

**A**  
**Project Report**  
**on**  
**BroStay**

**Submitted by**

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## **1. INTRODUCTION:**

### **1.1 ABOUT EXISTING SYSTEM:**

- BroStay is a peer-to-peer online marketplace that allows people to rent out their homes or apartments to travelers for short-term stays.
- BroStay offers a wide range of accommodations, from private rooms to entire homes and apartments, to suit the needs and budgets of different travelers.
- Hosts can list their properties for free on the platform and set their own prices and availability.
- Travelers can search for accommodations based on location, price, and other filters, and can communicate directly with hosts through the platform to ask questions and arrange bookings.
- BroStay charges a service fee to both hosts and guests for each booking, which varies depending on the cost of the reservation.
- BroStay has also expanded into other areas, such as experiences and adventures, which allow travelers to book local tours and activities with hosts.

### **1.2 PROBLEMS IN EXISTING SYSTEM:**

1. Safety concerns: Some guests have reported incidents of theft, assault, and even murder in BroStay listings. While BroStay has implemented safety measures such as background checks and security cameras, these incidents still occur and have raised concerns about the safety of guests.
2. Discrimination: There have been reports of discrimination against certain groups of guests, such as those based on race, gender, or sexual orientation. BroStay has taken steps to address this issue by implementing policies that prohibit discrimination, but it remains a problem that the company is working to address.
3. Misrepresented listings: Some hosts have been known to exaggerate the quality or features of their listings, leading to disappointment and frustration for guests. BroStay has taken steps to combat this by requiring hosts to provide accurate and detailed information about their listings, but the issue still persists.
4. Regulatory challenges: BroStay has faced regulatory challenges in many cities and countries around the world. Some local governments have imposed restrictions on short-term rentals, and BroStay has been criticized for contributing to rising housing costs and gentrification in certain areas.
5. Customer service issues: Some guests have reported difficulties in getting timely and effective customer service from BroStay when issues arise. While BroStay has made improvements to its customer service, including the implementation of a 24/7 support hotline, some guests still report frustration with the company's response times and handling of issues.

### **1.3 Proposed System:**

BroStay is a platform that connects people who have space to rent with those who are looking for accommodation. The system of BroStay is designed to be user-friendly and

efficient, allowing hosts to list their properties and guests to search and book their preferred accommodations. Here is a brief overview of the proposed system of BroStay:

- **Listing a Property:** Hosts can create an account on BroStay and list their property, providing information such as the type of accommodation, number of rooms, location, amenities, and price.
- **Searching for Properties:** Guests can search for properties based on their preferences, such as location, price, amenities, and type of accommodation. They can view photos of the property, read reviews from previous guests, and communicate with the host to ask questions or clarify details.
- **Booking a Property:** Guests can book their preferred property by selecting their check-in and check-out dates, providing payment information, and agreeing to the host's house rules. The host will then confirm the booking and provide further instructions to the guest.
- **Payment and Fees:** BroStay charges a service fee to guests for each booking, and takes a commission from the host's earnings. Payment is processed securely through the BroStay platform, and hosts receive payment after the guest checks in.
- **Communication:** BroStay provides a messaging system that allows hosts and guests to communicate before, during, and after the booking process. This allows guests to ask questions or request additional information, and hosts to provide instructions or address any concerns.
- **Reviews:** Both hosts and guests can leave reviews after the booking is completed. These reviews are publicly visible and can help future guests and hosts make informed decisions.
- **Support:** BroStay provides customer support through various channels, including a 24/7 hotline, email, and a help center. Guests and hosts can contact support for assistance with any issues or concerns.

Overall, the proposed system of BroStay is designed to be efficient, transparent, and user-friendly, allowing hosts and guests to connect and book accommodations easily and securely.

## SOFTWARE REQUIREMENT PROFILE

<u><b>HARDWARE</b></u>	
Processor	Intel Core i5
RAM	8GB
HDD	500GB
<u><b>SOFTWARE</b></u>	
CLIENT-SIDE TECHNOLOGIES	HTML, CSS, JAVASCRIPT, BOOTSTRAP
SERVER-SIDE TECHNOLOGIES	MONGODB
WEB SERVER	SPRINGBOOT



PROGRAMMING LANGUAGE	JAVA SCRIPT/HTML/CSS/BOOTST RAP
DATABASE	MONGO DB
IDE	VISUAL STUDIO CODE

## **TOOLS AND TECHNIQUES USED:**

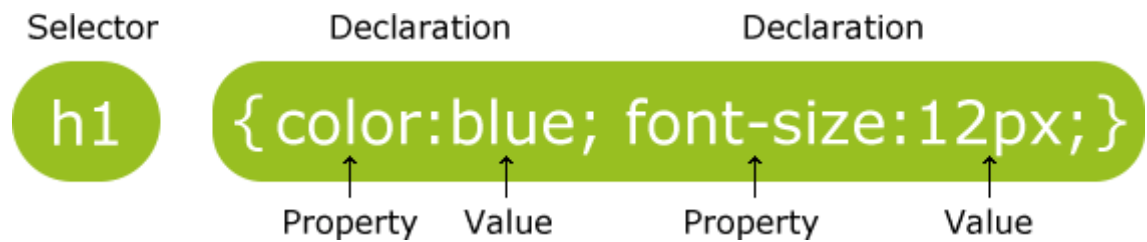
- **CASCADING STYLE SHEET**



Cascading Style Sheets (CSS) is a style sheet language used to describe the presentation semantics (the look and formatting) of a document written in a markup language. Its most common application is to style web pages written in HTML and XHTML, but the language can also be applied to any kind of XML document, including plain XML, SVG and XUL.

CSS defines HOW HTML elements are to be displayed. Styles are normally saved in external .CSS files. External style sheets enable you to change the appearance and layout of all the pages in a Web site, just by editing one single file! The CSS files referenced in the HTML page.

A CSS rule has two main parts: a selector, and one or more declaratio



The selector is normally the HTML element you want to style. Each declaration consists of a property and a value. The property is the style attribute you want to change. Each property has a value.

Following example formats a paragraph in an HTML document

```
p
{
    color: red.
    text-align center.
}
```

## **JAVASCRIPT**



JavaScript was originally developed by Brendan Eich of Netscape under the name Mocha, which was later renamed to Live Script, and finally to JavaScript.

JavaScript is a prototype-based, object-oriented Scripting Language that is dynamic, weakly typed and has first-class functions. It is also considered a functional programming language because it has closures and supports higher-order functions. JavaScript is primarily used in the form of client-side JavaScript, implemented as part of a web browser in order to provide enhanced user interfaces and dynamic websites.

The primary use of JavaScript is to write functions that are embedded in or included from HTML pages and that interact with the Document Object Model (DOM) of the page. Some simple examples of this usage are:

- i) Opening or popping up a new window with programmatic control over the size, position, and attributes of the new window (e.g. whether the menus, toolbars, etc. are visible).
- ii) Validating input values of a web form to make sure that they are

acceptable before being submitted to the server.

- iii) Changing images as the mouse cursor moves over them: This effect is often used to draw the user's attention to important links displayed as graphical elements.

**EXAMPLE:**

a) A simple recursive function:

```
function factorial(n)
{
    if (n === 0)
    {
        return 1;
    }
    return n * factorial (n - 1);
}
```

**HTML:**



- HTML (Hypertext Markup Language) is a markup language used to create web pages and other information that can be displayed on the internet.
- It consists of a series of tags that define different elements of a web page such as headings, paragraphs, images, links, tables, forms, and more.
- HTML tags are surrounded by angle brackets (< >) and are used to structure content, provide semantic meaning, and define the appearance of a web page.
- HTML documents are written in plain text format and can be created using a simple text editor or specialized HTML editors.
- Once an HTML document is created, it can be viewed using a web browser such as Chrome, Firefox, or Safari.

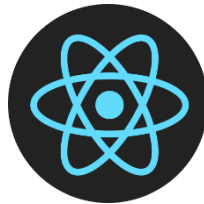
**TAILWIND:**



Bootstrap is a popular open-source front-end framework that is used to design and develop responsive, mobile-first websites and web applications.

- It is built using HTML, CSS, and JavaScript and includes pre-built design components and templates that can be easily customized to create visually appealing and user-friendly interfaces.
- Bootstrap also provides a grid system that allows developers to create responsive layouts that automatically adjust to different screen sizes and devices, ensuring that websites look and function well on desktops, tablets, and mobile phones.
- Additionally, Bootstrap includes a variety of plugins and JavaScript components such as modals, carousels, tooltips, and popovers that can be easily integrated into web projects to add interactivity and enhance user experience.
- Overall, Bootstrap is a powerful tool that simplifies and streamlines the web development process by providing developers with a comprehensive set of tools and resources to create high-quality, modern websites and web applications.

### **REACT:**



- React creates a VIRTUAL DOM in memory. Instead of manipulating the browser's DOM directly, React creates a virtual DOM in memory, where it does all the necessary manipulating, before making the changes in the browser DOM. React only changes what needs to be changed!
- React is a JavaScript library used for building user interfaces.
- It was developed by Facebook and is now an open-source project.
- React allows developers to create reusable UI components, making it easier to build and maintain complex applications.
- It uses a component-based architecture, where each component represents a part of the UI.
- React uses a virtual DOM (Document Object Model) to efficiently update the UI without needing to manipulate the actual browser DOM.

### **VITE:**



- Vite is a build tool and development server used for modern web development.
- It was created by Evan You, the creator of Vue.js, and is now an open-source project.
- Vite focuses on fast development and uses a modern ES module-based workflow to achieve this.
- It leverages native ES modules in the browser to eliminate the need for bundling during development.
- Vite supports multiple front-end frameworks, including React, Vue.js, and Svelte.
- It includes a built-in development server that supports hot module replacement (HMR) for fast code updates without needing to refresh the page.

•

### **MONGODB:**



- MongoDB is a popular, open-source, document-oriented NoSQL database system. Instead of using tables and rows as in traditional relational databases, MongoDB uses a flexible document model that maps to the way developers code. Documents, which can be nested and hierarchically arranged, can represent complex data structures that are difficult to model in a relational database.
- MongoDB is designed to be scalable, flexible, and high-performance, making it a popular choice for modern web applications that need to handle large volumes of data and high traffic. It supports dynamic queries, indexing, and aggregation, and provides built-in support for horizontal scaling through sharding. MongoDB is also highly available, with built-in replication and automatic failover to ensure data availability in the event of hardware or network failures.
- MongoDB has a rich set of features, including support for full-text search, geospatial queries, and real-time analytics. It also provides a flexible data model that allows for fast development and iteration, and supports a variety of programming languages and platforms, including Node.js, Python, Java, and Ruby on Rails.

### **VISUAL STUDIO CODE:**



- Visual Studio Code (VS Code) is a free, lightweight, cross-platform source code editor developed by Microsoft. It's designed to be highly customizable and versatile, supporting a wide range of programming languages and frameworks.
- VS Code includes a range of features that help developers to code more efficiently, such as intelligent code completion, syntax highlighting, code snippets, debugging tools, Git integration, and many more. It also offers a vast marketplace of extensions, allowing users to customize and enhance their editor with new functionalities, themes, and plugins.
- One of the strengths of VS Code is its ease of use and intuitive interface, making it a popular choice among both novice and experienced developers. Additionally, it can be used for a variety of development tasks, including web development, mobile development, game development, and more.

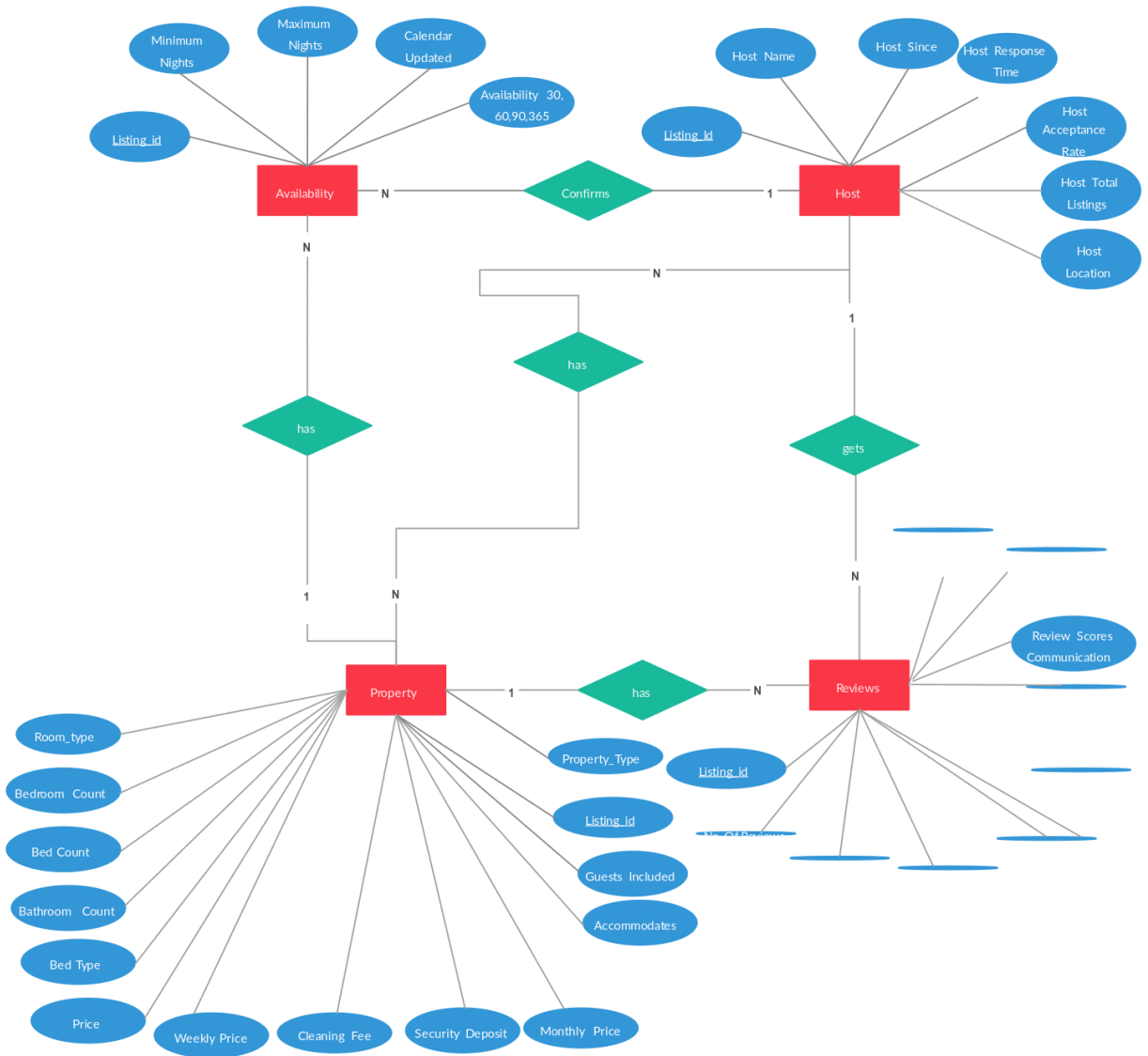
### **SYSTEM ANALYSIS:**

System Analysis is a detailed study of the various operations performed by a system and their relationships within and outside of the system. Analysis begins when a developer begins a study of the program using existing system. During analysis, data are collected on the various files, decision points and transactions handled by the present system. The commonly used tools in the system are Data Flow Diagram, ER-Diagram, etc. Training, experience and common sense are required for collection of relevant information needed

for the development of the system. The success of the system depends largely on how clearly the problem is defined, thoroughly investigated and properly carried out through the choice of solution. A good analysis model should provide not only the mechanisms of problem understanding but also the framework of the solution. Thus, it should be studied thoroughly by collecting data about the system. Then the proposed system should be analyzed thoroughly in accordance with the needs.

The existing system is functionally compatible with the process logic but lacking in certain operations such as booking summary and alteration that customers should be able to do in the system for the changing needs. The booking and status tracking are not automated. Usually, the e-commerce websites do not provide with the status tracking. The customers will have to register for the same with customer support team and make phone calls to know the status of requested service. In this type of status tracking the customers face lots of hardships in getting connected and to talk to the executive for knowing the status.

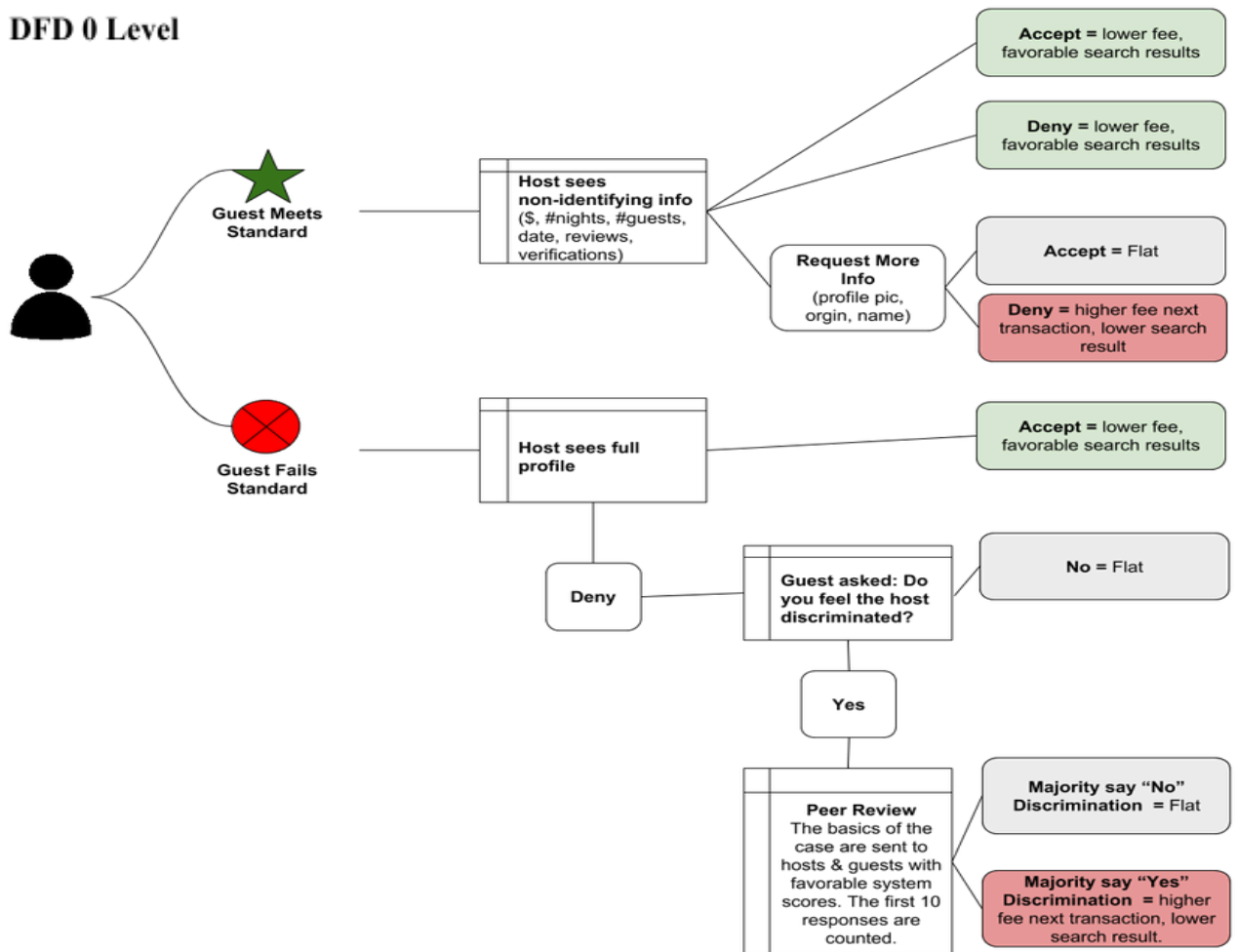
### **ER-DIAGRAM:**



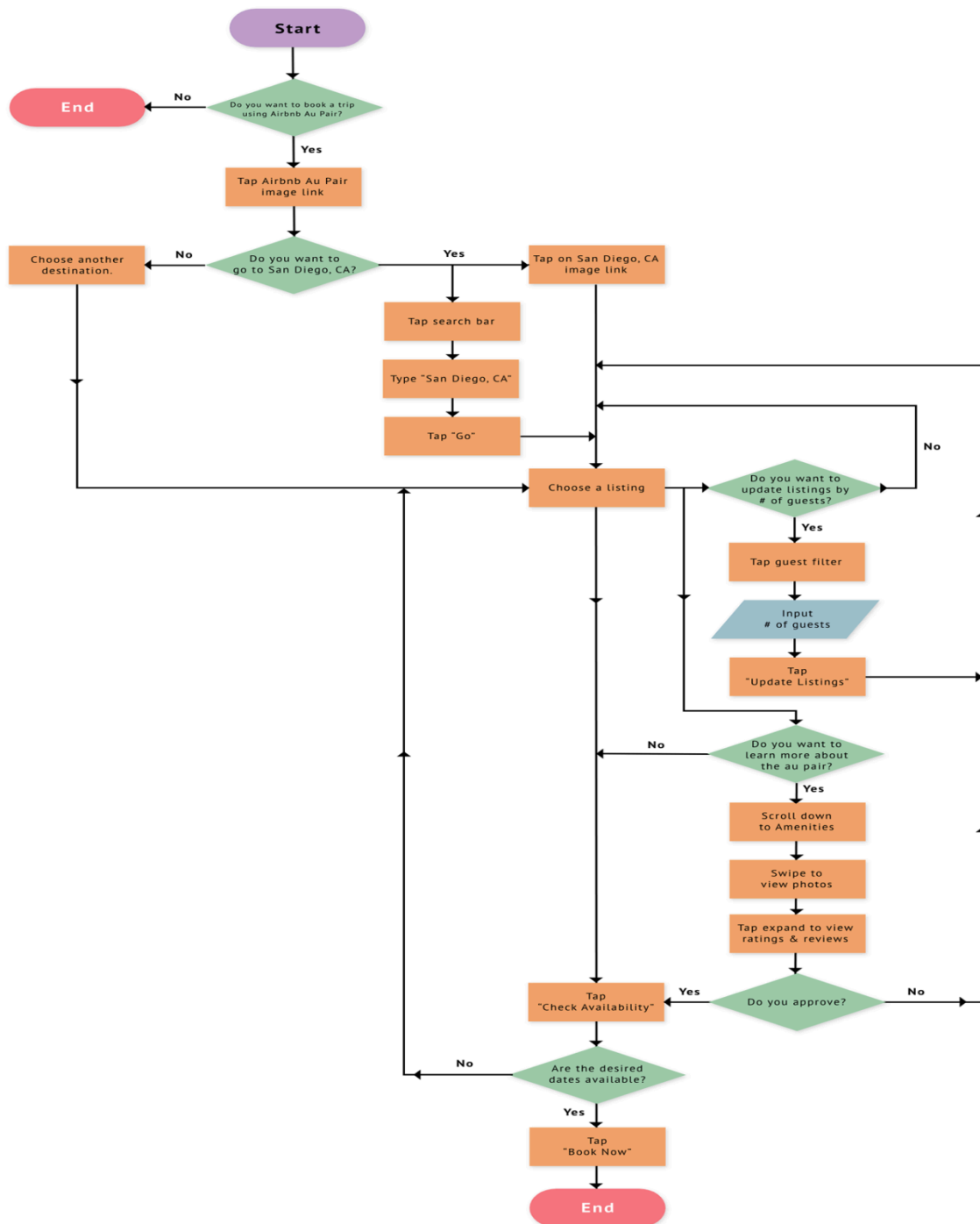
## **DATA FLOW DIAGRAM:**



## DFD 0 Level



## Flow Control Chart



## 8. REPORT AND TESTING RESULT

The main interfaces are:

- Web server and application server interface.
- Application server and Database server interface.

Check if all the interactions between these servers are executed properly. Errors are handled properly. If database or web server returns any error message for any query by application server then application server should catch and display these error messages appropriately to users. Check what happens if user interrupts any transaction in-between? Check what happens if connection to web server is reset in between?

## **TESTING**

Testing is the process of evaluating a system or its components with the intent to find that whether it satisfies the specified requirements or not. This activity results in the actual, expected and difference between their results i.e. testing is executing a system in order to identify any gaps, errors or missing requirements in contrary to the actual desire or requirements.

### **Testing strategies**

In order to make sure that system does not have any errors, the different levels of testing strategies that are applied at different phases of software development are as follows:

- **Unit testing**

The goal of unit testing is to isolate each part of the program and show that individual parts are correct in terms of requirements and functionality.

- **Integration testing**

The testing of combined parts of an application to determine if they function correctly together is Integration testing. This testing can be done by using two different methods.

- **Top-down integration testing**

In Top-Down integration testing, the highest-level modules are tested first and then progressively lower-level modules are tested.

- **Bottom-up integration testing**

Testing can be performed starting from smallest and lowest level modules and proceeding one at a time. When bottom level modules are tested attention turns to those on the next level that use the lower-level ones they are tested individually and then linked with the previously examined lower-level modules.

### **System testing**

This is the next level in the testing and tests the system as a whole. Once all the components are integrated, the application as a whole is tested rigorously to see that it meets Quality Standards.

### **Acceptance testing**

The main purpose of this Testing is to find whether application meets the intended specifications and satisfies the client's requirements. We will follow two different methods in this testing.

### **Alpha testing**

This test is the first stage of testing and will be performed amongst the teams. Unit testing, integration testing and system testing when combined are known as alpha testing. During this phase, the following will be tested in the application

### **Beta testing**

In beta testing, a sample of the intended audience tests the application and send their feedback to the project team. Getting the feedback, the project team can fix the problems before releasing the software to the actual users.

### **Testing methods:**

#### **White box testing**

White box testing is the detailed investigation of internal logic and structure of the Code. To perform white box testing on an application, the tester needs to possess knowledge of the internal working of the code.

#### **Black box testing**

The technique of testing without having any knowledge of the interior workings of the application is Black Box testing. The tester is oblivious to the system architecture and does not have access to the source code. Typically, when performing a black box test, a tester will interact with the system's user interface by providing inputs and examining outputs without knowing how and where the inputs are worked upon.

### **7.3. Validation**

All the levels in the testing (unit integration, system) and methods (black box, white box) are implemented on our application successfully and the results obtained as expected.

### **7.4. Limitations**

The execution time for support vector machine is more so that the user may not receive the result fast.

### **7.5. Test results**

The testing is done among the team members and by the end users. It satisfies the specified requirements and finally we obtained the results as expected.

## **SAMPLE SNAPSHOTS:**

- How to start an application

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL COMMENTS

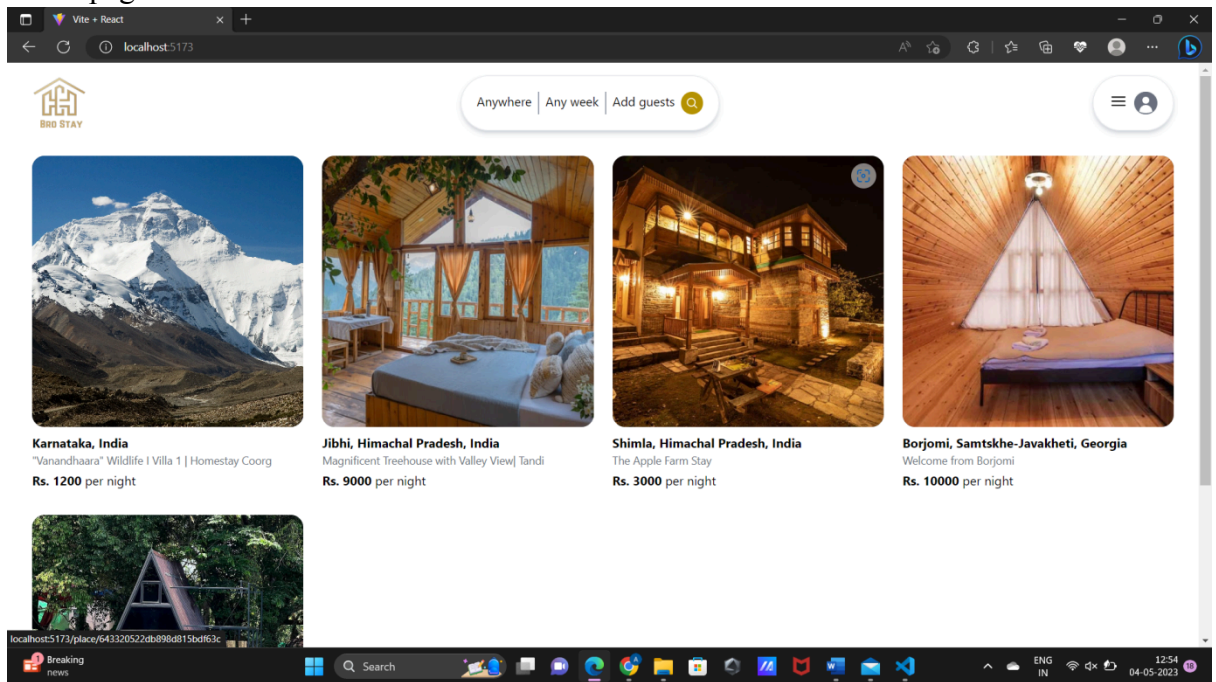
VITE v4.1.4 ready in 1145 ms
→ Local: http://localhost:5173/
→ Network: use --host to expose
→ press h to show help

[nodemon] 2.0.21
PS C:\Users\Anmol Porwal\Documents\brostay> cd api
PS C:\Users\Anmol Porwal\Documents\brostay\api> npm run dev

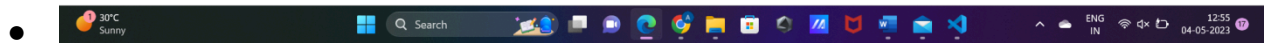
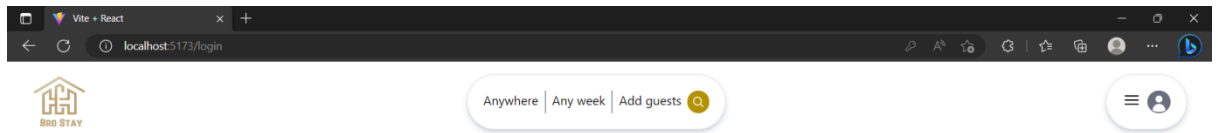
> dev
> nodemon index.js

[nodemon] 2.0.21
[nodemon] to restart at any time, enter `rs`
[nodemon] watching path(s): *.*
[nodemon] watching extensions: js,mjs,json
[nodemon] starting `node index.js`
```

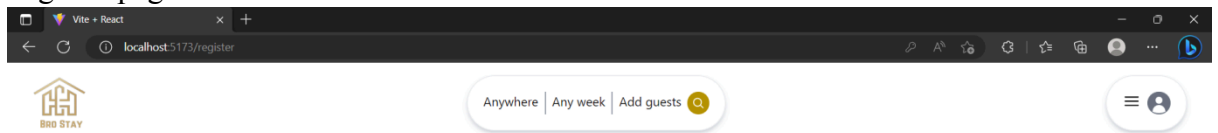
- Home page



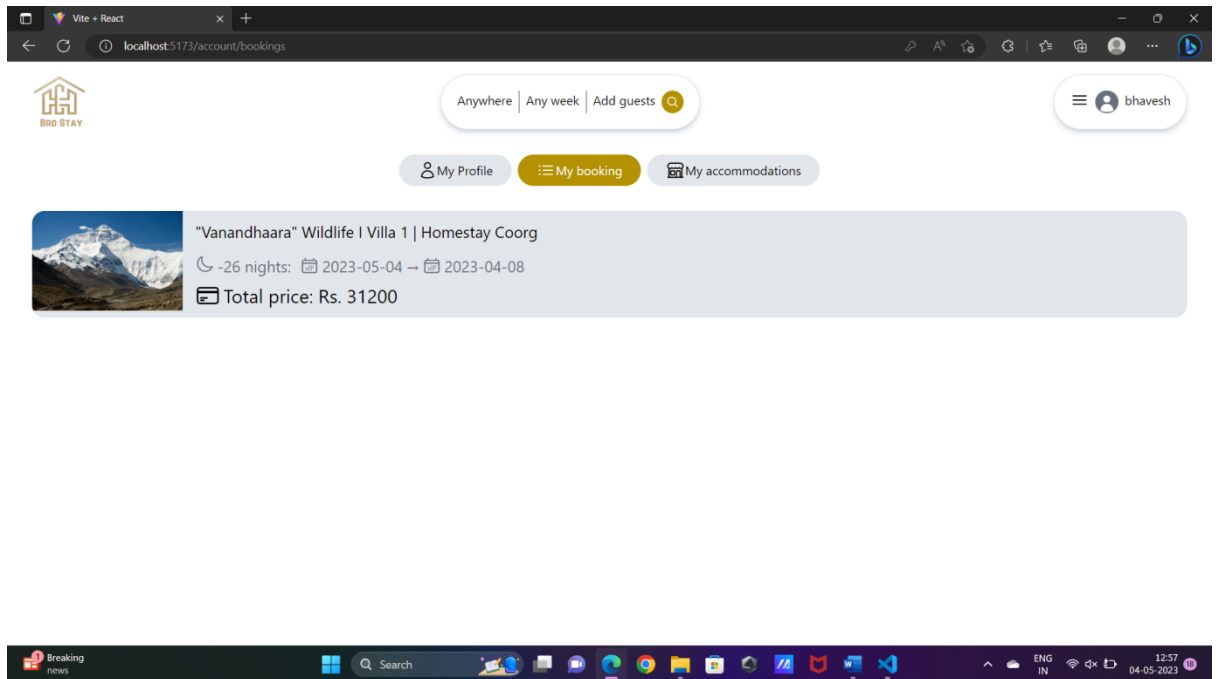
- Login page



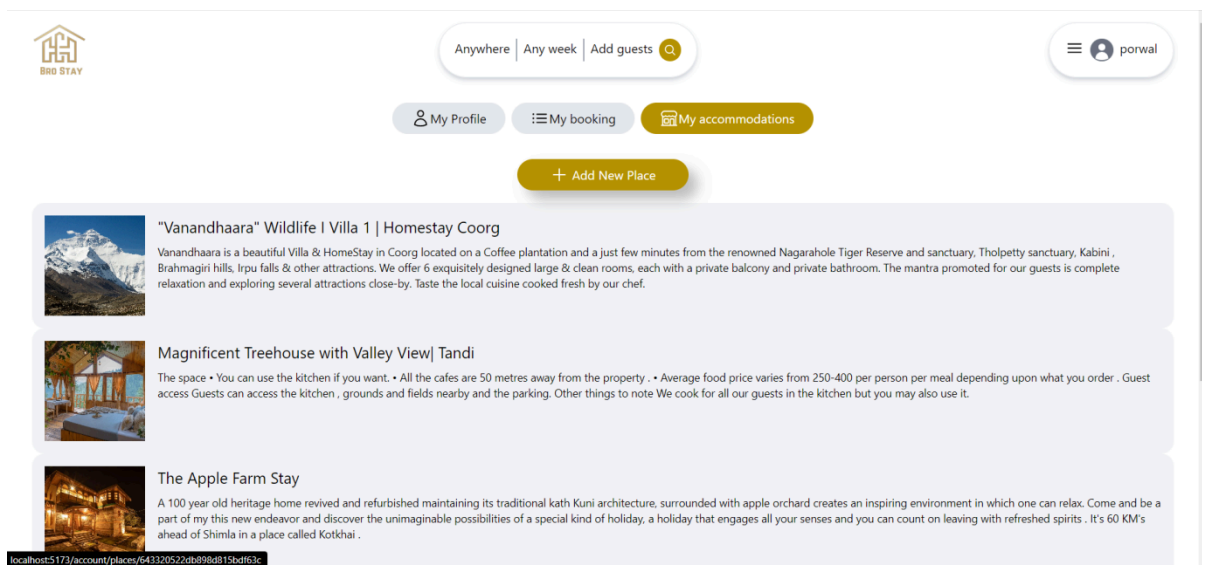
- Register page



- All Bookings



- My Accommodations



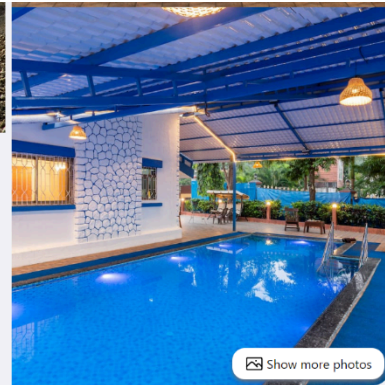


Anywhere | Any week | Add guests

bhavesh

## "Vanandhaara" Wildlife I Villa 1 | Homestay Coorg

Karnataka, India



Show more photos

### Description

The space The villa is designed offering lovely spaces like a premium resort in Coorg with a homely touch :). We are located in a Covid-free green-zone in Coorg. Wildlife enthusiasts, Bird-watchers, Butterfly watchers, families and couples who would like to just relax, enjoy fresh air and silence, visit us regularly :). We encourage a minimum of 2-nights stay to enjoy and explore the various sites in and around Vanandhaara. The top-end premium guest-room has sunset views from inside thru the lovely large window. This has an additional cost of INR 1000 compared to the other 5 guest rooms. A note on the accommodation and pricing- We encourage 2 adults and 2 children in every guest-room or 3 adults and 1 child max in every guest room. The pricing on AirBnB is calculated as bed and breakfast for 2 adults. If a third person is included, this is charged at INR 2,250 per head. If a 4th person is included, another INR 2,250

Price:Rs.1200 / per night

Check in:  
dd-mm-yyyy

Check Out:  
dd-mm-yyyy

Number of guests:

1

### Description

The space The villa is designed offering lovely spaces like a premium resort in Coorg with a homely touch :). We are located in a Covid-free green-zone in Coorg. Wildlife enthusiasts, Bird-watchers, Butterfly watchers, families and couples who would like to just relax, enjoy fresh air and silence, visit us regularly :). We encourage a minimum of 2-nights stay to enjoy and explore the various sites in and around Vanandhaara. The top-end premium guest-room has sunset views from inside thru the lovely large window. This has an additional cost of INR 1000 compared to the other 5 guest rooms. A note on the accommodation and pricing- We encourage 2 adults and 2 children in every guest-room or 3 adults and 1 child max in every guest room. The pricing on AirBnB is calculated as bed and breakfast for 2 adults. If a third person is included, this is charged at INR 2,250 per head. If a 4th person is included, another INR 2,250 is added and a 2nd room will be allocated. Guests can avail Dinner onsite at a nominal additional charge of INR 500 per person per meal(both veg and nonveg).

Check-in: 14

Check-out: 8

Max number of guests:

Price:Rs.1200 / per night

Check in:  
dd-mm-yyyy

Check Out:  
dd-mm-yyyy

Number of guests:

1

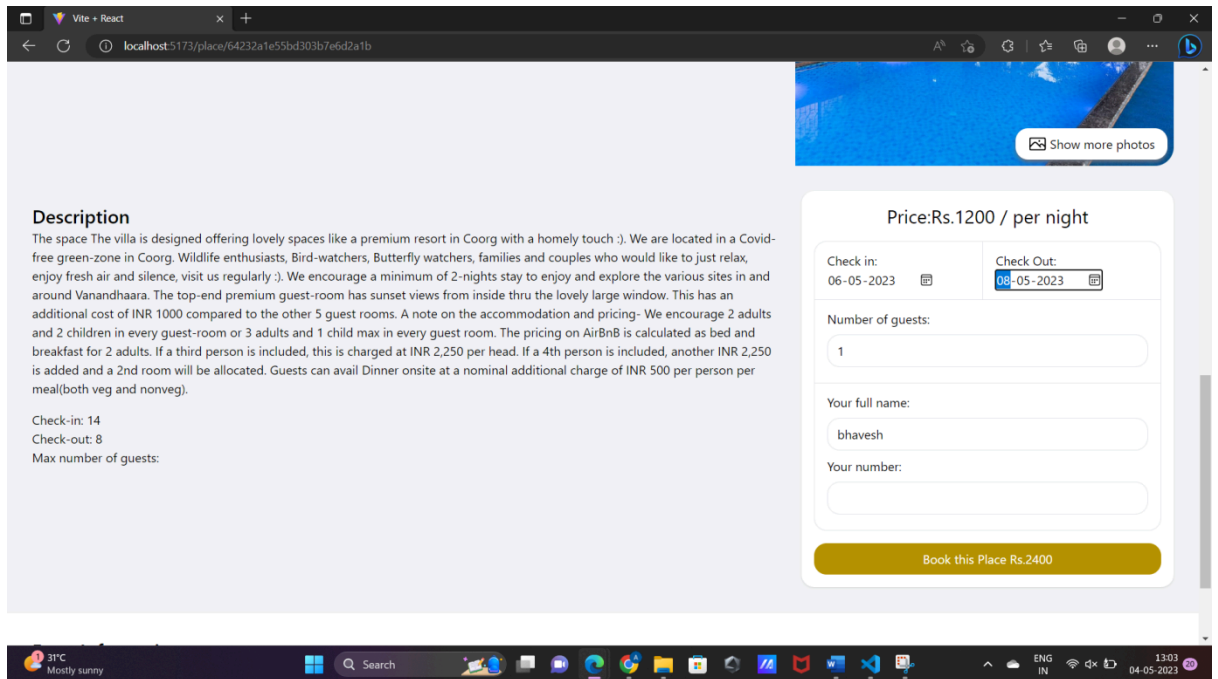
Book this Place

### Extra Information

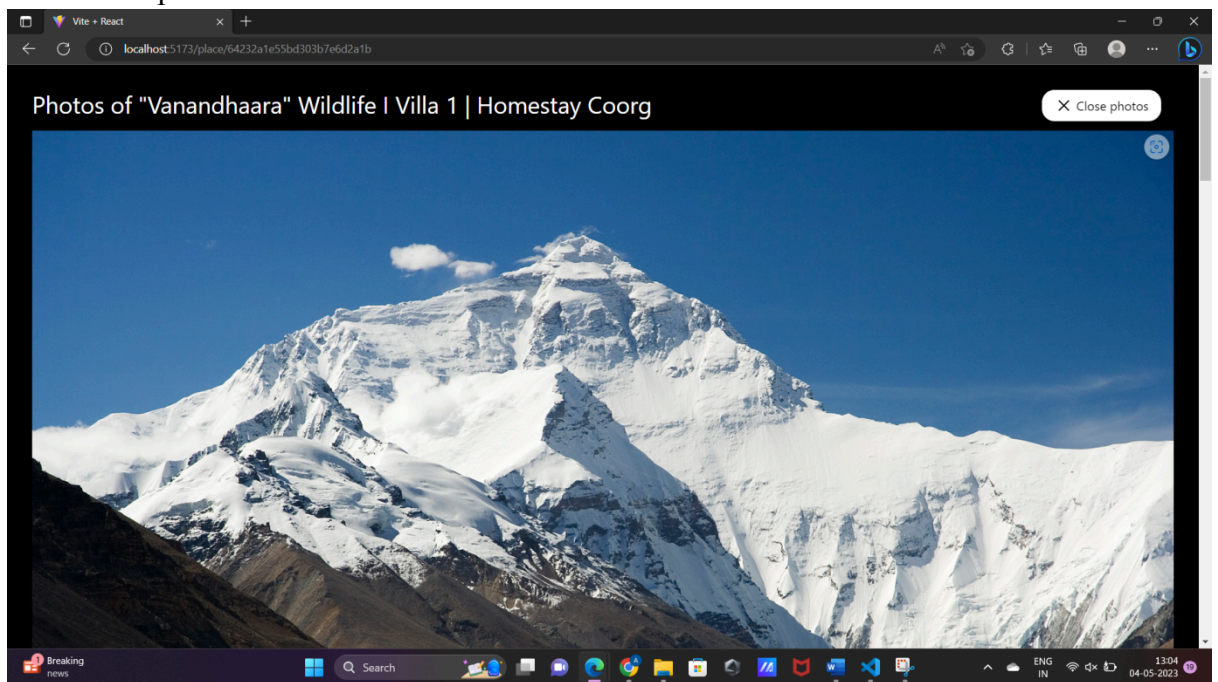
Vanandhaara is a beautiful Villa & HomeStay in Coorg located on a Coffee plantation and a just few minutes from the renowned Nagarhole Tiger Reserve and sanctuary, Tholpetty sanctuary, Kabini , Brahmagiri hills, Irpu falls & other attractions. We offer 6 exquisitely designed large & clean rooms, each with a private balcony and private bathroom. The mantra promoted for our guests is complete relaxation and exploring several attractions close-by. Taste the local cuisine cooked fresh by our chef.

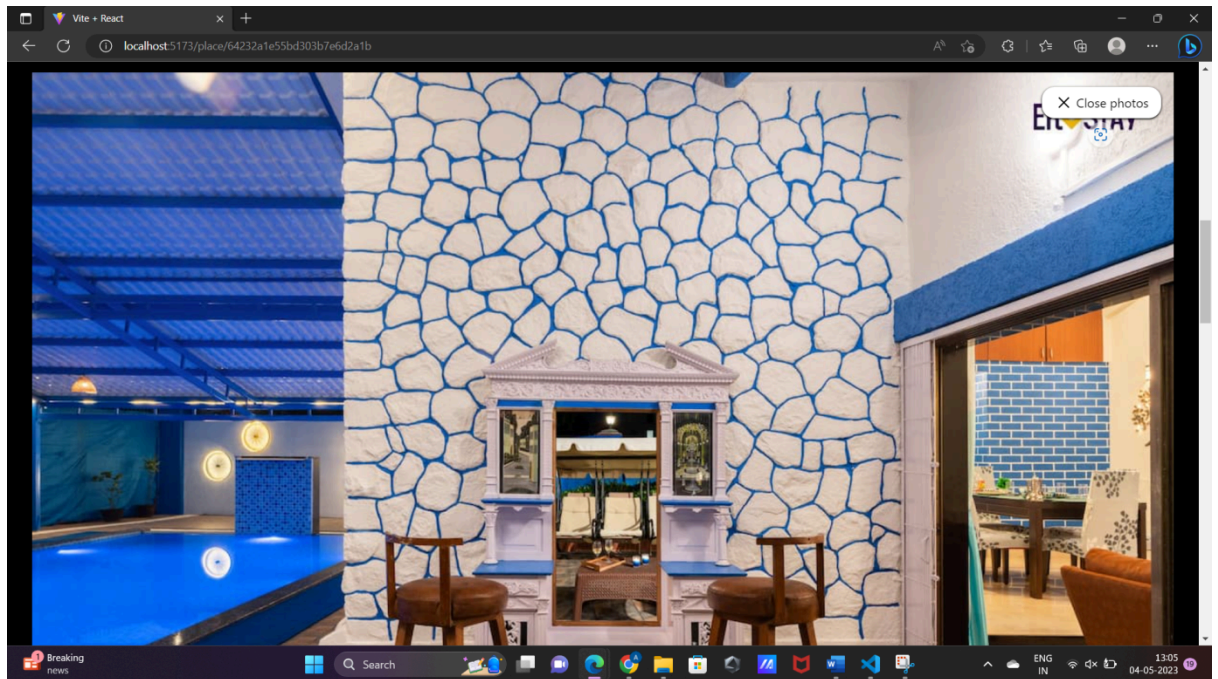
- Enter the date of booking and name and phone number



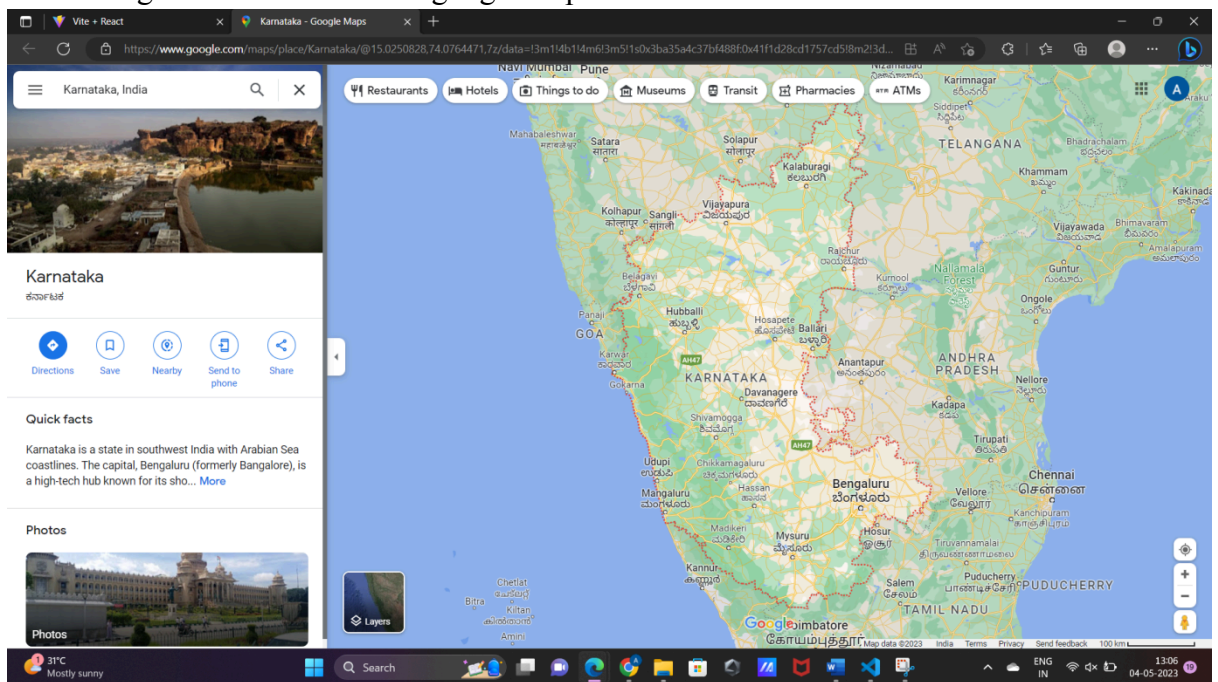


- Show more photos of destination

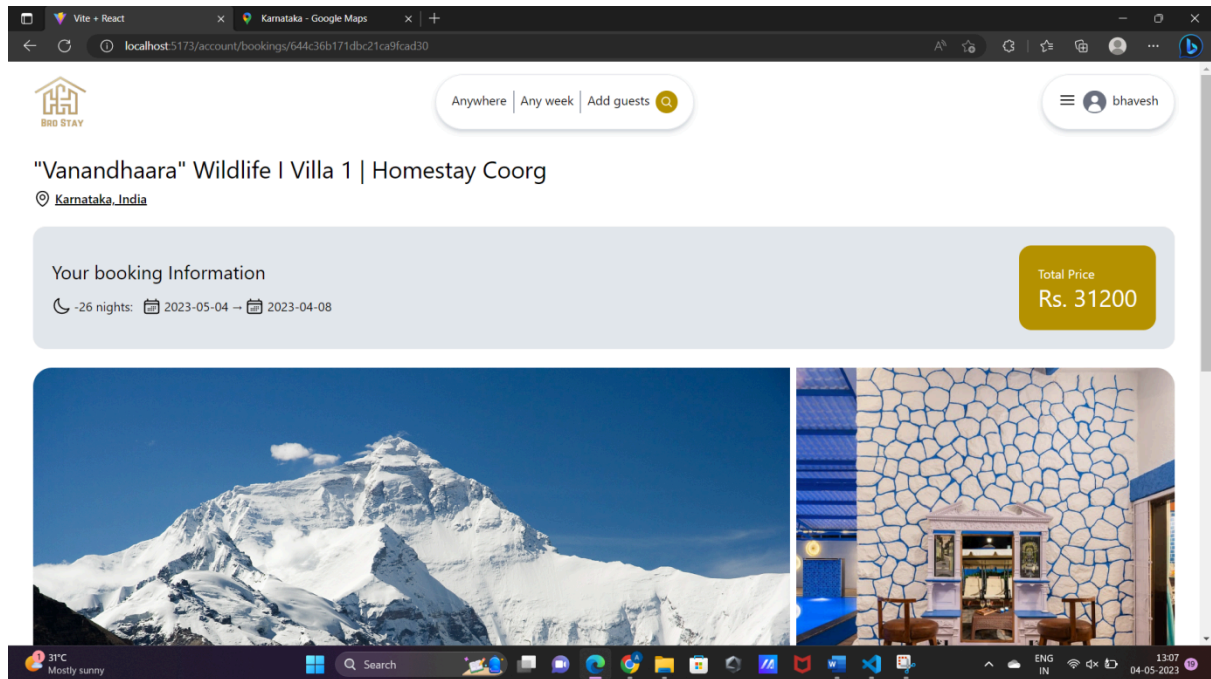




- On clicking location it will show google map location for direction



- Bill receipt with total amount



## **REFERENCE AND BIBLIOGRAPHY -**

Here are some references and sources for further reading on Airbnb:

1. Airbnb website: <https://www.airbnb.com/> This is the official website of Airbnb, where you can find information about the company, its services, and listings.
  2. Chesky, B., Gebbia, J., & Blecharczyk, N. (2013). Airbnb: Lessons Learned and Questions Raised. Harvard Business School Case 9-17-027.
  3. Guttentag, D. (2015). Airbnb: disruptive innovation and the rise of an informal tourism accommodation sector. *Current Issues in Tourism*, 18(12), 1192-1217.
  4. Oskam, J., & Boswijk, A. (2016). Airbnb: The future of networked hospitality businesses. *Journal of Tourism Futures*, 2(1), 22-42.
  5. Sundararajan, A. (2016). *The sharing economy: The end of employment and the rise of crowd-based capitalism*. MIT Press.
  6. Zervas, G., Proserpio, D., & Byers, J. W. (2017). The rise of the sharing economy: Estimating the impact of Airbnb on the hotel industry. *Journal of Marketing Research*, 54(5), 687-705.
- These sources provide insights into various aspects of Airbnb, including its business model, impact on the tourism industry, and regulatory challenges.