



## **IT313-Software Engineering**

### **System Testing**

**Guest house Booking System**

**Group 6**

**Group members**

**Meet Patel 202101045**

**Jay Parikh 202101066**

**Divyam Thaker 202101068**

**Ayush Mangroliya 202101073**

**Dev Changela 202101069**

**Mehul Rawal 202101033**

**Kirtan Mevada 202101012**

**Vraj Thakkar 202101090**

**Jay Malaviya 202101048**

**Suyash Bhagat 202101085**

**Professor : Saurabh Tiwari**

**Mentor : Shruti Shah**

## **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  $\geq 8$  &  $\leq 20$  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.

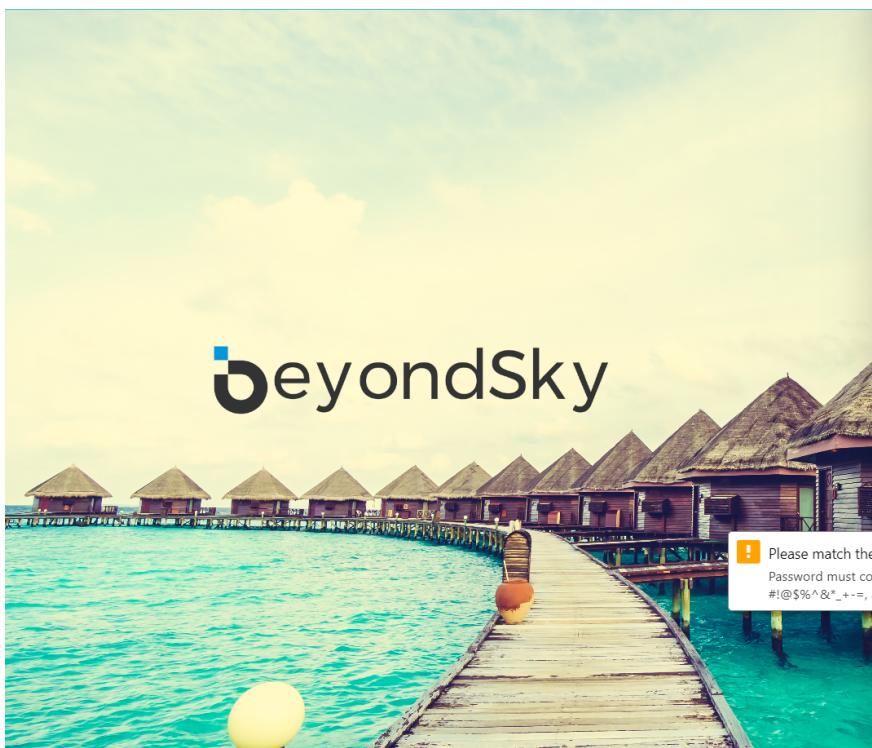
#### **Additional:**

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

<b>Testcase no.</b>	<b>Description</b>	<b>Data</b>	<b>Expected Output</b>	<b>Result</b>
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

<b>Testcase no.</b>	<b>Description</b>	<b>Data</b>	<b>Expected Output</b>	<b>Result</b>
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.

<b>Testcase no.</b>	<b>Description</b>	<b>Data</b>	<b>Expected Output</b>	<b>Result</b>
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

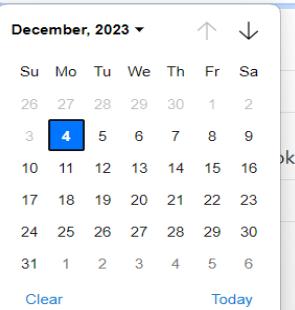
# The Haven

## 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.

<b>Testcase no.</b>	<b>Description</b>	<b>Data</b>	<b>Expected Output</b>	<b>Result</b>
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 alphabetic name between 5-30 characters.	Failed
TC8	Cardholder name length < 5	qwer	Invalid cardholder name. Please enter alphabetic name between 5-30 characters.	Failed
TC9	4<Cardholder name length <31	qwertyu	accepted	Successful
TC10	Cardholder name length > 31	qwertyuioplkjhgfdsazxcvbnm mnbvcxz	Invalid. Please enter alphabetic name between 5-30 characters.	Failed
TC11	CVV length is <3	78	Invalid CVV. Please enter a 3-digit number.	Failed
TC12	CVV length is 3	789	accepted	Successful
TC13	CVV length is >3	78910	Invalid CVV. Please enter a 3-digit number.	Failed

### Payment

amazon            

Card Number:

Cardholder Name:

Please match the requested format.  
Invalid card number. Please enter a 16-digit number.

Expiry Date:

CVV:

Amount : ₹4000/- only

**Pay Now**

### Payment

amazon            

Card Number:

Cardholder Name:

Expiry Date:

CVV:

Amount : ₹4000/- only

Please match the requested format.  
Invalid CVV. Please enter a 3-digit number.

**Pay Now**

## 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 scenic tropical resort with a long wooden pier extending into clear blue water. Several traditional-style overwater bungalows with thatched roofs are visible along the pier. The sky is bright and slightly cloudy. On the right side of the image, there is a registration form overlaid on the scene.

**beyondSky**

Email: ayushmangroliya15@gmail.com

First Name: Ayush

Last Name: Mangroliya

Age: 20

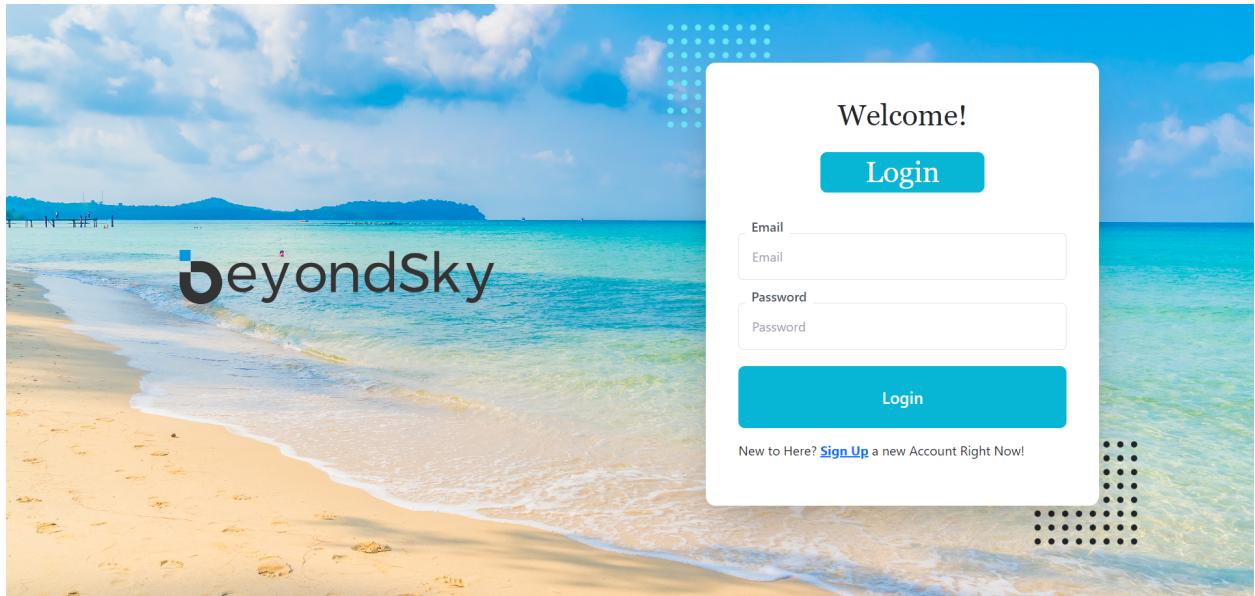
Password: .....\*

Contact Number: 9876543210

Gender: Male

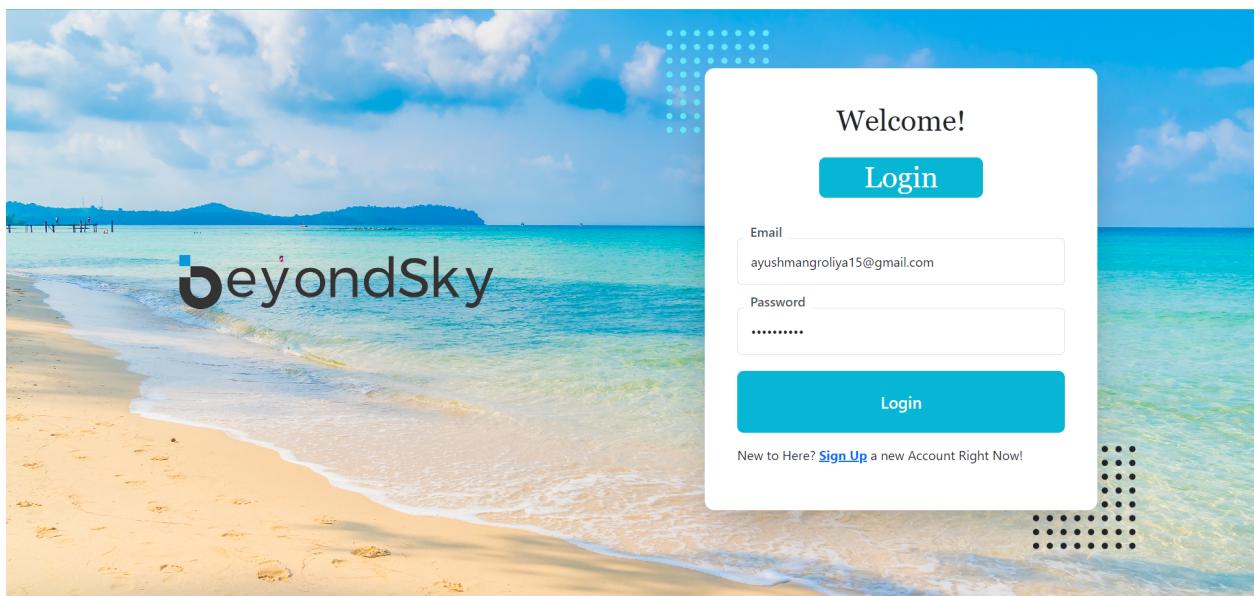
**Register**

**Output :** Successfully created account and redirected to login page

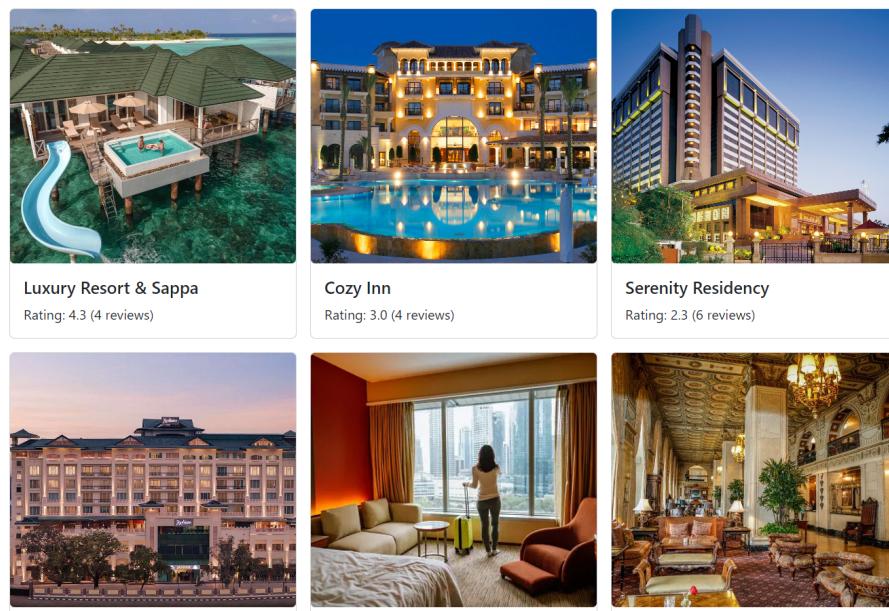


2. **User login :** Ensure that the user is able to login into the booking website.

**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  
 ▼

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 :

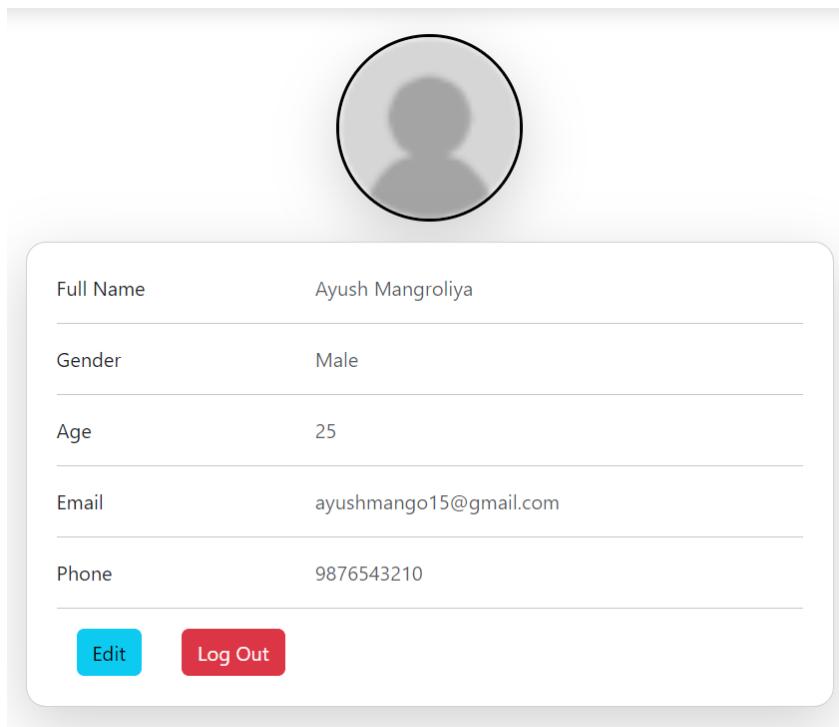
**Input :** Change the fields you want to edit and click on save.



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'. The header includes the logo, the name 'The Haven', and the date '6:03 PM | 4 Dec 2023'. On the left is a sidebar with icons for dashboard, calendar, clock, document, and user. The main content area is titled 'RESERVATION' and contains 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, there are navigation links for pages 1 through 10, with page 3 highlighted in red. It also shows 'Items per page' and '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 is a sidebar with icons for navigation. The main area has a title "Details of 101" and a close button "X". The timestamp in the top right corner is 6:07 PM | 4 Dec 2023. The details for Room 101 are as follows:

Room Number	Room Type	Status	Check In Date	Check Out Date	Contact No.	Age	Gender
101	STANDARD	Available	12/6/2023	12/12/2023	9876543210	31.00	Male

Below the table, there are buttons for "SAVE" and "CANCEL". At the bottom of the window, it says "1 of 4 pages (31 items)".

**Output :**

The screenshot shows a software interface for managing reservations. The header features the logo "The Haven" and the timestamp 6:09 PM | 4 Dec 2023. Below the header, the word "RESERVATION" is centered. The main area displays a table of room bookings:

Room Number	Room Type	Status	Check In Date	Check Out Date	Guest Name	Contact No.	Age	Gender
101	STANDARD	Available	Wed Dec 06 2023 00:00:00	Tue Dec 12 2023 00:00:00	Rahul	9876543210	31	Male
102	STANDARD	Available	-	-	-	-	-	-
103	STANDARD	Available	-	-	-	-	-	-
104	STANDARD	Available	-	-	-	-	-	-
105	STANDARD	Available	-	-	-	-	-	-
106	STANDARD	Available	-	-	-	-	-	-
107	STANDARD	Available	-	-	-	-	-	-
108	STANDARD	Available	-	-	-	-	-	-

At the bottom of the table, there are buttons for navigating through the pages and a dropdown for "Items per page". It also says "1 of 4 pages (31 items)".

## 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

Below the table, there is a note: "1 of 1 pages (6 items)". At the bottom of the dialog are "SAVE" and "CANCEL" buttons.

**Output :**

The screenshot shows the main "INVENTORY" page for "The Haven". The table displays the following data:

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, there is a note: "1 of 1 pages (7 items)". At the bottom of the page are navigation buttons and a "Items per page" dropdown set to 10.

## 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 view 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 list view, it says "1 of 2 pages (14 items)". The timestamp in the top right corner is 6:17 PM | 4 Dec 2023.

## 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 profile form contains 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 "Save" and "Cancel" buttons.

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. The profile form now shows the updated information:

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 "Edit" and "Log Out" buttons.