



IT313-Software Engineering

System Testing

Guest house Booking System

Group 6

Group members

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1. Black Box Testing

Black box testing is a software testing method that focuses on the functionality of a software application without requiring knowledge of its internal code or implementation. In this type of testing, the tester treats the software as a "black box," the testing process is based on inputs and expected outputs, with no consideration of the internal logic or structure of the application.

Black box testing primarily concerns validating that the software functions according to its specifications and meets the intended requirements. Testers design test cases based on the expected behavior of the software. They provide input to the software and check whether the output matches the expected result. Black box testing can be applied at various testing levels, including unit testing, integration testing, system testing, and acceptance testing.

Boundary Value Analysis: Testers pay special attention to testing at the boundaries of input ranges, as errors often occur at the edges of acceptable input values. This helps ensure that the software handles boundary conditions correctly.

Equivalence Partitioning: Testers often use equivalence partitioning to divide the input space into classes or partitions and select representative test cases from each partition.

Derived Equivalence Classes

1. Signup Page :

Constraint:

- **Password length should be ≥ 8 & ≤ 20 with a minimum of 1 unique character and minimum of 1 capital letter.**
- **Email should have '@' included and at least 1 more character after it.**
- **Age should be between 18 and 100**
- **Both names should be alphabetic only**
- **Only 10 digit contact number can be entered**

Valid Passwords:

1. Passwords with a length of 8 or more characters.
2. Passwords that contain at least one unique character and at least one capital letter is included.

Invalid Passwords:

3. Passwords with a length of less than 8 characters.
4. Passwords that meet the length requirement but do not include at least one unique character or capital letter.
5. Passwords that contain only lowercase letters and numbers without any special characters.
6. Passwords with special characters and capital letters but a total length of fewer than 8 characters.

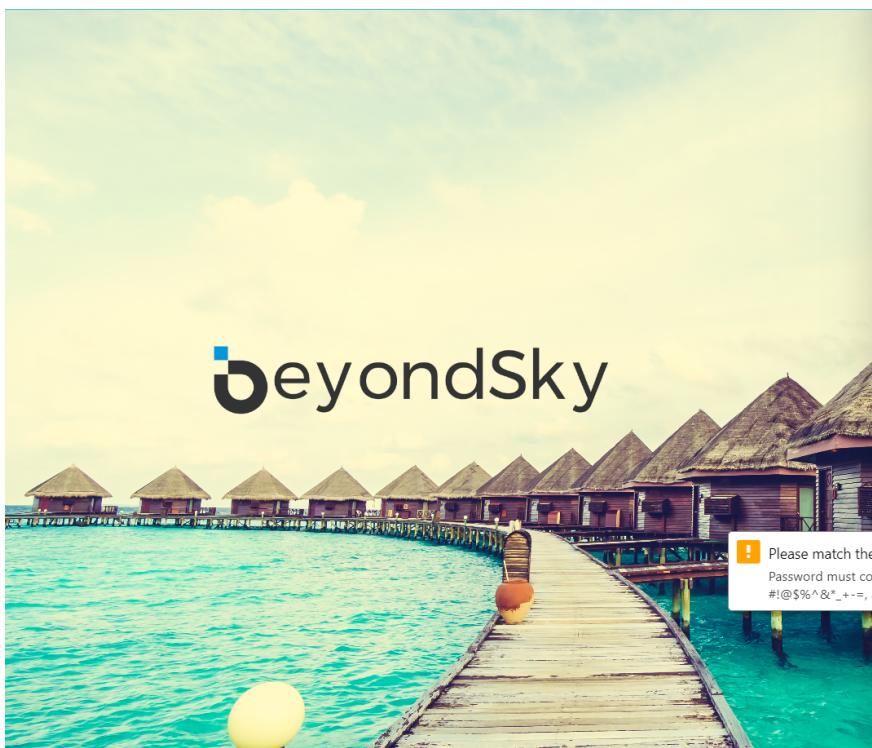
Additional:

- First and Last names can only take alphabet characters and age is only a number.
- Special characters do not include '#' and '_' .

| Testcase no. | Description | Data | Expected Output | Result |
|---------------------|--|---------------------|------------------------------|---------------|
| TC1 | Valid password: meets all criteria | Abcxyz2@ | Successful Password creation | Successful |
| TC2 | Password length < 8 characters | abcxyz | Try again | Failed |
| TC3 | Password length>20 | qwertyuioplkjhgfdsa | Try again | Failed |
| TC4 | Missing special character | 692496Em | Try again | Failed |
| TC5 | Missing capital letter | mxbagdfdyv@ | Try again | Failed |
| TC6 | Only lowercase letters and numbers | sgbdsmw6283 | Try again | Failed |
| TC7 | Special characters and capital letter but < 8 characters | %@abc@% | Try again | Failed |
| TC8 | Valid password: special character and capital letter at beginning | @Abcdefg1 | Successful Password creation | Successful |
| TC9 | Valid password: special character and capital letter at end | Abcdefg1@ | Successful Password creation | Successful |
| TC10 | Valid password: special character and capital letter in the middle | Abcd@efg1 | Successful Password creation | Successful |
| TC11 | Email without @ | raj_kumargmail.com | Invalid email('@') | Failed |

| Testcase no. | Description | Data | Expected Output | Result |
|--------------|------------------------------------|---------------------|------------------------------|------------|
| TC1 | Valid password: meets all criteria | Abcxyz2@ | Successful Password creation | Successful |
| TC2 | Password length < 8 characters | abcxyz | Try again | Failed |
| TC3 | Password length>20 | qwertyuioplkjhgfdsa | Try again | Failed |
| TC12 | Email with no character after @ | raj_kumar@ | Invalid email | Failed |

This is the error message when constraints are not met



The form is titled "Sign Up". It includes fields for Email, First Name, Last Name, Age, New Password, and Gender. A validation error message is displayed below the New Password field:

Please match the requested format.
 Password must contain at least: one uppercase letter, one lowercase letter, one digit, one special character from #!@:\$%^&*_-+=, and the length of the password should be between 8 to 32

| | |
|--------------|-------------------|
| Email | ayush15@gmail.com |
| First Name | Ayush |
| Last Name | Mangroliya |
| Age | 21 |
| New Password | |
| Gender | Male |

2. Profile editing :

1. Name should have at least five character
2. Name field cannot carry numbers or special characters
3. Only age>18 is permitted.
4. Only 10 digit contact number can be entered

| Testcase no. | Description | Data | Expected Output | Result |
|---------------------|--------------------------------------|-------------|------------------------|------------------|
| TC1 | Name field is blank | | Enter valid data | Enter valid data |
| TC2 | Name field has numeric value | s8software | Enter valid data | Enter valid data |
| TC3 | Name field has special characters | @software | Enter valid data | Enter valid data |
| TC4 | Age field is given non integer value | s18 | Enter valid data | Enter valid data |
| TC5 | Age <18 | 10 | Ineligible | Ineligible |
| TC6 | Age >18 | 29 | Saved | Saved |

The Haven

5:47 PM | 4 Dec 2023


Jay Malaviya

| | |
|------------|---------------------|
| Full Name | Jay Malaviya |
| Email | raj_kumar@gmail.com |
| Contact No | 7894561237 |
| Gender | Male |
| Age | 12 |
| Role | admin |
| Shift | Morning |

Save Cancel

The Haven

5:48 PM | 4 Dec 2023


J

| | |
|------------|---------------------|
| Full Name | J |
| Email | raj_kumar@gmail.com |
| Contact No | 7894561237 |
| Gender | Male |
| Age | 20 |
| Role | admin |
| Shift | Morning |

Save Cancel

3. Booking Details :

1. Check in date cannot be left unselected.
2. Checkout date also can't be unselected.
3. Checkout date has to be after the check-in date.
4. No. of rooms field has to be selected.

| Testcase no. | Description | Data | Expected Output | Result |
|---------------------|---------------------------------|-------------|---|---------------------------|
| TC1 | Check in date is empty | | By default has current date | Failed |
| TC2 | Checkout date is empty | | By default has current date | Failed |
| TC3 | Check in date is after Checkout | | Only dates after Check in date are available for Checkout | Failed |
| TC4 | Rooms not selected | - | Unable to book | By default selects 1 room |

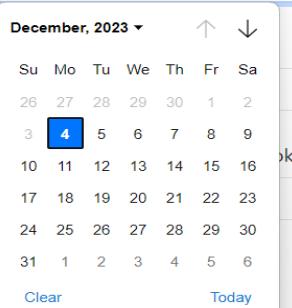
The Haven

Super Deluxe Room

₹4000/night

Check In date

04-12-2023



Book

The Haven

Super Deluxe Room

₹4000/night

Check In date

09-12-2023

Check out date

05-12-2023

Select number of rooms to book

Payment= ₹0

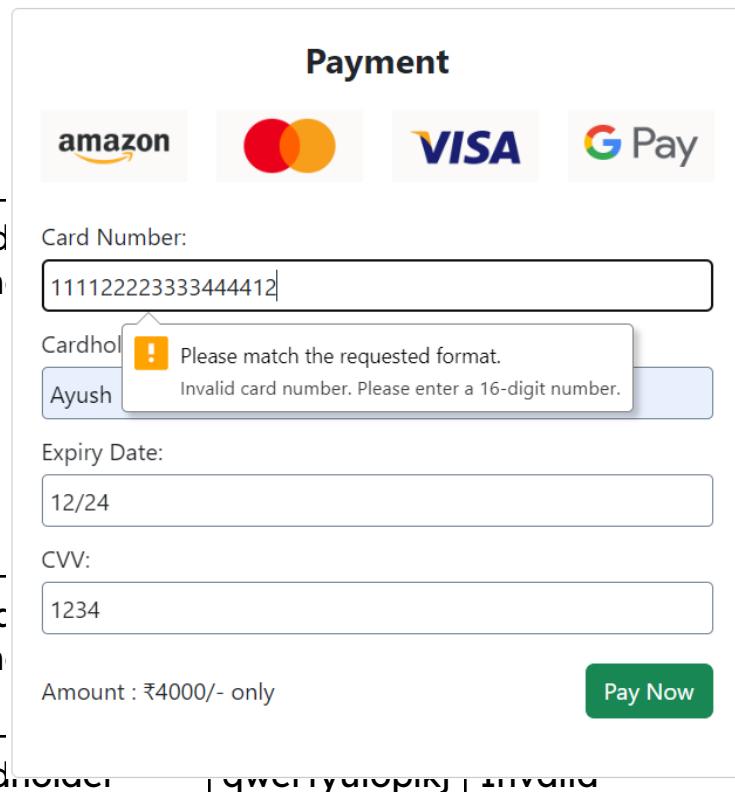
Invalid dates Entered

Book

4. Payment portal :

1. Card no. should be exactly **16** digits long
2. Expiry date cannot be empty and should be in **MM/YY** format
3. Cardholder name accepts alphabetic values between **5-30** characters
4. CVV is precisely **3** digits.

| Testcase no. | Description | Data | Expected Output | Result |
|---------------------|---------------------------------|-------------------|---|---------------|
| TC1 | Card no. is empty | | Please fill out this field | Failed |
| TC2 | Card no. < 16 digits | 12345 | Invalid card number. Please enter a 16-digit number.. | Failed |
| TC3 | Card no. = 16 | 1234567890123456 | accepted | Successful |
| TC4 | Card no. >16 | 12345678901234567 | Invalid card number. Please enter a 16-digit number.. | Failed |
| TC5 | Expiry Date not in MM/YY format | 5-5, 5/5 | Invalid expiry date. Please enter a valid date in MM/YY format. | Failed |
| TC6 | Expiry Date in MM/YY format | 05/05 | accepted | Successful |

| | | | | | |
|------|--|--|--|------------|--|
| TC7 | Cardholder name is not alphabetic only | abc123 | Invalid cardholder name. Please enter | Failed | |
| | |  <p>Payment</p> <p>amazon G Pay</p> <p>Card Number: <input type="text" value="111122223333444412"/></p> <p>Cardholder Name: Ayush ! Please match the requested format. Invalid card number. Please enter a 16-digit number.</p> <p>Expiry Date: <input type="text" value="12/24"/></p> <p>CVV: <input type="text" value="1234"/></p> | | | |
| TC8 | Card nam 5 | | | Failed | |
| TC9 | 4<Cc nam <31 | | Amount : ₹4000/- only Pay Now | Successful | |
| TC10 | Cardholder na 31 | | | Failed | |
| TC11 | CV nul | | | | |
| TC12 | CV <3 | | | Failed | |
| TC13 | CV | | Amount : ₹4000/- only Pay Now | Successful | |

2. Acceptance Testing

- The focus of acceptance testing is to evaluate the software's compliance with business requirements, usability, and overall satisfaction of the end-users.
- These test cases are derived from the user requirements or specifications. They are designed to determine whether the software system meets the specified requirements and whether it is acceptable for delivery to the end-user.
- Acceptance testing is typically performed by the end-users, customers, or stakeholders to validate the functionality and ensure that it aligns with their expectations.

Acceptance Level TestCases :

1. **User Registration** : Ensure that users can successfully register on the booking website.

Input : Entered all the details on the page and clicked on register.



The image shows a tropical resort with overwater bungalows and a wooden pier extending into the water.

beyondSky

Email: ayushmangroliya15@gmail.com

First Name: Ayush

Last Name: Mangroliya

Age: 20

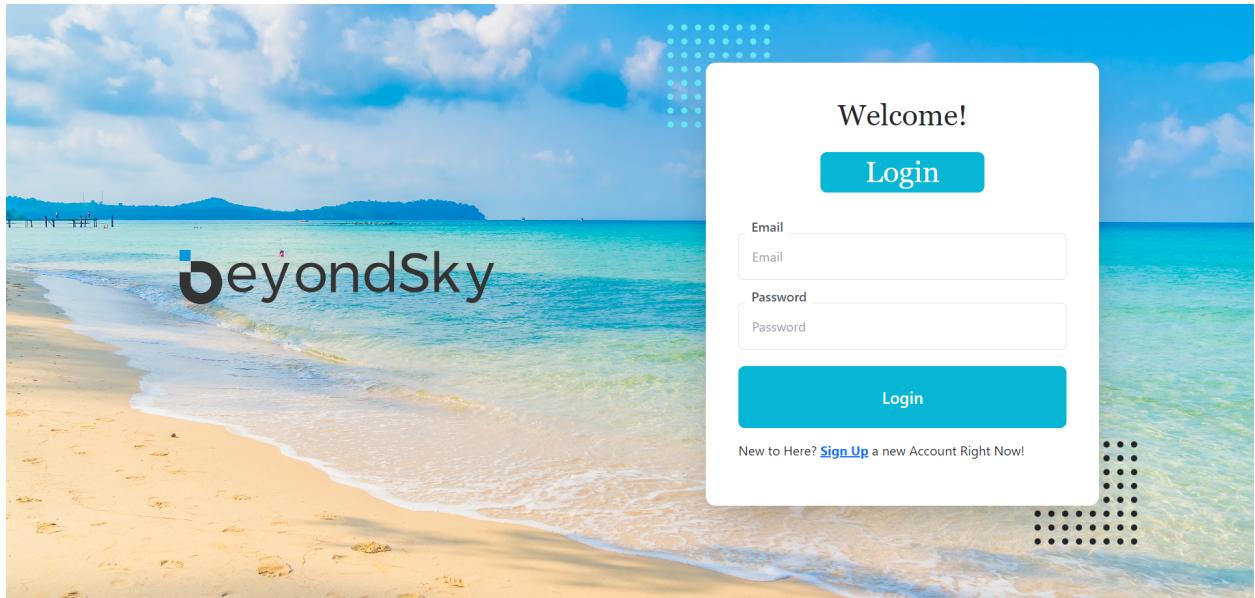
Password: (redacted)

Contact Number: 9876543210

Gender: Male

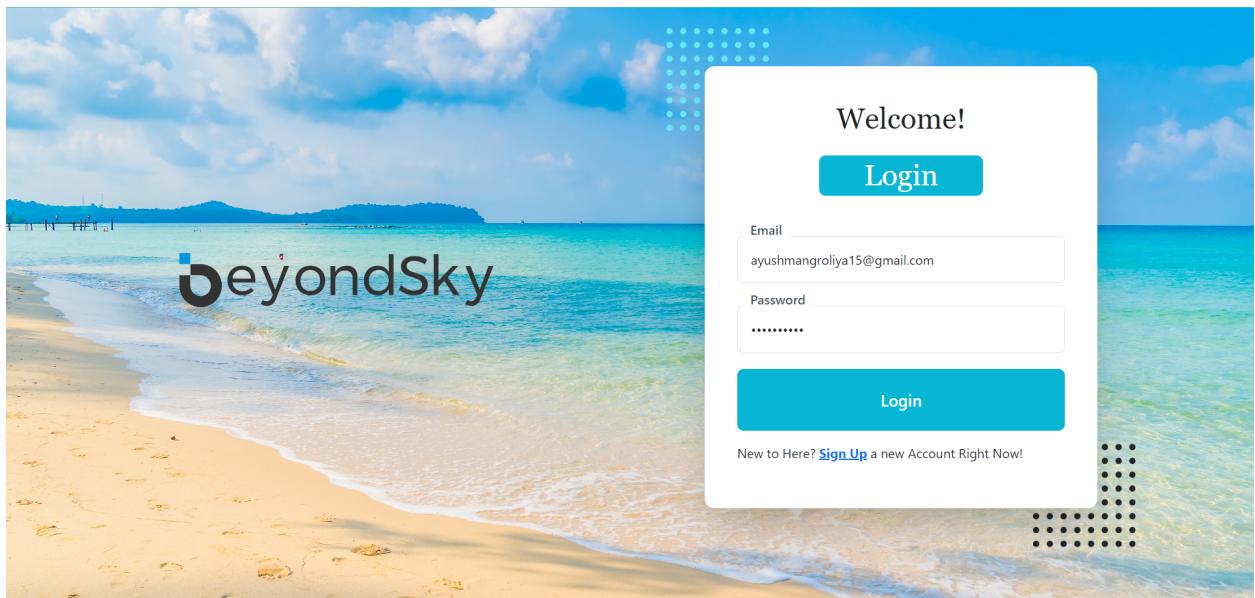
Register

Output : Successfully created account and redirected to login page

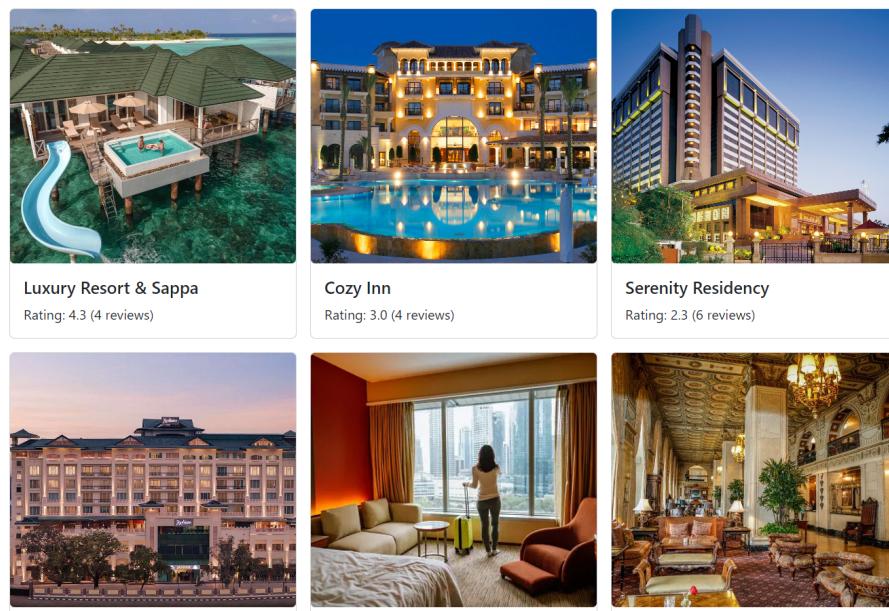


2. **User login :** Ensure that the user is able to login into the booking website.

Input : Entered the login details on the login page and clicked login.



Output : Successfully logged in and redirected to the home page.



- 3. Reserving Rooms :** Ensure that the user is properly able to enter booking details like checkin & checkout details, number of rooms, etc.

Input : Enter the checkin checkout details and click on book.

The Haven

Standard Room
₹1000/night

Check In date
 clear

Check out date
 clear

Select number of rooms to book
 down arrow

Payment= ₹8000
4 nights stay

Book

Output : The user is redirected to the payment portal.

Payment

amazon   

Card Number:

Cardholder Name:

Expiry Date:

CVV:

Amount : ₹8000/- only **Pay Now**

4. Payment Processing : Ensure that the user is able to pay properly

Input : Enter the payment details and click on pay now.

Payment

amazon   

Card Number:

Cardholder Name:

Expiry Date:

CVV:

Amount : ₹16000/- only **Pay Now**

Output : The booking confirmation page appears.

Booking Confirmed!

Dear Ayush
Following are the booking details:

Date: 3 December 2023
Booking ID: BD123456
User: Ayush Mangroliya

Room Details:
Rooms: 2
Room Type:
Room Numbers: 205, 206

Checkin Date: 2023-12-03

Checkout Date: 2023-12-07
Amount Paid: INR Rs.16000/-



[Go Home](#) [Download](#)

5. Edit Profile :

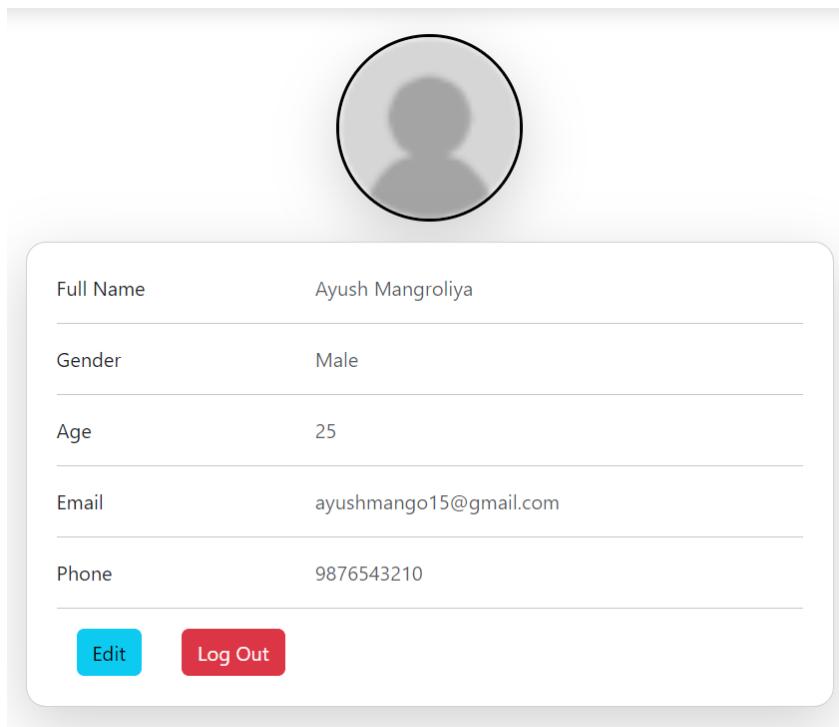
Input : Change the fields you want to edit and click on save.



| | |
|-----------|------------------------|
| Full Name | Ayush Mangroliya |
| Gender | Male |
| Age | 25 |
| Email | ayushmango15@gmail.com |
| Phone | 9876543210 |

[Save](#) [Cancel](#)

Output :



6. Reservation : When a user's booking gets confirmed it should show up on the reservation page of the management website.

The image shows a reservation page for 'The Haven'. At the top right is the logo and the date/time: 'The Haven' and '6:03 PM | 4 Dec 2023'. On the left is a sidebar with icons for dashboard, calendar, clock, document, and user. The main area has a title 'RESERVATION' and a subtitle 'Edit'. Below is a table of bookings:

| Roo... | Room Type | Stat... | Check In Date | Check Out Date | Guest Name | Contact No. | Age | Gen... |
|--------|--------------|-----------|---------------|----------------|------------------|-------------|-----|--------|
| 301 | SUPER DELUXE | Booked | 2023-12-04 | 2023-12-05 | Ayush Mangroliya | 9876543210 | 20 | Male |
| 302 | SUPER DELUXE | Available | - | - | - | - | - | - |
| 303 | SUPER DELUXE | Available | - | - | - | - | - | - |
| 304 | SUPER DELUXE | Available | - | - | - | - | - | - |
| 305 | SUPER DELUXE | Available | - | - | - | - | - | - |
| 306 | SUPER DELUXE | Available | - | - | - | - | - | - |
| 307 | SUPER DELUXE | Available | - | - | - | - | - | - |
| 308 | SUPER DELUXE | Available | - | - | - | - | - | - |

At the bottom are navigation buttons (back, forward, page numbers 1-10), a 'Items per page' dropdown, and a status message '3 of 4 pages (31 items)'.

<https://guesthouse-management-system.vercel.app/reservation#>

7. Offline Booking :

Input : Click on the vacant room and click on edit. Enter the details and then click on save.

The screenshot shows a software interface for managing room bookings. On the left, there's a sidebar with icons for navigation. The main area has a title "Edit" and a table with columns: Room No., Room Type, Status, and Check In Date. A modal window titled "Details of 101" is open over the table. The modal contains fields for Room Number (101), Room Type (STANDARD), Status (Available), Check In Date (12/6/2023), Check Out Date (12/12/2023), Guest Name (Rahul), Contact No. (9876543210), Age (31.00), and Gender (Male). At the bottom of the modal are "SAVE" and "CANCEL" buttons. The top right corner of the main window shows the time "6:07 PM | 4 Dec 2023".

Output :

The screenshot shows a software interface for managing reservations. At the top, there's a logo for "The Haven" and the time "6:09 PM | 4 Dec 2023". Below it, a title "RESERVATION" is displayed. The main area features a table with columns: Room No., Room Type, Status, Check In Date, Check Out Date, Guest Name, Contact No., Age, and Gen... (Gender). The table lists rooms 101 through 108, all of which are currently available. Room 101 is highlighted with a red border. The bottom right corner of the table area shows "1 of 4 pages (31 items)". The left side of the screen has a sidebar with various icons.

8. Add/Edit/Delete Inventory :

Input : Click on add/edit/delete inventory. Fill in the fields. Click on save.

The screenshot shows a modal dialog titled "Add New Record" over a background grid of inventory items. The dialog contains the following fields:

| ID | Item Name | Category | Stock | Price | Dealer |
|------|------------|-------------------|-------|-------|-------------|
| BS09 | Toothpaste | Bathroom Supplies | 50.00 | 1000 | Aman Kumar |
| | | | 10.00 | 50000 | Raj Kumar |
| | | | 15.00 | 900 | Neha Kapoor |
| | | | | 500 | Raj Kumar |
| | | | | 100 | Amit Kumar |

Fields in the dialog:

- ID: BS09
- Item Name: Toothpaste
- Category: Bathroom Supplies
- Stock: 50.00
- Min Stock: 10.00
- Price: 15.00
- Dealer: Raj Kumar

Buttons at the bottom: SAVE (highlighted in red), CANCEL.

Output :

The screenshot shows the main inventory page with a title "INVENTORY". The page includes a header with icons and the date/time "6:13 PM | 4 Dec 2023". Below the header is a table of inventory items:

| ID | Item Name | Category | Stock | Min Stock | Price | Dealer |
|------|------------|-------------------|-------|-----------|-------|-------------|
| BS09 | Toothpaste | Bathroom Supplies | 50 | 10 | 15 | Raj Kumar |
| BS06 | Brush | Bathroom Supplies | 8 | 10 | 90 | Aman Kumar |
| B02 | Bedsheet | Bedding | 100 | 250 | 1000 | Raj Kumar |
| E01 | Television | Electronics | 10 | 50 | 50000 | Neha Kapoor |
| E03 | Kettle | Electronics | 20 | 60 | 900 | Neha Kapoor |
| B03 | Pillow | Bedding | 2 | 5 | 500 | Raj Kumar |
| BS05 | soap | Bathroom Supplies | 10 | 50 | 100 | Amit Kumar |

Below the table are navigation controls and a page footer:

- Buttons: + Add, Delete, Edit.
- Page controls: < >.
- Items per page: 10.
- Page footer: 1 of 1 pages (7 items).

9. Add Employee :

Input : Click on add. Fill in the details. Click on save.

The screenshot shows a modal window titled "Add New Record" for "The Haven". The form fields are filled as follows:

- Name: Gaurav Kapoor
- Email ID: gauravkapoor@gmail.com
- Contact No.: 9876543210
- Shift: Morning
- Role: Inventory-Manager
- Salary: 20,000.00
- Gender: Male
- Age: 29

At the bottom right of the modal are "SAVE" and "CANCEL" buttons. In the background, a list of existing employees is visible, showing names like Amit Patel, Neha Singh, etc., along with their contact numbers and roles. The timestamp in the top right corner is 6:16 PM | 4 Dec 2023.

Output :

The screenshot shows the main "EMPLOYEES" list page for "The Haven". The table includes the following data:

| Name | Email ID | Contact No. | Shift | Role | Salary | Gender | Age |
|----------------|--------------------------|---------------|---------|-------------------|--------|--------|-----|
| Gaurav Kapoor | gauravkapoor@gmail.c... | 9876543210 | Morning | Inventory-Manager | 20000 | Male | 29 |
| Amit Patel | amit_patel@gmail.com | 9810034567 | Night | Receptionist | 100072 | Male | 26 |
| Neha Singh | neha_singh@gmail.com | 9810045678 | Night | Receptionist | 100000 | Female | 27 |
| Sneha Verma | sneha_verma@gmail.c... | 9810067890 | Morning | Receptionist | 100000 | Female | 29 |
| Vikas Yadav | vikas_yadav@gmail.com | 9810078901 | Night | Inventory-Manager | 50000 | Male | 30 |
| Anita Mishra | anita_mishra@gmail.co... | 9810089012 | Evening | Inventory-Manager | 50000 | Female | 31 |
| Prakash Shukla | prakash_shukla@gmail... | 9810090123 | Morning | Inventory-Manager | 50000 | Male | 32 |
| Pooja Yadav | pooja_yadav@gmail.com | 9810101234584 | Night | Inventory-Manager | 50000 | Female | 33 |
| Rajesh Jha | rajesh_jha@gmail.com | 98101112345 | | Inventory-Manager | 50000 | Male | 34 |

At the bottom right of the page is the timestamp 6:17 PM | 4 Dec 2023. The page also includes navigation buttons and a "Items per page" dropdown.

10. Edit Profile :

Input : Click on Edit. Edit the fields. Click on Save.

The screenshot shows the profile editing interface for a user named Jay Parikh. On the left, there is a sidebar with icons for dashboard, reports, settings, and users. The main header says "The Haven" with a logo, and the timestamp is "6:21 PM | 4 Dec 2023". The profile picture is a mug filled with hot chocolate and marshmallows, with the name "Jay Parikh" below it. The right side contains a form with the following fields:

| | |
|------------|---------------------|
| Full Name | Jay Parikh |
| Email | raj_kumar@gmail.com |
| Contact No | 7894561237 |
| Gender | Male |
| Age | 20 |
| Role | admin |
| Shift | Morning |

At the bottom right of the form are two buttons: "Save" (blue) and "Cancel" (red).

Output :

The screenshot shows the profile view screen for Jay Parikh after the changes were saved. The sidebar and header are identical to the input screen. The profile picture and name are displayed on the left. The right side shows the updated profile information in a read-only format:

| | |
|------------|---------------------|
| Full Name | Jay Parikh |
| Email | raj_kumar@gmail.com |
| Contact No | 7894561237 |
| Gender | Male |
| Age | 20 |
| Role | admin |
| Shift | Morning |

At the bottom right of the form are two buttons: "Edit" (blue) and "Log Out" (red).