#### 1.1. Task Name:

Paying the quarterly society maintenance bill (Done by the flat member through the society management app)

#### 1.2. Task Goal:

Helping the flat member to pay the society maintenance bill on time using the online payment facility available on the app.

#### 1.3. Task Trigger:

The member receives the notification/reminder to pay the quarterly society maintenance bill.

Flat Member / User	Online Application Payment Facility
	1. Reminds users to pay the quarterly society maintenance bill on time.
2. The user sees the reminder and opens the application to pay the bill.	3. When the user clicks on the reminder, it navigates the user to the payment page.
4. The user sees the bill amount and selects one of the payment options available on the app.	5. As soon as the user selects the option, it asks for the payment details of the user if not saved earlier or retains the saved details.

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### 1.4. Barrier:

1.4.1. The user-selected payment option is currently unavailable.

#### Response to Barrier:

	6. The application notifies the user that the selected payment option is not available and it will update the user as soon as it is available. It also suggests to the user other available options.
7. The user verifies the details and enters the secret code (CVV) and clicks on pay the bill.	8. The app redirects to the payment gateway and asks for the OTP received to the user to verify the transaction with the associated bank.

1.4.2. The transaction is unsuccessful due to an error while processing the transaction.

#### Response to Barrier:

	9. The app notifies the user regarding any failures while processing the transaction and updates the user. It also updates the user as soon as the service is restored.
10. The user enters the OTP received and confirms the transaction.	11. The app gives the notification of successful payment and digital receipt of bill payment.
12. The user checks the notification of successful bill payment and views the digital receipt provided by the app.	



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### 2. Task 2:

#### 2.1. Task Name:

Filing a complaint against an occurrence of suspicious activity in the society  
(Done by the flat member through the society management app)

#### 2.2. Task Goal:

Allowing the flat members to file a complaint against any suspicious activity recognised in society.

#### 2.3. Task Trigger:

Any occasion or scenario that happened in the society which is suspicious.

Flat Member / User	Online Application Payment Facility
1. Flat members recognised any suspicious activity in the society.	
2. The flat member opens the app and navigates to the file complaint section in it.	
	3. The user interface of file complaint asks the user first if he wants to hide his identity and file an anonymous complaint.
4. The user selects one of the options to hide the identity or not.	5. Further, the user interface presents a form to capture all the details of the complaint made by the user.
6. The user fills in all the necessary details required to file the complaint. Also, the user fills in his/her suggestion on the actions to be taken if the complaint is viable.	7. Then, the app asks for confirmation to submit the complaint to the society's committee.
8. The user confirms the submission of the complaint.	9. The app notifies the user that the complaint is successfully submitted to the committee.

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### 2.4. Barrier:

2.4.1. The app fails to submit the complaint due to technical errors.

#### Response to Barrier:

	10. The application notifies the user that the complaint is not sent to the committee due to technical error and it has saved a draft of the whole complaint to be submitted later as soon as the service is available.
11. The user views the message of successful complaint submission. Also, the user can view all the complaints made by him/her.	12. Then, the app notifies the accounts of the society committee about the filed complaint, who can view all the details of it and take due action on the same.

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## User Persona:

Sara(Resident)



"I am looking for a medium to connect with society."

**AGE:** 29 years  
**Work:** DBA analyst  
**Family:** Married  
**Location:** Jadhav Heights, pune

Organized

Busy

Helpful

Ambitious

**Brand**





**Bio**

Sara is DBA analyst in Barclays from past 3 Years. She is very techno savvy person and enjoy helping Others. She likes to make friends. due to her busy schedule she is not able to interact with neighbours also she is not able to attend events /meeting of the society. She is looking for mobile app which connect her with neighbours as well as manager of the society.

**Goals**

- Connect with society and neighbours.
- Resident of society want to live with happiness and harmony.
- Want good culture and environment where my kids to be outgoing and always discovering new things.

**Frustration**

- To raise complaints need to put complaints in complaint box.
- Most of the important decision discussed on whatsapp but due to busy schedule don't get time to read messages.
- She is not present for meeting hence she is not able to get point discussed in meeting.

**Motivation**

Achievement

convenient

Low price

Social

**Technology**

IT & Internet

Software

Mobile App

Social network

**Personality**

Introvert  Extrovert

Analytical  Creative

Loyal  Fickle

Passive  Active

John(Manager)



"I am looking for a medium which make my work simpler."

**AGE:** 40 years  
**Work:** Society Manager  
**Family:** Married,2 sons  
**Location:** MontVert, pune

Organized

Stressed

Helpful

Protected

**Brand**




**Bio**

John is society manager of MontVert from past 2 years. He take care of society management. He is always ready to help others. He has strong management skills. He does most of the work manually. His work is to keep record of resident, visitor management, vehicle management, service request & complaint management. Etc. Some time its very difficult to mange it manually.

**Goals**

- Connect with Resident and committee members.
- To get society people connected with each other.
- Secure and hassle free lifestyle through integrated system.
- Convenient way to maintain society database.
- Keep all records in one place.

**Frustration**

- Keeping all the records in register is very frustrating.
- Making many society members together is great challenge and it take much time.
- Peoples are not ready to give maintenance charges need to go door to door for maintenance.

**Motivation**

Achievement

convenient

Low price

Social

**Technology**

IT & Internet

Software

Mobile App

Social network

**Personality**

Introvert  Extrovert

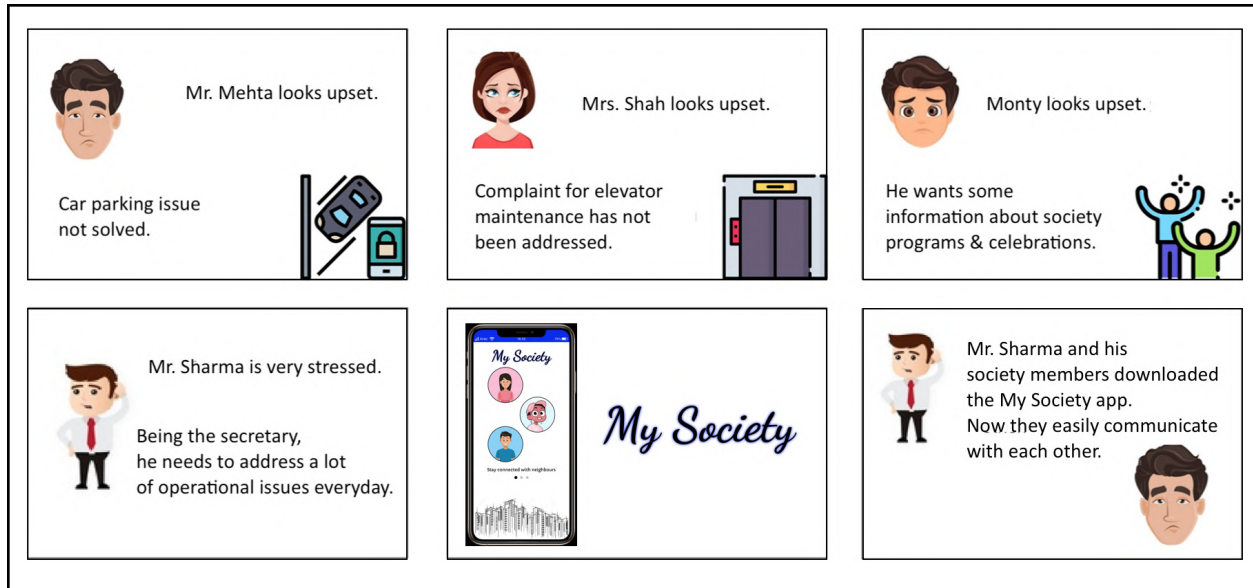
Analytical  Creative

Loyal  Fickle

Passive  Active

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## Storyboard:



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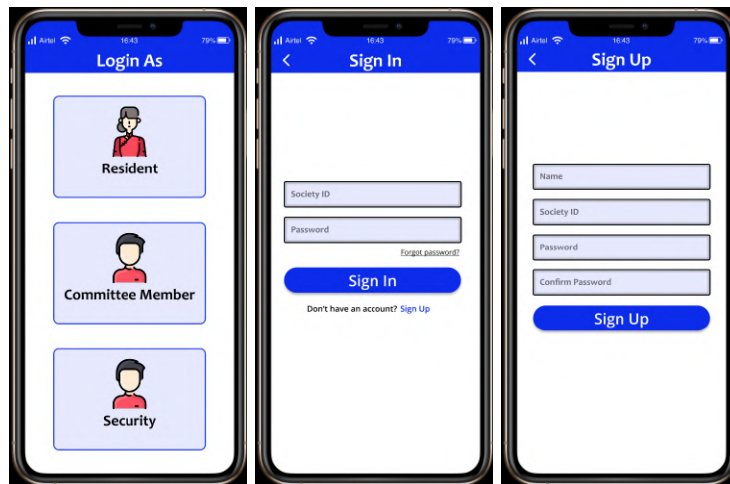
## UI Screenshots:

<https://www.figma.com/file/GpldoVmwjJdPn6ppSE3bRE/Society-Management-System?node-id=0%3A1>

### Onboarding



### Sign In/Sign Up



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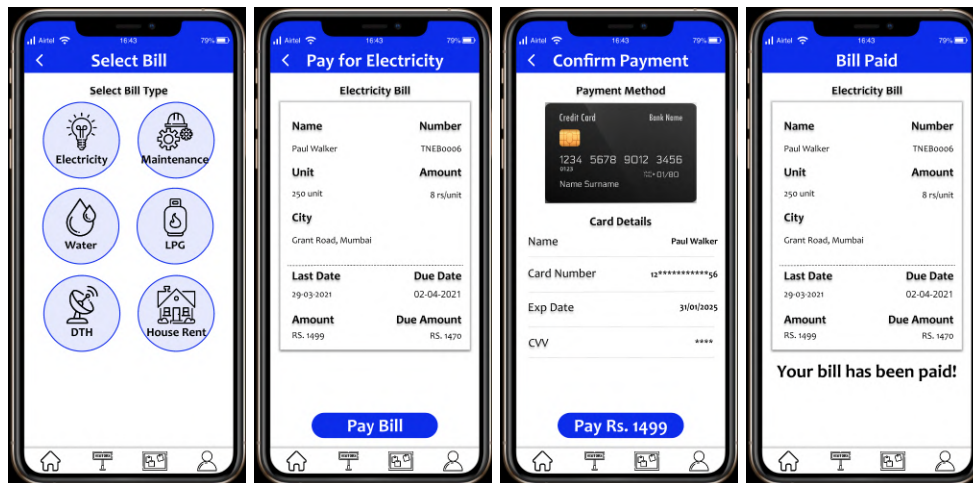
## Resident Login



## Resident Login - Visitors



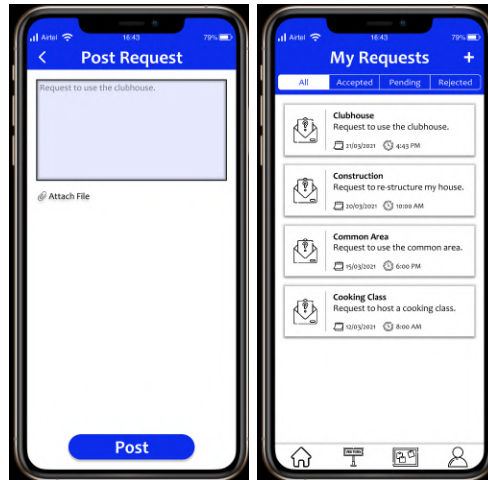
## Resident Login - My Bills



## Resident Login - Requests



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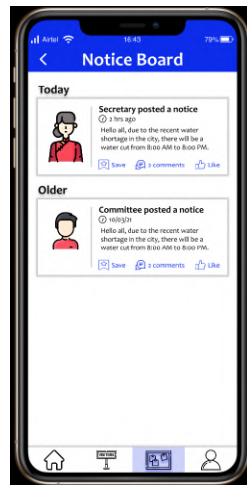
## Resident Login - Complaints



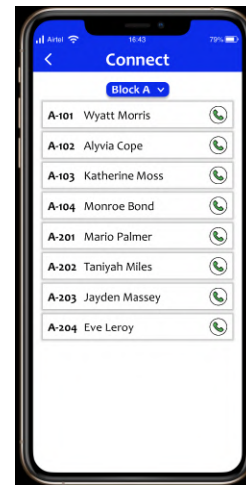


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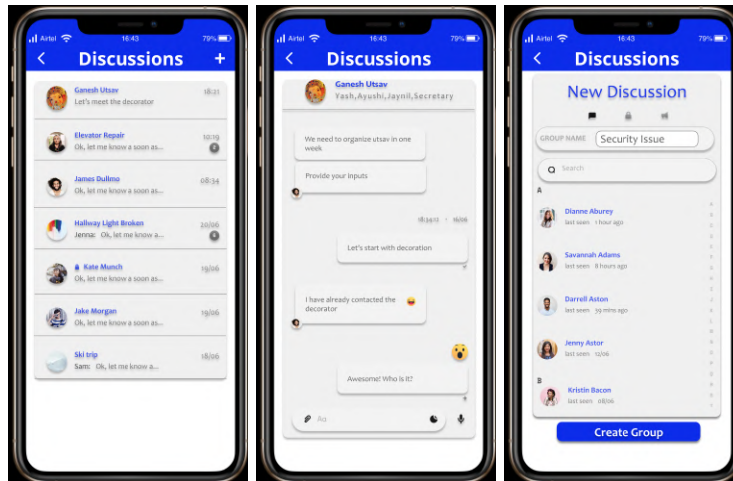
## Resident Login - Notice Board



## Connect (common to all users)



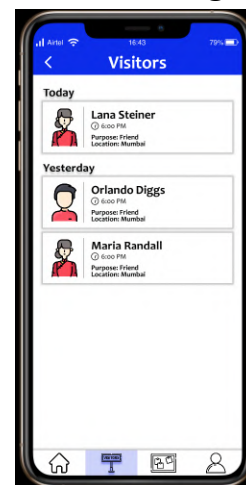
## Discussions (common to all users)



## Committee Member Login



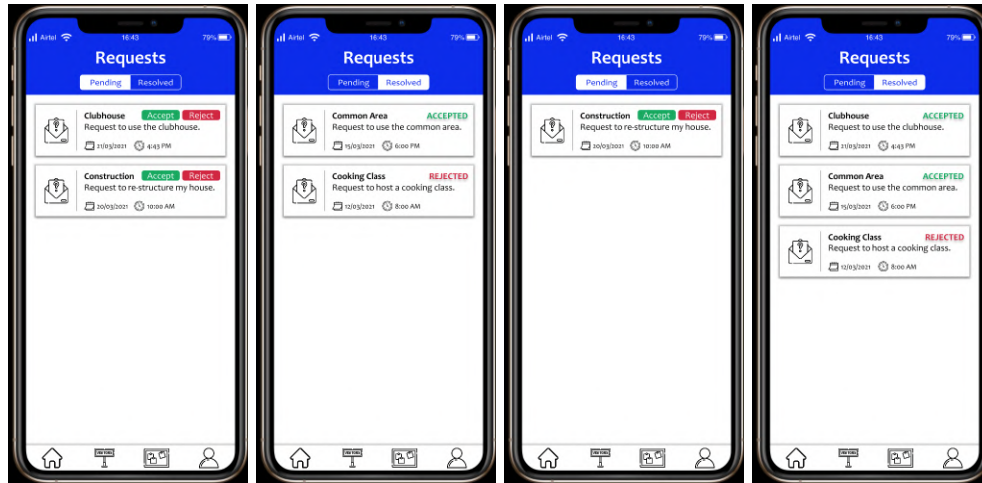
## Committee Member Login - Visitors





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## Committee Member Login - Requests



## Committee Member Login - Complaints



## Committee Member Login - CCTV



## Committee Member Login - Notice Board



# Project Report: Society Management System

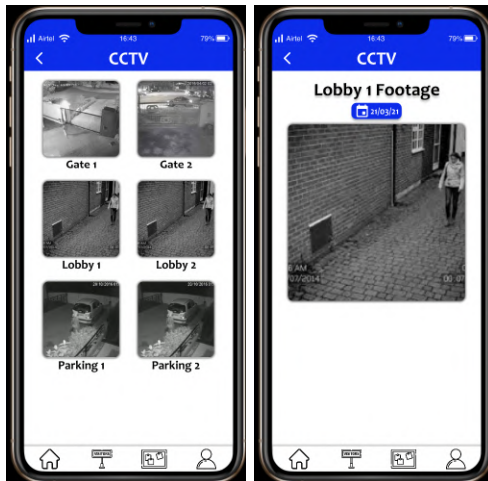
## Security Login



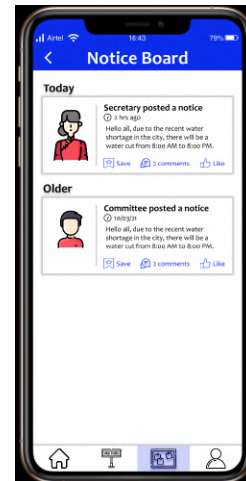
## Security Login - Visitors



## Security - CCTV



## Security - Notice Board



# Project Report: Society Management System

## Usability Testing:

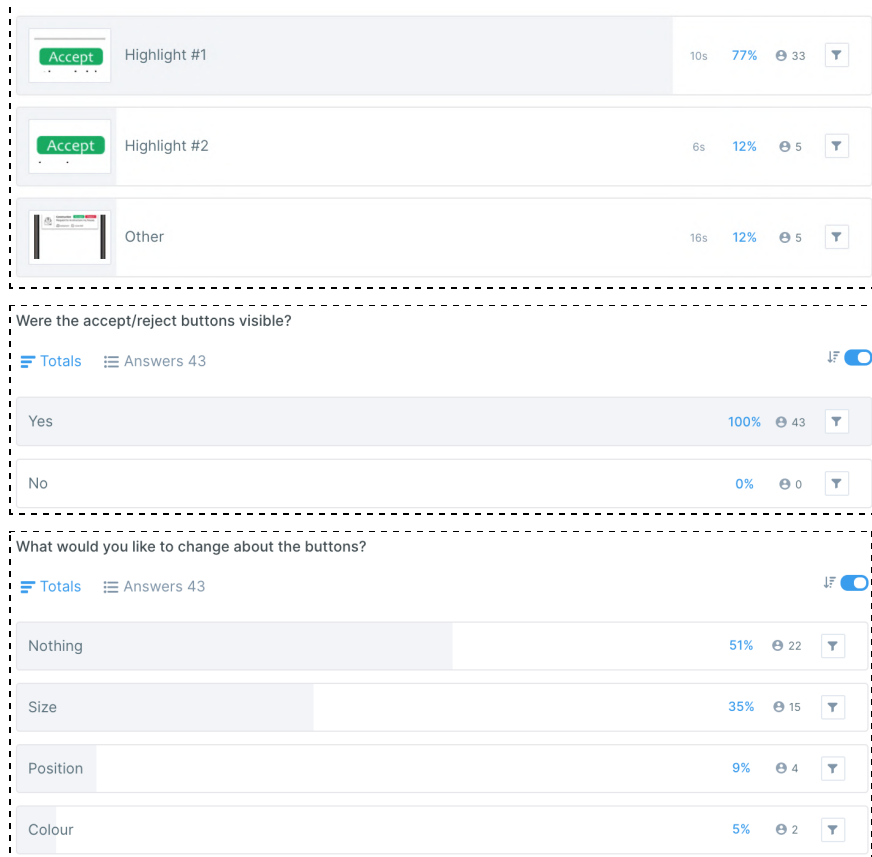
<https://app.usabilityhub.com/do/611e5b16f87a/d532>

<https://app.usabilityhub.com/do/ea86b183a092/d315>

<https://app.usabilityhub.com/do/da6a026888b/8734>

<https://app.usabilityhub.com/do/ec300d1e511e/a3f9>

### First Click Test - Where would you click to accept a request? (43 responses)

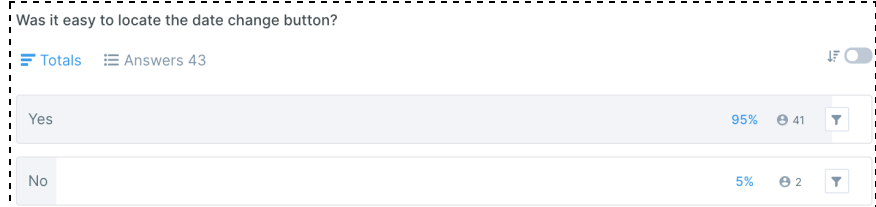
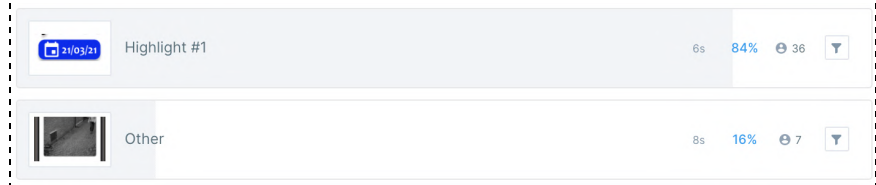


### Conclusion

As it can be seen that 89% of the users were able to click the accept button and 100% of the users were able to find it. However 35% of the users suggested that the size of the button should be increased. Hence, increasing the size of the button can be incorporated in the design.

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## First Click Test - Where would you click to check the CCTV footage of a different date? (43 responses)

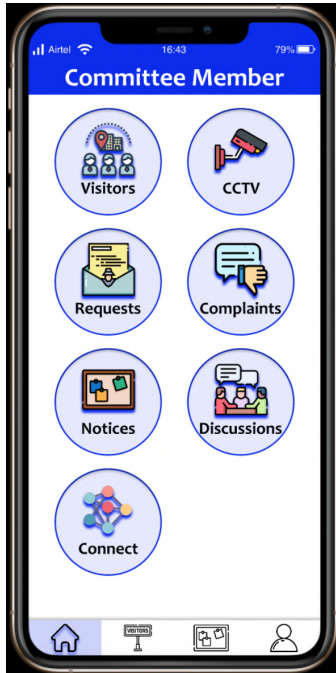


### Conclusion

Out of the 43 responses almost all were able to find the way to change the date. Hence, the UI seems to be working well and no change is required.

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## Five Second Test (36 responses)



What all options do you recall the home page having?

Totals Answers 36

IF

Visitors	94%	34	
CCTV	86%	31	
Complaints	83%	30	
Requests	81%	29	
Notices	78%	28	
Discussions	61%	22	
Connect	58%	21	

What opinion do you have about the no. of features on the home page?

Totals Answers 36

IF

Just perfect	72%	26	
Too many features	22%	8	
Too less features	6%	2	

## Conclusion

In this 5 second test, users were able to successfully recall most of the features available. However, as discussions and connect features were present at the bottom, they were recollected by around 60% of the users only which was expected. Hence, there seems to be no issue with the design.

# Project Report: Society Management System

## Five Second Test (36 responses)



What all details are required for adding a new visitor?

Totals Answers 36

Name	97%	35	
Visitor Address	89%	32	
House No.	81%	29	
Purpose of Visit	81%	29	
CCTV Image	61%	22	

Did you see the back button on the top of the screen?

Totals Answers 36

Yes	53%	19	
No	47%	17	

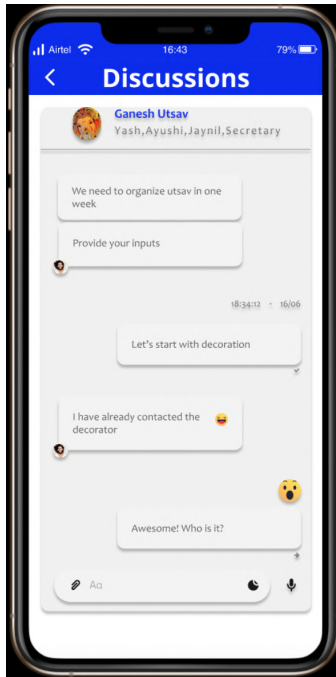
## Conclusion

In this 5 second test, almost all the users recollected all the necessary details to be filled. However, the option to take the image through cctv was not recollected. Hence, an icon depicting its purpose can be used to make it more clear.

Apart from that, only 50% of the people were able to recollect the presence of a back button, so the size of the back button must be changed.

# Project Report: Society Management System

## Design Questions Test - Discussions Page (37 responses)

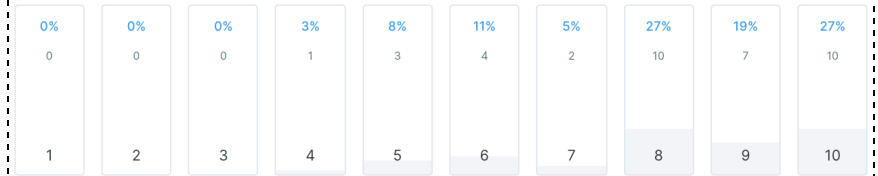


How would you rate the chat interface?

Mean: 8.1

Very Bad

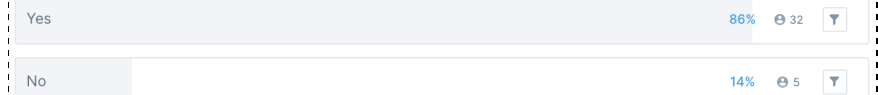
Very Good



Is the chat window similar to the apps you regularly use?

Totals Answers 37

IF

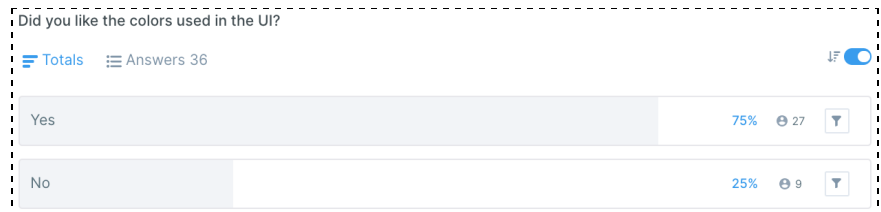
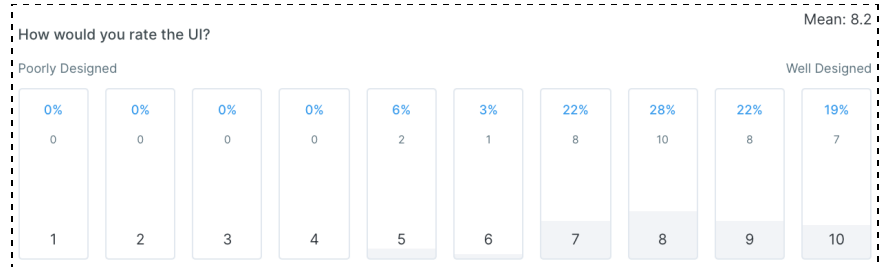
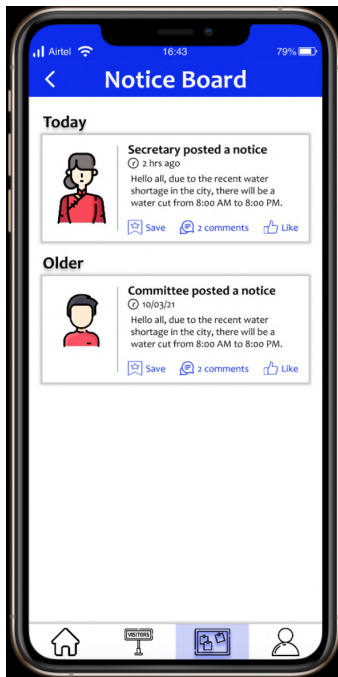


## Conclusion

The average rating for the UI of the discussions window is 8.1. The users were able to use it in a similar way as their regular messaging apps. There was a sense of familiarity with the UI.

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## Design Questions Test - Notice Board Page (36 responses)



### Conclusion

The average rating for the notice board page is 8.2 and 75% of the users loved the color combination.



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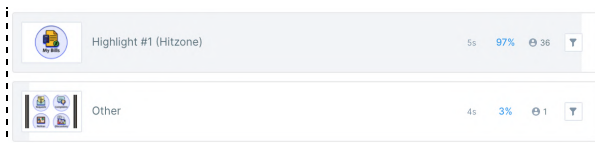
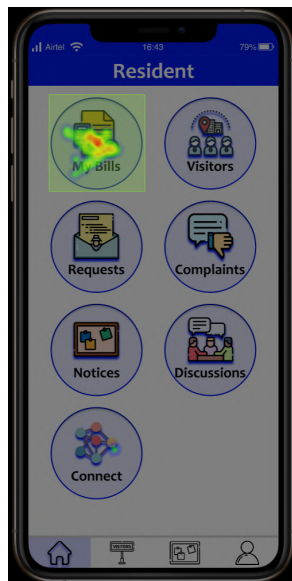
## Navigation Test - How would you pay your Electricity Bill? (37 responses)

How would you pay your Electricity Bill?

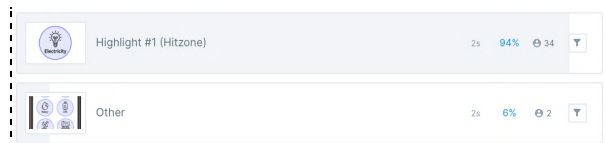


**i** A total **92%** of participants completed all steps in an average of **11 seconds**.

### Step 1

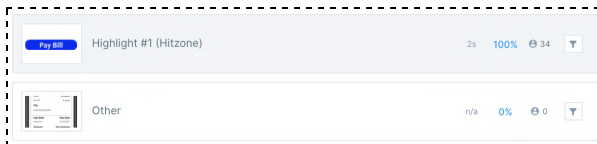
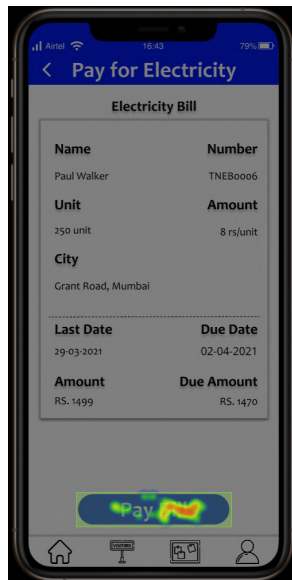


### Step 2

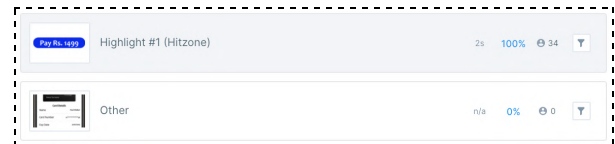
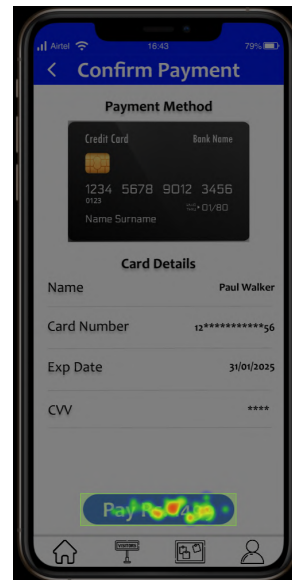


# Project Report: Society Management System

## Step 3



## Step 4



How was the navigation?

Totals Answers 37



Seamless

100%

37



Tricky

0%

0



## Conclusion

Almost all the users were able to reach the last step and pay the electricity bill. The average duration for the task was 11 seconds which is better than was expected and everyone found the navigation seamless. No further change is required for the UI design.

# Project Report: Society Management System

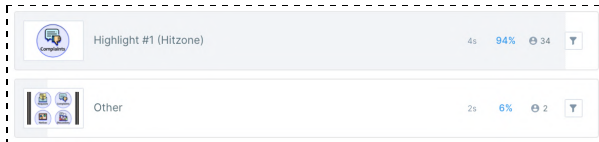
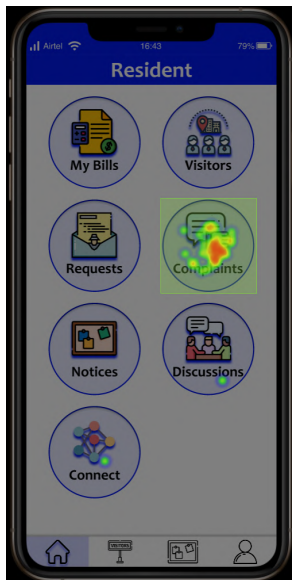
## Navigation Test - How would you add or post a water complaint? (36 responses)

How would you add or post a new **Water Complaint**?

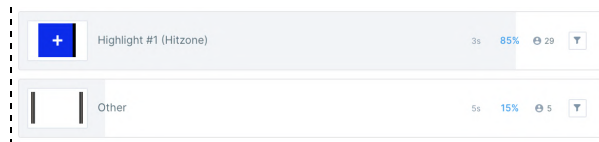


**i** A total **78%** of participants completed all steps in an average of **11 seconds**.

### Step 1

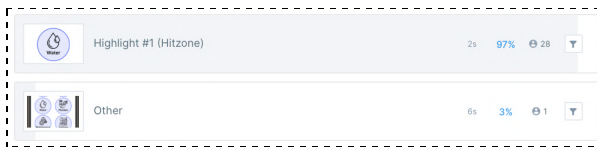
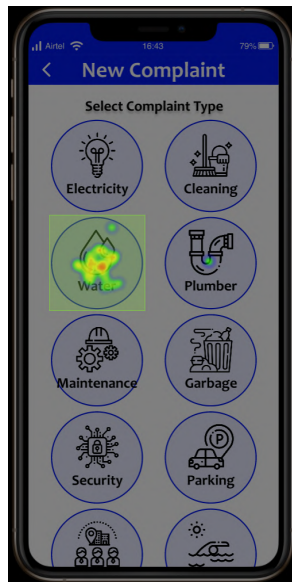


### Step 2

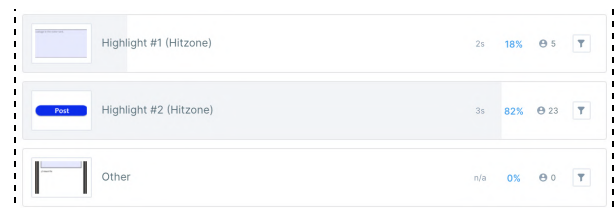


# Project Report: Society Management System

## Step 3



## Step 4



Was the navigation easy enough?

Totals    Answers 36



Yes

92%

33

No

8%

3

## Conclusion

Around 92% of the users were able to easily navigate through the complaints portal and add a new complaint. Most of the users had difficulty in clicking on the 'add' button on the second step, either because it is in one corner or they just did not see it. Hence, the complaints portal navigation can be considered seamless except maybe the add button can be located somewhere more visibly.

## Project Report: Society Management System

**UX Target Table:**

<b>Work role: User Class</b>	<b>UX Goal</b>	<b>UX Measure</b>	<b>Measuring Instrument</b>	<b>UX Metric</b>	<b>Baseline Level</b>	<b>Target Level</b>	<b>Observed Results</b>
Resident: new user	Ease of use	Initial User Experience	BT1: Post complaint	Average time on task	<10 min	<2 min	11 secs
Resident: new user	Ease of use	Initial User Experience	BT2: Pay bill	Average time on task	<10 min	<2 min	11 secs
Resident: new user	User Satisfaction	First Impression	Questions: Q1-Q2 in Design Questionnaire	Average rating	7.5/10	8/10	8.1/10
Resident: new user	User Satisfaction	First Impression	Questions: Q3-Q4 in Design Questionnaire	Average rating	7.5/10	8/10	8.2/10
Committee Member: new user	Ease of use	Initial User Experience	BT2: Accept request	Average time on task	<10 min	<1 min	11 secs
Committee Member: new user	Accuracy	Initial User Experience	BT2: Accept request	Average no. of errors	<1	<1	5
Security: new user	Ease of use	Initial User Experience	BT3: Check CCTV footage	Average time on task	<15 min	<1 min	7 secs
Security: new user	Accuracy	Initial User Experience	BT3: Check CCTV footage	Average no. of errors	<1	<1	6

# Project Report: Society Management System

## Conclusion:

The Society Management System was designed and well received by the clients. It fulfilled all the requirements specified by the clients. The results of the usability testing corroborates that the UI is easy to use, well designed and attractive.

## Client Testimony:



*“The UI looks good. All the features are covered and the animations are subtle. All the requirements are covered properly.”*

**Patwardhan Ninad**



*“The UI looks much better now and the navigations are easy to understand. Good job overall.”*

**Vishal Parab**



*“The UI has improved a lot from the initial version. Better color combinations are used. All requirements satisfied. Good Job!”*

**Jay Visave**