Assignment No. 3

Aim: The aim of the hostel allotment and booking website is to provide a user-friendly platform that simplifies the process of finding, reserving, and managing hostel accommodations while ensuring a seamless and convenient experience for users and hostel administrators alike.

Software used:

Backend:

- PHP: A server-side scripting language used for web development, allowing you to handle backend logic and server-side operations.
- MySQL: A popular open-source relational database management system, which is used to store and manage data efficiently, making it ideal for user data, memberships, and other backend data.

Frontend:

- HTML (Hypertext Markup Language): The standard markup language for creating web pages, providing structure and content.
- CSS (Cascading Style Sheets): A stylesheet language used for describing the presentation and layout of web pages, essential for styling and designing the user interface.
- JavaScript: A versatile programming language that adds interactivity to web pages, used for form validation, dynamic content, and user interface enhancements.

Development Environment:

- Visual Studio Code (VS Code): A popular, free, and open-source code editor developed by Microsoft, offering a user-friendly interface and an extensive library of extensions for customizing your development environment. VS Code is versatile and ideal for web development projects.

Description:

The Hostel Allotment & Booking Platform is a user-friendly website that simplifies hostel accommodation. Using React for the frontend and JavaScript (Node.js) for the backend with MongoDB as the database.it enables easy bookings, secure transactions, and personalized searches for accommodations. Admin tools streamline allotment, ensuring a smooth experience for guests. The platform prioritizes user support and feedback, aiming to provide a hassle-free and efficient hostel booking experience.

HCI

GOMS MODEL FOR HOSTEL MITRA

Group Members:

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1. GOMS MODEL FOR LOGIN PAGE OF HOSTEL MITRA

Goals : The main goal for a user logging in is to access their HOSTEL MITRA account securely.

Operators:

1. Go to the Login Page: The user navigates to the login page.
2. Enter Username/Email: The user inputs their username or email.
3. Enter Password: The user inputs their password.
4. Click "Login": The user clicks the login button.
5. Authentication: The system verifies the username and password.

Methods:

Method 1: Using a Username and Password

- Go to the Login Page
- Enter Username/Email
- Enter Password
- Click "Login"
- Authentication

Method 2: Using Social Media Login

- Go to the Login Page
- Click "Login with Facebook/Google" (or any other social media option)
- Authentication

Selection Rules:

•If the user has previously registered their account with an email and password, they are likely to use Method 1.

•If the user has linked their account to a social media platform, they might choose Method 2.

2. GOMS MODEL FOR SIGN UP PAGE OF HOSTEL MITRA

Goals: The main goal for a user signing up is to create a new account in the "HOSTEL MITRA" application.

Operators:

1. Go to the Sign-Up Page: The user navigates to the sign-up page.
2. Enter Username/Email: The user inputs a username or email.
3. Enter Password: The user inputs a password.

4. Confirm Password: The user re-enters the password for confirmation.
5. Click "Sign Up": The user clicks the sign-up button.
6. Account Creation: The system validates the information and creates a new account.

Methods:

Method 1: Creating an Account Using Username and Password

- Go to the Sign-Up Page
- Enter Username/Email
- Enter Password
- Confirm Password
- Click "Sign Up"
- Account Creation

Method 2: Creating an Account Using Social Media Login

- Go to the Sign-Up Page
- Click "Sign Up with Facebook/Google" (or any other social media option)
- Account Creation

Method 3: Creating an Account Using Email Verification

- Go to the Sign-Up Page
- Enter Email
- Click "Sign Up"
- Verify Email (e.g., click a confirmation link sent via email)
- Account Creation

Selection Rules:

•If the user prefers to create an account with an email and password, they are likely to use Method 1.

•If the user prefers the convenience of linking their account to a social media platform, they might choose Method 2.

•If the application requires email verification for added security, the user would use Method 3

3. GOMS MODEL FOR SELECTION OF HOSTEL THROUGH HOSTEL MITRA

Goals: The main goal for a user is to search a specific hostel within the "HOSTEL MITRA" application.

Operators:

1.Open Application: The user launches the "HOSTEL MITRA" application.

2.Navigate to Explore: The user navigates to the section of the app that lists hostels.

3.Scroll/View Hostel: The user scrolls through the list of available hostel.

4.Select a Hostel: The user chooses a specific Hostel from the list.

Methods: Now, let's consider the subtasks involved in achieving the main goal:

Method 1: Browsing and Selecting a Hostel

- Open Application
- Navigate to Hostels
- Scroll/View Hostels
- Select a Hostel

Method 2: Searching for a Specific Hostel

- Open Application
- Navigate to Hostels
- Use a search feature to find a specific Hostel
- Select the identified Hostel

Selection Rules:

•If the user is browsing for Hostels without a specific one in mind, they are likely to use Method 1.

•If the user has a specific Hostel in mind and the app offers a search feature, they might use Method 2.

4. GOMS MODEL FOR CONTACT US IN HOSTEL MITRA

Goals: The primary goal for a user is to contact a Hostel owner within the "HOSTEL MITRA" application.

Operators:

1.Open Application: The user launches the "HOSTEL MITRA" application.

2.Navigate to Contact us: The user goes to the section of the app that displays contact us.

3. Enter Email: The user inputs their email.

4.Enter Text: User enters text about the queries related to hostel.

5.Send Email: User send email to the owner.

6.Make a Phone Call Method: Click on the "Call Support" button to initiate a phone call to customer support.

Methods:

Method 1: Using Email

- Open Application
- Navigate to Contact us
- Enter Email
- Enter Query
- Send Email

Method 2: Using Phone Number

- Open Application
- Navigate to Contact us
- Select Phone number.
- Make call.

Selection Rules:

• If the user has a general inquiry and prefers a written record, they will follow Method1

• If the user has an urgent issue and prefers direct communication, they will follow Method2.

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Report of User Interface

Title: Hostel Mitra

Objective:

1. Facilitate Efficient Hostel Search
2. Comprehensive Hostel Listings
3. Accurate and Updated Information
4. User Reviews and Ratings
5. Notification and Alerts
6. Safety and Security
7. Data Privacy and Security
8. Mobile-Friendly Experience

Modules:

1. User Authentication and Registration
2. Hostel Listing Management
3. Search and Filter
4. Review and Rating System
5. Booking and Reservation
6. User Dashboard
7. Notifications and Alerts
8. Map Integration
9. Testing and Quality Assurance

Software: VS CODE, MONGODB ATLAS, MICROSOFT EDGE

Hardware:Laptop and Internet Router

Description of Interface Developed:

1.User interface is made up of different color combinations including Blue,Black,Yellow ,Green and white.

2.In the right half of the interface there is an interacting image present for attracting students.

3.On top of the interface navbar is present for navigation ,navbar incorporates Home,About,Contact us.

4.In left side of interface one statement is present that is (WELCOME TO PCCOER HOSTEL MITRA)

5.After the statement there are two buttons for User and Admin.

No of Screens in the Interface:12

Interaction Styles used :(For example Natural Language, Form Filling, GUI, Menu Based etc)

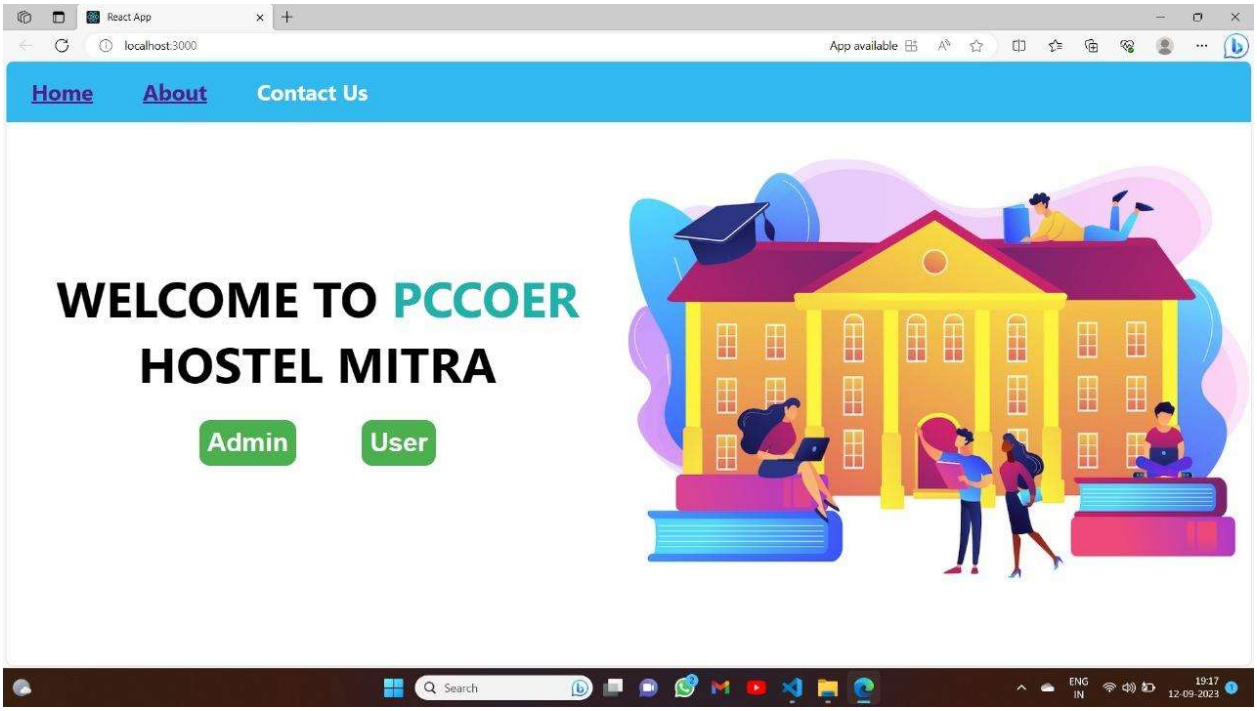
Principles of HCI: For References refer this below table

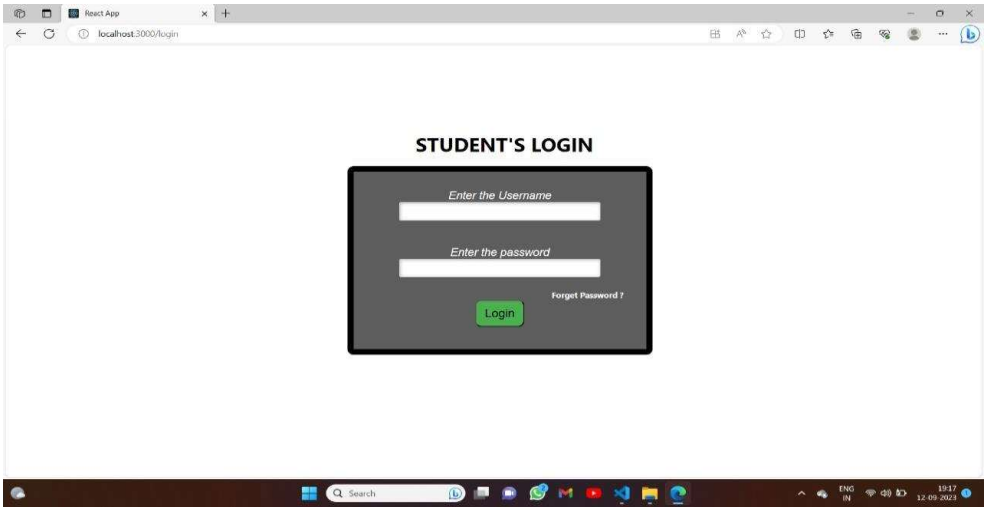
Sr.No	Goals	Achieved	Explanation
1.	Usability	Yes	User-friendliness, accurate information, search options, and secure booking process.
2	Utility	Yes	Helping travelers easily find, compare, and book hostels, enhancing their travel planning experience.
3	Effectiveness	Yes	Ability to efficiently connect travelers with suitable hostels, provide accurate information, and facilitate hassle-free bookings.
4	Flexibility	Yes	Adaptability to various user preferences and needs, allowing travelers to customize their searches and bookings according to their unique requirements.
5	Error Prevention/Protection	Yes	Implementing safeguards and validation checks to minimize user mistakes during the booking process, ensuring a smooth and error-free experience.
6	Invisible Technology	Yes	Seamless integration of behind-the-scenes technology, like data analytics and AI algorithms, that

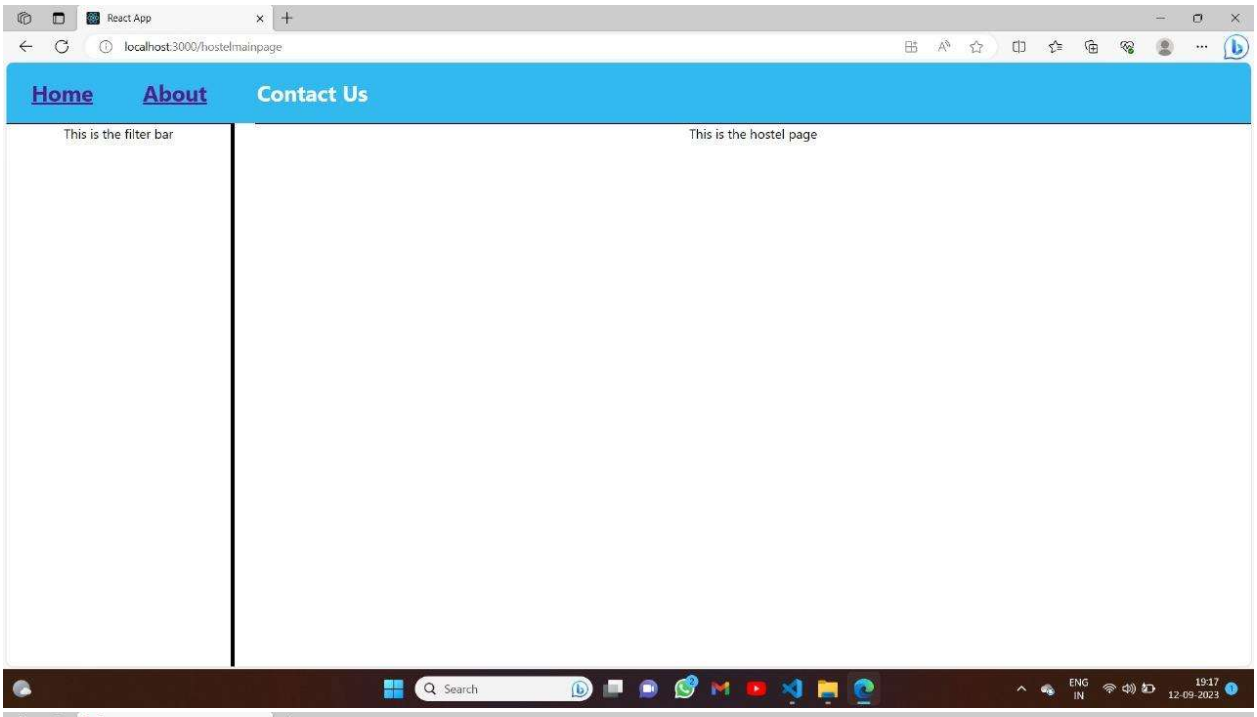
			enhances user experience without being prominently visible to the user. It can help in personalizing recommendations, optimizing search results, and improving overall functionality without the user necessarily being aware of it.
7	WYSIWYG	Yes	Interface that allows users to see how the final product will appear while they are working on it. This means that the on-screen display closely resembles the printed or published version, making it easier for users to format and edit content without needing extensive technical knowledge.

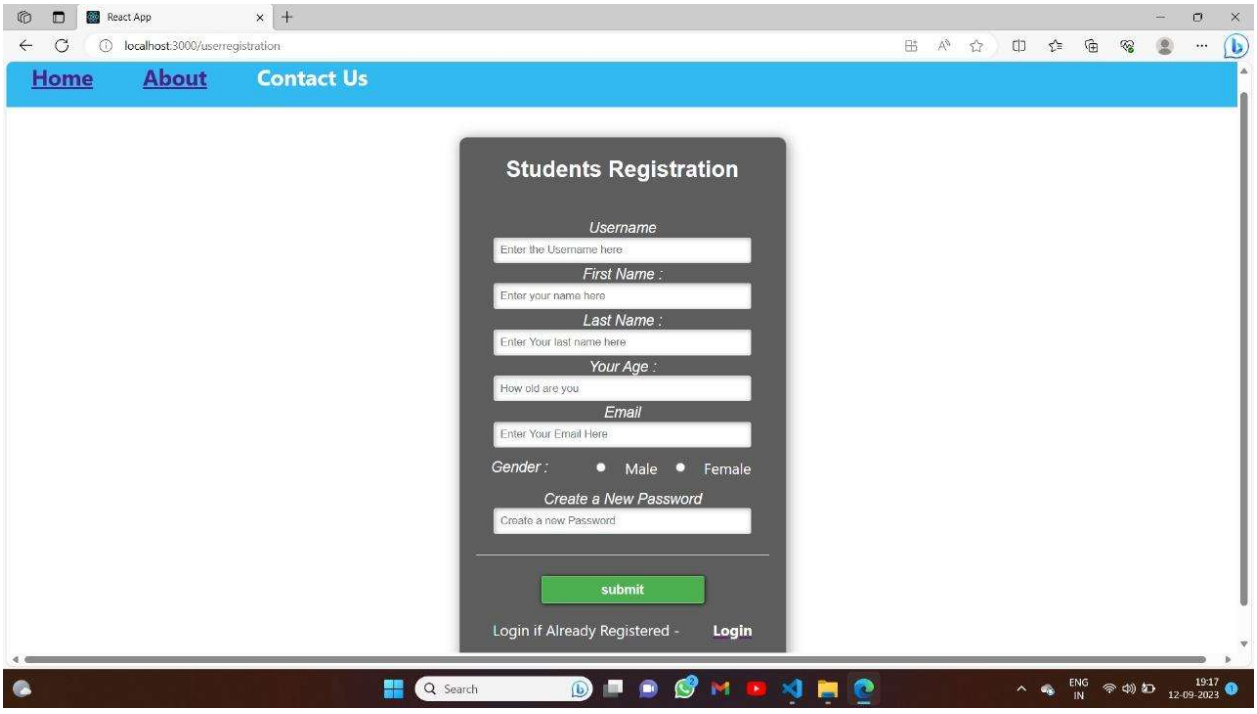
Sr. no.	Element	Observation Size and Colors	Improvement/ corrections
1	Home Page a. Labels 1. Website Name 2. Logo 3. Profile Logo b. Navbar Buttons i) Home ii) Register iii)Login	 76px #000000 108px x 108px 80px x 60px 1366px x 76px #ffffff 1366px x 76px #ffffff 1366px x 76px #ffffff	
2	Login Page Text boxes Title Buttons 1. Continue with Google 2 Continue with Facebook	 360px x 65px 76px 360px x 65px 360px x 65px	
3	Register Text Boxes Continue Button	 360px x 65px 360px x 65px	
5	Hostel Information Page 1. Hostel 2. Facilities	 130px X 35px #e2dbc0 130px X 35px #e2dbc0	
6	Hostel a.Cards 1.Image 2. Title	 130px X 40px #e2dbc0 1066px X 465px	
7	User profile 1. Image 2.Title	 400px x 250px 86px #000000	
8	Events 1. Cards 2. Date 2. Title	 821px x 421 #e2dbc0 421px #000000 96px #000000	

Screenshot of Interface :






React App
localhost:3000/hostelmainpage
Home
About
Contact Us
This is the filter bar
This is the hostel page
Search
ENG
IN
19:17
12-09-2023


React App
localhost:3000/userregistration
Home
About
Contact Us
Students Registration
Username
Enter the Username here
First Name :
Enter your name here
Last Name :
Enter Your last name here
Your Age :
How old are you
Email
Enter Your Email Here
Gender :
Male
Female
Create a New Password
Create a new Password
submit
Login if Already Registered -
Login
Search
ENG
IN
19:17
12-09-2023

Conclusion:-

Building a hostel finding website involves a combination of front-end and back-end development, as well as careful planning and execution. In conclusion, here are some key points to consider:

1.User-Centric Design: The success of your hostel finding website depends on a user-centric design. Prioritize a clean and intuitive user interface that makes it easy for users to search for hostels, view details, and make bookings.

2.Responsive Design: Ensure your website is responsive, meaning it adapts well to various devices and screen sizes. Mobile-friendliness is critical as many users browse and book accommodations on their smartphones.

3.Security: Implement security best practices to protect user data and transactions. Use HTTPS, validate user inputs, and store sensitive data securely.

4.Maintenance and Support: Regularly update your website to keep it secure and up to date. Provide customer support to assist users with inquiries or issues.

Assignment No : 3

Title: GOMS model - Adding items to a cart of e-shopping website.

Problem Statement: Implement GOMS modelling technique to model user's behaviour in given scenario

Learning Objectives:

- ✓ Usability assessment of a given interface
- ✓ Model user behaviour in terms of GOMS (Goals, Operators, Methods and Selection rules)
- ✓ Learn how to predict time it will take a user to carry out a goal using GOMS Model.

Learning Outcomes:

- ✓ Improve human-computer interaction efficiency by eliminating useless or unnecessary interactions.
- ✓ Using GOMS modelling for usability information when the system is in the earliest of design phases.
- ✓ Improve the performance of a cognitive skill, eliminate unnecessary operators from the method used to do the task.
- ✓ Provides hierarchical task description for a specific activity.

Requirements:

Specific scenario of user-interaction – Addin$_1$g items in a cart of e-shopping website.

Theory:

Goals, operators, methods, and selection rules is a method derived from human-computer interaction (HCI) and constructs a description of human performance. The level of granularity will vary based on the needs of the analysis.

- ✓ The **Goal** is what the user wants to accomplish.
- ✓ The **Operator** is what the user does to accomplish the goal.
- ✓ The **Method** is a series of operators that are used to accomplish the goal.
- ✓ **Selection** rules are used if there are multiple methods, to determine how one was selected over the others.

Implementing GOMS for given Scenario:

Define the User's Top-Level Goal - Adding items in a cart

Goal: Select an item and Add it to cart

Operator: Amount of mouse clicks required

Methods:

1. Check list the item, click on quantity, click on "add to cart"
2. Click on quick view and add to cart

Selection:

Based on time taken to achieve the goal, select the appropriate method.

Conclusion : Thus Students were able to apply the concept of GOMS model for selected interface.