Ahmedabad
University

Human-Computer Interaction

Final Project Report

Section-2

Submitted to faculty: Professor Anurag Lakhani

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Student Details

Roll No.	Name of the Student	Name of the Program
AU1940109	Jap Purohit	B.Tech CSE
AU1940118	Raj Gariwala	B.Tech CSE
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2021-2022 (Winter Semester)

Contents

Chapter-1

Introduction:

Motivation and Overview of the Project:

There are many students, working people who move from their native place to new place in order to study or work respectively. However, the biggest problem they face is to find the appropriate PG of their choice, of their comfort zone, and majorly in their paying range. Additionally, they have to manually hunt for PG whenever they move into a new city or place in order to find a place to live.

The idea that we bring is to solve that problem by providing a platform in which users can access and see various available properties which are listed as Paying Guest. Additionally, they can purchase or rent a Paying Guest from their native self because the data regarding PGs would be available at their fingertips. Moreover, their place hunt efforts would be reduced and they can filter properties based on their comfort, choice, and willingness to pay.

Market Survey:

PGO:

- PGO is a unique application that helps the user to find him/her a Hostel/PG.
- PGO allows hostel and PG hunters to approach PGO verified property owners or PGO customer care directly and take the deal forward without having to deal with middlemen.
- Along with providing the facility of PG, this application also ensures the safety purposes
- of the user.
- It has a feature of customization which allows user to select Hostel/PG on the basis of:
- Stay type(Hostel, PG, etc.), Booking type(Monthly, Half-yearly, Annually, etc.), Price
- range(<5000, 5k-10k, etc), shared apartment.
- It also has an option to see nearby Hostel/PG, if the city of the user is unfortunately not
- mentioned in the list of cities.

Book My PG

- Book My PG is a technology-based platform for Booking PG, Serviced Apartments, Shared Flat and Rooms by Location with Specific requirements by filtering by Location, IT Parks, LandMark, Price, Room type, Amenities, Gender and Food.
- This website also provides customer service by the feature of "chatbot".
- For better enhancement of the user, they also provide a video of the interior of the PG.

Zolo:

- The Zolo app is designed to help users find his/her dream home as PG.
- It has an option to select the city from which the result gets optimized.
- Several Form Fill-in options are also available to know the details of the user. And a checkbox to get updates on Whatsapp is also present.
- To know more about the services, customer service is also available.

Chapter-2

Brief Description of facilities available:

1. **Bulleted list:**
In UI/UX design projects, bulleted and numbered lists can be helpful. Lists make it easy to arrange data and highlight relevant information in vector graphics. You may choose from five different levels of indentation. To create visual colour changes, you may utilise text colour, strokes, and effects. Bulleted lists can be used to express data that is not in any particular order. In Figma, bullets will have the same style at all indentation levels. Customizing bullets is currently unavailable.Make a bulleted list for items that don't need to be in any specific sequence.

2. **Library of Figma Community Files and Plugins**
Figma is a community platform with a plethora of tools where we can publish our work and have it analysed or modified by other users. Thousands of creators have contributed to the Open figures illustration collection, Remote design sprinting, Material design kit, and Figma templates. Figma plugins are also incredibly fast, dependable, and safe. There are over 40 distinct plugins available at the time of writing, and the number is growing. We can deploy private plugins within the firm via business subscriptions. Repetitive labour automation inside Figma frames, design defect detection plugins, and data population plugins are all examples of valuable plugins.

3. **API Connection**
The key benefit of using HTML/CSS is that we can create a live connection using API wherein we can fetch real-time data from the database or the APIs and can update the data continuously at the frontend. This important functionality is not provided by Figma. There we cannot update the live data as there is nothing like API connection. So using APIs we can create a real time prototype or website and can be deployed in real life. For eg - Updating the live stock price can be done using APIs.

4. **Fidelity:**
The feature that we are using is HTML/CSS which provides high fidelity as it gives users the experience very close to the real life websites or softwares. Whereas Figma is a low fidelity prototyping software as it provides you the overall idea of how your website or software will look and how it will function. But it does not give you the proper user experience of the real time softwares. It is just a basic tool through which you can design your website, its flow and how it will function. A basic prototyping software.
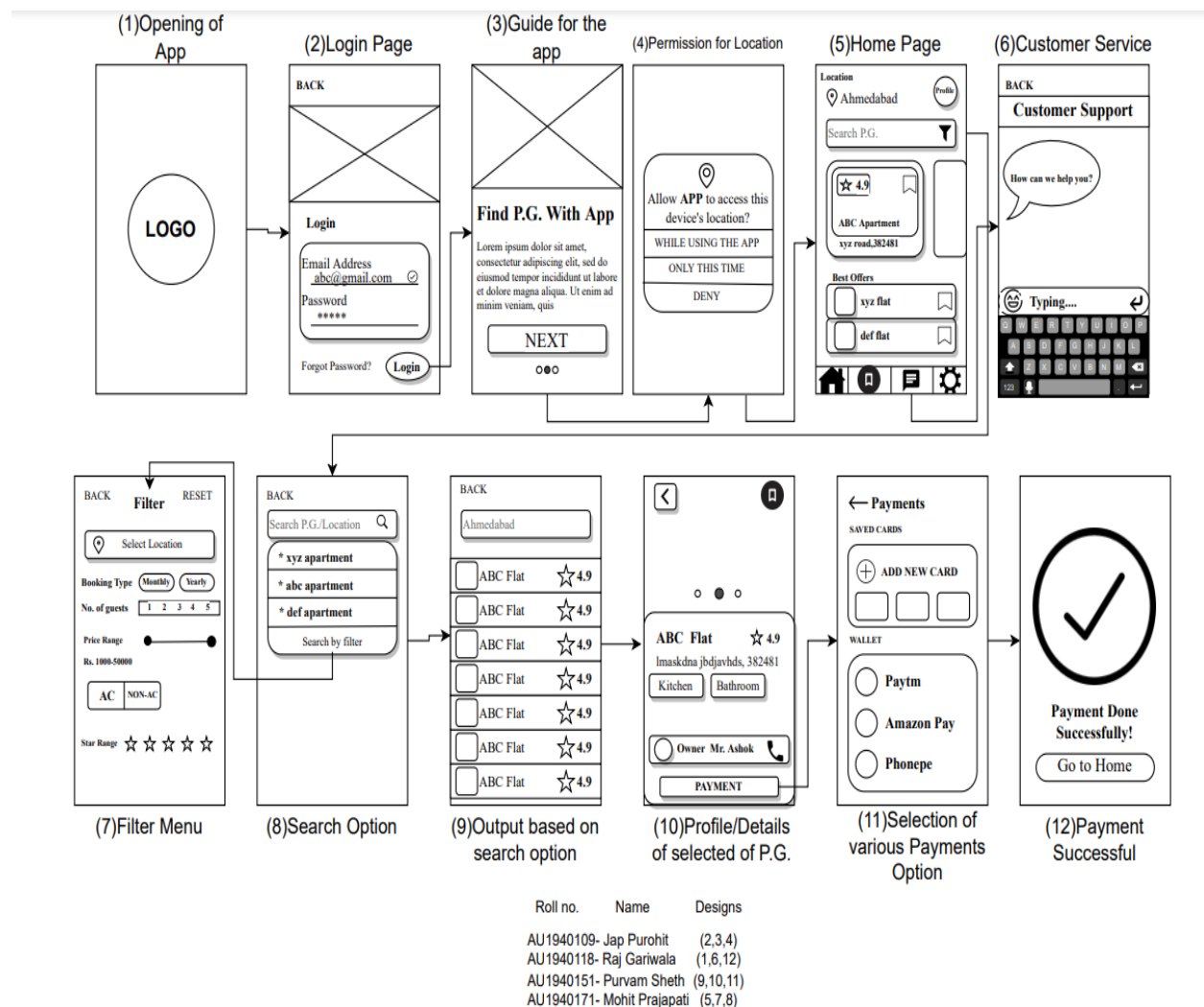
Comparison table with other tools:

	Figma	**Adobe XD**	**Sketch**
Platform	Browser-based app, desktop app and mobile app	Desktop and browser app	Desktop and mobile app
Operating system	macOS, Windows, Linux	MacOS	macOS, Windows, iOS, Android
Collaboration	Real-time collaboration	Real-time collaboration for MacOS Sketch subscribers	Real-time collaboration on projects synced to the cloud
Getting started	Lessons and design exercises	Documentation	Video tutorials and step-by-step guides
Plugins	Growing library available in-app	Large library, downloaded externally	Growing library available in-app
Vector manipulation	Vector networks	Vector paths	Vector paths
Price	Free starter version or $12/month per editor (US)	30-day free trial, then $9/month per editor (US)	7-day free trial, then $9.99/month (US)

Chapter-3

Project Planning and Preparation:

We intended to begin this project by starting and covering all the features step-by-step as it involved lots of components, and grouping of various components under frame. So, to avoid any scope of error, we planned to go step-by-step while implementing and as a project plan.

Paper-pen designs of the screens:

(1)Opening of App
(2)Login Page
(3)Guide for the app
(4)Permission for Location
(5)Home Page
(6)Customer Service

(7)Filter Menu
(8)Search Option
(9)Output based on search option
(10)Profile/Details of selected of P.G.
(11)Selection of various Payments Option
(12)Payment Successful

Roll no.	Name	Designs
AU1940109-	Jap Purohit	(2,3,4)
AU1940118-	Raj Gariwala	(1,6,12)
AU1940151-	Purvam Sheth	(9,10,11)
AU1940171-	Mohit Prajapati	(5,7,8)

We as a group firstly divided the tasks of who will create which design. As we can see from the start, the login page (2), the guide for the app (3), and permission for location page (4) are created by Jap. Several features like customer support (6), payment successful page (12), and opening of the app (1) are created by Raj. Mohit has created a home page design (5), filter menu design (7), and the design of the search option (8). Purvam has worked on the output page based on the search option (9), profile/details of the selected P.G. (10), and design of selection over various payment options (11).

Persona Development:

The persona created by team member Jap Purohit is

MICHAEL FARADAY (BY JAP PUROHIT)

PROFILE

Gender : Male
Age : 26
Education : Master's degree
Occupation : Working Professional
Address : 123 Anywhere Rajkot

"

Living the life with successfully and respecting other privacy and concerns

BIOGRAPHY

Michael is aspiring software developer coming from a small town and trying to settle down in a new city.

MOTIVATIONS

Family and friends
Socialness
Gain more knowledge

GOALS

Try to live the most luxurious life

Work hard and always be consistent

FRUSTRATIONS

Managing the place without or with domestic help

Finding places which allows all the mandatory ammenties.

People not respecting other people's privacy

PERSONALITY

Introvert ———————●——— Extrovert

Thinking ———————●——— Feeling

Judging ————————●— Perceiving

Sensing —●————————— Intuition

TECHNOLOGY

Software

Social Media

Mobile App

BRANDS

IKEA   Starbucks
Instagram ZARA

The persona created by team member Raj Gariwala is:

NIHAR PATEL (BY RAJ GARIWALA)

PROFILE

Gender : Male
Age : 35
Education : Master's degree
Occupation : Real Estate Businessman
Address : 156 Anywhere Ahmedabad

"

Spreading happiness by providing the roof over person's head

BIOGRAPHY

Nihar is experienced real estate professional and one of the renowned constructor in the town which constructs houses /commercials in all the price range.
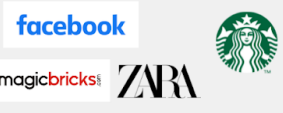
MOTIVATIONS

Spreading happiness
Family and friends

GOALS

Provide a place to live to each and every person

Making each construction project successful.

.

FRUSTRATIONS

Unsold or unleased properties.

Mataining properties

Building the properties which satisfy market requirement

PERSONALITY

Introvert ————————● Extrovert

Thinking ————————● Feeling

Judging ●———————— Perceiving

Sensing —●———————— Intuition

TECHNOLOGY

Software

Social Media

Mobile App

BRANDS

facebook   Starbucks
magicbricks ZARA

The persona created by team member Purvam Sheth is:

POOJA SHETH (BY PURVAM SHETH)

PROFILE

Gender   : Female
Age   : 42
Education   : Bachelor's degree
Occupation   : Houseworker
Address   : 165 Anywhere Ahmedabad

66

Children's happiness and care is my prime motto of life

BIOGRAPHY

Pooja is houseworker and the mother of 2 young teenagers.

MOTIVATIONS

Family and Children.
Socialness

GOALS

Keeping family and children happy and safe.

Make sure to give family and children clean and healthy food.

.

FRUSTRATIONS

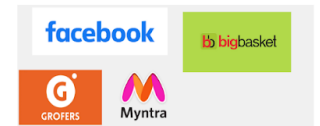Uncleanliness and unhygienic conditions

Improper time management

PERSONALITY

Introvert ————————— Extrovert

Thinking ————————— Feeling

Judging ————————— Perceiving

Sensing ————————— Intuition

TECHNOLOGY

Software

Social Media

Mobile App

BRANDS

facebook   bigbasket

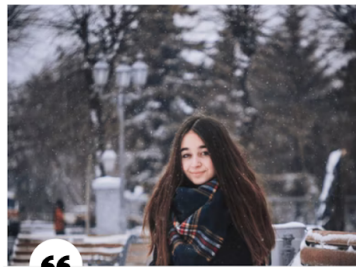GROFERS   Myntra

The persona created by team member Mohit Prajapati is:

KINJAL MEHTA (BY MOHIT PRAJAPATI)

PROFILE

Gender   : Female
Age   : 18
Education   : Bachelor's Degree
Occupation   : Student
Address   : 185 Anywhere Ahmedabad

66

Living life without any stress and enjoy each and every moment of life

BIOGRAPHY

Kinjal is undergraduate student coming from a very small town. She loves to explore new places, food and kind of a girl to live in present. Very young-blood personality

MOTIVATIONS
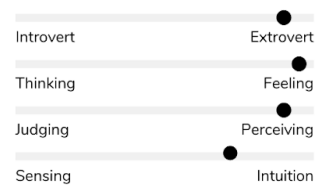
Family and Friends
Party
College Life

GOALS

Enjoy and always live in the present

Study and move to foreign for better opportunity.
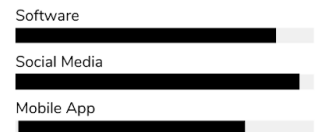
.

FRUSTRATIONS

Managing daily chores as being living alone

Lot of travel time from PGs to near various amenities

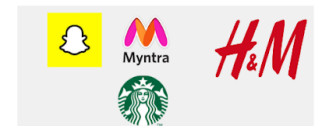Facing criticism from judgmental people and feeling unsafe due to few narrow mind people

PERSONALITY

Introvert ————————— Extrovert

Thinking ————————— Feeling

Judging ————————— Perceiving

Sensing ————————— Intuition

TECHNOLOGY

Software

Social Media

Mobile App

BRANDS

Snapchat   Myntra   H&M

Starbucks

Scenario Description:

1. Scenario-1 [Contributed By Raj Gariwala]:

As a user I may or may not like to share the current geographical location which many applications ask for while using the application, there should be an alternative option if one refuses to give access to the current location. As this application understands my privacy concerns, it has an option to enter the location manually instead of asking for the user's location which he/she might find quite interesting. Also, once the permission is granted for the location it should also enable not to track when the application is not used. So, it makes users feel safe while using the application as well as when not using the application by ensuring that their data is safe and he/she is not getting tracked.

2. Scenario-2 [Contributed By Purvam Sheth]:

As a user I would like to check the background of the owner/proprietor of the PG, looks over the ratings and previous testimonials which especially covers the safety concerns if there are any, also likes to get an overview of the locality near the PG, rules, and regulations of the PG which needs to be followed, availability of the public transport and many others which will affect the daily life and routine. Safety is one of the prime concerns for me as a user.

3. Scenario-3 [Contributed By Jap Purohit]:

From my perspective security in the application is the uttermost concern, data that I should enter should not be used by any third-party application which many of the applications nowadays allow. Also, security from the payments perspective should be taken care of, as the application should provide a safe passage while executing the transaction. Along with safe payment passage for the transaction, the user must feel safe that if the application saves the details for payment that it shouldn't be visible easily or it shouldn't be shared with anyone.

4. Scenario-4 [Contributed By Mohit Prajapati]:

As this application needs PG's to rent PG's itself, therefore as an owner of the PG I would like to enter the PG details that I would give on rent, there should be options like how much time I would like to rent the particular premise and at what price. As a user, I should be able to approve the request from the portal only whether to approve the applicant or to deny. I would also be able to get the history of the applicant.

Use case Description:

1. Use Cases for Scenario-1:

1. The user is on the search PG screen.
2. The user chooses the option to select the location.
3. The system shows a dialogue box to the user asking permission for the location.
4. The user enters the location details manually.
5. The system shows the PG results accordingly.

Alternative Cases:
    2. If the user selects to give access to his/her current location for once,
        2.1 The system goes to step 5.
        2.2 The system shows an acknowledgment message ensuring the safety of the user.
    2. If the system couldn't find any PG with the given details by user,
        2.1 the system shows an error message.
        2.2 The system returns to step 2.

2. Use Cases for Scenario-2:

1. The user is on a particular PG details screen
2. The user selects the owner detail option.
3. The system shows the details of the owner.
4. The user returns to the previous page and looks for other details of PG.

Alternative Cases:
    2. If the user selects locality near PG option,
        2.1 The system displays the appropriate details.
        2.2 The system returns to step 1.
    2. If the user selects rules and regulations of the PG option,
        2.1 The system displays the appropriate details.
        2.2 The system returns to step 1.
    2. If the user selects availability of public transport near PG option,
        2.1 The system displays the bus stations or train-stations around 0.5Km.
        2.2 The system returns to step 1.

3. Use Cases for Scenario-3:
1. The user is on the payment screen using the payment services authorized by the government.
2. The user then allows the system to send messages to his/her device.
3. The system generates a unique OTP for the payment initialized by the user.
4. The user enters the OTP obtained from the respective messenger.
5. The system shows an appropriate message for payment confirmation.
6. Saved payment details should be hidden by hiding some digits of payment details.
7. Save details should be unlocked only with help of a security gateway(biometric lock, pin code, etc.)

Alternative Cases:
    2. If the user doesn't allow the system to send a message,
        2.1 The system shows an error message, that an online transaction can't be made without allowing messaging permission.
        2.2 The system returns to step 1.
    4. If the user enters the wrong OTP,
        4.1 The system displays an error message.
        4.2 The system returns to step 1.

4.   **Use Cases for Scenario-4:**
1. The user enters the login details.
2. The system validates the details and goes to next page.
3. The user enters the details of the house he/she wants to give as PG.
4. The system enters the house details in it's database.
5. A customer seeking PG wants to come to the user's house.
6. The system generates a dialog box for the user to accept/decline the request of customer.
7. The user accepts the request of the customer.
8. The system shows an appropriate message confirming that PG is rented.

Alternate Cases:
    2. If the login credentials of the user are incorrect,
        2.1 The system shows an error message.
        2.2 the system returns to step 1.
    7. If the user declines the request of the customer,
        7.1 The system asks for the reason for declining the request.
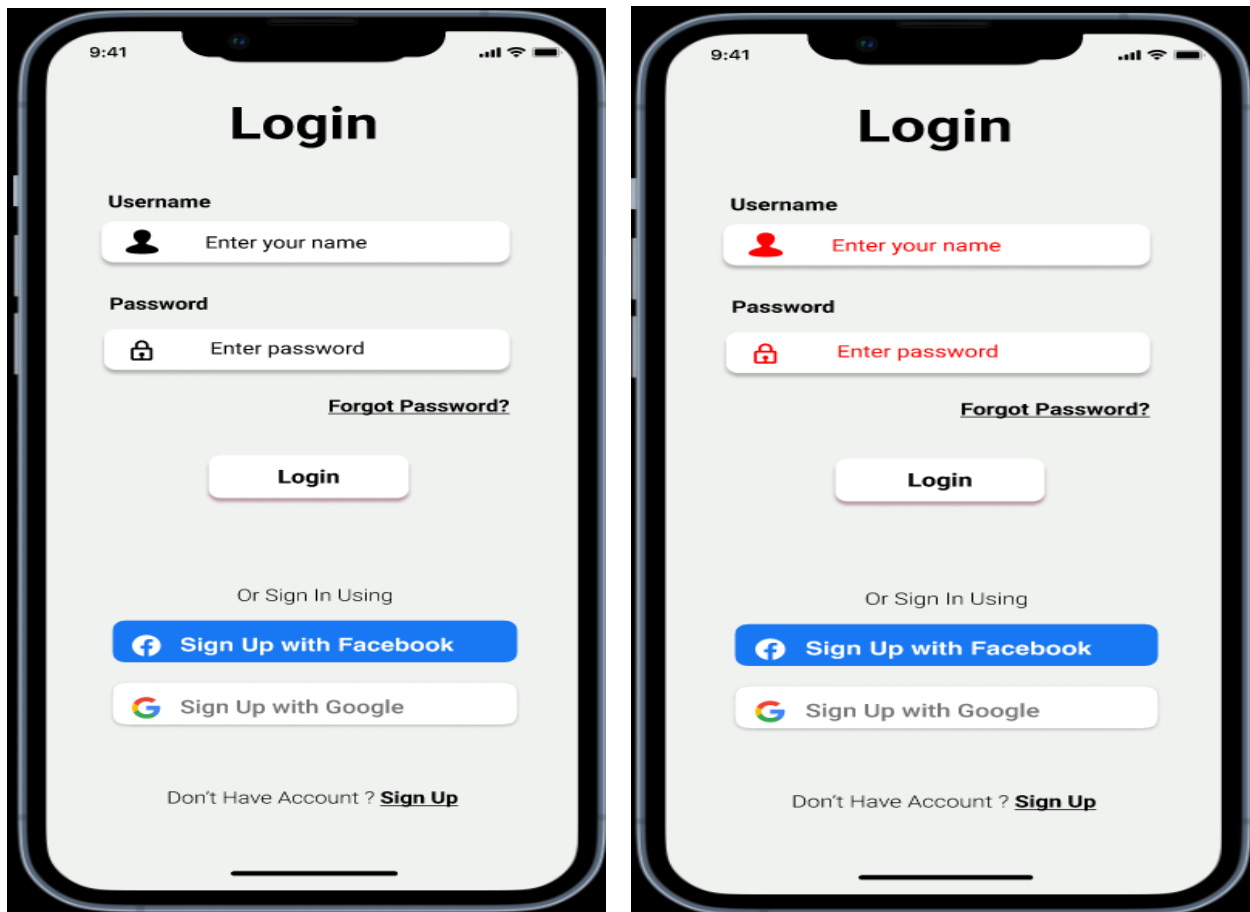   7.2 The user waits for another request to come.

Chapter-4

Project Features:

1. Login:

Functionality: Providing the feature to access the system with correct credentials and find the information that the user is looking for.

Photos of Implementation:

Design Principles:

Strive for consistency: Fonts, font color, and style are similar for the message printed. **Prevent Errors:** The login button is disabled until the user enters values in both fields. And if the values entered by the user are not valid then showcasing feedback with red color, therefore, grabbing the attention of the user that invalid credentials and also popup for same. If the user enters valid credentials then open the home page.

Also, the user is given full control that how he/she wants to login into the system. Therefore, it supports the internal locus of control.

Lastly, it caters to universal usability as it can be used by every person from being a novice to an expert. Also, people of any age range can use it.

Interaction Style:

The interaction style used is:

- **Form Fill-In:** User needs to fill the username and password so it showcases form fill-in option
- **Menu-Selection:** The user is also given the option to login using Facebook or Google. So, it options based feature to login into the system.

So, the login feature is a combination of form fill-in and menu-selection interaction styles.

2. **Sign-Up:**

Functionality: Providing the feature to create credentials to access the system. Also, providing an option to create credentials using various other platforms.

Photos of Implementation:
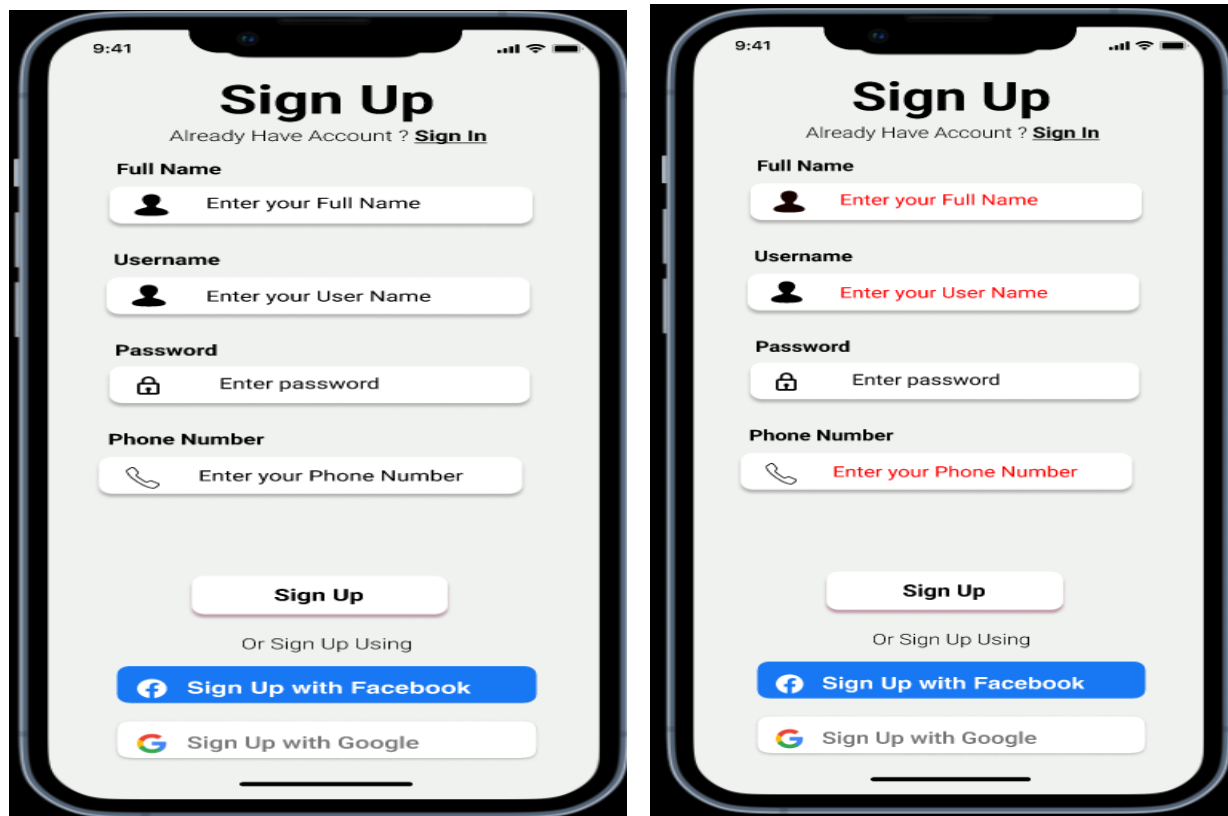
Design Principles:

Strive for consistency: Fonts, font color, and style are similar for the message printed and all labels. Along with icons are same across the whole application implies the same meaning. **Prevent Errors**: The login button is disabled until the user enters values in both fields. And if the values entered by the user are not valid then showcasing feedback with red color, therefore, grabbing the attention of the user that invalid details and also popup for same. If the user enters valid information then open the login page for final verification.

Also, the user is given full control that how he/she wants to signup into the system. Therefore, it supports the internal locus of control.

Lastly, it caters to universal usability as it can be used by every person from being a novice to an expert. Also, people of any age range can use it.

Interaction Style:

The interaction style used is:

- **Form Fill-In:** User needs to fill in the necessary details so it showcases form fill-in option as interaction style if the user selects to create an account using that way.
- **Menu-Selection:** The user is also given the option to sign up using Facebook or Google. So, it is an option-based feature to signup into the system.

So, the signup feature is a combination of form fill-in and menu-selection interaction styles.

3. **Forgot Password**

Functionality: Providing the feature to get the password and access the system to find the information that the user is looking for

Photos of Implementation:
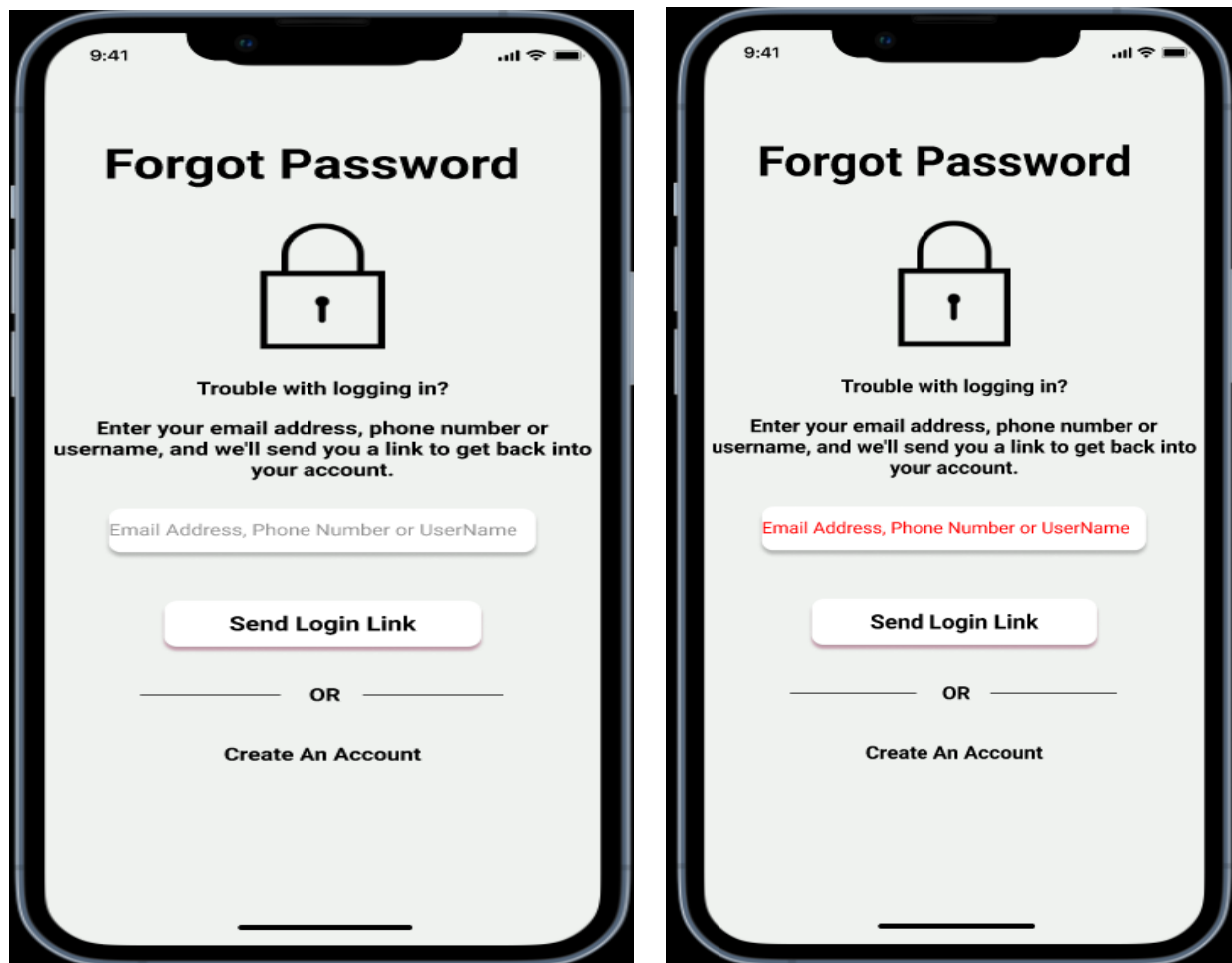
Design Principles:

Prevent Errors: The "Send Login Link" button is disabled until the user enters the value in the field. And if the value entered by the user is not valid i.e. not present in the system then it will showcase feedback with red color, therefore, grabbing the attention of the user that invalid details are entered also a pop-up for the same will be displayed. If the user enters valid details then send the login link to the registered mobile number or email with respective details and then redirect to the login page.

Offer Informative Feedback: After the user click the "Send Login link" button the system generates a message saying "The login link was generated and sent to the registered mobile number/email".

Also, the user is given full control that how he/she wants the login link to be generated in the system. Therefore, it supports the internal locus of control.
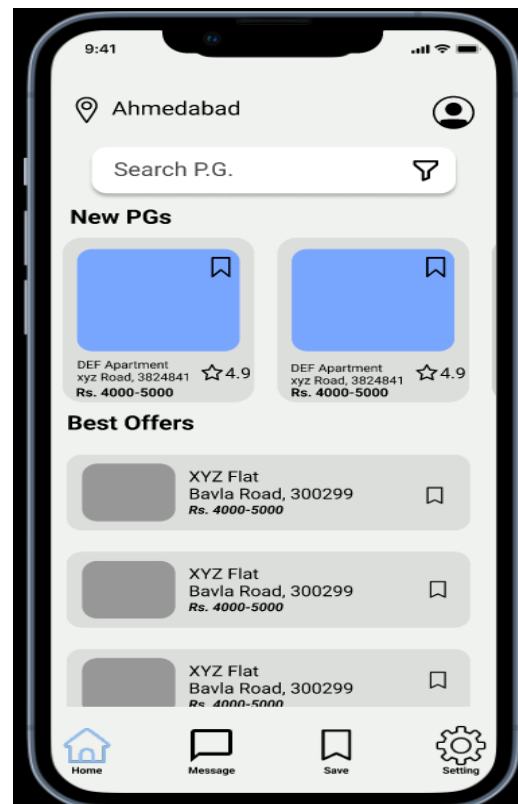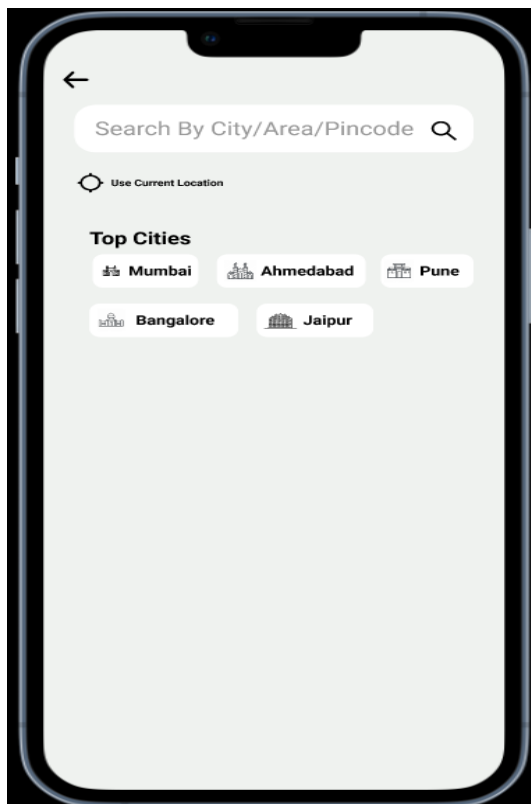
Interaction Style:

The interaction style used is:

- **Form Fill-In:** User needs to fill in the necessary details so it showcases form fill-in option as interaction style.

4. Search PG by location

Functionality: Providing the feature to search the nearby PG from the location information provided by the user.

Photos of Implementation:

Design Principles:

Strive for Consistency: Fonts, font color, and style are similar for the different available cities for PG. Along with icons containing the same meaning are same across the whole application implies the same meaning.

Permit Easy Reversal of Actions: After the user gives the location details of his/her, the system directs them to the page showing the results according to the details entered. But unfortunately, if the user had entered the wrong location details the button to change the location details will be present on the next page, which relieves the anxiety of the user and make him/her comfortable that his/her actions can be reverted.

Also, the user is given full control that how he/she wants to search the PG nearby to the location details provided by him/her. Therefore, it supports the internal locus of control.
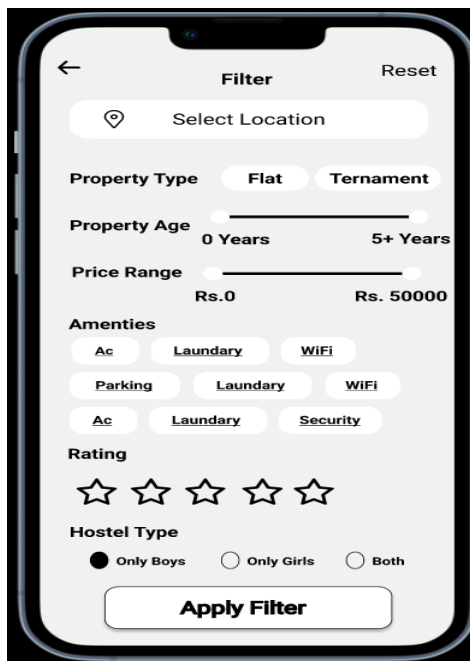
Interaction Style:

The interaction style used is:

- **Form Fill-In:** User fills in the location details so that the system generates the results according to it, which showcases the form fill-in option as interaction style.
- **Menu-Selection:** The user is also given pre-built options to search the PG by selecting the mentioned cities such as Ahmedabad, Mumbai, Bangalore, etc.

So, the "Search PG by the location" feature is a combination of form fill-in and menu-selection interaction styles.

5. Filter PG

Functionality: This feature enables to filter the user to filter out the options based on the criteria he/she selects apply.

Photos of Implementation:

Design Principle:

Strive for consistency: Fonts, font color, and style are similar for the message printed and all labels. Along with icons are same across the whole application implies the same meaning.

Permit Easy Reversal of Actions: The user can re-filter or can re-select the criteria if he/she wants by again going to the same page. Also, if the user has given the wrong criteria for filter then he/she can revert back or resolve his/her error. Therefore, relieving the anxiety of the user and thereby making the user more comfortable as a user. Also, an option for resetting is also given which resets all the criteria.

Support Interval Locus of Control: Therefore, the user is given full freedom to select criteria thereby making the user in charge of the interface and the interface responds accordingly to the action given by the user.

Interaction Style:

- **Direction Manipulation:** The user is given an option to directly select the price range, rating, property age by dragging the cursor based on the requirement. Therefore, avoiding the error provides high satisfaction.
- **Menu Selection:** The user is given the option to select from the given option of amenities and the "choose" option for selecting the PG type and who is allowed to stay in the PG.

Therefore, this feature interaction style is the combination of direct manipulation and menu selection.

6. **Showcasing new PGs and best offers**

Functionality: This feature enables to display users with new paying guests for the selected location and the best offer available for various paying guests.

Photos of Implementation:
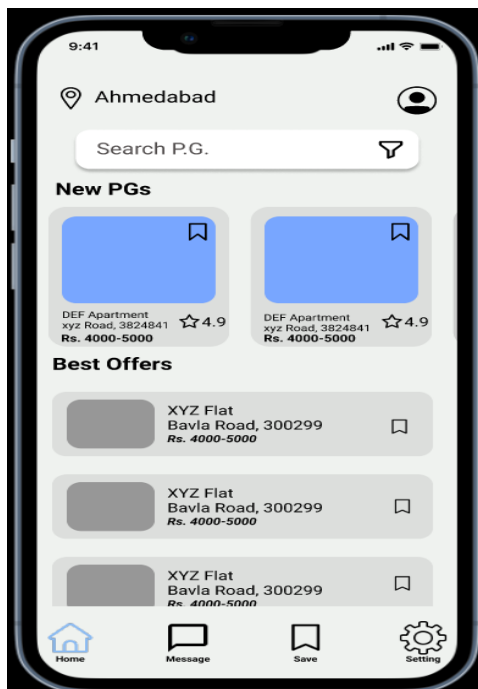
Design Principle:

Strive for consistency: Fonts, font color, and style are similar for the message printed and all labels. Along with icons are same across the whole application implies the same meaning.

Offer Informative Feedback: The bottom navigation drawer showcase which menu or option is selected by displaying that icon in a different color.
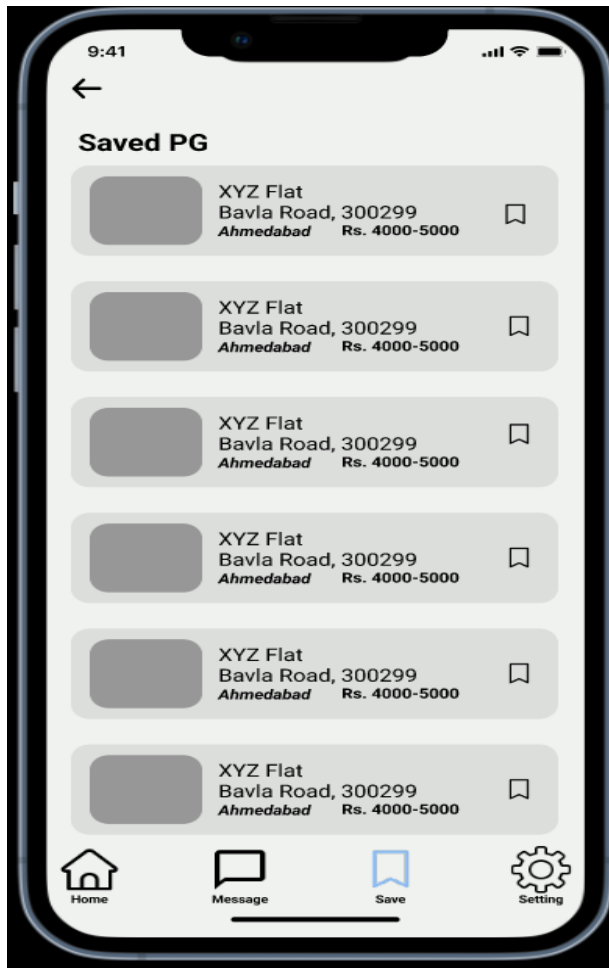
Interaction Style:

- **Menu Selection:** The user is given a list of available options of paying guests and needs to select from the given list. Therefore, providing a clear structure for decision making as all possible choices are present at one time.

Therefore, for this feature menu selection is used as an interaction style.

7. Bookmark PG

Functionality: This feature is used to save paying guests which user wants to use or would like to revisit for future reference.

Photos of Implementation:

Design Principle:

Strive for consistency: Fonts, font color, and style is similar for the message printed and all labels. Along with icons are same across the whole application implies the same meaning.

Offer Informative Feedback: The bottom navigation drawer showcase which menu or option is selected by displaying that icon in a different color.

Reduce Short Term Memory Load: By this feature, the user doesn't need to remember the paying guest he/she liked. Therefore, reducing the memory load.

Interaction Style:

- **Menu Selection:** The user is given a list of available options of paying guest user bookmarked. Therefore, providing a clear structure for decision making as all possible choices are present at one time.

Therefore, for this feature menu selection is used as an interaction style.

8. Display PG Details

Functionality: This feature enables the user to get all the details of the PG he/she is interested in.

Photos of Implementation:

Design Principle:

Strive for Consistency: Fonts, font color, and style are similar for all the similar information. Along with icons containing the same meaning are same across the whole application implies the same meaning.

Interaction Style:

- **Menu Selection:** The user is given the option that how he/she wants to contact the PG owner and also given the option if he/she wants to see the location of paying guests on maps. Therefore, for this feature the interaction style used is menu selection.
    #### 9. Payment Option/ Booking PG option

Functionality: Providing the feature to the user for booking the PG and paying the rent for the same prior to the condition that PG is available and the user wishes to pay.

Photos of Implementation:
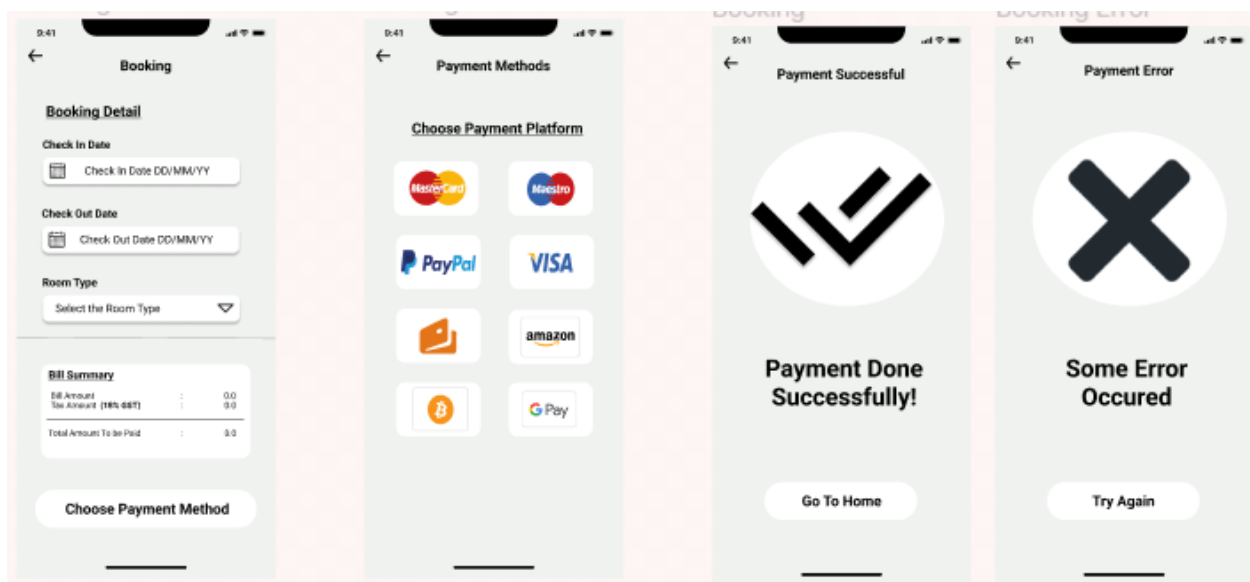
Design Principles:

Strive for consistency: Fonts, font color, and style are similar for the message printed. **Offer Informative Feedback:** If the payment is successful, then it provides successful feedback, and in the case of unsuccessful payment, then it showcases an error message. Also, the bill summary gets updated based on the fill-in data while making the booking.

Support Internal Locus of Control: Users are given full control over when and how they want to perform their payment along with the freedom to choose the check-in date and check-out date irrespective of criteria.

Interaction Style:

The interaction style used is:

- **Form Fill-In:** The user needs to fill in the check-in date, check-out date, and type of room they want to stay in. And based on the form fill request bill would be generated.

- **Menu-Selection:** The user is also given the option to choose among different options for the payment he/she wants to pay for.

Hierarchy Task Analysis:

Goal: Payment for the Booking of the PG

1. Fill in the check-in date, check-out date and room type

    1.1 Validate the details filled by the user

    1.2 Check the availability of PGs for filled information

    1.3 If everything is valid then allow to perform the next task

    1.4 If everything is not valid then grey out the choose payment option.

2. Select the payment he/she is comfortable with.

    2.1 If payment is successful then show message accordingly.

    2.2 If payment is unsuccessful then show message accordingly.

10. Chatting with the owner of the PG

Functionality: Providing the feature to the user to have conversation with the owner of the PG to get some important details which are required for a PG Finder to know.

Photos of Implementation:
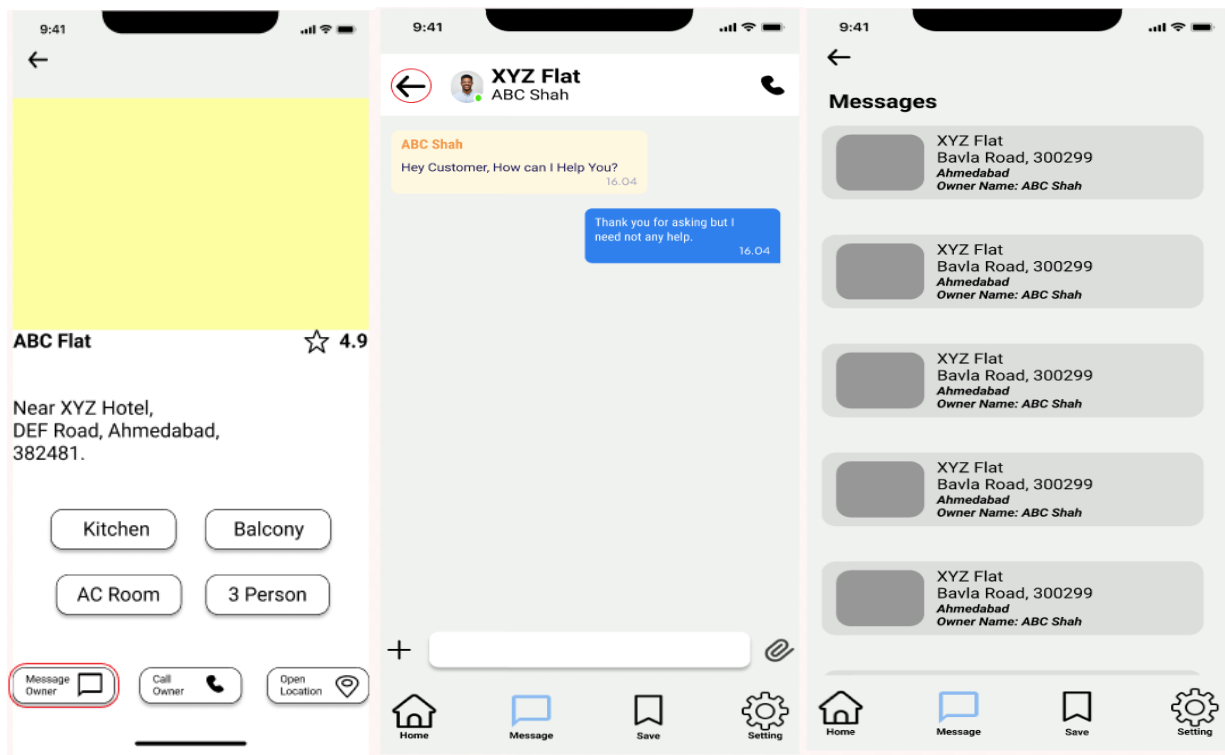
Design Principles:

Strive for consistency: Fonts, font color, and style are similar for the different given options to view different facilities of PG. Along with icons containing the same meaning are same across the whole application implies the same meaning.

Reduce Short Term Memory Load: As we know the user have limited ability to remember information in short term memory. As, we can see in the 3rd image the list of all the conversation with owner is given, so that user don't have to go to the PG information page whenever he/she wants to talk to the owner of that PG. Also, whenever the user opens the chat he/she will find the previous chat to connect with the conversation.

Support Internal Locus of Control: The users are given full control over the whole screen for every buttons so that they feel that the interface is responding to their actions.

Affordance: As we can see in our screens that the icon used for messaging invites the user to click on it to activate the messaging feature.

Interaction Style:

The interaction style used is:

- **Menu-Selection:** The user needs to click on the conversations mentioned in the screen among the different chats he/she had previously done.
- **Direct Manipulation:** The user is provided with different manipulative icons which carry their meanings such as clip icon to add any file to the conversation, phone icon to call the owner, etc.

Hierarchy Task Analysis:

Goal: Chat with the owner of PG to get necessary information

1. Editing the message which is previously sent due to some error in typing.

   1.1 Check whether the message after editing is not empty.

2. Deleting the message which is previously sent due to some error in typing.

   2.1 Check whether the message is clearly removed from both the sides.

   2.2 If message is deleted successful then show the message accordingly.

11. Change Password

Functionality: By providing that feature if a user might want to change the password then he/she would be able to change it, Condition is user should be logged in apriori before changing the password.

Photos of Implementation:
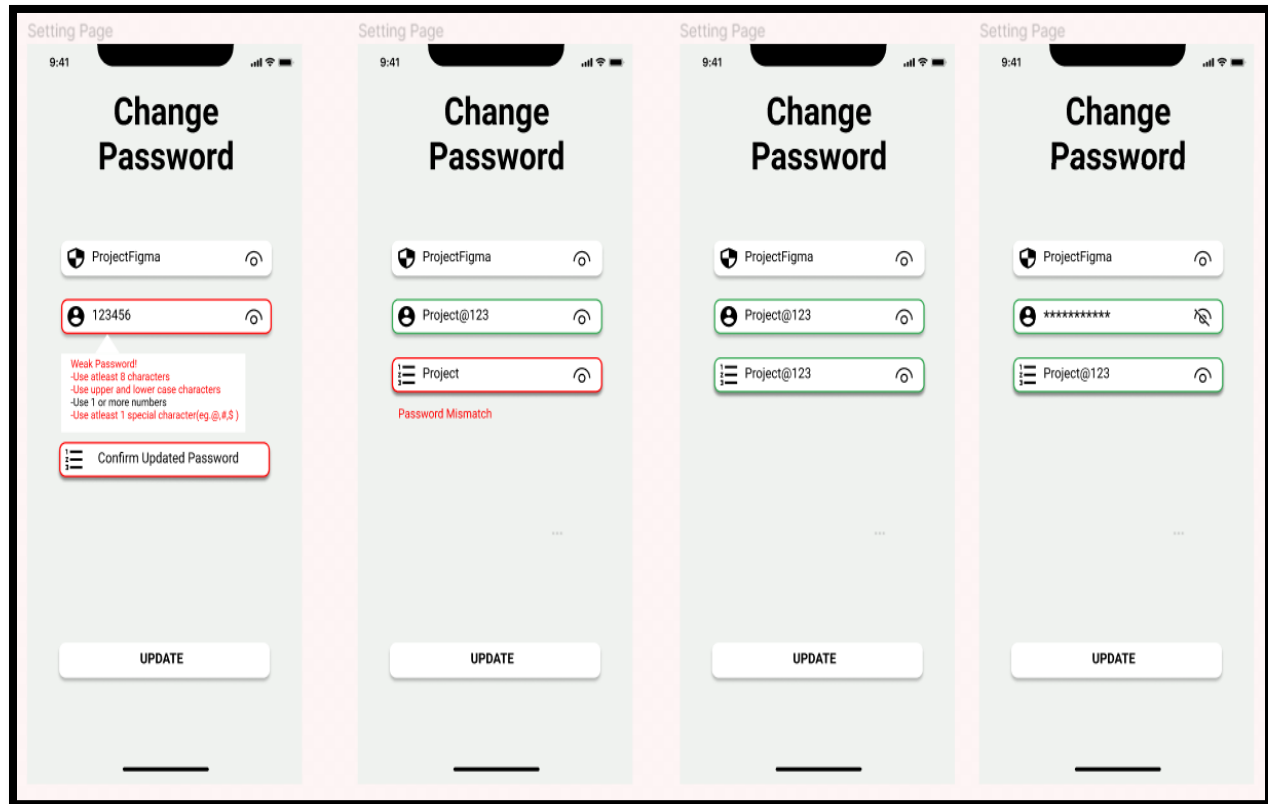
Design Principles:

Permit easy reversal of actions: Declaring the password requirements and ensuring that the user may see them for the duration of the field selection. We've been able to eliminate some of the technological constraints; there will be less text to show and fewer rules for the user to process as they type, allowing for speedier password formation. It's not enough to simply provide a link to password requirements (most users won't notice or care to expand that link); password requirements should be accessible when the user is establishing the password.

Reduce short term memory loss & Prevent error: Users create a complying password on the fly to meet difficult criteria, adding letters and symbols until it's legitimate. It's not so much the user's password at that moment as it is a random string that matches this system. Worse, because most passwords are disguised, that string is concealed from the users when they create it. People will have to hold that knowledge in their short-term memory as they produce it if they want to recall what they came up with, increasing their cognitive load. According to research, consumers make more mistakes while inputting passwords on smaller devices than on desktop computers, therefore displaying the password would prevent errors.

Interaction Style:

The interaction style used is:

- **Form Fill-In:** The user needs to fill in the current password, new password that they want to set and reconform the new password entered for validation.

Hierarchy Task Analysis:

Goal: Change Password

1. Fill in the current password.

   1.1 Validate the details filled by the user.

   1.2. If everything is not valid then entering a new password option   will not be accessible out the choose payment option.

2. Fill in the new password.

   2.1 If all constraints are fulfilled, a green outline will be shown over the box.

   2.2 If all constraints are not being fulfilled then the re entering password option will not be accessible and also red outline over new password box.

3. Re-entering the new entered password

   3.1 If re-entered password match with new password then green tick will be shown

   3.2 If the re-entered password does not match with the new password then a red outline over the box is displayed.

4. Update.

12. Update Profile

Functionality: By providing that feature if a user might want to change the profile then he/she would be able to change it according to their convenience. It includes updation of profile picture, current address, email-id, phone number, etc.

Photos of Implementation:
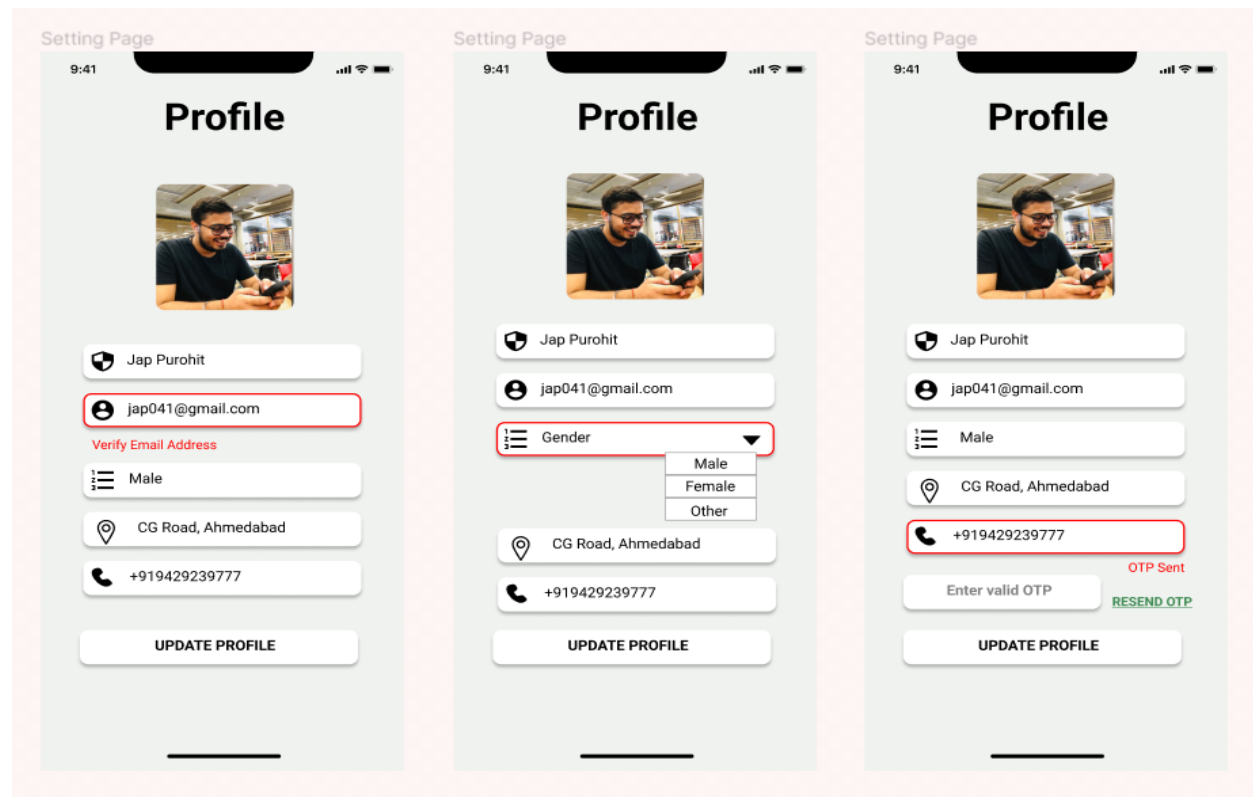
Design Principles:

Permit easy reversal of actions: Actions should be reversible as much as feasible. This feature reduces anxiety by letting the user know that mistakes may be reversed, and it encourages the user to try out new possibilities. A single action, a data-entry task, or a whole series of operations, such as the entry of a name-address block, are examples of reversible units.

Offer Informative Feedback: A system that provides feedback for each activity makes it easier for the user to attain their goals and reduces cognitive burden. A user may perceive a system that lacks certain features as clumsy, sluggish, or even broken. Finally, feedback should be immediate, with any delays eliminated to avoid the system appearing sluggish. For example, if an email is sent to the supplied email address or an otp is sent to the entered phone number, the dialogue should indicate that it was delivered.

Interaction Style:

The interaction style used is:

- **Form Fill-In:** The user needs to fill in the details they want to   update for i.e name, address, email-id, contact number, etc.

13. Notification Settings:

Functionality: Providing the feature to the user for configuring the notification settings like which all notifications he/she wishes to receive and at which place.

Photos of Implementation:
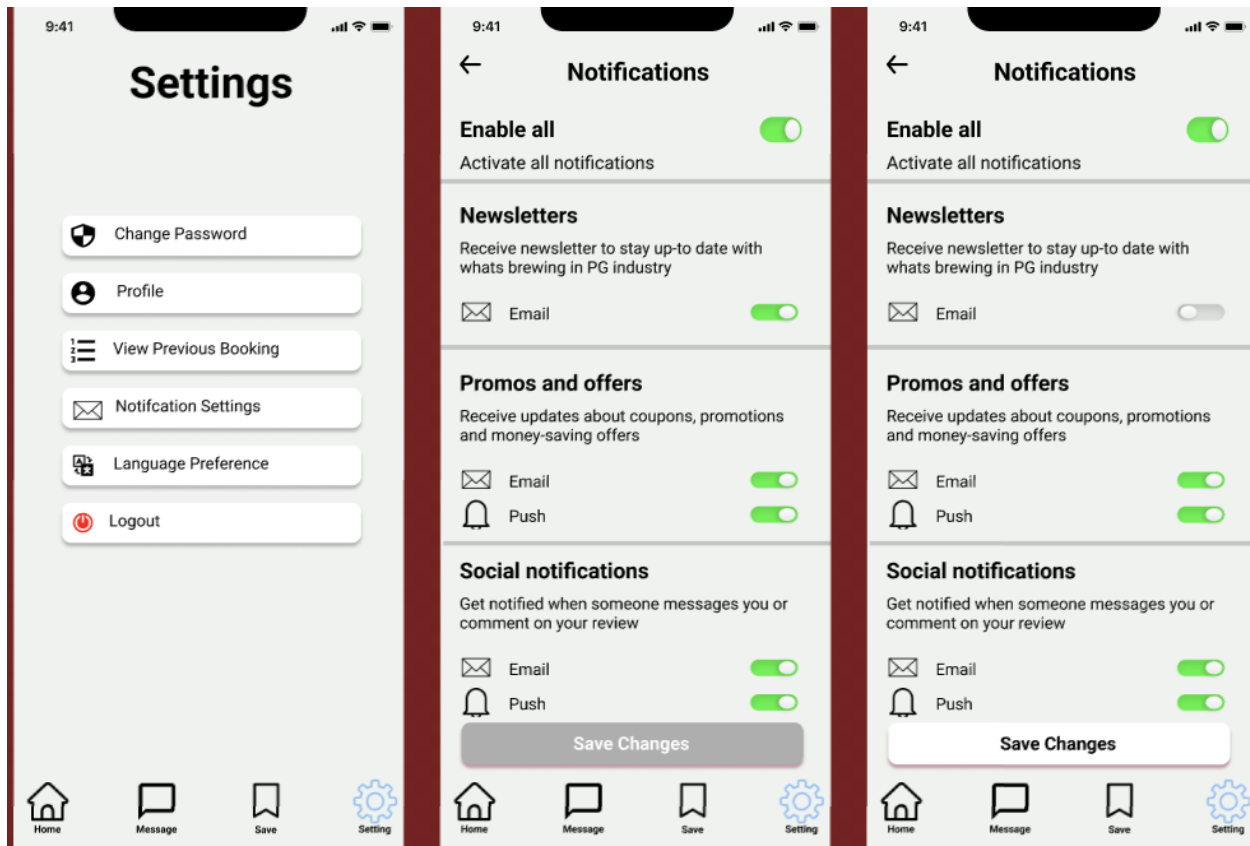
Design Principles:

Strive for consistency: Fonts, font color, and style are similar for the message printed.

Offer Informative Feedback: If the changes is successful saved, then it provides successful feedback, and in the case of unsuccessful saving, then it showcases an error message.

Support Internal Locus of Control: Users are given full control over which notification he/she wants to receive and which not. Along with options about where he/she can receive notifications.

Interaction Style:

The interaction style used is:

- **Form Fill-In:** The user needs to check the options he/she is given.
- **Direct Manipulation:** The user can directly interact with notifications settings by toggling around the options that he/she wants to just like a normal switch.

Hierarchy Task Analysis:

Goal: Provide the user ability to select the notification he/she wants to get.

1. Select the notifications settings
2. Select the notification he/she wants to get by toggling the input.
2.1 If the setting is saved successfully then show the message accordingly.

2.2 If the setting is not saved successfully then show the message accordingly.

14. Choose a language

Functionality:

Providing the feature for the user to select language other than providing only english, the user is provided the language in which he/she feels comfortable, which might remove the language barrier while using the PG finder application.

Photos of Implementation:
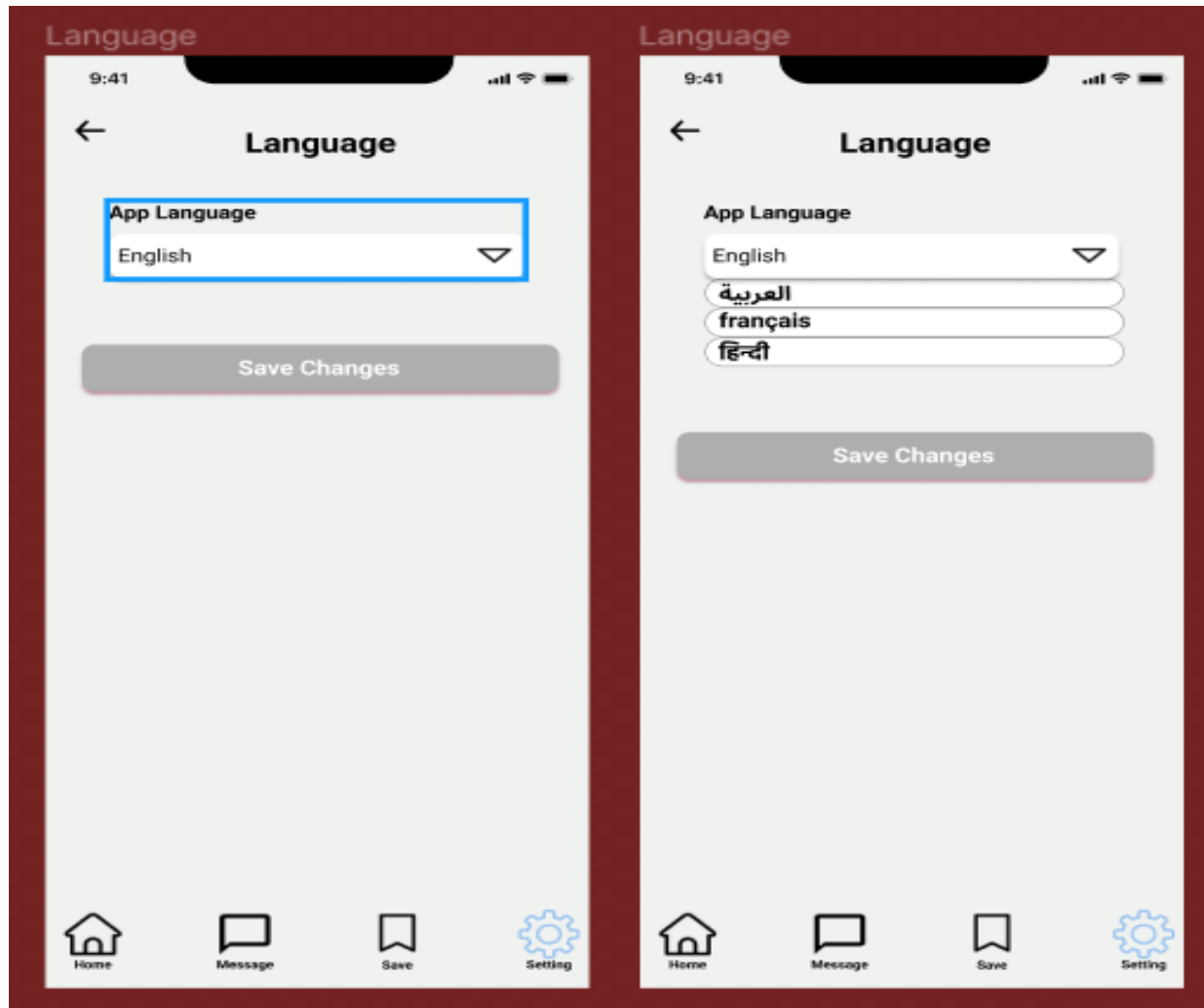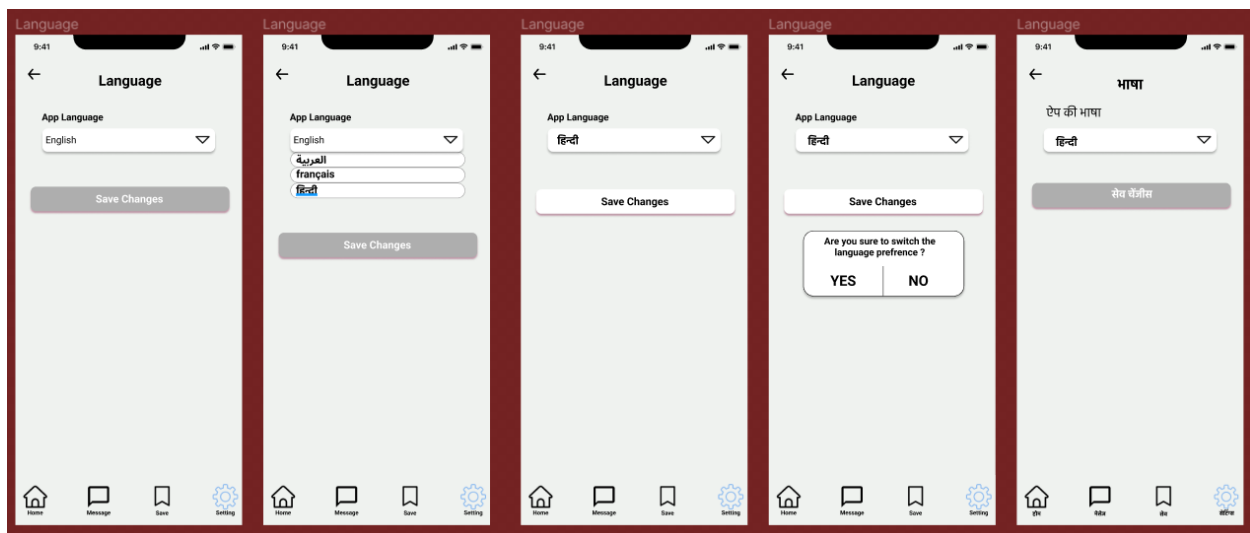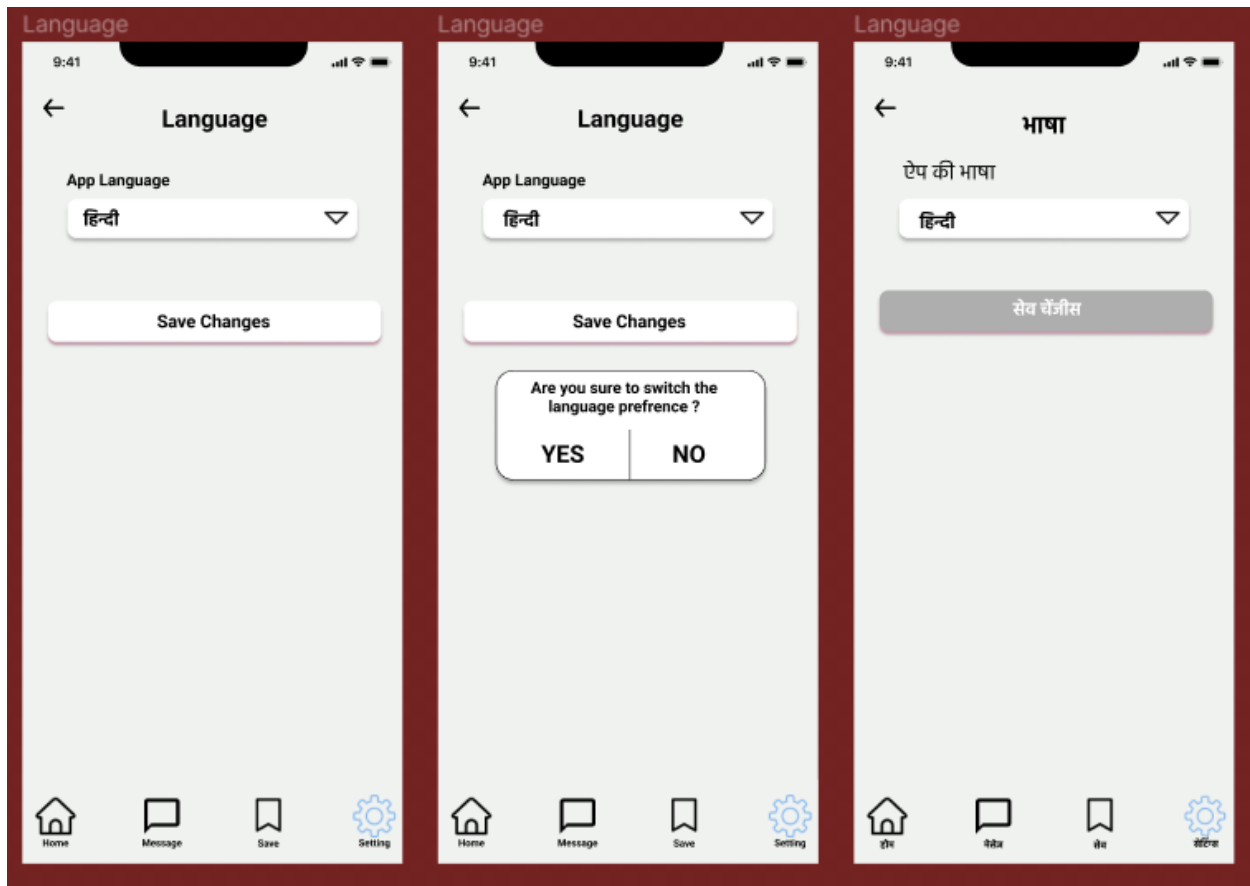
Design Principles / Universal Usability:

Offer Informative Feedback: If a user tries to change the language there is system feedback and confirmation for the same, as selecting a different language unknowing and then coming back to the original state might be difficult for the user.

Cultural and International diversity: Users are given full control over what languages they want to continue using the application and can choose the language which is comfortable to them.

Interaction Style:

The interaction style used is:

- **Menu-Selection:** The user is given the option to choose among different language options language available while using the PG Finder application.

Hierarchy Task Analysis:

Goal: Change in Language of PG Finder Application.

1. Select the language the user is comfortable with.

      1.1 If users find the appropriate language and select it.

            1.1.1 User saves the changes and continues using the app.

      1.2 If the user did not find the appropriate language or selected a different language.

            1.2.1 Users can cancel the changes made.

15. Rating of the PG

Functionality: Providing the feature to the user for rating the PG and giving the feedback for the same to give the review to the new people who come to live in the same PG by providing some important details which are required for a PG Finder to know.

Photos of Implementation:
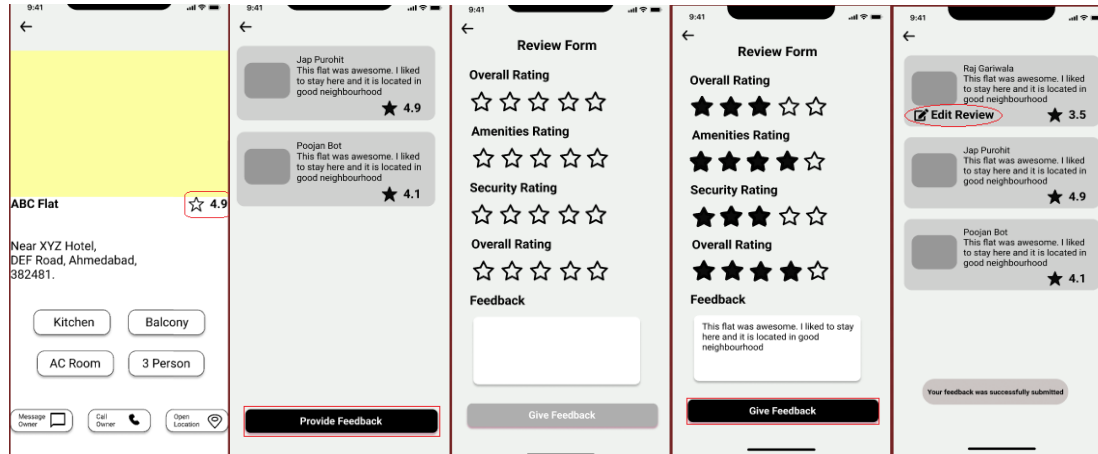
Design Principles:

Offer Informative Feedback: If a user gives the feedback for a PG there is system feedback and confirmation for the same which gives feedback to user that "his/her review was successfully submitted".

Reduce Short Term Memory Load: As we know the user has limited ability to remember information in short term memory. So, the user doesn't need to remember the feedback of the previous PG tenants. As we can see in the PG details page there is a button provided for review which provides the list of all the previous ratings of the PG. Thus, the user is only one click away to see all the feedback for that specific PG.

Support Internal Locus of Control: The user is given full control over the whole screen for every button so he/she can feel that the interface is responding to his/her actions.

Prevent Errors: As we can see in our screens that the icon used for "Give Feedback" is coloured gray until the user fills all the required entries and turns black when it is filled, this helps users from preventing unintentional errors.

Permit Easy Reversal of Actions: As we can see in the above image after giving the feedback of the PG the user is then allowed to edit his/her review so that if they had made any error they can revert back.

Interaction Style:

The interaction style used is:

- **Form Fill-In:** The user needs to fill in the different types of ratings available, and the feedback that the user would like to give upon their experience with the corresponding PG. And based on the form fill the review will then be displayed to all the users who visit the respective page.

Hierarchy Task Analysis:

**Goal:** To give/edit review to a PG regarding the facilities in it from previous experience

1. The user selects the option to give feedback on the PG information page

   1.1 The user then fills in the details in the form.

   1.2 After validating the inputs by user the review will then be displayed on the review page of the PG with an appropriate confirmation message.

       1.2.1 If the inputs by user is not validated then he/she will have to do 1.1 again.

2. Editing the review which was previously sent by the user due to some confusion.

   2.1 Go to the page where all the reviews are visible

   2.2 Click on the edit option provided before your name and change the review of the PG.

   2.3 After the review is changed successfully an appropriate message with confirmation will be displayed.

16. Booked PG

Functionality:

This feature will provide users to look back at history, we can say that this helps users not to search for their previous bookings. This feature provides very handy access to the previous bookings.

Photos of Implementation:
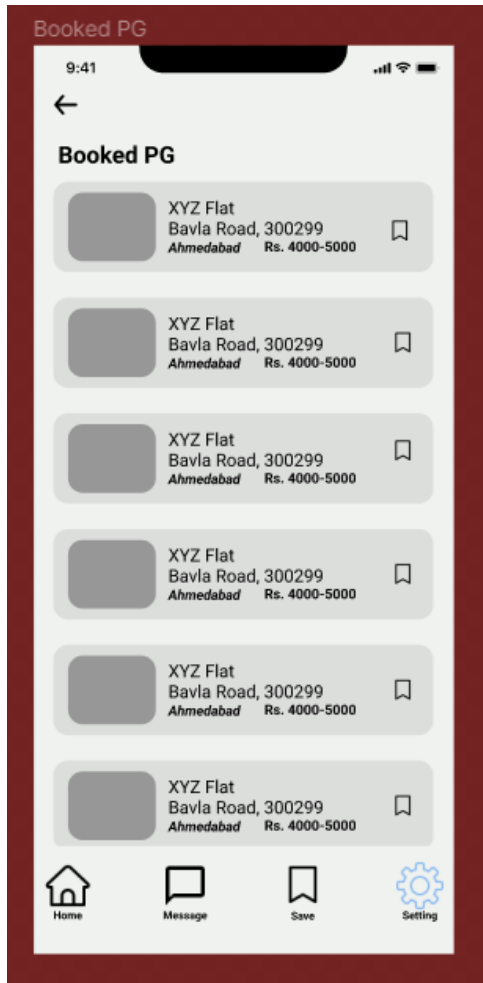
Design Principles / Universal Usability:

Don't make users remember information: What happens is that users are too lazy to remember information, this feature allows users to get the information quickly and without remembering it.

Set information in a logical, natural order: This feature provides information to the user in a logical manner. All the items in the list are ordered in a way that was booked recently.

Interaction Style:

The interaction style used is:

- **Menu-Selection:** The user is given the option to choose among different options of the booked PGs while using the PG Finder application. So, users will be able to select options from the given list.

Hierarchy Task Analysis:

Goal: Look for booked PGs List in PG Finder Application

1. Book the PG.

   1.1 Search for PGs.

       1.1.1 Use different filters to sort the results.

   1.2 Go for booking the PG.

       1.2.1 Select payment method.

       1.2.2 Confirm the payment.

2. Go to the booked PG option

   2.1 Go for the option.

   2.2 Select PG from there which you booked before.

   2.3 No need to follow a long process again, just finish the payment.

Chapter-5

Difficulties Encountered and Resolved:

1. Wiring: Wiring was employed to link the various designs together (webpages). We created several features in our project, but it was critical that they all be connected in some way so that the user could easily utilize it. The key challenge was to connect all of the webpages, which is referred to as wiring in Figma. We watched various tutorials and sites which demonstrates on how to conduct wiring in Figma in efficient, error-free and time saving manner, which aided us in completing the task.
2. Icons: It was challenging to locate icons to add to Figma that were related to our functionality, such as the edit icon. We were able to figure out a lot of things after putting in a lot of time and using the instructions accessible on the internet.
3. In the Figma application, we have given a box on the left side that includes layers and assets. Under these options, they provide information regarding pages. It is a very tiring process if we want to change the attributes of any used element on the page.
4. Figma provides the best features for the design but somewhere lacking in designs that really take input from the user like keyboard for typing, buttons, and switches. Users can only see the design but can't able to give inputs using those designs.

Chapter-6

<u>Real Life Implementation Perspectives:</u>

1. Difficulties Encountered and Resolved
   Difficulties that might get encountered: Regarding Payment method.
   How we came up with a solution: Due to large no. of payment methods available now a days is users are scattered some might use gpay, some might uses debit card, some might uses credit card therefore we have given various range of payment option available, also for users using debit card and credit card we added feature which can remember card details so user doesn't have to enter it every time for making payment.
2. **Difficulties that might get encountered:** Clarity/In-depth info.
   How we came up with a solution: Many times what happens is that 3rd party or let's say app helps user to get glimpses of the PG and basic facility available in the PG but if user want to know details in real depth than connecting user with owner with help of chat feature helps user get more clarity over facilities, rules and regulations and many more.
3. **Difficulty:** The user doesn't want to remember the information that is given to him. So, users will always be looking forward to such options which help users by remembering information like choices, tastes, and preferences.
4. How we came up with the idea that in our PG Finder app we can add the option of booked PG. This option will store information about the PGs that are booked before by the user. With this option users don't have to remember the names and other details of those PGs. Users can easily find those details under this feature.
   Difficulties that might get encountered: Huge number of Notifications.
   How we came up with a solution: Many times, users might not like the social notifications or notifications at all then we came with option that if user doesn't want notification at all then he can deactivate all notifications.

Chapter-7

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