Residence For Students- A website for residence solution of students

BY

Mst. Habiba Sultana ID: 172-15-9921

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

Supervised By
Mr. Ahmed Al Marouf
Senior Lecturer
Department of CSE
Daffodil International University

Co-Supervised By **Shah Md. Tanvir Siddiquee**

Assistant Professor
Department of CSE
Daffodil International University



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APPROVAL

This Project titled "Residence For Students- A website for residence solution of students", submitted by Mst. Habiba Sultana, ID No: 172-15-9921 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 11 September 2021.

BOARD OF EXAMINERS

Dr. Touhid Bhuiyan Professor and Head

Department of CSE Faculty of Science & Information Technology Daffodil International University

Internal Examiner

Chairman

Nazmun Nessa Moon Assistant Professor

Azmoon

Department of Computer Science and Engineering Faculty of Science & Information Technology Daffodil International University

Internal Examiner

Gazi Zahirul Islam Assistant Professor

Department of Computer Science and Engineering Faculty of Science & Information Technology Daffodil International University

De Asia

External Examiner

Dr. Md Arshad Ali Associate Professor

Department of Computer Science and Engineering Hajee Mohammad Danesh Science and Technology University

DECLARATION

We hereby declare that, this project has been done by us under the supervision of **Mr. Ahmed Al Marouf, Senior Lecturer, Department of CSE** at 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

Supervised by:

Mr. Ahmed Al Marouf

Senior Lecturer Department of CSE Daffodil International University

Co-Supervised by:

Shah Md. Tanvir Siddiquee

Assistant Professor
Department of CSE
Daffodil International University

Submitted by:

Habiba

Mst. Habiba Sultana
ID: 172-15-9921
Department of CSE
Daffodil International University

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ABSTRACT

The development of Residence For Students is presented in this paper. Our Residence For Students application's main purpose is to provide housing for students in Dhaka City. This project is about locating various forms of housing. Finding a hostel online has recently been a common activity among a growing number of people. We must try new activities in order to develop our normal lifestyle. Our application for student residence was designed and developed using Notepad++ and PHP my admin. This is a project with the goal of creating a basic web application in which a customer can view various sorts of rooms and learn about the technology used to create such an application.

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CHAPTER: 01

Introduction

1.1 Introduction

At present time, people are advanced by technology. They are changing their life style. In few time they want to any work at short-curt. So, they are depends on technology. Before the people had booked the hostel manually. But now, if the people want, they can booking hostel from anywhere . Registration forms verification to other data saving processes are done manually and most at times, they are written on paper. Thus, a lot of repetitions can be avoided with an automated system. The drawbacks of existing systems lead to the design of a website system that will help reduce a lot of manual inputs. With this system in place, we can improve the efficiency of the system, thus overcome the drawbacks of the existing manual system. This system is designed in favor of the hostel management which helps them to save the records of the students about their rooms and other things This system gives an idea about how a student and fee details, room allocation, mess expenditure is maintained in a better way.

1.2 Motivation

It is an online service platform where the system owner (administrator) can upload information and photographs about his rooms. The client or user can also contact the administrator who posted the room. The software allows users to book new hostel rooms. The method makes it easier for students to get to and from the hostel. This project also maintains track of the hostellers and students who have applied. Controller is in charge of it. He'll be in charge of the administration.

By providing an online application for hostel, automatically selecting students from the waiting list, mess calculation, complaint registration, and notice board, this document aims to reduce human effort and make hostel allocation easier for students and hostel administrators.

1.3 Objectives

- To conveniently keep and manage hostel details.
- To avoid complication and save time when processing data.
- Provide data access to users and students in accordance with their responsibilities and levels.
- To cut down on material costs
- Indicate the availability of rooms as well as their location.
- Confirm the booking if the guest is satisfied with the room location.
- That will save time
- For error-free, effective, and simple database-related work
- For the program's security and smooth operation

1.4 Expected Outcome

- It will monitor all of the services, rooms, students, and so on.
- It will handle the information of the room, student, and hostel.
- It will display the information and description of the hostel, bed.

- Improved editing, adding, and updating of records
- Keeps all student registration records

1.5 Report Layout

In this chapter 1, I have discussed about my project introduction. I discussed about my project motivation, o • It will monitor all of the services, rooms, students, and so on. • objective and fields of my work. In chapter 2, I will discuss about background. In chapter 3, I will discuss about requirement specification. In chapter 4, I will discuss about database designed. In chapter 5, I will describe about design specification, chapter 6 contains implementation and testing. In chapter 7 I will describe about impact on society, environment and sustainability and finally conclusion and future scope will be discussed in chapter 8.

CHAPTER 2

BACKGROUND

2.1 Preliminaries/Terminologies

Our Residence For Students application's purpose is to give a variety of housing options for students. This project aims to locate several types of dorms in Dhaka. Finding a hostel on the internet has been increasingly popular in recent years. Our application for Student Residence was implemented with the help of a website that was designed and developed. This is a project that aims to construct a basic web application in which a client can examine various types of rooms and learn about the technology that was used to make it.

2.2 Related works

My intention was to help students in some way. Once I think about our residence throughout our student years, it reminds me of hostel life. It was quite tough to find a hostel. As a result, I wanted to make our day-to-day duties easier to manage. My application is entirely focused on students, and through my website, I've attempted to assist students in Dhaka City in finding hostels quickly.

2.3 Comparative Studies

I was thinking about doing something for those students who come from outside of Dhaka and have a hard time finding a hostel before I made this application. As a result, I decided to assist them through my website. They can quickly discover an appropriate and comfy place to stay during their hostel stay by using this program.

2.4 Scope of the Problem

Following the software development process, I worked on the application. I went through each section after finishing the preceding one. The application was designed to take more than two weeks to collect requirements and a large amount of data. The next page contains the application planning and time management schedule.

2.4.1 Time Scheduling

Gantt Chart:

Task/Date	Start Date	End Date	Status	June	July	October	February	August
Proposal	27-06-2020	14-08-2021	Compete					
Requirements	30-06-2020	14-07-2020	Compete					
Design	20-07-2020	19-10-2020	Compete					
Implementation	21-10-2020	29-12-2020	Compete					
Testing	02-12-2020	30-02-2021	Compete					
Documentation	01-02-2021	14-08-2021	Compete					

Table 1: Gantt Chart

2.5 Challenges

The most difficult part of my project development phase was determining the needs of the students and putting them into practice through an application.

CHAPTER 3

REQUIREMENT SPECIFICATION

3.1 Business Process Modeling

Process to develop this application I had to design how I will approach towards my plan. First I have to create a flowchart, use case model and data flow diagram which will help us to execute the project step by step.

3.2 Requirement Collection and Analysis

Software Requirements To Develop this application I have used following Software Requirements:

• Operating System: Windows 10

• Project Platform: HTML, CSS, Bootstrap

• Programming Language: HTML, CSS, JavaScript, PHP

Database: MySQLIDE Tool : Notepad++

• Project Type : Web Application

3.3Methodology Development Model (Waterfall Model)

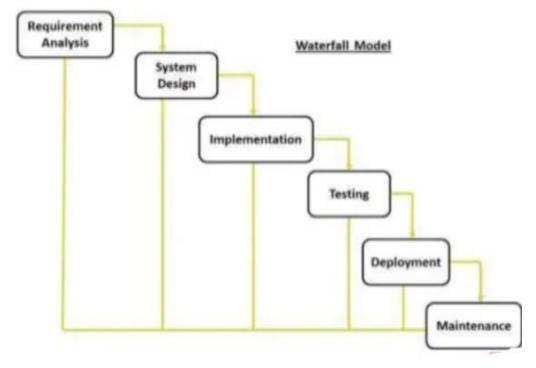


Figure 1: Methodology Development Model (Waterfall Model)

3.4.1 Use Case Modeling and Description: Login

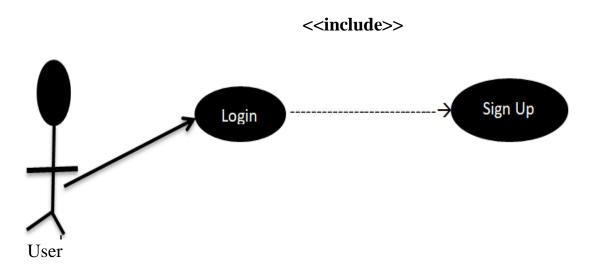


Figure 2: Use Case Modeling and Description: Login

3.4.2 Use Case Modeling and Description: After Login

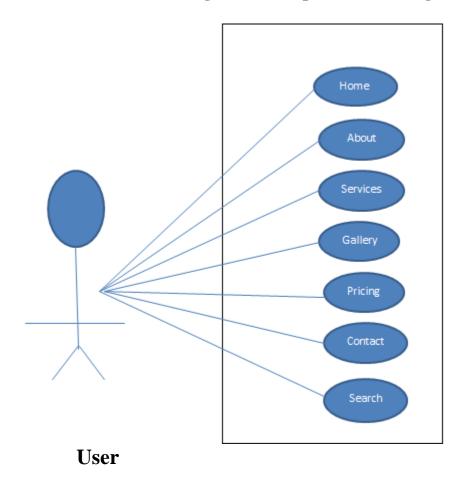


Figure 3: Use Case Modeling and Description: After Login

3.4.3 Use Case Modeling and Description: Sign Up or Registration System

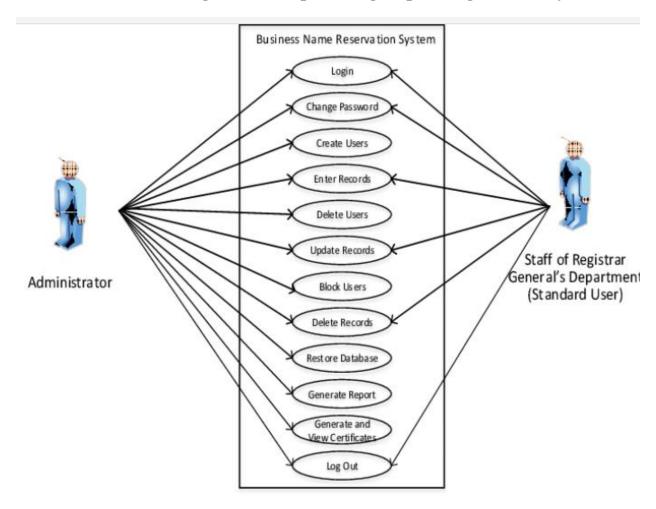


Figure 4: Use Case Modeling and Description: Sign Up or Registration System

Actor Perspective Use Case: Normal user (Sign UP)

Table 02: Use Case of normal user (Sign Up)

Use Case name:	Sign up		
Scenario:	Sign Up system for normal user.		
Brief Description:	For using this system, a normal user has to Sign Up with valid email, phone number and other valid information. Without Sign Up normal user would not be able to use this system.		
Actor:	Normal user Normal user must need to Sign Up at first.		
Post Condition:	Normal user must be Sign Up.		
Follow of Events	Normal user	. System	
	Normal user must Sign Up	Ensure valid phone number. Ensure valid email address .Ensure correct address	
Exception Condition	Without valid email and phone number a person could not signup.		

Actor Perspective Use Case: Admin and registered user (Login)

Table 03: Use Case of Admin and Sign Up user (login)

Use Case Name:	Login			
Scenario:	Admin and registered user login system.			
Brief Description:	Admin and register user can login with valid email and password.			
Actor:	Admin and registered user.			
Precondition:	For using the system Admin and registered user have to login first.			
Post Condition:	Without login Admin and registered user would not be able to access the system.			
Flow of Events:	Admin and registered user	System		
	Without valid user name and password admin and user cannot login into the system.	Finalize valid user name. Finalize the valid password		
Exception Condition:	Without valid user name and password admin a system.	and user cannot login into the		

Actor perspective Use Case: admin (Post rooms)

Table 04: Use case of admin (post rooms)

Use Case Name:	Post rooms		
Scenario:	Post a room.		
Brief Description:	Admin can post their rooms with photos and description.		
Actor:	admin.		
Precondition:	Write about the room.		
Post Condition:	Should add a picture with the room.		
Flow of Events:	admin	Process	
	1. To post a room admin have to add a picture with the description.	1. Ensure the correction.	
Exception Condition:	Without adding picture user cannot post room.	1	

Actor perspective Use Case: Sign Up user (Phone or Email)

Table 05: Use Case of register user (Phone or Email)

Use Case Name	Phone or Email
Scenario	Sign Up user can communication with admin by phone or email
Actor	Sign Up user
Pre-condition	Without login the system cannot send mail or contact phone
Post-condition	For communication with admin
Flow of events	After login user can send email or contact phone
Exception condition	Sign UP user can send mail to admin

3.5 Entity Relationship Diagram (ER Diagrams)

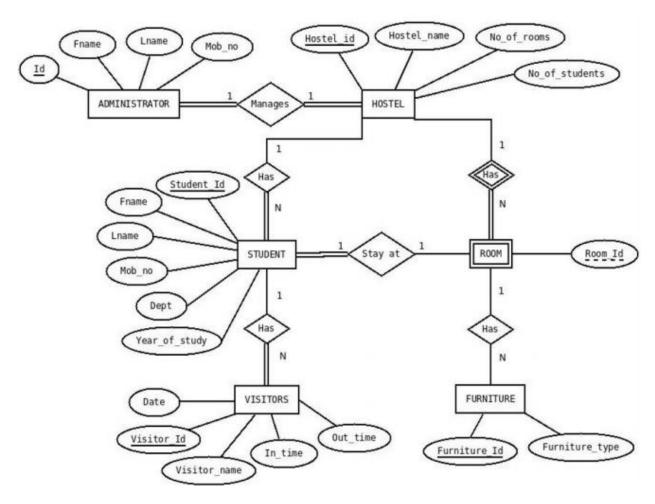


Figure 5: Entity Relationship Diagram (ER Diagrams)

3.6 System Sequence Diagram

3.6.1 Actor Perspective Sequence Diagram (admin):

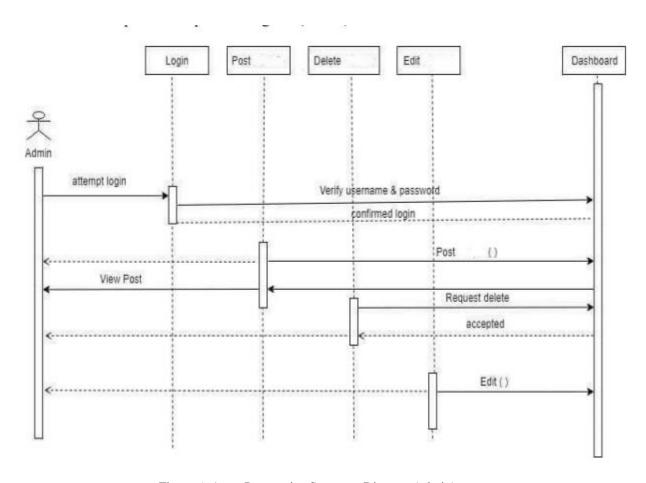


Figure 6: Actor Perspective Sequence Diagram (admin)

3.6.2 Actor Perspective Sequence Diagram: (Normal user)

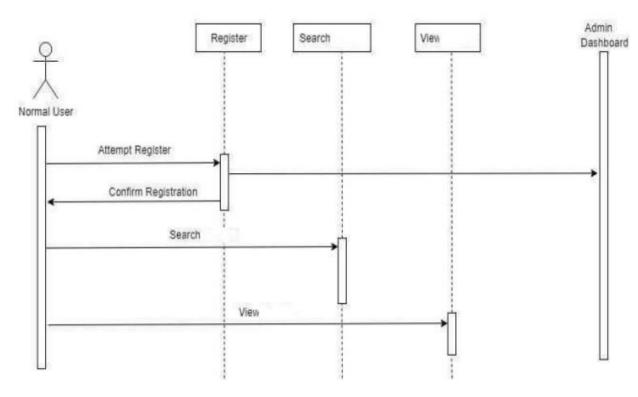


Figure 7: Actor Perspective Sequence Diagram: (Normal user)

3.7 Activity Diagram

Activity Diagram for booking room in Residence

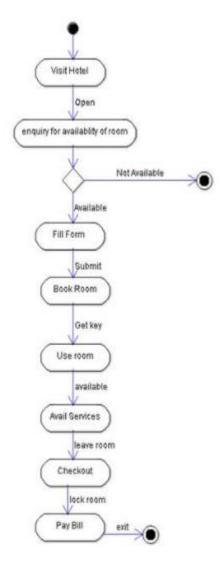


Figure 8: Activity Diagram

CHAPTER 4

DATABASE DESIGNED

4.1 Database: Residence Structure

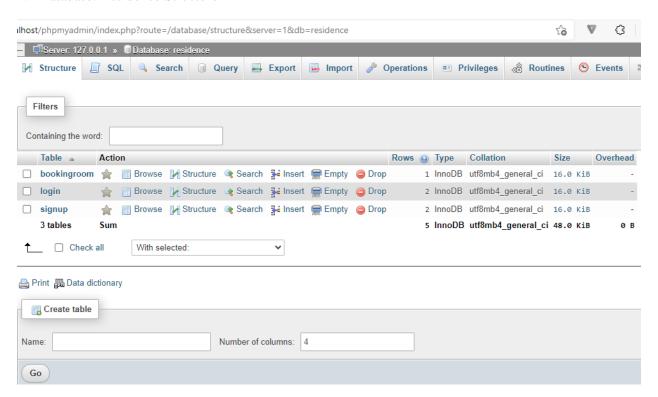
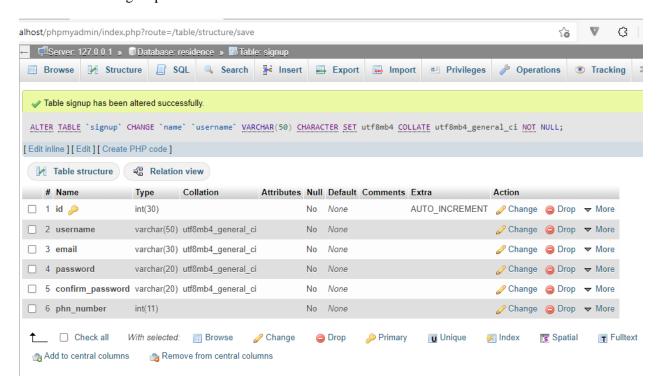
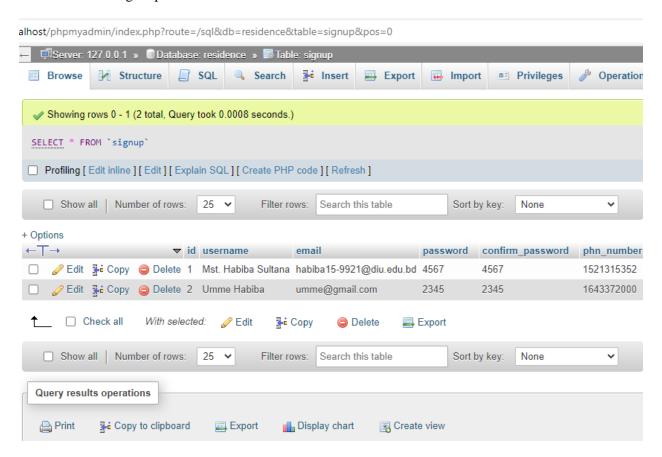


Figure 9: Database: Residence Structure

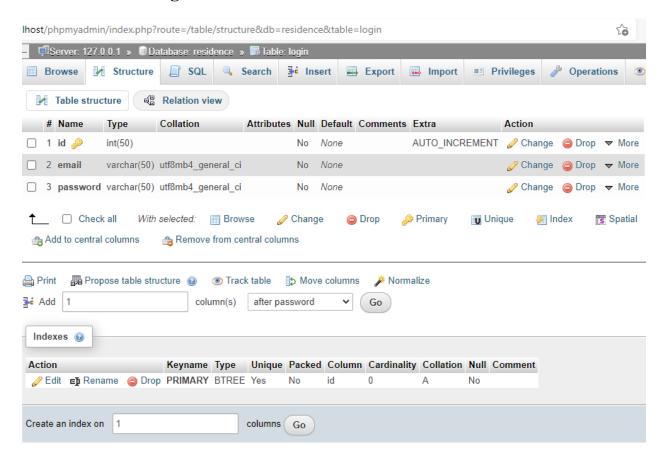
4.2.1 Database: Sign Up Pert 1



4.2.2 Database: Sign Up Pert 2

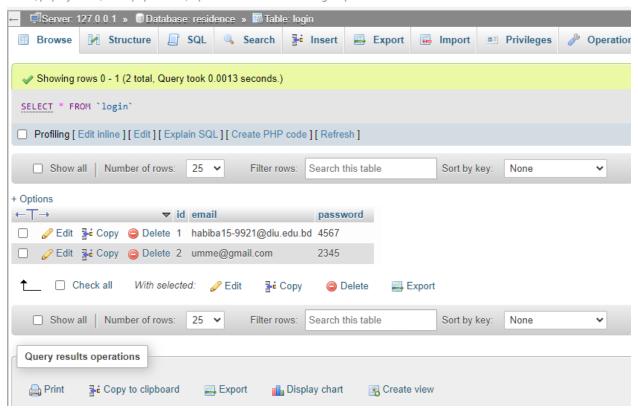


4.3.1 Database: Login Pert 1

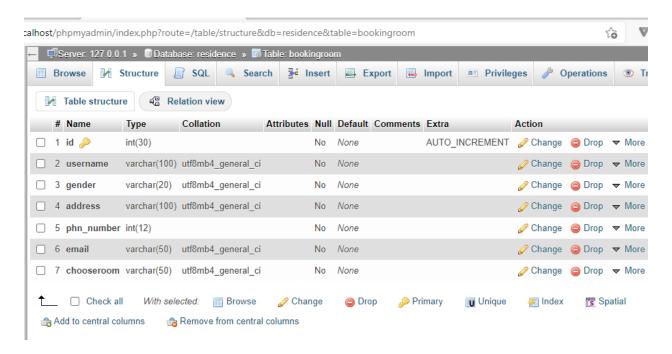


4.3.2 Database: Login Pert 2

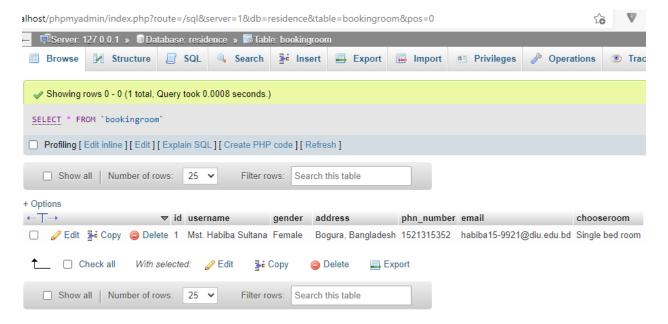
alhost/phpmyadmin/index.php?route=/sql&db=residence&table=login&pos=0



4.4.1 Database: Room booking Pert 1



4.4.2 Database: Room booking Pert 2



CHAPTER 5

DESIGN SPECIFICATION

5.1 Front-end Design

Front-end Design is the main attraction of an application. It also should be user friendly. Our application we designed a beautiful front end design. We also tried to design user friendly. In front end design, my application belongs with below screens.

- Home Page screen
- Sign Up Screen
- Login Screen
- About Screen
- Services Screen
- Gallery Screen
- Pricing Screen
- File upload Screen
- Room Details Screen
- Apply for Room Screen
- Contact Screen
- Search Screen

5.2 Interaction Design and User Experience (UX)

Interaction Design is most important part of user Experience design. An application fruition depends on User satisfaction. How an application is more attractive to the user mostly depends on interaction and Design part. In my application, we used the useful model of interactive design.

5.3 Implementation Requirements

Implementation Requirement is given below:

- 1) Web application
- 2) Html, CSS, Java Script, Bootstrap, Php language knowledge
- 3) Knowledge on My SQL.

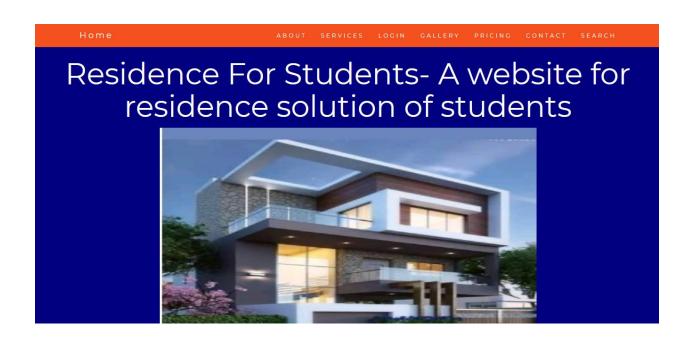
CHAPTER 6

IMPLEMENTATION AND TESTING

6.1 Implementation of Database

The implementation phase is where developer installs the Database Management System on the required hardware, optimize the database to run best on that hardware and software platform, create database and load data. The initial data could be either new data captured directly or existing data import from DBMS. Developer can establish database security and give access to authorized users. At this moment I used Mozila Firefox database & MySQL database.

6.2 Implementation of Front-end Design



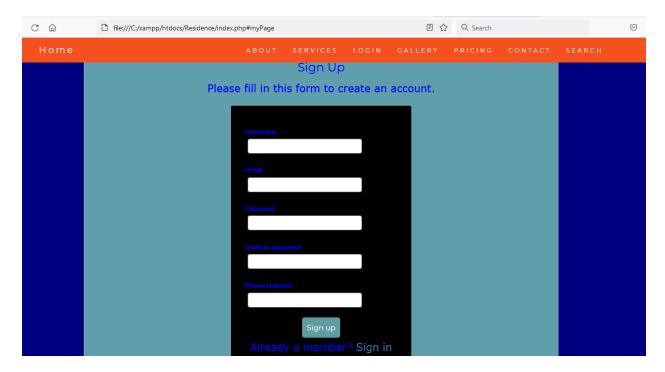
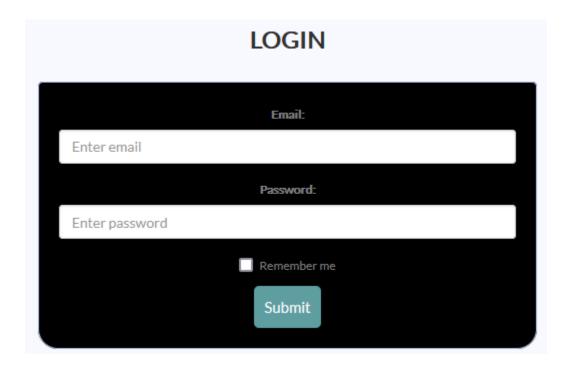
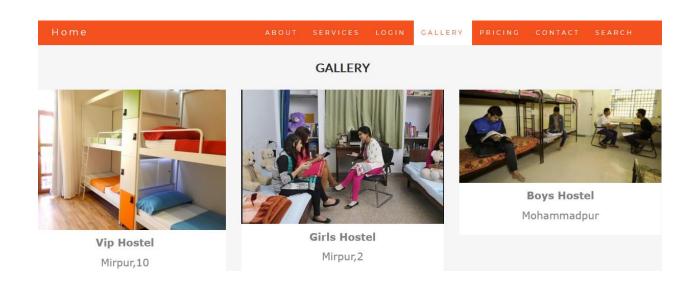
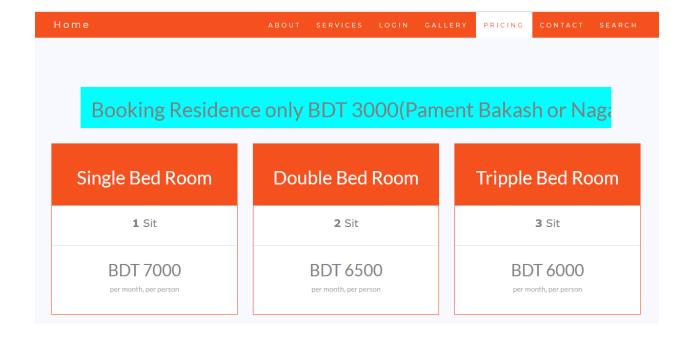


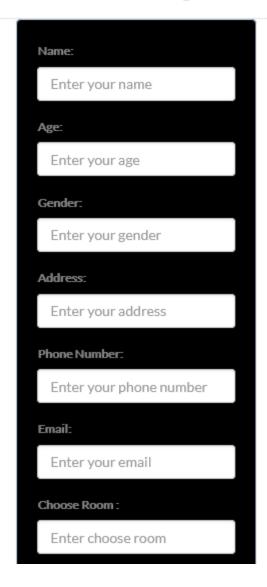
Figure 10: Implementation of Front-end Design

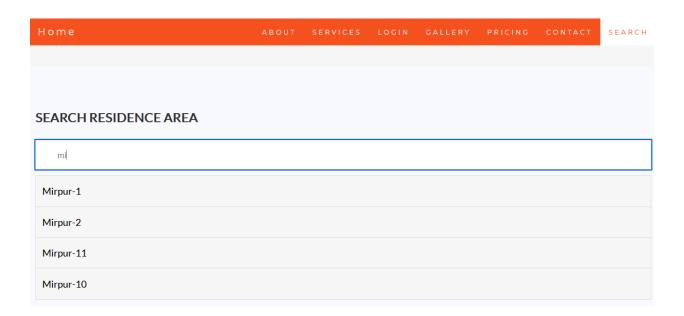






Residence Booking Form





6.3 Implementation of Interactions

The most crucial aspect of a system is interaction implementation. When users switch from one module to another, this is referred to as interaction. At the time, this program only has one type of user, hence there is no way to interrupt values. To make this project a success, I tried to provide a decent user experience. An application will be successful if its users find it useful and have a positive experience with it. My expectations would skyrocket from there.

6.4 Testing Implementation

The concept "test implementation" refers to the process of putting a system in place and testing it using a specific method.

I have tested system several times. Sign Up, Login, Complain, Room Checking, tests on several times. I have tested following factors:

- Sign Up system
- Login System

- Apply for Hostel
- Check Available Rooms

6.5 Test Result and Report

Test Cases

Test Case: 01

Table 6: Test Case-01

Test Case #: 01	Test Case Name: Signup
System: Residence for Students	Subsystem: N/A
Designed By: Mst. Habiba Sultana	Design Date: 12-05-21
Executed By: Mst. Habiba Sultana	Execution date: 7-06-21

Pre-Condition: The individuals must be Sign Up if they want to use the system.

Step	Action	Expected System Response	Pass/Fail	Comment

Step	Action	Expected System	Pass/Fail	Comment
		Response		

1.	If a user does not fill up the form, then the signup process will not be completed.	All requirements should be fulfilled on the field.	Pass	All requirements should be fulfilled on the field.
2.	If the user clicks only the signup button without filling the required fields, then the process will not be completed.	All the required fields must be filled up.	Pass	All the required fields must be filled up.
3.	If the user enters invalid email addresses like ABC.com then it becomes unacceptable.	The system should be given an error message with invalid inputs.	Pass	Invalid email address.
4.	The user is expected to enter valid email address as ABC@gmail.com.	This type of email should be considered as valid email.	Pass	Valid email address.
5.	The user is expected to enter valid name and phone number.	The phone number field must be displayed by the system.	Pass	The phone number field must be a number field.
6.	The password and Confirmation password field is required by the user.	The system should display the password and confirmation password field.	Pass	Password and confirmation password must be required
7.	The password and confirmation password must be matched.	If the user does not give the same password in the fields, then the system will show error.	Pass	The both passwords must be same.
8.	The user is allowed to combine any kind of password characters.	It is accepted as a valid password by the system.	Pass	The registration process will be completed.
9.	The user must fill the required fields with valid information or query.	The system will allow as it is registered and show the home page.	Pass	The registration process will be completed.

Test Case: 02

Table 7 Test Case-02

Test Case #: 01	Test Case Name: Login
System: Residence for Students	Subsystem: N/A
Designed By: Mst. Habiba Sultana	Design Date :01-05-21
Executed By: Mst. Habiba Sultana	Design Date :01-06-21

Pre-Condition: Must be signed up for access to his/her account.

Step	Action	Expected System	Pass/Fail	Comment
		Response		
1.	Entering email without password.	A message is displayed by the system as "password is required"	Pass	Password is required.
2.	Entering password without email.	System requires the field of email.	Pass	System requires the field of email.
3.	If sign in button is clicked without filling the email password field.	The system requires email and password fields.	Pass	The system requires email and password fields.
4.	If a user enters invalid email and password.	"Invalid login attempts" will be displayed.	Pass	Invalid login attempts.
5.	If the user enters valid email and password.	The account will be accessed by the system successfully and will	Pass	The account will be accessed by the system successfully and will be

	be redirected to the	redirected to the login
	login page.	page.

Test Case: 03

Table 8: Test Case-03

Test Case #: 01	Test Case #: 01
System: Residence for Students	Subsystem: N/A
Designed By: Mst. Habiba Sultana	Design Date: 01-05-21
Executed By: : Mst. Habiba Sultana	Execution date:05-06-21

Pre-Condition: Must be added product pictures, user phone number, product quantity

Step	Action	Expected System	Pass/Fail	Comment
		Response		
1.	If the user fills the field without title name.	The field is required	Pass	The field is requiring.
2.	If a user confirms any field without	The required field	Pass	The required field
2.	filling any information.	must be filled.	rass	must be filled.
3.	If the user posts room without picture.	The system will not accept the post.	Pass	The post will be rejected.
4	If the user post without valid description of the room.	The admin will not approve the post.	Pass	The post will not be approved.

CHAPTER 7

Impact on Society, Environment and Sustainability

7.1 Impact on Students

Students may simply discover a good hostel to live in by using this program. They will have a lot of options to pick from. This will help them save time. They can also find a hostel within their price range. The website is user-friendly, allowing students to use it with ease.

7.2 Limitations

In most projects a project management methodology is essential however experience shows that it is never enough, that there is always another dimension that means "managing" and thus have some limitations. The limitations of my project are given below.

- 1. The unregistered user cannot post any room in the system.
- 2. The registered user cannot delete their account without the permission of Admin.
- 3. The registered user can not block each other in the system.

7.3 Obstacles & Achievements

The more time we have to focus on adding specific logic, the more time we'll have to fix the problems that will inevitably come during the website development process. It is a popular, cost-free, and effective competitor

CHAPTER 8

CONCLUSION AND FUTURE SCOPE

8.1 Discussion and Conclusion

For our application we can solve the issue which are existing in the previous time. By this application a lot of hostel will connect with website. Then we will get easily searching hostel.

8.2 Scope of Further Development

My application's objective has been to link individuals to share, exchange, and interact with information for the majority of the internet's history. We shall highlight the concept of interstate and standards organizations as we create the internet of action through this management system by the types of rooms they share make decisions experiences and the brought savings of human aims and values that enable each other to peruse. The next is the proper choice of my proposal: People will receive various types of video of rooms at actual hostels. Fake accounts can be rejected by the administrator.

References

- [1] https://www.researchgate.net/figure/Use-Case-Diagram-for-Registration-System_fig7_260617389
- [2] https://www.slideshare.net/hiraakram11/presentation-of-hostel-management-system-srs [Waterfall Model]
- [3] https://code-projects.org/hostel-management-system-project-in-php-css-javascript-and-mysql-free-download/? cf chl managed tk =pmd 974070dd7a2cd978d47451a3f2802ae1799ebbb5
 1629025154-0-gqNtZGzNAyKjcnBszQj6 [ER Diagram]
- [4] https://umlatthemr.blogspot.com/2017/04/hotel-management-system-tasks-we-have.html [Activity Diagram]

Appendices

May include any supporting material which is not essential for the main body of the report These could be:

- Questionnaire designed for use
- Completed questionnaires received
- Details of requirements
- User evaluation of the system I developed
- User manual/guide
- Test plans and results
- Project plans
- Tables of contents
- Diagrams

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