

HOSTEL DETAILS AND MANAGEMENT

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This Report Presented in Partial Fulfillment of the Requirements for the
Degree of Bachelor of Science in Computer Science and Engineering

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DAFFODIL INTERNATIONAL UNIVERSITY

DHAKA, BANGLADESH

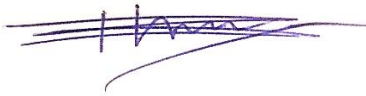
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APPROVAL

This Project titled “Hostel Details and Management”, submitted by MD. Rifat and MD. Mahadi Hasan to the Department of Computer Science and Engineering, Daffodil International University, has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 5th December 2021.

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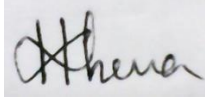
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DECLARATION

We hereby declare that; this project has been done by us under the supervision of **Most. Hasna Hena, Assistant professor, Department of CSE** Daffodil International University. We also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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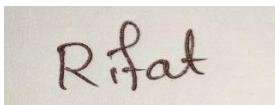
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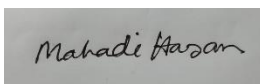


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ABSTRACT

The project “Online Hostel Booking & management System” is a system based on accessing the internet to find & book for rooms/seat in a hostel. This is a project implemented for all the Hostels of Bangladesh which are not available in online. The purpose of this study is to develop and implement an online hostel booking system for hostels that will replace the manual method of booking for hostel rooms/seats. This project will provide people all Over the country with an easy and fast way to find their convenient hostel & book hostel rooms/seats online. The use of online view of room/seat rents, meal system and uploading of available hostel rooms/seats and facilities was used for the new system so that the client can view all the details about the hostel and make his choice before arrival. The Online Hostel Booking System interface is web pages that can be accessed through a web browser. The system is implemented in HTML, CSS and JavaScript. Users can perform room/seat booking activities and can see all the details of any Hostel anytime and from anywhere by accessing it via Internet. The Online Hostel Booking System is an easy-to-use application. Everyone who knows how to use a Web browser can easily find hostels and carry out booking. It also increased the efficiency of the hostel managers and also their profit margin, once they have a better and good facilities.

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CHAPTER 1

Introduction

1.1 Introduction:

Hostel Finding System is a Web application development which provides the facilities for finding hostels/accommodation & booking hostels easily as your choice like rent, place location & detail activities of the hostel. The website help user in case of Hostel Information, registration, room/seat booking and food/meal system. Aim of the Hostel Finding System is to find the hostels as clients wants and make user friendly web-application. Due to the increase in educational institution & Job sector in cities like Dhaka, Chittagong, Sylhet etc. Hostel are also increasing for the accommodation.

With the advancement of technology, application areas of computer are rising day by day. Every sector desires its procurement for fast accurate and automated operations. Therefore, different program is developed to meet the requirement of various types of users i.e., related to any field. I choose Hostel finding web-app as the system seemed simple and easy to use.

1.2 Motivation:

About 15 to 20 lakh students go to the city to study every year. Students are always embarrassed about actually finding hostels from the village to the city. Everyone always wants to find a good hostel at low cost. Again, many people want food to be good. There is only one way to get rid of these thoughts. If all the hostels are seen together, it would be better to stay in different places, how much it would cost in a hostel, how good the food would be in a hostel, how good the environment of a hostel would be. Also, to be tense about where to stay before going to study in the city. Our thoughts come from these things. If the students/clients can see all the information in a short time without having to search for it, then there will be no worry about anything. And now the digital age. We all get a lot of misinformation by looking at posters or banners.

Which puts us in even more danger. Let us work to solve all these things. Successful completion of our work will benefit many students/clients through us.

As I always face one thing. That is, someone from the village who tell me that he is going to Dhaka for the purpose study/Job. Can I arrange where he will stay? Can he stay at my place? They have this problem because they can't find a good place to stay in the city. There are many hostels or accommodation in Bangladesh that have a beautiful learning environment for students and also for others. Those who are new in the city are having trouble finding those places. Again, many times they are harassed by looking at banners or posters or they cannot find a good hostel. So, we decided to solve all this issue. So that all the students/clients can easily avoid all these hassles and find a suitable hostel just browsing internet and one click on the website with their phone/pc from anywhere in Bangladesh.

1.3 Objective:

The Goal & Objective of 'Hostel Finding System' is to design an application which allows to handle all the important information of hostels and find hostels as per client's demand and make it user friendly.

There are some objectives of hostel finding system:

- i. Keeping user satisfaction as at most priority
- ii. User can see all the information of hostels (such as price, location, food menu) in any city of Bangladesh in just one click to this website.
- iii. Keeping details about the users, their needs and payment detail reports etc.
- iv. Keeping the best hostel facilities.
- v. Give the user choices from the cheapest to high price hostels as per the facility.
- vi. Give the user choices as per their advantageous places.

1.4 Expected outcome:

An online booking system works all the time. This gives freedom to potential clients to book a room/seat anytime they want. It also maximizes sales of hostels because it is not limited to the working hours. In fact, studies show that a 24/7 online reservation system greatly increases the number of hostel bookings. In the foreign country in Europe or other developed country we can see that every hostel has online reservation system. But in our country, there such no system to reserve a seat or room online as like our convenient place, rent etc. So, the outcome of this project is everyone in this country from anywhere they can see all the hostels in one website. After that they can easily get all the important information, they need like they can choose the location, see the room quality, rent, room pictures and every detail of the hostels they need. After that they can book the room/seat through our website or directly go to the place & book. The website provides all the important details like hostel's manager contact number, google map location of the hostels, meal chart, rent, address etc. So, the hassle of a student/client will be finish & it will save money, time and all. The hostel owner will also be profited by this. They don't have to spent money or time for marketing. They don't need to have the manpower for putting up posters everywhere & they can get all customers by online.

1.5 Scope:

This project traverses a lot of areas ranging from business concept to computing field, and required to perform several researches to be achieve the project objectives. The area covers include:

1. Hostel industry: This includes study on how the hostel rent business is being done process involved and opportunity that exist for improvement.
2. Students/Clients as well as the Hostel owner/manager will be able to use the system which is cool.
3. Web-platform means that the system will be available for access 24/7 except when here is a temporary server issue which is expected to be minimal.

CHAPTER 2

Background

2.1 Introduction:

We had a hard time getting our project ready. We didn't know the rules for building a website. So, my teammate and I do a course on web development at Creative IT. From there we learn a lot of things that helped us get our website ready.

The first thing that comes to mind as background work is website design. We think and create a user-friendly design. The design requirement was such that anyone could understand everything by entering the website. If the client does not understand easily then the use of the website will be less. There are many complicated designs, but they do not work if the user does not understand. So, we keep our design user-friendly and think of a beautiful design.

The next task is coding. We use HTML, CSS, and JavaScript to design the layout of website. This is not the end. Then comes the work of the background of that website. There we have to do a lot more work including JavaScript, PHP, API. Background work means collecting client data. Log in by opening an account. Search by location. Sort out the searched hostel. Creating a review or comment option for the client who is staying in the hostel. There is much more to do, including calling the hostel manager from the website. All of this takes a lot of time. We take the help of our supervisor while doing this work. And the supervisor helps a lot to fix what is in our design. He has helped us a lot in every work.

2.2 Related Work:

We haven't done website-related work before. It's a whole new experience for us. We first do a web development course for this project. Daily practicing the coding of that course, studying at varsity, everything was a little difficult. Then collecting data from different hostels was a bigger challenge. On off days we would go out to collect data. Many do not want to give data. Many are afraid to give data. The teacher has

helped us a lot in each of our tasks. We would go somewhere and try to collect some data. Finding a hostel was another difficult task. Basically, the thing to mention is, we had to do a course to finish this project.

2.3 Comparative Studies:

We have a lot of studies to do on our project. First, we watch free web development course videos from various websites and YouTube. Later we realize that we should do a course. Because it was not possible to learn a lot from YouTube or websites. I and my teammate enrolled in a web development course. First, we are taught web design. Teaches us HTML, CSS, JavaScript, Use of API, Layout Design, and much more for web design.

Then comes the work of development. Which is known as the backend in the case of a website. In the course, we are taught JavaScript, Python, PHP for backend work. There are also a few frameworks to learn. Such as React, Angular, jQuery, NodeJS, Django, and Laravel. Here React, Angular, jQuery need JavaScript to work. Django requires Python and Laravel needs PHP.

MySQL is taught for database work. Also, Postgre is used for database work. However, when to use which is decided according to the framework and the type of website.

Also, a visitor needs to know about UI (User Interface) and UX (User Experience) for how long they will stay on the website. Many times, website needs Add-on, Extension, or Plugin. For which it is important to know CMS. WordPress is a popular CMS.

2.4 Challenges:

No one has done any work related to our project before. We try to find information about our work on various websites and on YouTube. But we couldn't find anything anywhere. Then we decide for ourselves how we should work and what we should do.

The first challenge is, we have to learn full website development. That is why we have said before that we get admitted in a course. At first, I thought about how could I study such a big course. But we gradually became accustomed to it. Being a CSE student, we already had a lot of ideas about some programming languages. Our previous knowledge was very useful in the case of the course.

Then comes the challenge of data collection of different hostels. At first, we thought it might not hurt. But when we go to collect data, we face many dangers. At first, it was very difficult to find a hostel. It took about 1 hour to find a hostel. Secondly, many people misunderstood us and did not want to give data. After going to the hostel to see the to-late did not give data. Another big problem was to enter the girls' hostel and collect data. Finding hostels in some unfamiliar places becomes very difficult for us.

All in all, it takes a long time to collect all our data. And it was a big challenge for us. We could not collect data of all hostels in Dhaka city. We will collect some more data later.

CHAPTER 3

Requirements Specification

3.1 Business Process Model:

Every website is started on a large scale for business. The main income of the website comes through ad viewing. However, there are different ways of earning income from different websites. Since our website is a service provider website, there is less scope for doing business here. However, we can create a business environment here if we want.

There are several options for creating a business environment from a website. The first one is by showing ads. When a visitor visits the website, the ad can be shown on the webpage. Ads are displayed on the website through Google AdSense. The more times a visitor reloads the page, the more ads he will see. Here it is possible to show multiple ads on one page. AdSense pays depending on the type and number of views of the ad. However, due to the increase in the number of websites at the present time, the number of ads showing varies. There remains a problem here. Visitors may be annoyed by repeated ads. Or anyone is annoyed when too many ads are shown.

In the case of our website, there is another way. We can put a recommendation option on the homepage of our website. Where only hostel operators will show hostels based on payment. There are also several suggestion options on the 1st side of the search. The hostels that will pay the website authorities will show them first. We see advertisements in newspapers. If you want to advertise on the first page, you have to pay more. You have to pay less for the inside pages. The same can be said of our website.

However, we will not use this business policy on our website for the first time. Because it comes after an ugly idea towards our website. We will provide non-profit service from now on. In order to increase the number of visitors to our website. Later, if we

can spread it across the country, we can do business through the second policy. We will not display ads on the website because we want to keep our website tidy. I think it is better not to show ads on websites that provide public services.

3.2 Requirement Collection and Analysis:

It takes a lot of things to build a perfect website. To make the website more beautiful, we have to use more things. Here are some major requirements that we used to build our website:

1. Domain Name
2. Web Hosting
3. Business type Email Address
4. Logo Design
5. Favorite Icon (Favicon)
6. Text Content
7. Images
8. Design Analysis
9. Programming Language
10. Framework
11. Database
12. Security Socket Layer (SSL)
13. Google Analytics
14. Website Security and Firewall
15. Data Collection and Input
16. Website Maintenance

Programming Language:

- i. HTML
- ii. CSS
- iii. JavaScript

- iv. PHP
- v. MySQL

Framework:

- i. jQuery
- ii. Laravel
- iii. Bootstrap

Web analytics is the collection, reporting, and analysis of website data. Emphasis on defining metrics against your organizational and user goals and using site data to determine the success or failure of those goals and drive strategy and improvement user experience. Website analysis is done depending on the visitor. Web analytics depends on how many people are using the website, how much loading time, how much help the user is getting, how much time the user is spending, how the website is performing, storage capacity, browsing time, etc. Since our website has just been created, we have not received a complete web analysis report. It is better to publish the website after analyzing it. But we need real-time users for analysis. We will do the analysis when we publish our website for the user. After the website is published, the analysis has to be done. Some problems remain hidden from view. Which can be understood after the user's use. Even after the website is published, many updates are needed which are dependent on the analysis.

3.3 Modeling and Description:

Website modeling means modeling how to create a whole website. We said first we want to create a user-friendly model. So, we build our website model first. Here we first put the option of creating an account. Or a user can log in if he/she has an account. After that, he will be able to take service from the website. We put a simple model on the home page. Boys' and girls' hostels will be arranged separately. The user can take the service as per his requirement. For hostel listing, first, there will be the name and address of the hostel. Below is the cover image of a hostel and below it will be the price, view details option, and view on map options. This gives a simple look at our website.

If you click on the user view details option, you will be able to see the details of that hostel. There the user will see different options according to the seat of each room. After that, you will be able to see the details of monthly rent and meal cost and there will also be a meal routine. After that, the user can book a seat by pressing the order button if he wants. Or you can talk to the hostel operator directly from the Call No option. Former hostel hosts can share their reviews if they want.

After that comes the next description. The website contains a description of each item. Since we are dealing with hostels here, the description of the hostel is very important. What is a hostel like here, their security system, electricity, and water usage limitations, lift uses facility, Wi-Fi, locker system and all the extra facilities will be provided together? All in all, so that anyone can know all the information about a hostel. That's why you can add everything you need.

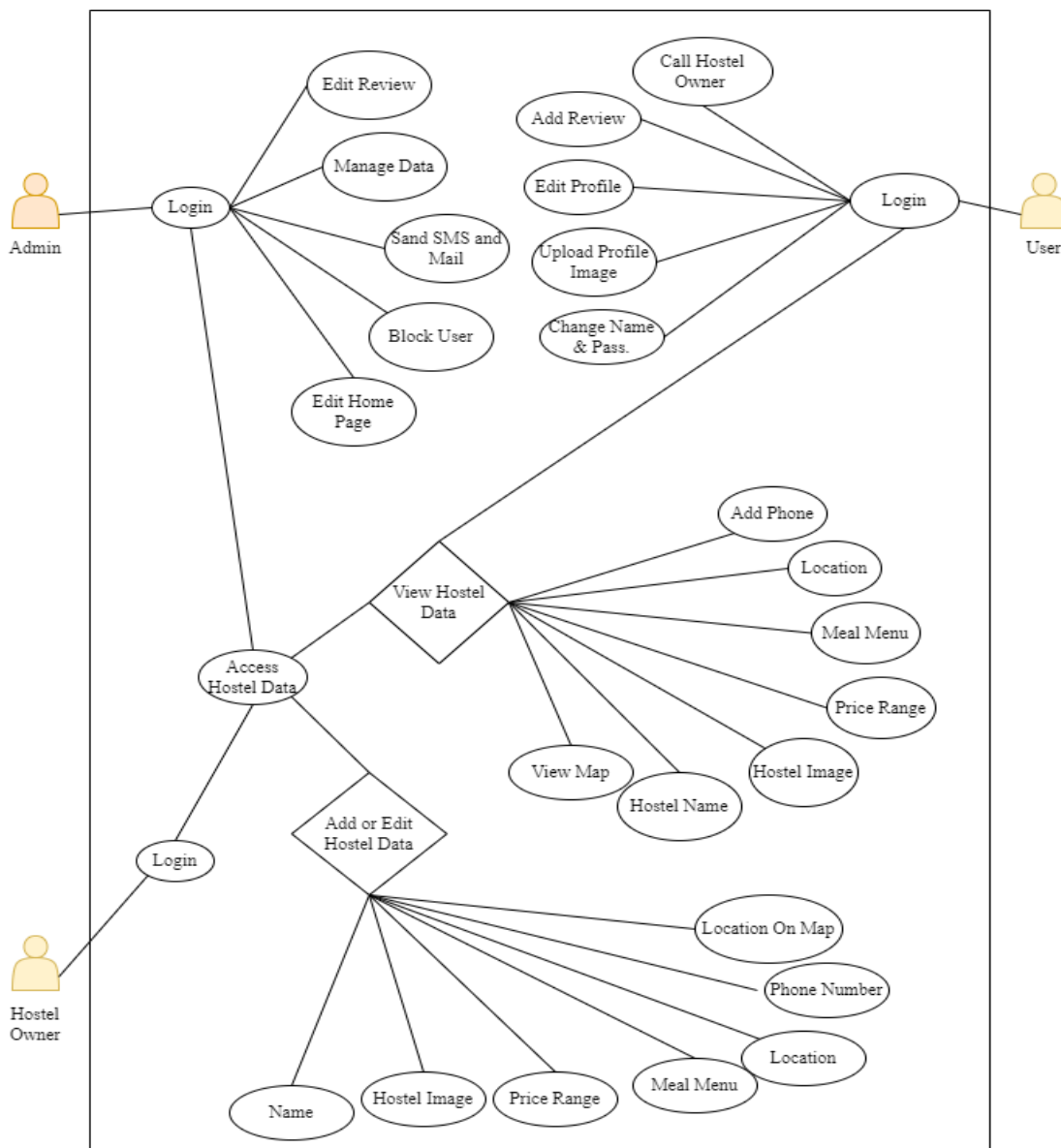


Figure: 3.3: Use Case Diagram

All this will be beautifully arranged on the website. The user is not disappointed after entering the website. No information will be hidden. The user will know everything and will choose the hostel of his choice. Hopefully, the user will not suffer to understand all these things.

3.4 Design Requirements:

One has to think of a layout before designing any website. You have to work according to that layout. First of all, it takes a programming language for design. HTML, CSS, JavaScript with these 3 it is possible to design a website completely. The basic design is made with HTML. CSS is used to make that design beautiful. Website beautification work is done with CSS. Fonts, font style, margins, padding, image size, hover and many more things are done through CSS. Also complete with CSS stylish animation or moving text, picture zoom in and out, etc.

After that, some work is done with JavaScript. Java basically works a bit like a back-end type. Such as setting the loading time of a page, setting the loading animation, setting the animation time, working from the bottom to top on the click button and many more things are done. Using JavaScript completes a website. All this requires pc and design software. You also have to do the work of the database on the website. For which a proper design must be made. Database work is not that easy. It is not possible to complete the work of a database without proper design.

The website must have a design for each job. If the design is not right, then it becomes very difficult to build a website. So, you have to think carefully and create a design layout. We have written below more details about our website design. The basic requirements for anyone to design a website are: Understand your goals and requirements, explain your approach and capabilities to a developer, confirm requirements and the business functions of your website, Propose an approach with a scope, budget, and schedule.

CHAPTER 4

Design Specification

4.1 Front-end Design:

We are using 3 languages for designing the front-end of the website. They are:

1. HTML
2. CSS
3. JAVASCRIPT
4. JQUERY

The front-end design was created using these programming languages. Page layout was designed in HTML & CSS has been used for all the designing part. All the validation task and animations has been developed by JavaScript.

4.2 Back-end Design:

1. PHP
2. Laravel

All validation tasks and animations were developed by JavaScript. All business logic and front logic were implemented in PHP.

4.3 Database:

1. MYSQL

MYSQL database has been used as database for the project.

4.4 Interaction Design & UX:

The procedure thru which designer's layout interfaces in software program or digital gadgets with an emphasis on aesthetics or fashion is named consumer interface (UI) layout. Designers attempt to expand interfaces which might be each clean to apply and

exciting for users. Graphical consumer interfaces and diverse varieties of consumer interface layout are examples of UI layout. Interaction diagram because it describes how and in what order a fixed of objects interacts with one another. A collection diagram makes a specialty of lifelines or methods and items that coexist, and the messages transferred among them to finish a characteristic earlier than the lifeline terminates.

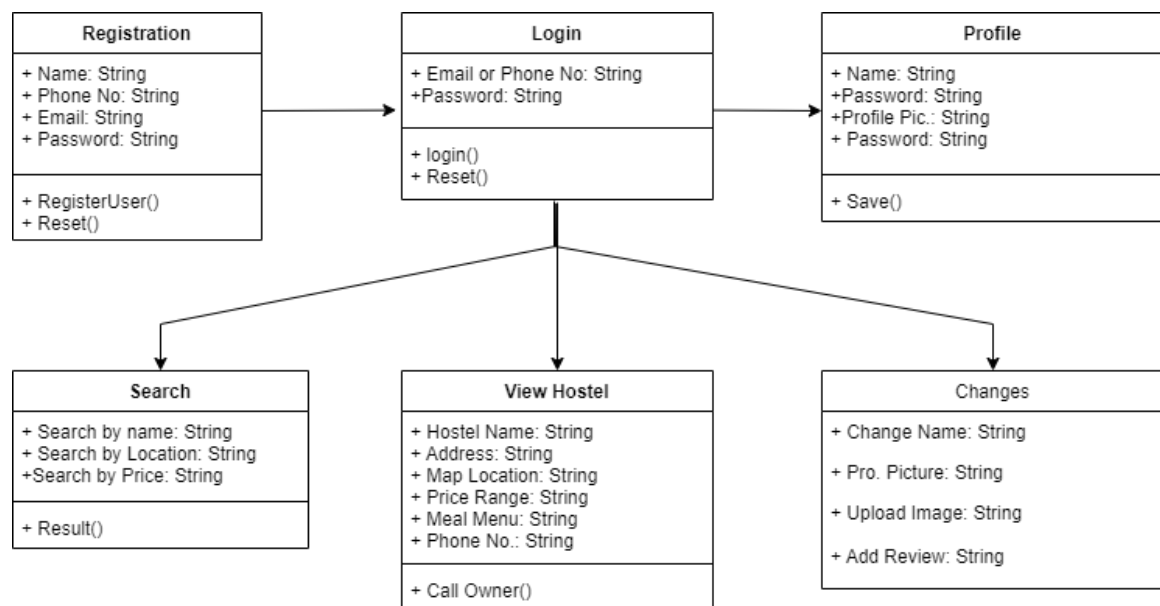


Figure: 4.4: User UML Diagram

4.5 Implementation Requirements:

The website was designed taking into account the following:

1. To be simple and light
2. More informative as possible
3. Maintainability and content updates.

Functional requirements are those requirements that are used to illustrate the internal working nature of the system, the description of the system, and explanation of each subsystem. It consists of what task the system should perform, the processes involved, which data should the system holds and the interfaces with the user? The functional requirements identified are:

Functional requirements are those requirements that are used to illustrate the internal working nature of the system, the description of the system, and explanation of each subsystem. It consists of what task the system should perform, the processes involved, which data should the system holds and the interfaces with the user? The functional requirements identified are:

Functional necessities are the ones necessities which might be used to demonstrate the inner operating nature of the machine, the outline of the machine, and the rationale of every subsystem. It includes what undertaking the machine ought to perform, the methods involved, which facts ought to the machine hold, and the interfaces with the user. The useful necessities diagnosed are:

As regards the website content, the basic information that is required to be provided by user:

Customer's registration: The system should allow new

1. Customer's registration: The System have to permit new customers to sign in online:
 - i. Name
 - ii. National Id
 - iii. Contact number/Email
 - iv. Password

1. Online reservation of hostels: Clients should be able to use the system to make booking and online reservation.
2. Automatic update to database once reservation is made or new Clients registered: Whenever there's new reservation or new registration, the system

should be able to update the database without any additional efforts from the admin.

3. Feedbacks to clients: It have to offer method for clients to depart feedback.

CHAPTER 5

Implementation and Testing

5.1: Implementation of Database:

Data is everywhere, as are all kinds of databases, and when it comes to web development, it's a very database intensive process now. So, it is essential that all web designers and developers know every nook and cranny of database design and management in order to get the desired results from the web applications they create. All kinds of web entities, from the simplest information-sharing blogs to large directories and user-oriented sites, are now using databases. No matter how simple or complex the website operation is, the database must be well maintained by proper planning, design, implementation, and maintenance to ensure efficiency and security.

First of all, you need a planning of database. When designing the database functionality you need, consider what is stored in a typical database and what kind of input mechanism your site will need for it. At this point, you don't have to worry about the individual tables and fields, but the goal is to show the full focus of the drawing. This allows you to divide the building components into smaller sections. Keep in mind that it can be difficult to add items later. Therefore, it is important to do this first.

Database Functionality: To do this well, you must first think outside the database. Focus on making it clear what your site will do. For example, if you are building a subscription website, the first thought would be the data that each user might have to store. However, leave it for later at this point and draw what these subscribers will do on your site. Will they just post articles, send messages, fill out forms, or upload their certificates or photos? If so, the database must be designed for publications, files, emails, photos, certificates, etc.

Once you understand the basics, the next step is to organize the information you want to store. At this point, you need to use one of the best database design tools that can

visually configure your database model. The best tools recommended by experts are MySQL Workbench for MySQL DBS, DBDesigner4, or Gliffy. These are usually free online applications for creating database models based on flowcharts. Microsoft Vision is a premium tool that is also very useful for database modeling. There are two types data in our website. Clint data table was given below-

Table 1: Clint Data

User Name	Email	Phone	Gender	Password	P. Picture
Abc	abc@gmail.com	017XXXX	Male	*****	Img123.jpg
Def	def@gmail.com	018XXXXXX	Female	*****	Img.jpg

User and admin login database was here:

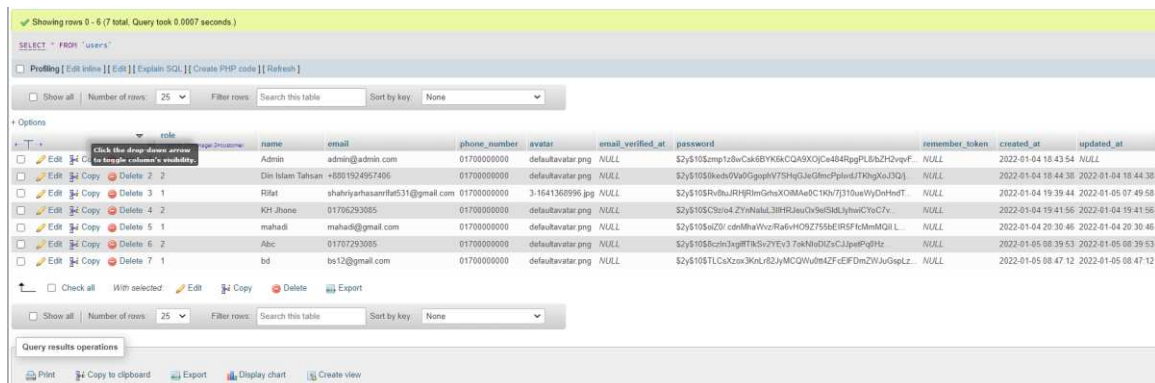


Figure: 5.1.1: Login Database

Data stored, which input by user and admin-

	id	user_id	property_photo	title	type	rent_amount	real_estate	bed_type	bathroom	address	location_id	google_map	description	features	s_name	s_email	s_phone_number	created_at	updated_at
	1	2	151122200.jpg	Ambur Doyu House	1	8500	2000	Single Bed	1	Ambur Doyu House	1	ambur	bedroom, kitchen, living room, dining room, bathroom, terrace	bedroom, kitchen, living room, dining room, bathroom, terrace	Uti Man labran	ambur12345@gmail.com	0170000000	2022-01-01 10:00:00	2022-01-01 10:00:00
	2	3	151413540.jpg	Fully furnished House	1	3000	2500	Double Bed	1	10/10 Road, 6 Baran	1	https://www.google.com/maps/@10.1000000,10.1000000,15z	One of the best houses for students. Fully furnished. Air conditioning. Close to the bus stop.	air conditioning, close to bus stop, fully furnished	shahyarnasirah31@gmail.com	shahyarnasirah31@gmail.com	0170000000	2022-01-01 10:00:00	2022-01-01 10:00:00
	3	4	151413541.jpg	11 Gars House	2	2000	2500	Double Bed	1	10/10 Road, 6 Baran	2	https://www.google.com/maps/@10.1000000,10.1000000,15z	One of the best houses for students. Fully furnished. Air conditioning. Close to the bus stop.	air conditioning, close to bus stop, fully furnished	shahyarnasirah31@gmail.com	shahyarnasirah31@gmail.com	0170000000	2022-01-01 10:00:00	2022-01-01 10:00:00
	4	5	1511388458.jpg	11 Gars House	1	2000	2500	Queen Bed	1	10/10 Road, 6 Baran	2	https://www.google.com/maps/@10.1000000,10.1000000,15z	One of the best houses for students. Fully furnished. Air conditioning. Close to the bus stop.	air conditioning, close to bus stop, fully furnished	shahyarnasirah31@gmail.com	shahyarnasirah31@gmail.com	0170000000	2022-01-01 10:00:00	2022-01-01 10:00:00
	5	6	151413545.jpg	Smart House Eduwandi	1	3000	2500	Queen Bed	1	10/10 Road, 6 Baran	2	https://www.google.com/maps/@10.1000000,10.1000000,15z	One of the best houses for students. Fully furnished. Air conditioning. Close to the bus stop.	air conditioning, close to bus stop, fully furnished	shahyarnasirah31@gmail.com	shahyarnasirah31@gmail.com	0170000000	2022-01-01 10:00:00	2022-01-01 10:00:00
	6	7	151413546.jpg	15+ Beds House Kadapan	1	3000	2500	Single Bed	1	15+ Beds House Kadapan	2	https://www.google.com/maps/@10.1000000,10.1000000,15z	One of the best houses for students. Fully furnished. Air conditioning. Close to the bus stop.	air conditioning, close to bus stop, fully furnished	shahyarnasirah31@gmail.com	shahyarnasirah31@gmail.com	0170000000	2022-01-01 10:00:00	2022-01-01 10:00:00
	7	8	1511388459.jpg	12 Gars House	2	2000	2500	Queen Bed	1	12 Gars House	2	https://www.google.com/maps/@10.1000000,10.1000000,15z	One of the best houses for students. Fully furnished. Air conditioning. Close to the bus stop.	air conditioning, close to bus stop, fully furnished	shahyarnasirah31@gmail.com	shahyarnasirah31@gmail.com	0170000000	2022-01-01 10:00:00	2022-01-01 10:00:00
	8	9	151413547.jpg	10+ Beds House	1	2000	2500	Queen Bed	1	10+ Beds House	2	https://www.google.com/maps/@10.1000000,10.1000000,15z	One of the best houses for students. Fully furnished. Air conditioning. Close to the bus stop.	air conditioning, close to bus stop, fully furnished	shahyarnasirah31@gmail.com	shahyarnasirah31@gmail.com	0170000000	2022-01-01 10:00:00	2022-01-01 10:00:00
	9	10	1511388460.jpg	Smart House	1	3000	2500	Queen Bed	1	Smart House	2	https://www.google.com/maps/@10.1000000,10.1000000,15z	One of the best houses for students. Fully furnished. Air conditioning. Close to the bus stop.	air conditioning, close to bus stop, fully furnished	shahyarnasirah31@gmail.com	shahyarnasirah31@gmail.com	0170000000	2022-01-01 10:00:00	2022-01-01 10:00:00
	10	11	1511388461.jpg	10+ Beds House	1	2000	2500	Queen Bed	1	10+ Beds House	2	https://www.google.com/maps/@10.1000000,10.1000000,15z	One of the best houses for students. Fully furnished. Air conditioning. Close to the bus stop.	air conditioning, close to bus stop, fully furnished	shahyarnasirah31@gmail.com	shahyarnasirah31@gmail.com	0170000000	2022-01-01 10:00:00	2022-01-01 10:00:00
	11	12	1511388462.jpg	10+ Beds House	1	2000	2500	Queen Bed	1	10+ Beds House	2	https://www.google.com/maps/@10.1000000,10.1000000,15z	One of the best houses for students. Fully furnished. Air conditioning. Close to the bus stop.	air conditioning, close to bus stop, fully furnished	shahyarnasirah31@gmail.com	shahyarnasirah31@gmail.com	0170000000	2022-01-01 10:00:00	2022-01-01 10:00:00

Figure: 5.1.2: User and Admin Inputted Data Store

We can see how it works by an activity table content. Everything is sharp when we see a activity diagram. Our user activity diagram shows us how it works for a user in database. The user activity diagram was given below:

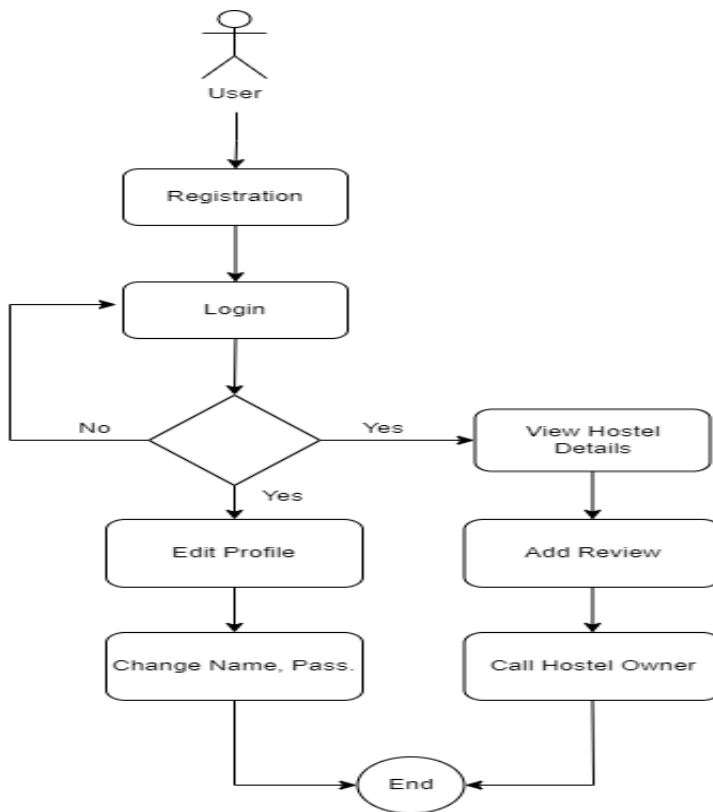


Figure: 5.1.3: Activity Diagram

5.2: Implementation of Front-end Design:

Designing intuitively and turning it into a fully functional (and responsive) web design is a combination of programming, math, and human interaction. First, we need to create a design layout and implement the code accordingly. A standard website has a header, section navigation, main content, sidebar, promo items, footer. Then we will arrange these things as we wish. Here the basic layout design is made with HTML. And JavaScript and CSS are used to make it beautiful. When designing a website, you have to take care of how to make the website beautiful. First, you have to fix the font design. Where the font will be big or small, where the font color will be, what will be the font style, these things have to be monitored. Then comes the UI. Fonts, images, videos, and other content must be designed together.

We have put the first login option on our website. Visitors will be able to take our service after logging in. We have beautifully decorated our hostels. First, give the name and location of each hostel. Below is a cover photo of a hostel. Below that, the hostel's price, short description, and last 2 button layouts have been used. The two buttons are details and view on map. If the visitor clicks on view on map, the address of the hostel will show on the map. Then clicking on the Details button will take him to another page. That page will contain the name, picture, and some details of the hostel. From there he can see the full details of the hostel. Below is a sample of the details of our hostel:

Hostel name: City Hostel

Hostel type: Girls Boys

Address: 29/B, East Raza bazar, Tejgaon, Dhaka

Manager's name: Md. Shahidul Islam

Contact number: 0175913****

Room type & rent: including meal without meal

Room Type: Single bed room Cost: 8000 bdt

Room Type: Double bed room Cost: 6800 bdt

Room Type: Tipple bed room Cost: 6000 bdt

Room Type: Quad bed room Cost: 5200 bdt

Room Type: Dining place seat Cost: 4500 bdt

Meal per day & Cost:

- Breakfast: X
- Lunch: X
- Dinner: X

Meal Menu:

Table 2: Hostel Meal menu

	Sat	Sun	Mon	Tue	Wed	Thu	Fri
Breakfast	Vaat, Daal, dim	Khichuri, Dim, chatni	Porota, sobji	Vaat, vorta, Daal	Porota, dim	Khichuri, sobji	Vaat, Daal, dim
Lunch	Vaat, mach, Daal	Vaat, sobji, chicken	Vaat, dim, daal	Vaat, vorta, mach	Vaat, Mach, Daal	Vaat, dim, daal	Polao, Beef/chicken, dim
Dinner	Vaat, sobji, dim	Vaat, dim, daal	Polao, chicken, sobji	Vaat, vorta, mach	Vaat, dim, daal	Vaat, sobji, chicken	Vaat, sobji, dim

That's all of our website design.

Details page output was given below:

The screenshot displays a user interface for a hostel listing. At the top, there is a navigation bar with 'Home', 'About', and 'Contact us' links, alongside 'Submit Property' and 'Go To Dashboard' buttons. The main content area is divided into several sections: a header for 'CM Student Hostel' (For Boys) at '16A Green Road, Framgate'; a 'Room Type & Rent' section showing 'Quad Bed' for BDT 3300, with options for 'With Meal' and 'Without Meal'; a 'Detail & Features' section listing 'Bed Type: Quad Bed', 'Bathrooms: 1', and 'Hostel Type: For Boys'; a 'Description' section with placeholder text; and an 'Amenities' section listing 'Bedding', 'Internet', 'Balcony', and 'WiFi'. On the right side, there is a contact form for 'Rifat' (01700000000) with fields for 'Email' and 'Phone No.', and a 'Send Message' button. Below the form is a 'Featured Hostel' section showing 'Azimpur Student Hostel' for rent at BDT 3500.

Figure: 5.2.1: Details Output 1

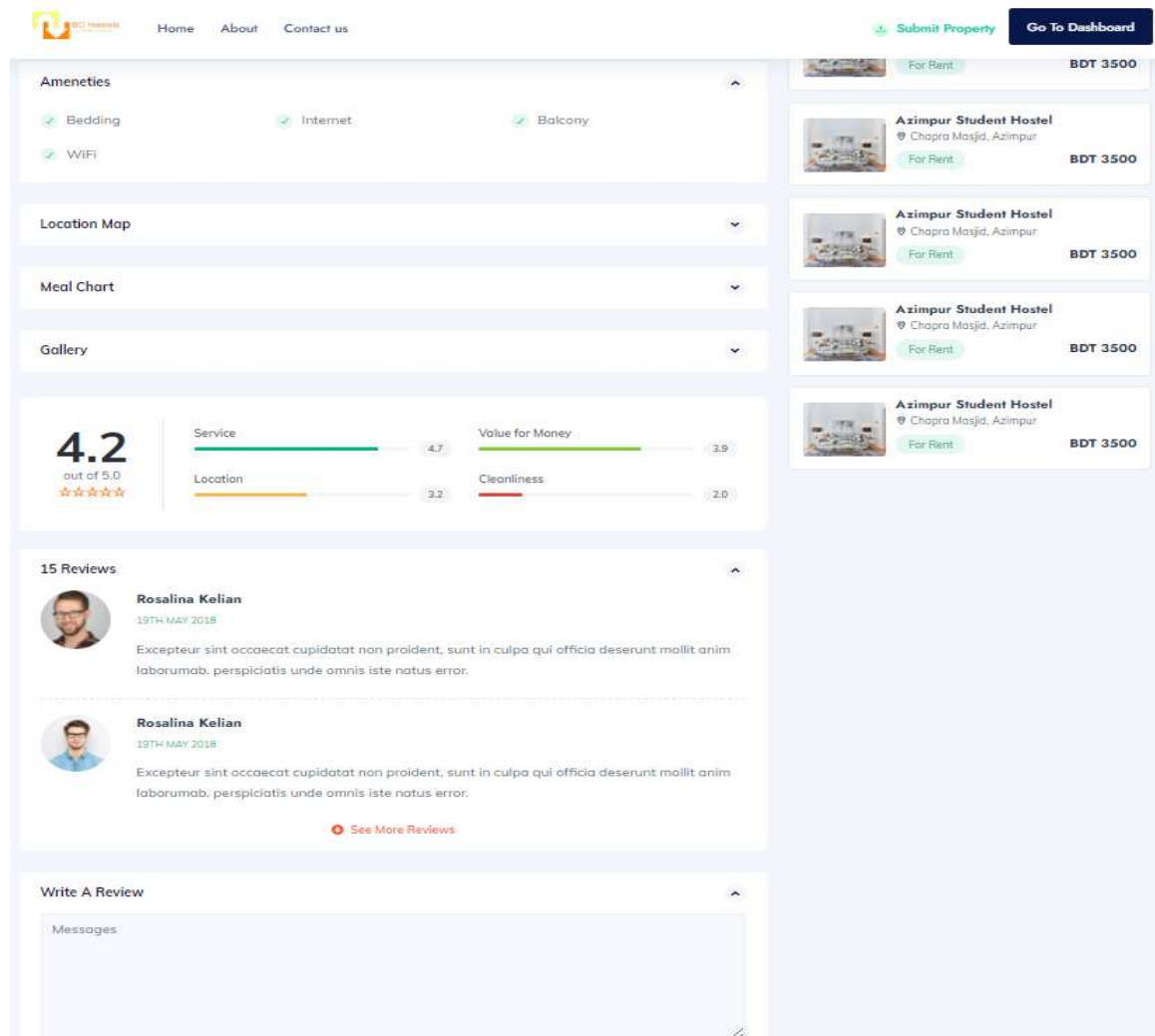


Figure: 5.2.2: Details Output 2

5.3: Testing Implementation:

Having a website is not enough. Organizations need to develop informative, accessible, and user-friendly websites. To maintain all these characteristics, your website must be properly tested, and this process of testing your website is called web testing. Web testing is a software testing practice to test websites or web applications for potential errors. This is a comprehensive test of web applications before they go live. A web-based system must be fully verified from start to finish before bringing it online to the end user. By performing a site audit, an organization can ensure that the web system is functioning properly and can be accepted by users in real time. User interface design

and functionality are keywords in website testing. Here are the essential things of website testing:

1. Functionality Testing
2. Web Interface Testing
3. Web Compatibility Testing
4. Web Performance Testing
5. Web Security Testing

There is also another testing for web browser. Which is Cross Browser Testing. Cross Browser Testing allows you to make any web experience perfect, on any browser or mobile device with their cloud-based real device lab. There is also another browser test named Load Ninja. Load Ninja allows you to test your web application loading with real browsers at scale, using test scripts that can be played back immediately after recording, generating browser-based performance data actionable to isolate problems and debug in real time.

Functionality testing is mainly Audit - all links in web pages, database connections, forms used to submit or obtain user information in web pages, check cookies, etc. Cookie testing, database testing, valid HTML/CSS testing, internal link testing, external link testing, mail link testing, broken link testing, failed validation testing, error message for wrong input also a part of web testing. Web testing is a huge part. It takes a lot of time to test each part here. If a test is missed, the visitor can see the fault. After publishing the website and testing is run. Many faults can only be identified by the visitor. There is no substitute for testing to make every work on the website subtle. No website is published without testing. The website is later updated as per the requirements of the visitors. If the website is not updated from time to time, it will lag behind other websites. So, the testing implementation of the website is very important.

5.4 Test Result and Report:

We run tests on our website. We have done some testing. First, we did functionality testing on our website. Our website is fine with functionality testing. Here we have tested our web page connection, database connection, forms submitted, user information. All of this is fine on our webpage. If one of these does not work then the website cannot be published. These tests are very important. It is not possible to run a website if the test that is done in the first step is not correct.

The next thing that comes to mind is web interface testing. Here the interface of our webpage is tested. The interface is what we see after the website is opened. This basically refers to the design of our website. The more beautiful the interface, the more the user will like the website. If the interface is not nice, the website does not look nice. So, interface testing is much more important for the website.

This is followed by website compatibility testing. Here is a test of how much loading time a website has, how data is used, storage capacity, how much traffic it can hold. These issues are very important. If the loading time of the website is more, the visitor will be annoyed. Website loading time may also increase if storage capacity is reduced. In addition, if more visitors visit at the same time, a loading problem also occurs. All of this is tested when it comes to this step.

Web performance testing is done depending on the visitor. Here's a look at how a visitor's website is performing. The main thing is how much service the visitor can get. If a visitor does not come to his desired service website, then the website fails in the performance test.

After that, you have to do a web security test. This is a sensitive issue for the website. The chances of the website being hacked are much higher at the present time. Hacking a website means losing a website. Hacked sites can be returned and retrieved from time to time. However, if a website is hacked, all the information of the website user goes to the hacker. Hackers can do any bad thing with this information. In addition, the

hacking of the website has a great impact on the data of the website. So, web security is much more important. domain and hosting supplier now also provides web security.

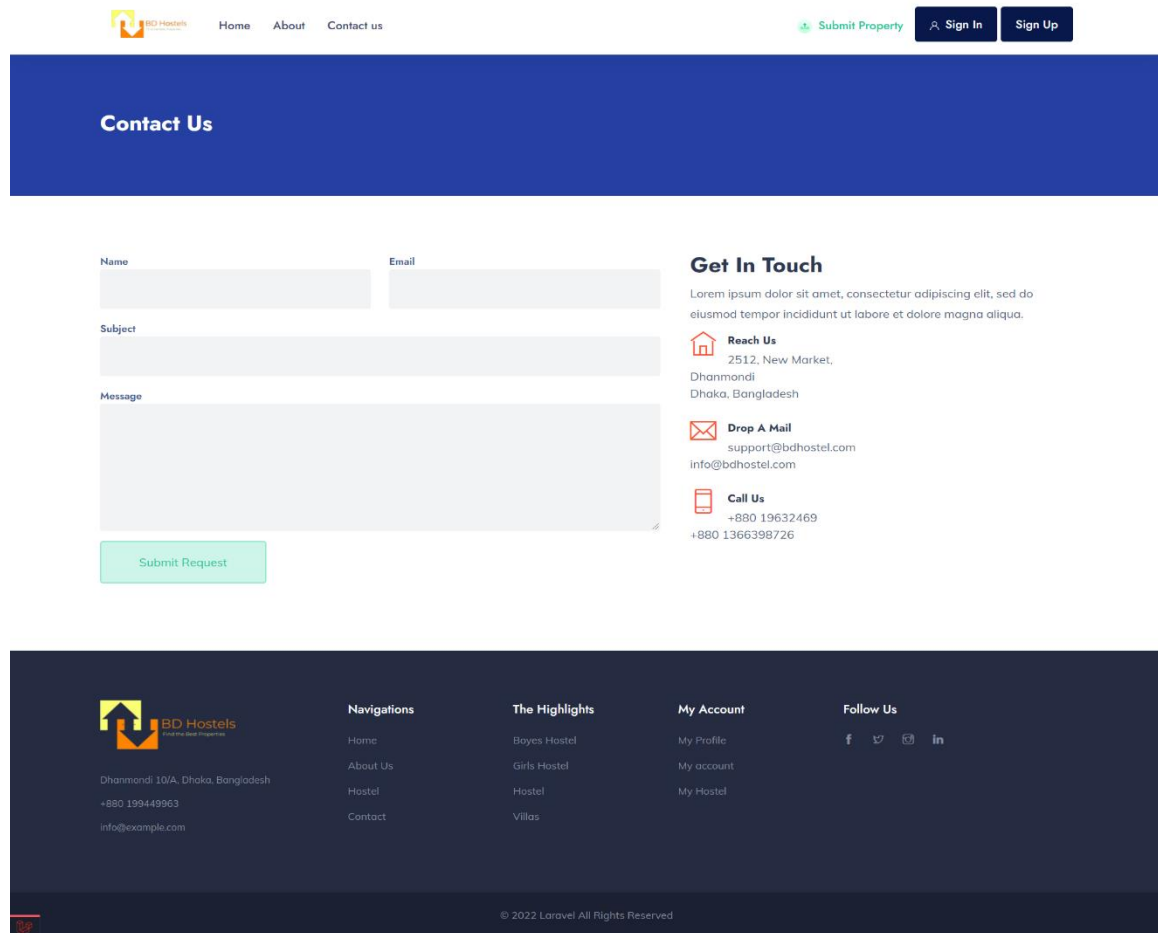
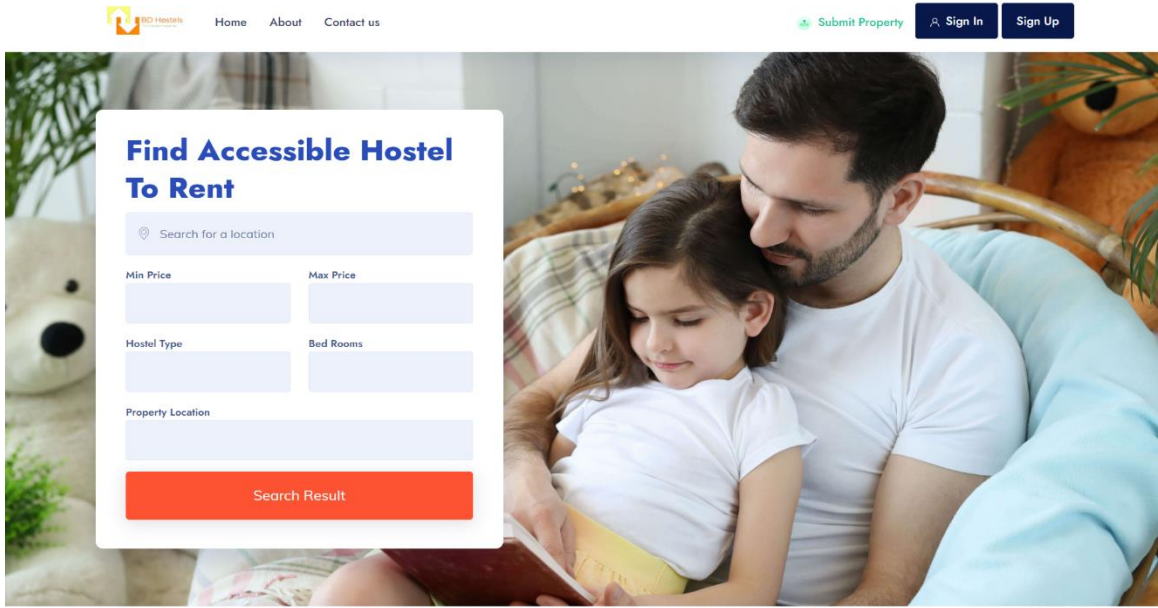
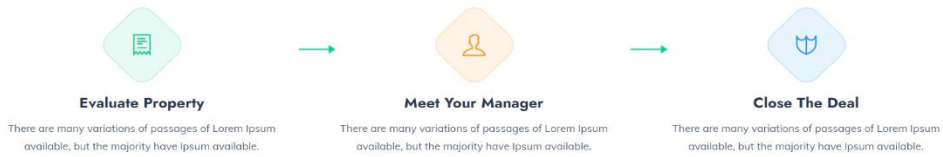


Figure: 5.4.1: Front-end, Contact us page.



How It Works?

At vero eos et accusamus et iusto odio dignissimos ducimus qui blanditiis praesentium voluptatum deleniti atque corrupti quos dolores



Explore Good Places

At vero eos et accusamus et iusto odio dignissimos ducimus qui blanditiis praesentium voluptatum deleniti atque corrupti quos dolores

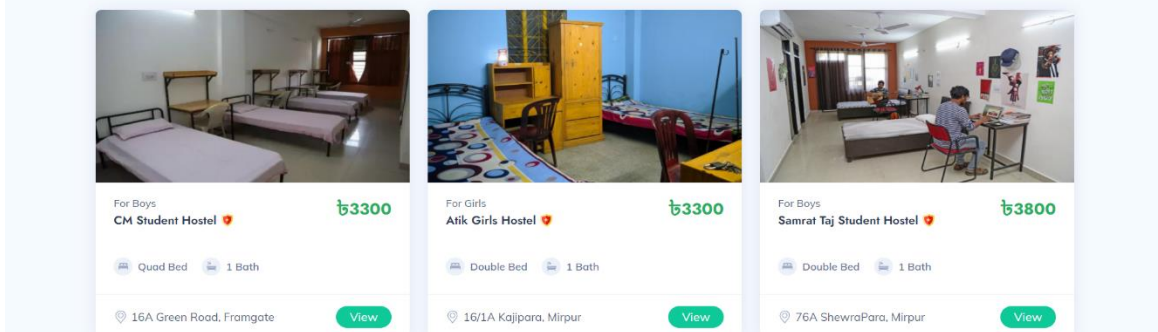


Figure: 5.4.2: Front-end, Home Page.

CHAPTER 6

Conclusion and Future Scope

6.1 Discussion and Conclusion:

1. Introduction: This chapter discusses what has been done, recommendations on the system's operations, the future scope of this system, and the conclusions that are to be made regarding the system's functioning in the current status and that of the future where some improvements are to be made on the system.
2. Summary: This project was aimed to improve the current Hostel booking/Reservation Systems by creating an online Hostel booking/reservation system that enables the client to book Hostel online. The existing Hostel reservation system was file-based where the client books the Hostel manually on ledger books. Online Hostel Management System enables users to locate, find the details about the hostel and reserve Hostel online through accessing it on web platform where client login then she/he starts the process of booking.

6.2 Recommendation:

- i. I believe that the system can effectively and efficiently display the Hostels are available, the location of hostel, rent & can allow clients/students to reserve a free hostel that available as like as his/her convenience place & rent.
- ii. I recommend that through making the web application more responsive the client will be able to reserve vehicles on mobile devices easier.
- iii. The researcher recommends that any module that are not captured in a proposed system will be included during the system upgrade due to the time factor.

6.3 Conclusion:

Online Hostel reservation device improves the present device due to the fact we're in a automated world. This new device is mandatory, it permits the consumer of the device (client, System administrator) to find & reserve Hostels on-line and this reduces the losing of time of the customers seeking out in which to go, growing the protection of the property. The advanced device has been efficiently deployed on a website. After connecting to the device via the Internet, a few feedbacks are found. This device`s workflow of the front-give up is consumer-pleasant and green sufficient to work. The device advanced with destiny improvement opportunities in consideration. The object-orientated method of this device lets in the addition of recent entities and methods, if you want to be beneficial to engage with current ones and to increase the functionalities. The builders of this device want to hold their involvement and contribution to this device for in addition improvement operation. Some new capabilities might be delivered quickly on this device. The builders of this device want to feature a Forum facility on this website, in which all of the registered customers.

6.4 Scope for Further Developments

In evaluation to preceding experiences, whilst each interest associated with the Hostel condo enterprise turned into confined to a bodily vicinity alone, the hostel condo enterprise has emerged with new delicacies. Even if the bodily place has now no longer been absolutely eliminated, the internet`s energy has altered the character of features and the way those duties are accomplished. Clients may also now find & e-book Hostels online, lease hostel rooms/seats online.

The gadget might be changed certainly to paintings on a huge network. This involves, quantity other, resolving used conflicts, protective database integrity, and making sure consistency of facts if its miles allotted throughout a couple of locations. Whereas those tasks will significantly lessen the charges that are the usage of not unusual place and reasonably-priced workplace gadgets like database and laptop applications. Can viable

to enhance this undertaking at the cell app version. In the cell app, customers can be capable of e-book Hostels via.

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