

CRITERION B: DESIGN

1. DATABASE SCHEMA

1.1 Database Tables

Table Name: users

Description: Acts as the main database that stores all registered user accounts

| Field Name | Data Type | Description | Validation Rules |
|------------|-----------|--|----------------------------|
| id | INT | to assign an id to the registered data | Primary key |
| username | Varchar | to save username | - |
| email | Varchar | to save email for login | must be of type email |
| password | Varchar | to save username for login | - |
| phone | Varchar | to save phone number user | must contain 10-15 numbers |
| role | Varchar | to save the user's status | - |

Table Name: rooms

Description: Acts as the main database that stores all added room data.

| Field Name | Data Type | Description | Validation Rules |
|------------|-----------|--|------------------|
| Id | INT | to assign an id to the registered data | Primary key |
| Image | LongText | to save the room image path | - |
| Name | Varchar | to save name room | - |
| Person | Varchar | to store the capacity of the room | - |
| Size | Varchar | to store the details of the room size | - |
| price | Float | store room prices | must be a number |
| bed | Varchar | saving mattress capacity | - |
| status | Varchar | status is available or booked | - |

Table Name: order

Description: Acts as the main database that stores all order room data.

| Field Name | Data Type | Description | Validation Rules |
|--------------|-----------|--|----------------------------|
| Id | INT | to assign an id to the registered data | Primary Key |
| Id_rooms | INT | for the relationship between the rooms table and the order table | Forgein Key |
| name | Varchar | to save the name order | - |
| checkin_date | Date | to save the checkin date | must be a date |
| chekout_date | Date | to save the checkoutedate | must be a date |
| Name_rooms | Varchar | to save the room name | - |
| phone | Varchar | to save phone number user | must contain 10-15 numbers |
| status | Varchar | status is available or booked | - |

Table Name: arship

Description: to summarise the history of orders that have been placed.

| Field Name | Data Type | Description | Validation Rules |
|--------------|-----------|--|----------------------------|
| Id | INT | to assign an id to the registered data | Primary Key |
| name | Varchar | to save the name order | - |
| checkin_date | Date | to save the checkin date | must be a date |
| chekout_date | Date | to save the checkoutedate | must be a date |
| Name_rooms | Varchar | to save the room name | - |
| phone | Varchar | to save phone number user | must contain 10-15 numbers |
| status | Varchar | status is available or booked | - |

1.2. ENTITY-RELATIONSHIP DIAGRAMS

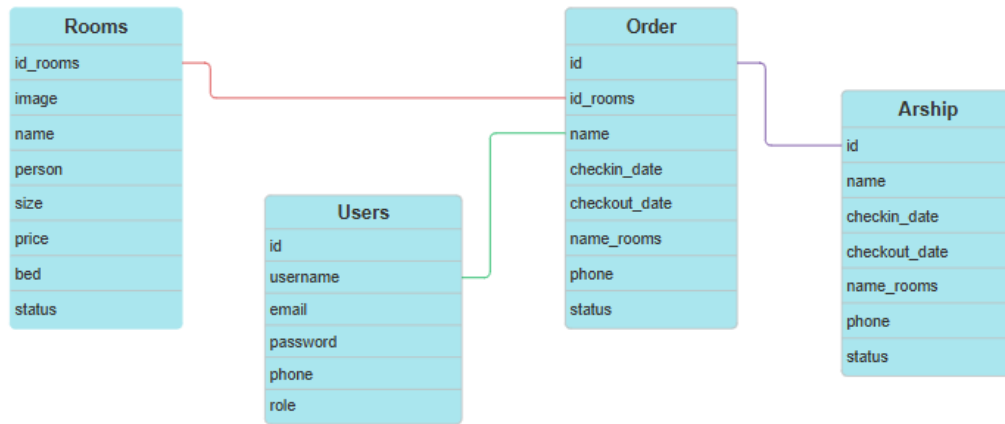


Fig1.1. 1 Flow data Reference

2. USER INTERFACE DESIGN OVERVIEW

2.1.INTRODUCTION

The wireframes would be designed using wireferame cc, while flowcharts are created in draw.io

2.2. COLOR PALETTE

The client has requested a redesign of a villa booking system to better reflect the villa's branding and preferred color scheme. Currently, the system uses white as the main color, with deep blue (#2E5284) and green-gray (#6F8D6B) as primary colors, and gold (#E3BD34) and coral (#E5572E) as accent colors. The client wants a visually cohesive design that mirrors the villa's elegant and inviting atmosphere. The existing user interface (UI) contains excessive empty space, which reduces readability and detracts from the overall user experience (UX). Additionally, the current color and design choices make the system appear outdated and less engaging. In the redesign, the client envisions a clean, modern aesthetic that is user-friendly, engaging, and visually appealing, creating an immersive booking experience that reflects the villa's unique charm and warmth.



Fig2.2. 1 Color Palette

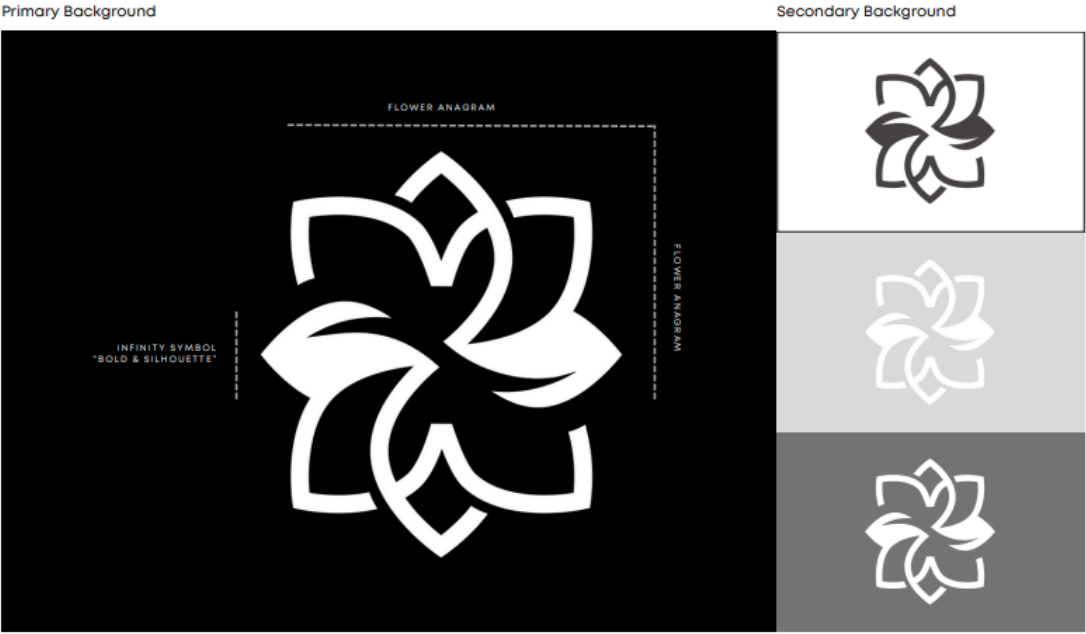


Fig2.2. 2Variations of the System's Logo and Name Display

2.3. WIREFRAME: USER LOGIN

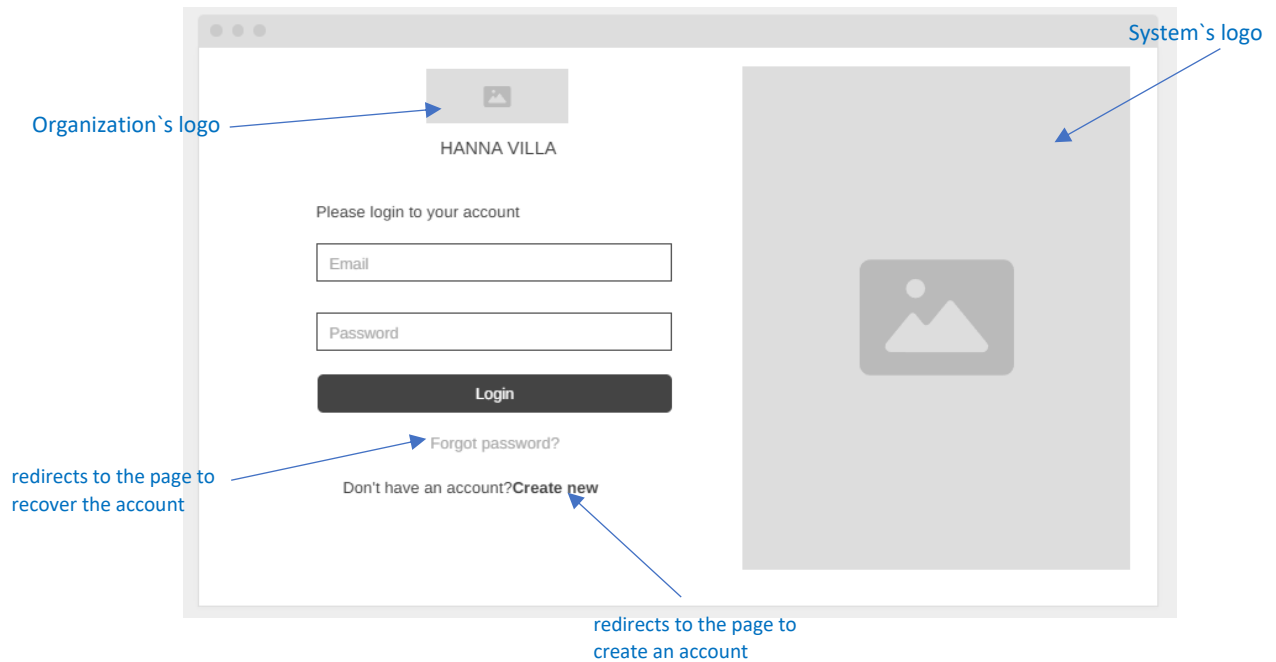


Fig2.2. 3 Login page

The login screen will be the initial entry point for every user when they visit the website. Since both fields are required to identify and verify the user successfully, once the submit button is pressed, the system will first validate that all fields are filled. If they match successfully, the system will perform a process to determine the page between the user and the admin.

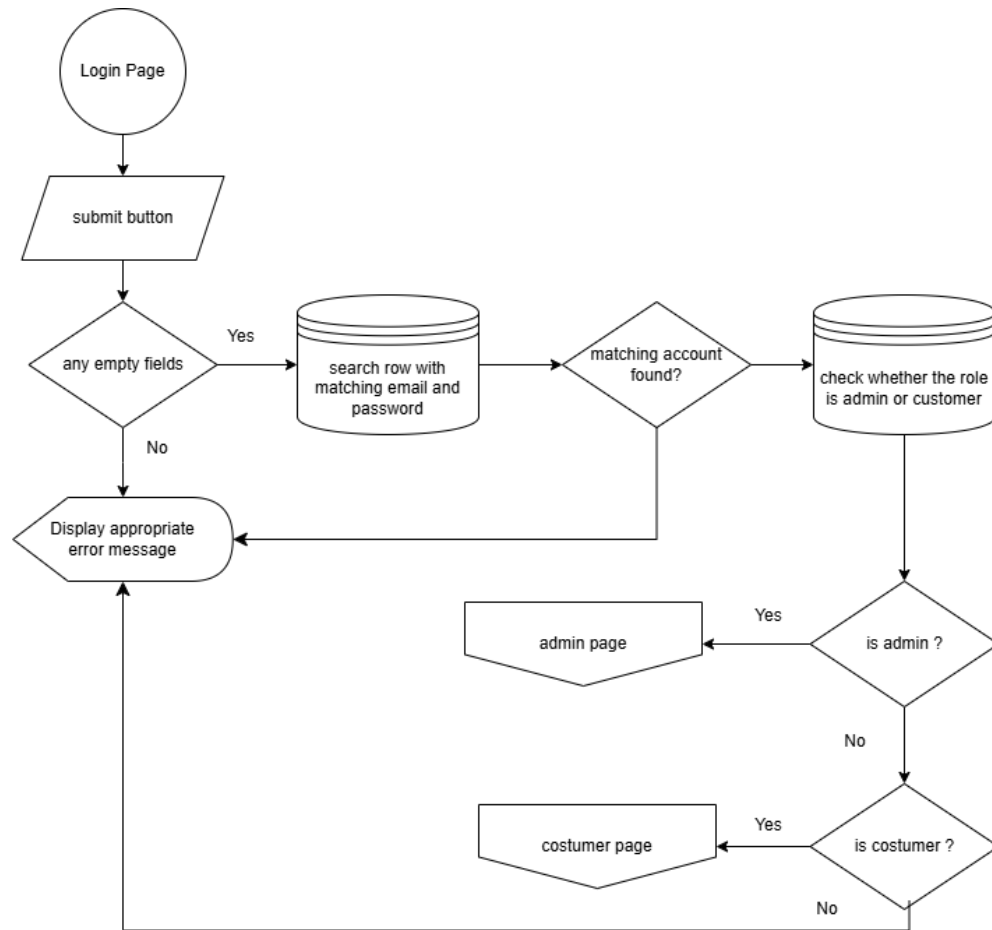
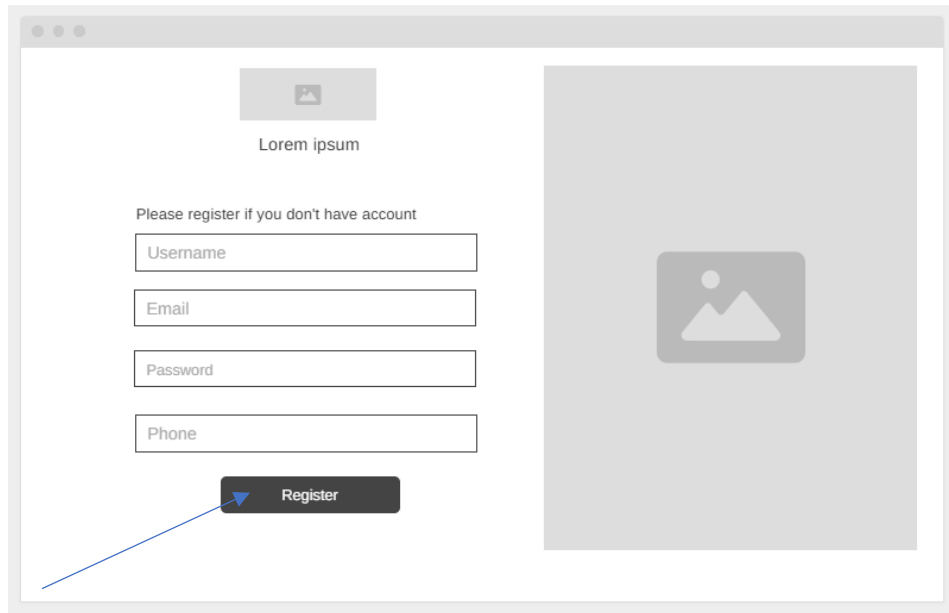


Fig2.2. 4 Login Flowchart

2.4. WIREFRAME: ACCOUNT REGISTRASION

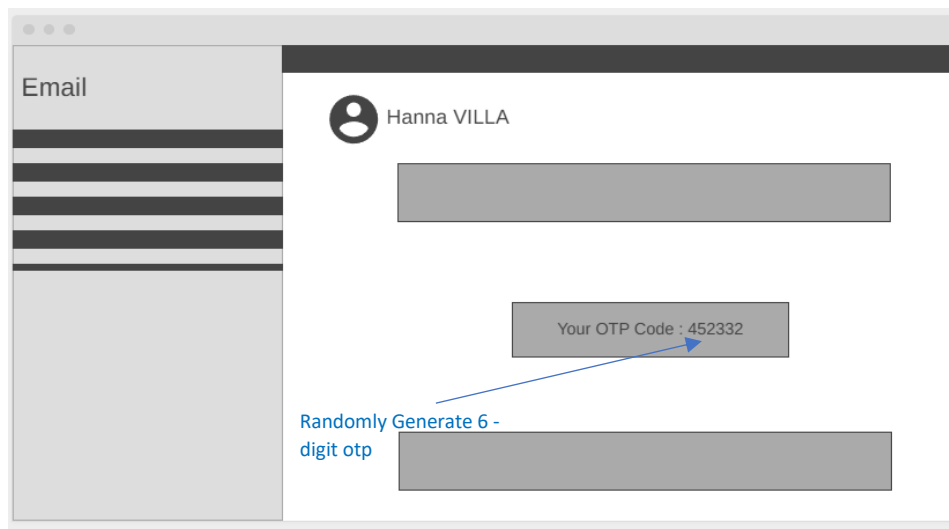


A wireframe of a registration page. At the top, there is a placeholder for a logo and a line of placeholder text "Lorem ipsum". Below this, a message says "Please register if you don't have account". There are four input fields stacked vertically, labeled "Username", "Email", "Password", and "Phone". Below these fields is a dark "Register" button. A blue arrow points from the bottom left towards the "Register" button. To the right of the form is a large gray rectangular area with a placeholder for a profile picture.

redirects to the register
process

Fig2.2. 5 Registration Page

in order to create a registration account the user must provide a valid email because an otp code will be sent to a valid email.



A wireframe of an email notification for an OTP code. On the left is a vertical sidebar with the word "Email" at the top and several horizontal bars below it. The main content area has a header with a user profile icon and the name "Hanna VILLA". Below the header is a large gray rectangular area. In the center, a box displays "Your OTP Code : 452332". Below this box is another large gray rectangular area. A blue arrow points from the text "Randomly Generate 6 - digit otp" to the OTP code box.

Fig2.2. 6 OTP Code Email Notification

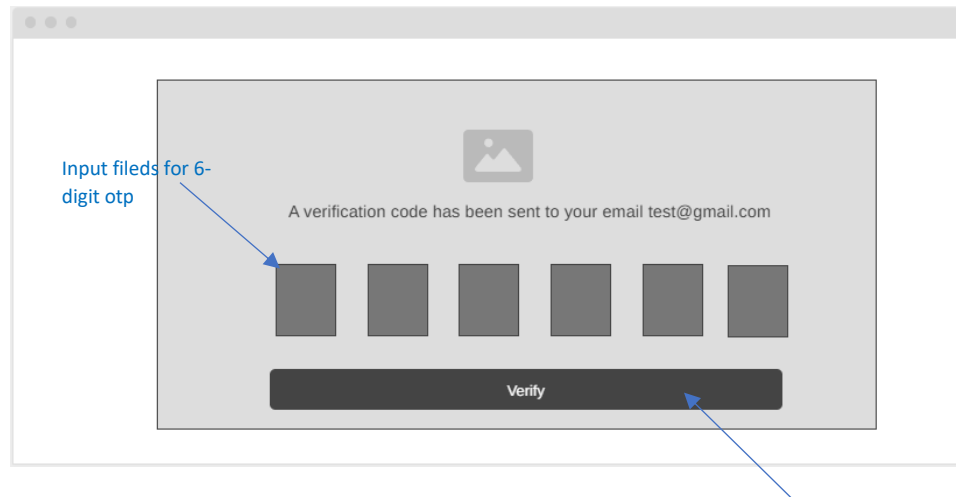
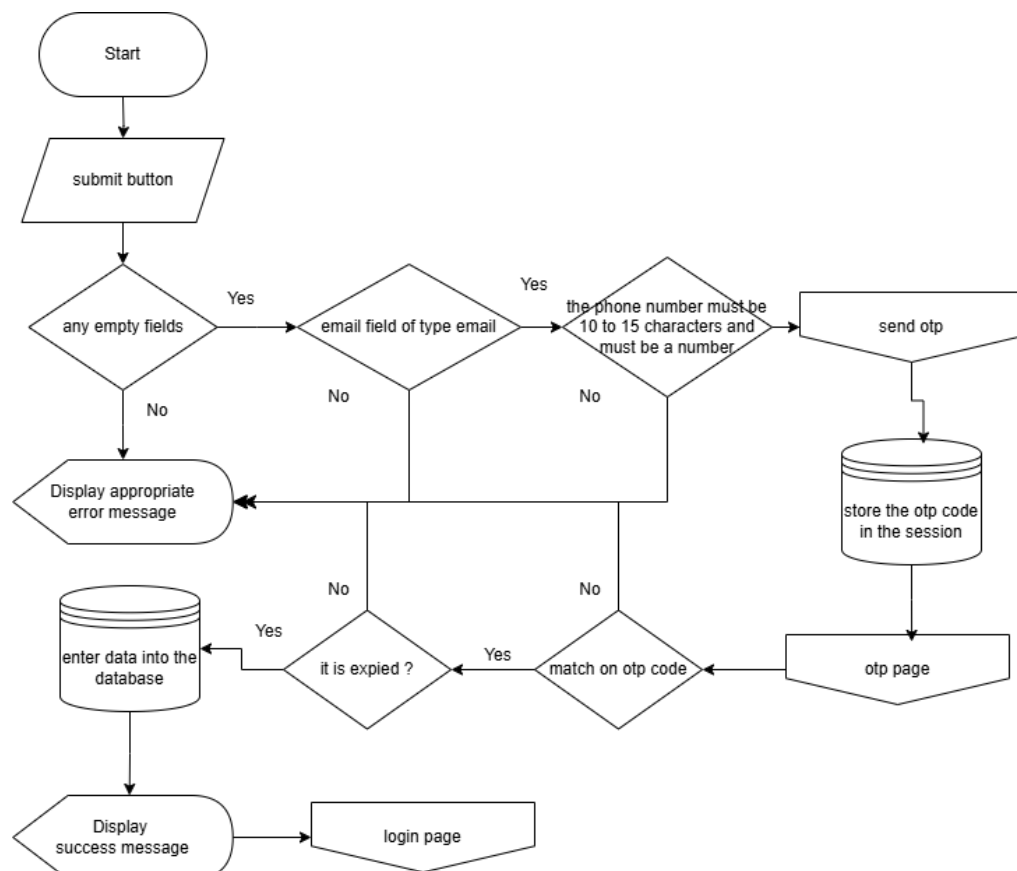


Fig2.2. 7 Insert OTP Code Page



2.5. WIREFRAME: FORGOT PASSWORD

This wireframe illustrates a 'Forgot Password' form within a browser window. At the top, there is a header area with a placeholder image and the text 'Lorem ipsum'. Below this, the form is titled 'Forgot password'. It contains two input fields: 'Email' and 'New Password'. A blue arrow points to the 'Email' field with the annotation 'Input fileds for email', and another blue arrow points to the 'New Password' field with the annotation 'Input fileds for new password'. Below the input fields is a dark 'Submit' button. At the bottom of the form, there is a link that says 'Don't have an account? Create new'. To the right of the form is a large gray rectangular area, possibly representing a sidebar or a placeholder for a logo.

If a user forgets their assigned account password and chooses to initiate the password recovery process password recovery process, they will be redirected to a dedicated page where they will be required to provide and new password and then submit an OTP code for two-step authentication.

This wireframe shows a user profile page. On the left is a sidebar with the label 'Email' and several horizontal bars representing a list. The main content area features a user profile header with a circular avatar icon and the name 'Hanna VILLA'. Below the header is a large gray rectangular box. Further down, a smaller gray box displays the text 'Your OTP Code : 452332'. A blue arrow points to this box with the annotation 'Randomly Generate 6 - digit otp'. Below the OTP box is another large gray rectangular box, likely for a password or confirmation input.

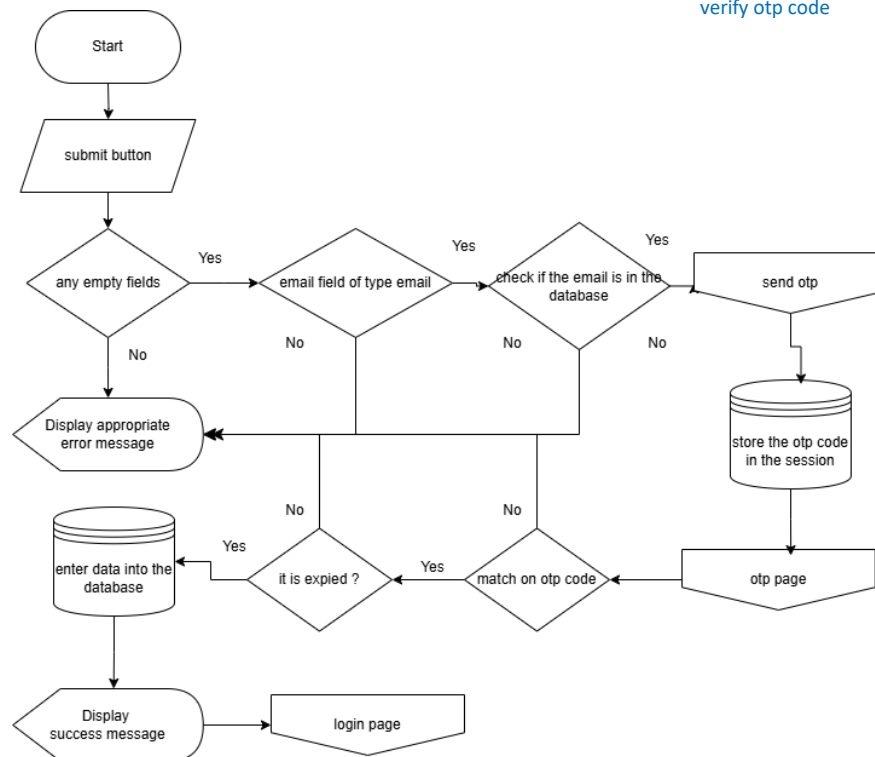
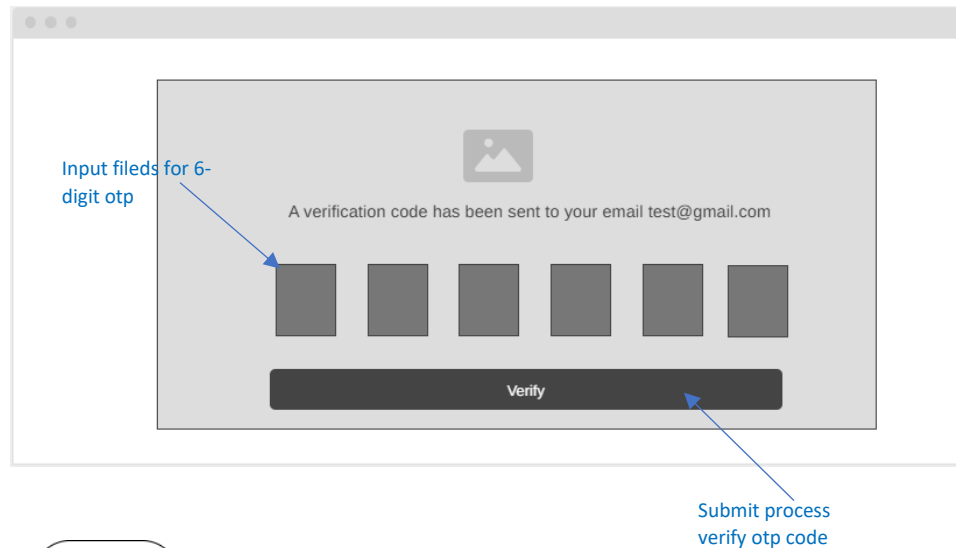


Fig2.2. 8 Registration Flowchart

2.6. WIREFRAME: BOOK ROOMS

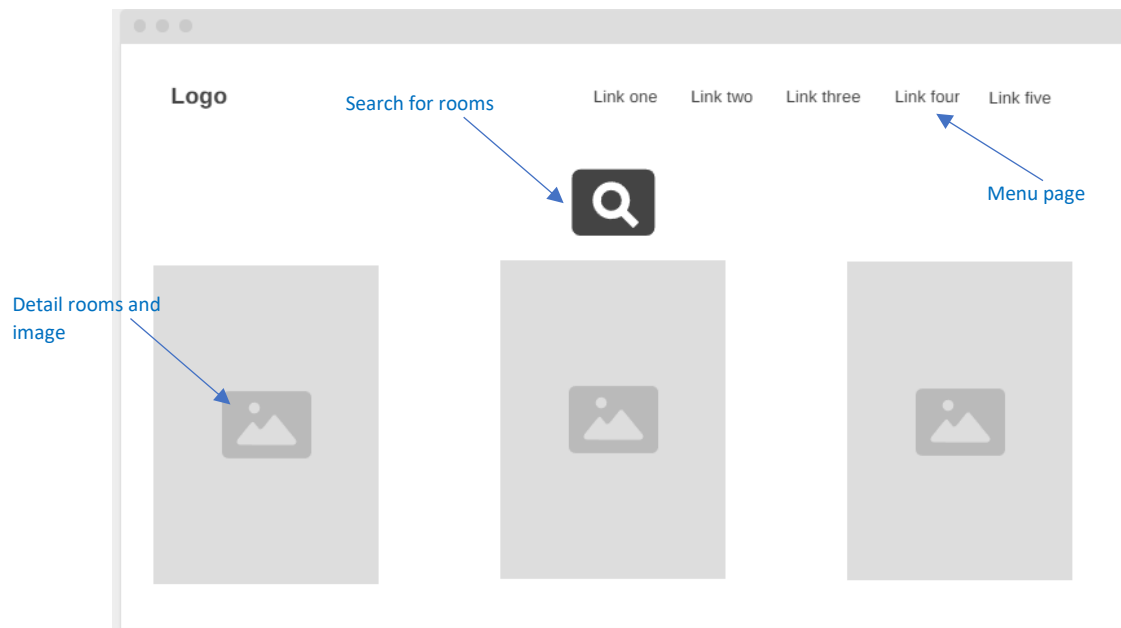


Fig2.2. 9 Rooms Page

on the rooms page there is detailed information about the rooms available for booking and displaying images and there is a search bar to search for rooms.

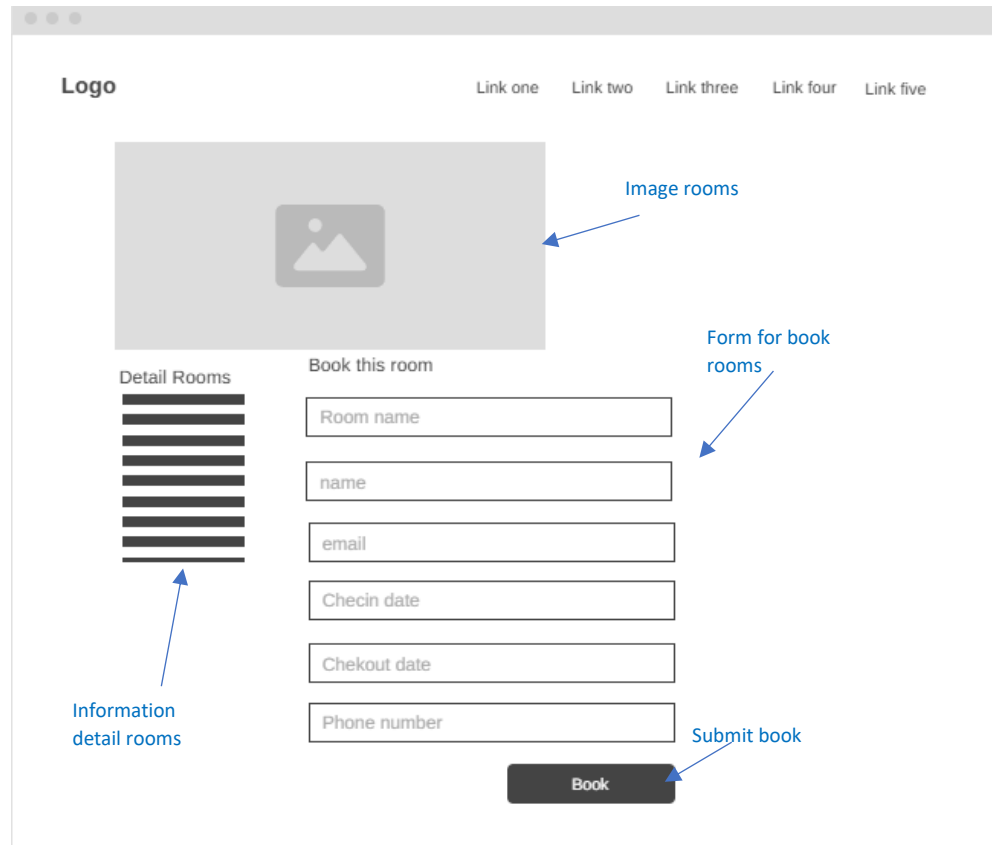


Fig2.2. 10 Detail Rooms and Book Page

if detail rooms is clicked, it will bring up detailed information and the status of the room has been booked or not and there is a room booking form.

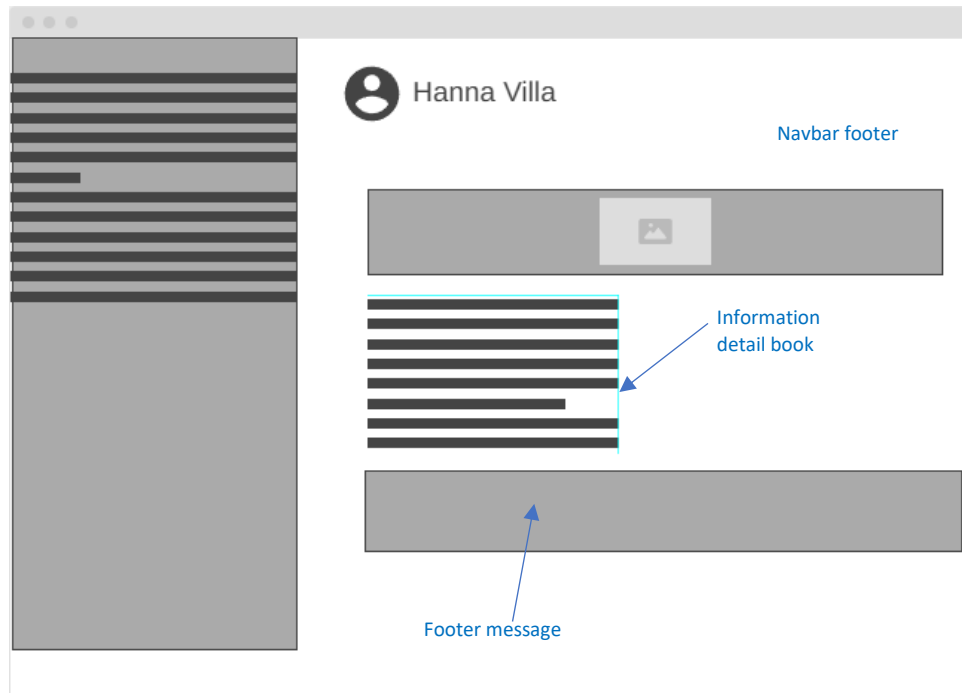


Fig2.2. 11 Detail Order Information Email Notification

If the room is successfully booked, the message details and order receipt will be emailed to you.

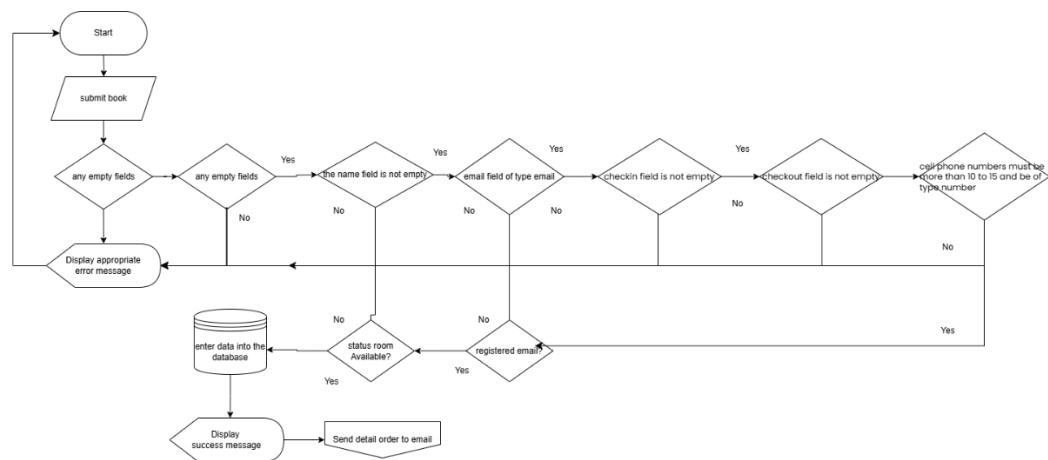


Fig2.2. 12 Flow Chart Book Rooms

2.7. WIREFRAME: DASHBOARD ADMIN

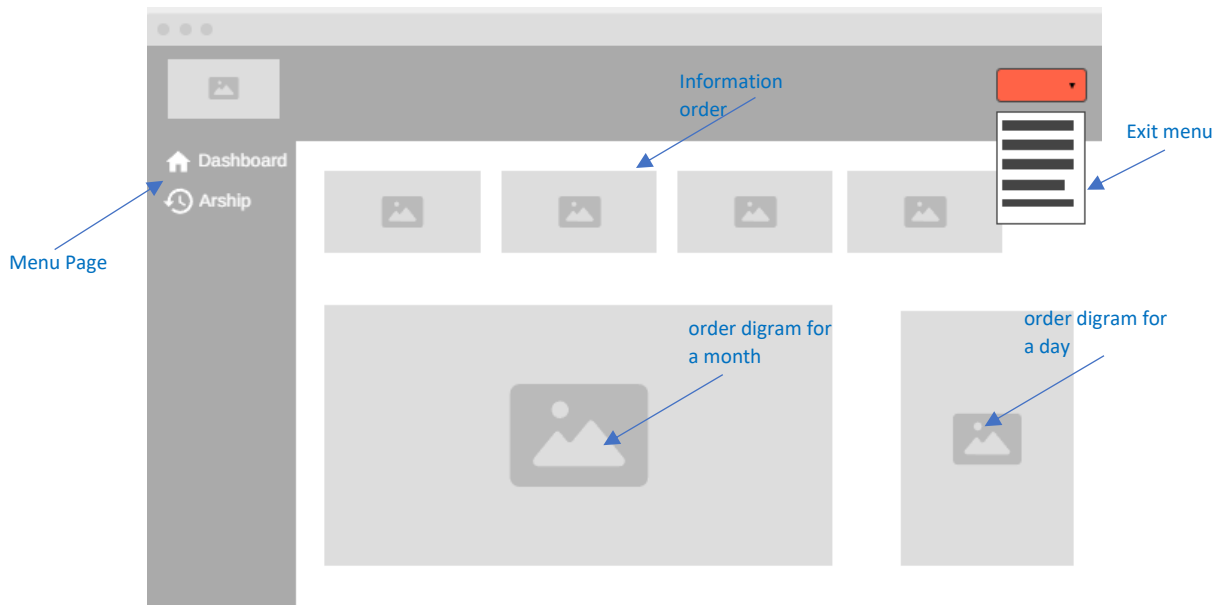


Fig2.2. 13 Admin Page

3. TEST PLAN

| Test type | Nature OF TEST | EXAMPLE |
|----------------------------|---|--|
| Valid localhost connection | Verify that a graphical user interface (GUI) is displayed upon running the PHP file | Run the entry point file through the localhost server in Google Chrome |
| Input validation | Ensure that the system prompts the user to re-type their inputs upon receiving incomplete or incorrect input(s) | If the user types an email address in the wrong format, the program would show a message of the intended structure |
| Database interaction | Confirm that the system can successfully | MySQL database If the user sends a request to register a new account, the system will |

| | | |
|-------------------|--|--|
| | read from and write to the MySQL database | will first check if there is the same email and email if the email has not been registered. then the data can be entered into the database. |
| Page redirection | Validate that pressing a specific button redirects the user to the intended page | If the user clicks the button to switch to account registration mode on the login page, the page will shift to display the sign-up page |
| Access control | Verify that the system authenticates the inputs to only grant access to registered users | If a user attempts to log in with a non-existent account, an error message is displayed, and the user is redirected to the login and registration page |
| OTP functionality | Validate OTP generation functionality OTP generation, sending and verification | The system would send an email to the user's email address with the 6-digit OTP that they need to input |