

2023-01-24

# An Undergraduate Internship/Project on Topic Customer service portal (website)

HASAN, MD RAKIBUL

Independent University, Bangladesh

---

---

<https://ar.iub.edu.bd/handle/11348/729>

*Downloaded from IUB Academic Repository*



# **An Undergraduate Internship/Project on Topic Customer service portal (website)**

By **MD RAKIBUL HASAN**

Student ID: **1730174**

**Autumn, 2022**

Supervisor:

**Mr. Md Abu Sayed**

**Lecturer**

Department of Computer Science & Engineering

Independent University, Bangladesh

**January 24, 2023**

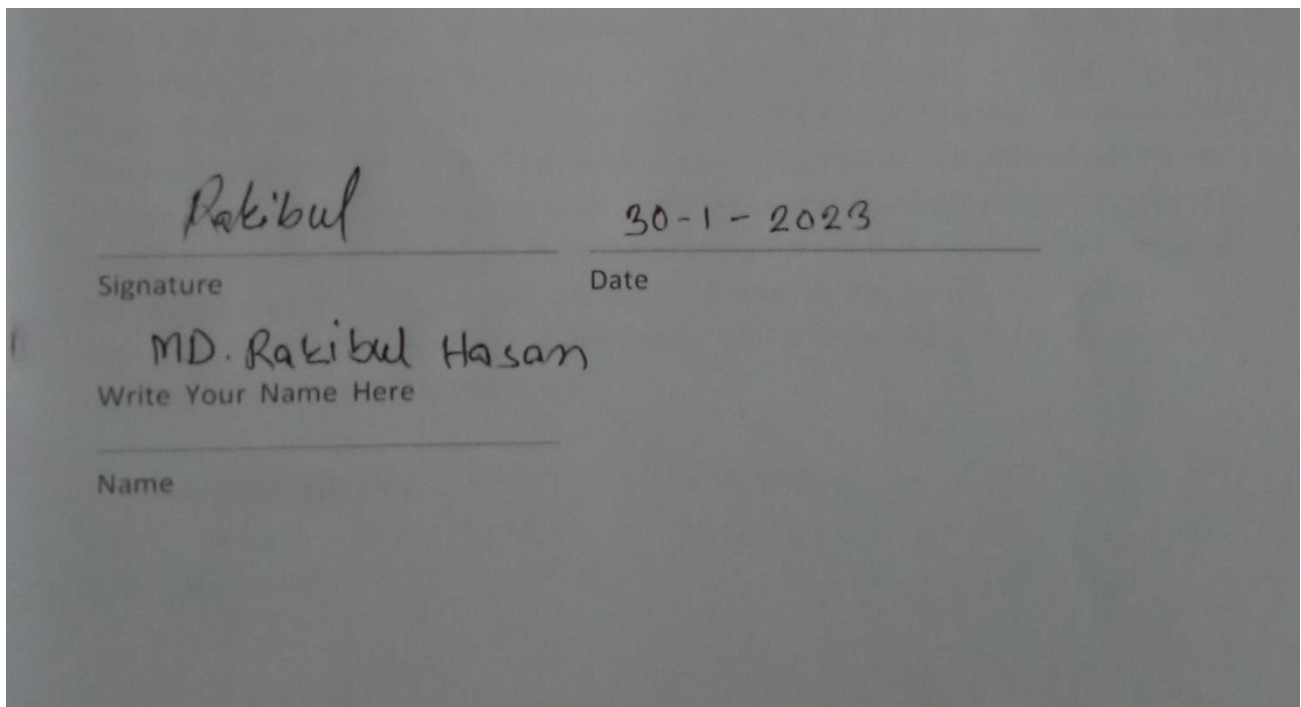
**Dissertation submitted in partial fulfillment for the degree of Bachelor of  
Science in Computer Science**

**Department of Computer Science & Engineering**

**Independent University, Bangladesh**

# Attestation

This is to authenticate that I am MD RAKIBUL HASAN have completed the report titled” Customer service portal (website)” and submitted it in partial fulfillment of the requirement for the Degree of Computer Science and Engineering from Independent University, Bangladesh. It has been completed under the guidance of my university supervisor Md Abu Sayed and company supervisor Mrs. Dina Mostafa who is the AGM of BASHUNDHARA IT Department. This work has not been submitted as a project to this university previously, neither has it been submitted to any other institution. All the sources of information used in this Project Report has been properly acknowledged in it.



The image shows a form with handwritten entries. At the top left, the word "Rakibul" is written in cursive. To its right, the date "30-1-2023" is written. Below these, there are two horizontal lines. Under the first line, the word "Signature" is printed. Under the second line, the word "Date" is printed. Below the "Signature" line, the name "MD. Rakibul Hasan" is written in cursive. Below the "Date" line, the name "MD. Rakibul Hasan" is written in cursive. Below the name, the text "Write Your Name Here" is printed. At the bottom left, the word "Name" is printed.

# Acknowledgement

First and foremost, I would like to express my heartfelt appreciation to Almighty Allah, who provided me with the drive and strength to work hard during my internship because of His mercy and grace. I would like to express my gratitude to the Faculty of Computer Science and Engineering department to keep internship credit in the curriculum of the graduation program and give me a scope of tasting the flavor of industry-oriented tasks and the field of work with my interest. I would like to thank specially to my supervisor Mr. Abu Sayed, lecturer, Department of Computer Science and Engineering, Independent University, Bangladesh who encouraged and directed me with his continuous guidance, invaluable instructions, stimulating suggestions and thoughtful advice during pursuing this internship and preparation of this report.

Also, I want to show my deepest gratitude to Tuhin Ahmed (senior officer) and special thanks to my supervisor at Bashundhara IT who gave me guidance, advice and motivation to work hard; for which I will be forever grateful. My internship at Bashundhara Group gave me the opportunity to work with the web development there who trusted me with them to work in such a big project and initially guided me towards how the company deals with web design and developing and the type of engineering knowledge required in this field. The guidance that I received will give me the opportunity to work for this company full time in the future. Last but not the least, I would like to thank my parents, other family members and friends for their constant support and encouragement.

**MD RAKIBUL HASAN**

24th January 2023

Dhaka, Bangladesh

# Letter of Transmittal

24 January, 2023

Md Abu Sayed Lecturer

School of Computer Science and Engineering

Independent University, Bangladesh Subject: Submission of Internship Report

Dear Sir,

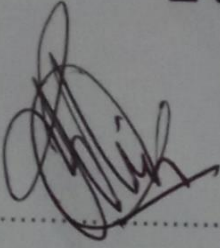
It is with a great pleasure that I am presenting the internship report on the project "Customer service portal (website)". In Bashundhara Housing they are launching a new website for their company. I was involved in this project for the completion of my Bachelors Computer Science and Engineering Degree. I am happy to inform you that I have successfully completed my internship for 14 weeks at Bashundhara group under the supervision of Dina who is the AGM at engineer IT of Bashundhara GROUP. This project gave me an opportunity to apply the theoretical knowledge gain at my University to Practical knowledge.

I am hoping that this report will be interesting, unique and informative. I also hope that this meets your expectations. I have tried my best to avoid my mistakes and deficiencies and hope that this report will satisfy you. I would like to end by thanking you again for helping me and giving me the chance to submit this report to you.

Sincerely,

MD RAKIBUL HASAN

# Evaluation Committee



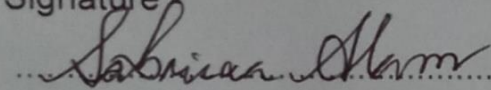
Signature

Rubayed Mehedi

Name

Internal Examiner-1 / Panel Member-1

Signature

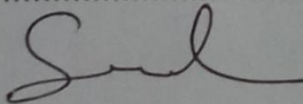


Name

Sabrinaa Alam

External Examiner-2 / Panel Member-2

Signature

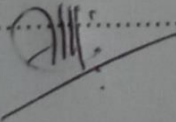


Name

Md Abu Sayed

Supervisor of the intern

Signature



Name

Head, Department of Computer Science & Engineering

# Abstract

In this report, I have shared my experience of three and a half months of internship Worked at Bashundhara Group. I have included all the steps I took that helped Some are short and some are concise to get my point across. I listed all my skills received during this period. Duties I must fulfill, the progress I made with my team and how I completed the tasks I was given. As an intern, I worked with Hard working group also. In the early period of my internship, most of the material was unknown to me because I did not have it formal expertise in e-commerce, I was recommended by Bashundhara IT Providing opportunities for professional growth and contact with the web developing, Something I can use in the future.

The report also discusses the obstacles I faced as a result of my new environment How do I deal with them? During the training, I got to know the techniques used During the implementation phase, I learned important skills and techniques for growth Fully effective web developing. Little by little I got to know some of them web development and technology in this course. I got an assignment Working with the team on the implementation of a backend code for connecting with the database after completion of all basic training sessions.

**Keywords**— alpha, beta, gamma

# Contents

<b>1. Introduction.....</b>	<b>10</b>
1.1 Overview/Background of the Work.....	10
1.2 OBJECTIVE.....	10
1.3 Scope.....	10
<b>2. Literature review.....</b>	<b>12</b>
2.1 Relationship with Undergraduate Studies.....	12
2.2 Related works.....	12
<b>3. Project Management &amp; Financing.....</b>	<b>14</b>
3.1 Process/Activity wise Time Distribution Maintaining.....	15
3.2 Process/Activity wise Resource Allocation.....	16
<b>4. Methodology.....</b>	<b>18</b>
<b>5. Body of the Project.....</b>	<b>19</b>
5.1 Work Description.....	19
5.2 System Analysis.....	19
5.3 Six Element Analysis of the project.....	20
5.4 Problem Solution Analysis.....	21
5.6 System Design.....	22
5.6.1 Rich Picture.....	22
5.6.2 UML Diagrams.....	23
5.6.3 Functional and Non-Functional Requirements.....	23
5.6.4 Product.....	24
<b>6. Results &amp; Analysis.....</b>	<b>30</b>
<b>7. Lesson Learned.....</b>	<b>31</b>
7.1 Problems Faced During this Period.....	31
7.2 Solution of those Problems.....	31
<b>8. Project as Engineering Problem Analysis.....</b>	<b>32</b>
8.1 Sustainability of the Project/Work.....	32
8.2 Community sustainability.....	32
8.3 Financial sustainability.....	32
8.4 Organizational sustainability.....	32
8.5 Social and Environmental Effects and Analysis.....	32
8.5.1 Social impact.....	32

8.5.2 Environmental impact.....33

**9. Future Work.....34**  
9.1 Conclusion.....34

**10. Bibliography.....35**

**Lists of figures** **page**

1. project management.....	14
2. Rich Picture.....	22
3. Uml diagram.....	23
4. input.....	24
5. output.....	26
6. Features.....	25
7. Database and table.....	26
8. Code for appointment booking .....	26
9. Connection to database to store Appointment’s data .....	28
11. Hosting.....	28
11. architecture.....	28
12. Result and analysis.....	29

**List of Tables** **page**

1. Time distribution.....	15
2. gnat chart.....	16
3. process.....	16
4. Estimated Cost.....	17
5. System Analysis.....	19

# Chapter - 1

## 1 Introduction

### 1.1 Overview/Background of the Work

I started my internship program at Bashundhara Group in the IT department from 01thOctober 2022. As Our company going to launch a new website they had need to members for frontend and backend developer. The goal is launching this website to improving quality of customer services. Where customers will be able to take self- services which is going to be easier and more cost efficient. I was so much interested in web developing and I have got this opportunity to develop a feature for this upcoming website. I have design it and wrote code for backend.

### 1.2 Objective

In present time my company (Bashundhara Housing) is providing manual customer care service in their land purchased department. Currently they facing some problem with manual services like Customer has to visit physically for getting services. Which is most risky during pandemic situation, then most of the time customers has to wait outside for meeting, A customer has to visit the bank for pay dues and charges. Where my Company wants to make it easier and quality of services improves. Where customers will be able to get all customer service facilities by customer service websiteportal from anywhere.

### 1.3 Scopes

- If the company shifts their manual customer service to online service, then it will be less costly.
  - Customers will be able to get information about their purchased land from home. They will be able topay fees and dues from anywhere.
  - It will save time than present. Many customers will be able to get services in same time.
  - It will be less costly. Because more people will get service in short time and less people will berequired for operating the website portal.
  - It will be fully secured and safe in pandemic situation.
  - For important issue customers will be able to take appointment in online And admin will be able to accept or reject appointment.
  - Customers will be able to provide feedback of services. Where company will be able to analysis thecustomer requirements.



# Chapter 2

## 1.1 Literature review

### Relationship with Undergraduate Studies

With the knowledge and skills, I learned and studied in various classes here at Independent University, Bangladesh, I was able to participate in and work on this project at East West Property Development pvt.ltd.(BG IT). I had to acquire a few more things while I was enrolled in these classes. I had to acquire a few

more things to align my knowledge with the company's requirements. The following are some of the courses

that were beneficial to me:

- CSE309: Web Application- This course's lesson was somewhat applicable to my line of work. I learned about the HTML, CSS, BOOTSTRAP and PHP in this course. Other topics covered were building a responsive website and making inventory website portal. I also learned making connection with database by xampp software.
- CSE 303: Database Management - This course covered the theories and methods for database creating and managing it. How to insert, delete data from database. This course teaches us creating connection between database and application.

### 1.2 Related works

There are many types of Customer Service quality improvement portal. They have designs to perform different types of checks. Their working principles are completely different. In my internship project I will concentrate on developing quality of customer service by making website portal.

Important limitations to the current study include its context and our inability to systematically manipulate the chatbots we used. The study context was limited to users in a particular market (Norway) using one of two chatbots for customer service. While we are confident that we involved enough users to reach saturation, it is possible that our findings were affected by the study context. Future research is needed to replicate and complement the study findings across different markets using different chatbots for customer service. While we see it as a strength that our study concerns user experience and user motivation in the context of real-life chatbot use, the study is limited in that we did not have the opportunity to systematically manipulate the participants' experience as one would be able to in a classical experiment. Hence, this study provides only limited insight into causal relations. Future research testing causal hypotheses based on our findings in classical experiments would be an interesting continuation of the present study. We also foresee future research that takes as its starting point the three implications for theory suggested above, as we see these as potential hypotheses in need of further exploration and validation. As such, we see the presented study as representing a first step on the path to establishing the needed knowledge on user experience and user motivation regarding chatbots for customer service. - Følstad, A. and Skjuve, M., 2019, August.

Chatbots for customer service: user experience and motivation. In *Proceedings of the 1st international conference on conversational user interfaces* (pp. 1-9).

To transit from a goods/services divide to a goods/service union (service aggregation), the platform for future service research requires the super ordination of mainstream service management by using service dominant logic (S-D logic) and lexicon and the generation of innovative theory; testing of the innovative theory by comparing its robustness with that of extant theory; conduct of empirical studies through hypotheses-testing and real world, in-depth research; focus on validity and relevance by using the full range of S-D logic compatible methods and metrics; and investigation at both micro and macro levels. However the real value of the research effort lies in the consideration for and the selection of appropriate models and theories related to service quality and how they have been applied for measuring it and how they have achieved customer satisfaction. It can be realized theoretically that the framework that will deliver various dimensions and items while building the portal-based Internet Banking Service Quality Model can satisfy the Gronroos Model (1984) specifications too. The author has expended considerable effort in filling this gap of research literature base by developing references about the theories and explaining the reason for the choice of the approach of why various theories and models have been chosen in the current research paper on service quality domain. - Cheung, C.F., Lee, W.B., Wang, W.M., Chu, K.F. and To, S., 2003. A multi-perspective knowledge-based system for customer service management. *Expert systems with applications*, 24(4), pp.457-470

# Chapter 3

## 3.1 Project Management & Financing

Work Breakdown Structure: Work breakdown structure is a type of project management that offers a visual way to detail the deliverables within a project. It does so by presenting key milestones within a hierarchy that simplifies large projects into smaller, more manageable groups.

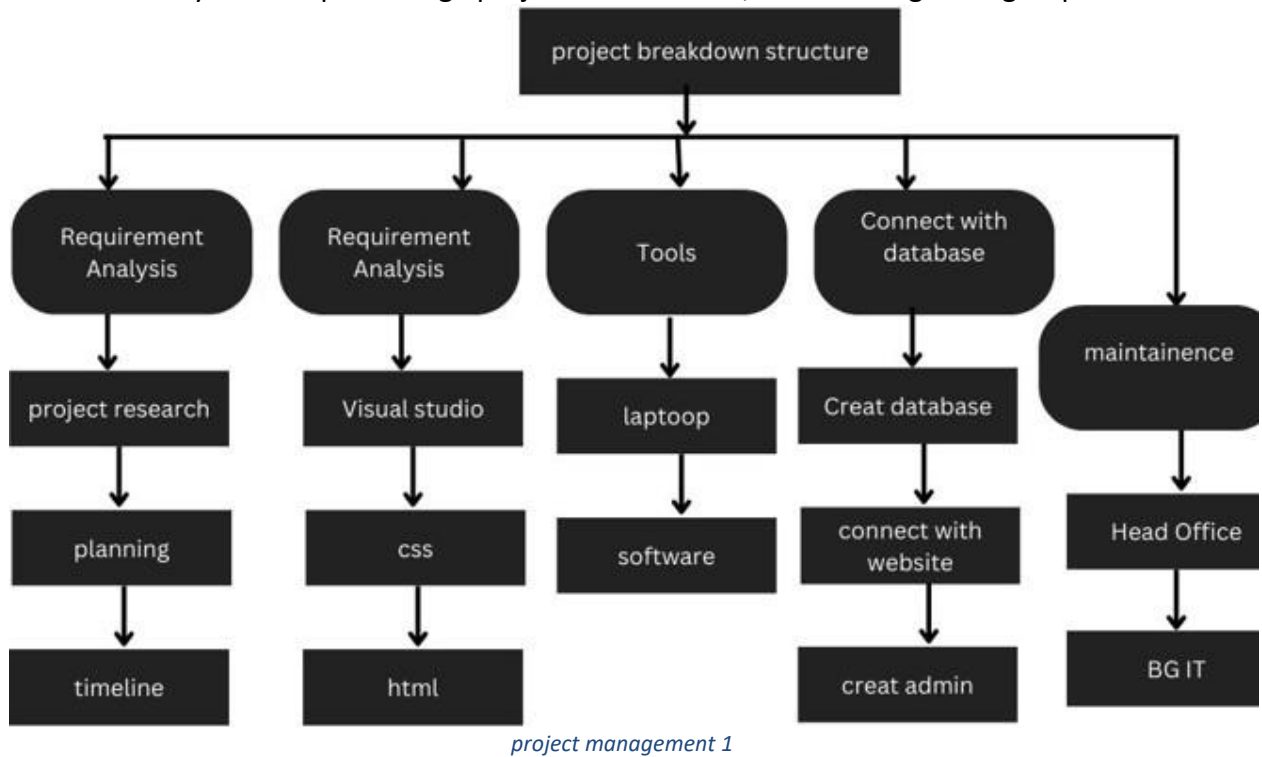


Figure – 1

1. The phase of requirement analysis is when the organization learns about the project's precise requirements from the client. This phase consists of three sub-tasks: confirming the amount of internet bandwidth required in the campus office, Project research, project timelines and most importantly, the project planning.
2. In the Design and building phase, we have to first install visual studio which is a virtual environment. Then we have to install the xampp software. I have used in my project and most importantly we have to install and configure with database server.
3. To require tools we need some requirements which are very important for this project like PC, internet.

<b>Time Distribution</b>	
<b>Tasks</b>	<b>days</b>
Requirement Analysis	13
Design and building	40
Require tools	7
Connect with database & Backend	32
Maintenance	8
<b><u>Total</u></b>	<b><u>100</u></b>

Table -1 (Time distribution)

4. Phase website maintaining is the main part of this project. In this phase we need a connection of the xampp server and in the database server first we have to create a admin and we have to enable our serverconnection with website for the monitor data.

5. In the last phase maintenance, includes only maintaining the database to operate the website.

### **3.2 Process/Activity wise Time Distribution Maintaining:**

The Time Distribution through Process/Activity gives us a desk with the set of responsibilities that ought to be achieved collectively with the time required to complete every task. According to the desk, requirement analysis changed into taking about thirteen days, website design and building taking about 50 days, database maintaining take about 32 days, and the maintenance required around eight days. In total, the project is to take more or less one hundred ten days to complete, implying that it changed into taking nearly four months to complete.

### Gantt Chart:

Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Requirements analysis	✓	✓												
Design and building			✓	✓	✓	✓	✓	✓	✓					
Connect with database										✓	✓	✓	✓	
Maintenance														✓

Table -2 (gantt chart)

The Gantt Chart of the Data customer service portal Project is shown in the diagram above. A Gantt Chart is a visual representation of a project’s progress. We can see from the chart above how each task, along with its sub-tasks, took a set amount of time to accomplish and how those tasks were divided according to that allocated time to be done in that precise timespan.

### 3.3 Process/Activity wise Resource Allocation:

The Resource Distribution by Process/Activity offers us a table with the set of tasks that must be accomplished together with the quantity of effort required to finish each task. The following are the top five tasks:

Tasks	Work Percentage
Requirement Analysis	13 %
Design and building	40 %
Connecting database	32%
Maintenance	15%
<b>Total</b>	<b>100%</b>

Table-3 (process)

**Requirement Analysis:** The first and most crucial task requirement analysis is to fully comprehend the client's objective. It consists of three sub-tasks: confirming the amount of internet bandwidth required in the campus office, Project research, project timelines and most importantly, the project planning.

**Design and building:** Before building a website we have to first install visual studio code which is a virtual environment. Then we have to work with html, css and bootstrap etc. designing it and frontend's work will take the time.

**Require Tools:** For establishing a website portal, we need some tools requirement which are very important for this project like PC, internet and different kind of software.

**Connecting database:** Actually this is work of backend. Which is works how it will show to customer. How customer will use it. Programming is the main thing here.

**Maintenance:** The maintenance of the total website will be maintained from the BG IT.

### 3.4 Estimated Costing:

The equipment necessary for the complete network operations for Organizational website building and maintaining is listed in the table below.

<b>Estimated Cost</b>	
<b>Equipment</b>	<b>Amount (BDT)</b>
Pc	50,000
Developers	50,000
Domain registration	3500
Internet Bill	3000
<b>Total:</b>	<b>10,6,500-TK</b>

Table – 4 (Estimated Cost)

# Chapter 4

## 4.1 Methodology:

1. **Prepare:** Involves establishing the organizational requirements, developing customer service web portal, and proposing a high-level conceptual architecture identifying technologies that can best support the architecture. The preparation phase can establish a financial justification for network strategy by assessing the business case for the proposed architecture.
2. **Plan:** Involves identifying initial customer service web portal based on goals, facilities, user needs, and so on. The planning phase involves characterizing sites and assessing any existing manual customer service and performing a gap analysis to determine whether the existing system infrastructure, sites, and operational environment can support the proposed system. A project plan is useful for helping manage the tasks, responsibilities, critical milestones, and resources required to implement changes to the customer service system. The project plan should align with the scope, cost, and resource parameters established in the original business requirements.
3. **Design:** The initial requirements that were derived in the planning phase drive the activities of the website design specialists. The website design specification is a comprehensive detailed design that meets current business and technical requirements and incorporates specifications to support availability, reliability, security, scalability and performance. The design specification is the basis for the implementation activities.
4. **Implement:** The website is built, or additional components are incorporated according to the design specifications, with the goal of integrating devices without disrupting the existing network or creating points of vulnerability.
5. **Operate:** Operation is the final test of the appropriateness of the design. The operational phase involves maintaining website health through day-to-day operations, including maintaining high availability and reducing expenses. The fault detection, correction, and performance monitoring that occur in daily operations provide the initial data for the optimization phase.
6. **Optimize:** Involves proactive management of the customer service web portal. The goal of proactive management is to identify and resolve issues before they affect the organization. Reactive fault detection and correction (troubleshooting) is needed when proactive management cannot predict and mitigate failures. In this process, the optimization phase can prompt a web redesign if too many website's problems and errors arise, if performance does not meet expectations, or if new applications are identified to support organizational and technical requirements.

# Chapter 5

## Body of the Project

### 5.1 Work Description

First of all, We operate the website from xampp and design for signup and login operation. Where php codeworking from backend. We need internet, pc and server to run the site. Where users will be able to registration and login with valid user name and id. Then a user will be able to get service from the website.

### 5.2 System Analysis

Process	Human	Non-computing hardware	Computing Hardware	Software/ System	Database	Network & Communication
<b>Requirement Analysis</b>	Admin & Intern understand project requirement	Pen & paper were need by the analysis for taking notes about the project's requirements	Laptop/ PC, Printer need for documentations and the quotation.	Server, xampp, browser.	Creating a relational database	Internet connection server, browser.
<b>Installation</b>	Admin & Intern for install require software	Pen & paper were need for taking notes of installation process	Laptop for install require software's	Virtual environment needed for this process	Installing server and host	Xampp and browse hosting site.
<b>Require Tools</b>	Admin & Interns manage all require tools	Pen & paper were need by the analysis for taking notes about tools	Need laptop/PC, printer for a softcopy & hardcopy of information is kept for the preparation of require tools and the quotation.	Microsoft Office is used to prepare the documentation and quotation of the tools.	Xampp and phpmyadmin	Xampp and hosting maintain database.
<b>Network Operation</b>	Admin & Intern create and monitor all the network operations	Stationaries & paper were need by the analysis for taking notes of command line for operation process	Laptop, server and browser implement network.	Internet, server, browser and database.	Connection to website.	Need internet connection on laptop for run the server and hosting ensure the power supply of pc.

<b>Maintenance</b>	NOC Engineer monitor and maintain whole network operation	Stationaries & paper were need by the analysis for taking notes.	Laptop/PC, Cables	Internet, server, browser and database maintaining.	Insert, delete and store data	All time internet connection and rur
--------------------	---	--	-------------------	---	-------------------------------	--------------------------------------

Table -4 (System Analysis)

System analysis is a problem-solving method that considers the entire system. Break down the pieces and understand how they work to achieve a particular goal. It is used in information technology and is used in computer-based systems. It is a detailed analysis of structure and design.

### 5.3 Six Element Analysis of Network monitoring

#### Feasibility Analysis

A feasibility study is a study that helps us understand specific aspects of a project and how those aspects can help in project development. Feasibility analysis Criteria will make it easier to identify difficulties that may arise in the process project. Feasibility factors that we analyzed for network operation of Data Center Network monitoring are listed below:

- **Operational Feasibility:** The project will be considered a success in the Operational Feasibility sector only if all project requirements are met and the project works successfully and is maintained after the network operation finishes. The project was successful because of the project design and successfully built and fast responding, making service more efficient.
- **Technical feasibility:** Available resources, including equipment and software, as well as other important technologies are evaluated for feasibility to understand the development of the project. This is completed by focusing on the fast service providing. The ability to manage these techniques equipment is analyzed in this way to see if it is effective and efficient in the customer service and relation building process. The most important network hardware in the project is laptop, internet, and the software technologies are virtual environment, xampp, server, hosting, browser, chr and the quality of those decide on the strength and security of the Bashundhara Housing. The most of our software and technology in this project is of updated version, high quality and efficient. Therefore, it can be said that this project is technically feasible.
- **Economic Feasibility:** This looks at the costs and benefits of a project analysis. This sector monitors the costs associated with surveying. Construction and configuration process. The examined data determines whether or not the project will be financially successful. That is, the budget negotiations were held with Bashundhara Housing as it was a very big project. Carefully consider the rate of profit of the company to ensure that it is an economically feasible project.
- **Timing feasibility:** Project timing was considered in this study. Make sure it is ready on time. If the project deadline is reached the project will be successful. There were four-month completion schedules for the project and we completed the network in time as planned.

## 5.4 Problem Solution Analysis

This section discusses recognized, investigated and possible issues think of solutions to these problems. These are the problems that have been determined:

- Configuration problem: Proper configuration for a server /software is most important for running the server/software. We have to ensure that in a configuration all the steps and updates are complete properly. To solve this problem, we have to update yum and all the command lines have to be placed accurately.
- Appropriate version: Appropriate and updated version is very important for connecting. We have to make sure that version is ok for those browser and servers.
- Network connectivity: For a monitor the server and database there must show all the network traffic and all the network related issues. We have to make sure that all the network connections are shown and if there is any problem in any places network connection then they will solve problems.
- Poor Internet connection: Strong internet connection is a must for completing the work efficiently. So we have to ensure that the required internet speeds are provided and there is a 24/7 internet connection. Improve security: It's more important to have a strong security system in the Database and server. For improving security advance firewall was used and also adding the latest security software in the system.

## 5.5 Effect and Constraints Analysis

Website launching project for Bashundhara Housing data center will vastly increase the quality of work performed by these offices. The technical solutions we provided will provide flexibility with job prospects. Bashundhara Housing has one of the biggest commercial IT sectors in Bangladesh. Bashundhara Housing data center Provide Server, hosting and infrastructure services. IT facilities to support system administrators in setting up and supporting systems. Systems monitoring and notification at the customer's request feature infrastructure designed and built to be concurrently maintainable.

Website's server Monitoring for their own data center will be a huge plus factor in terms of communication and job effectiveness and cost effectiveness.

## 5.6 System Design

### 5.6.1 Rich Picture

A rich picture is a drawing of a situation that depicts the main elements and relationships to consider when trying to intervene in an upgrade. Contains images, texts, symbols and icons used to describe the situation graphic. Rich pictures help us see the relationships and connections we may have, otherwise I will miss it. It helps identify one or more topics that participants may want to pursue further explore and deal with. Therefore, rich pictures are always used in the pre-analysis stage.

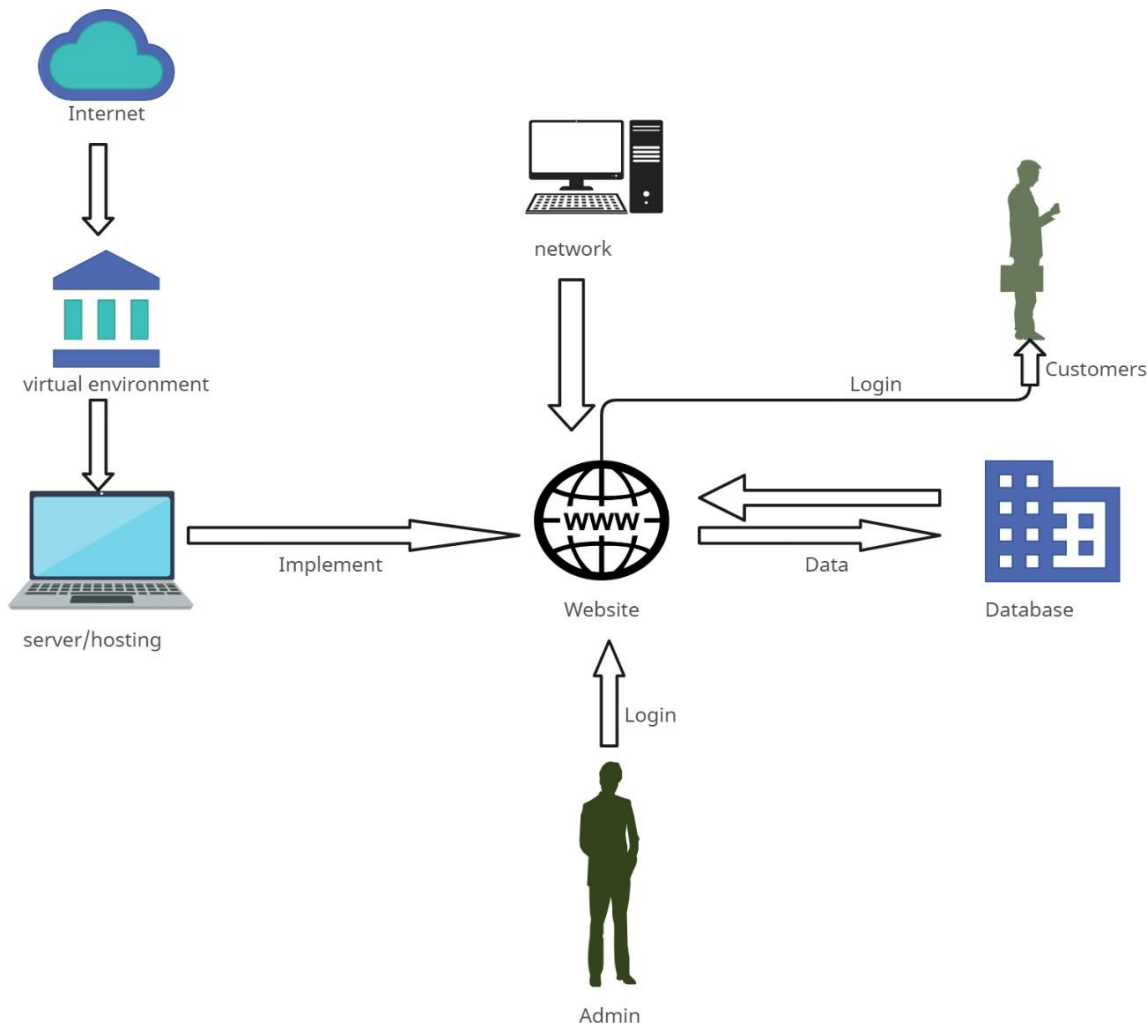


Figure-2 (Rich Picture)

### 5.6.2 UML Diagrams

A UML diagram is a diagram based on the UML (Unified Modeling Language) with the purpose of visually representing a system along with its main actors, roles, actions, arti-facts or classes, in order to better understand, alter, maintain, or document information about the system. UML diagrams can be used as a way to visualize a project before it takes place or as documentation for a project afterward. But the overall goal of UML diagrams is to allow teams to visualize how a project is or will be working, and they can be used in any field.

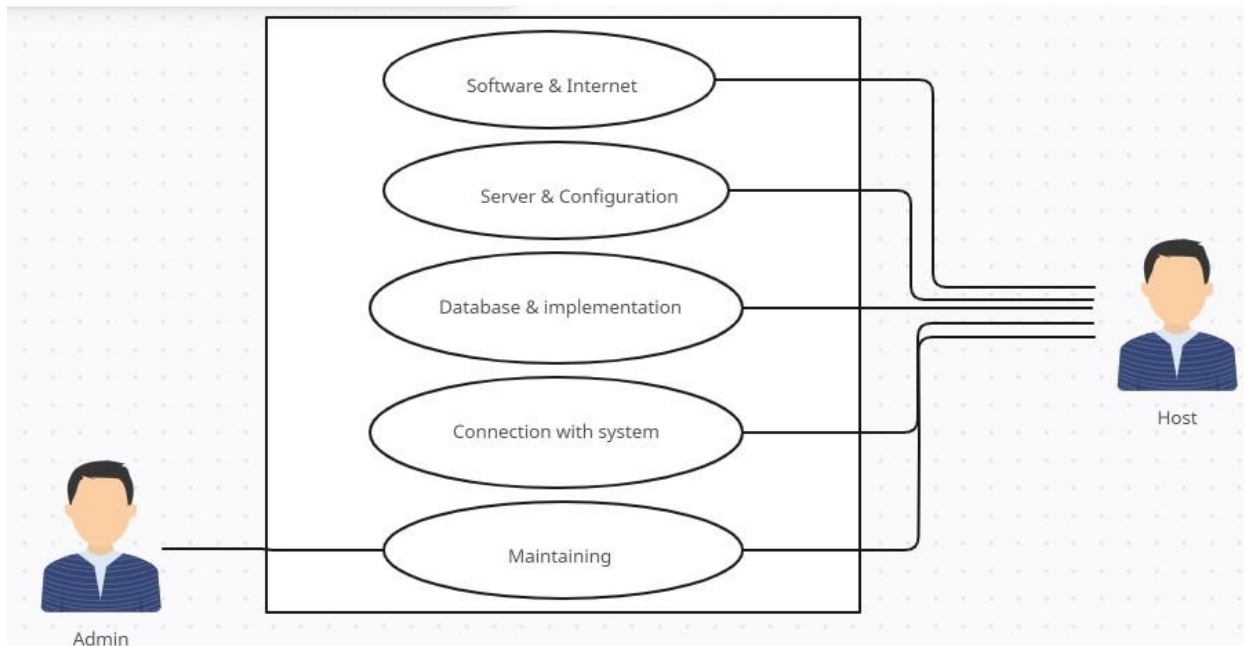


Figure-3 (Uml diagram)

Use Case Diagram A use case diagram is a way to summarize details of a system and the users within that system. It is generally shown as a graphic depiction of interactions among different elements in a system. Use Case diagrams of network monitoring are given below:

### 5.6.3 Functional and Non-Functional Requirements

The functionality that the system must have to be viable is referred to as a functional requirement. Functional Requirements are useful in the development of a system. It informs us about the functionality that we should expect from the system; faults can be detected at this stage, which is less expensive to rectify; and it assists us in determining whether any functionality is missing. The functional requirements which the project tried to meet are: Efficient server via monitor, LAN connectivity on PCs/Laptop, and HOSTING configuration on workstation is required.

The functional requirements which the project tried to meet are:

- Efficient server via monitor, LAN connectivity on PCs/Laptop, and server configuration on VM workstation is required in the office.
- data transmission from beginning to finish via the physical medium of the Server.
- It can contain one server and it will only be considered centralized in the server.
- It may also comprise one or more clients are able to save data to the website's database.
- XAMPP: The site will be operated from this software.

- Troubleshooting will be conducted at both the admin and host end to reset the server in the event of a disconnection or failure of server, and the head office will solve it.

Non-functional requirements are specifications that outline the portability of the system. There are also constraints to improve performance. Non-functional requirements I do What is discussed for the project is given below:

- Availability: Data monitoring system uptime over a period of time Frames are called network availability. The length of time the monitor is fully functional is called uptime. For office work of Bashundhara Housing Monitor, the network connection is very important and is always guaranteed by us.
- Reliability: Our website is of excellent quality and has best hosting for smooth network monitoring and our monitors are reliable. A trusted protocol is a communication protocol that informs users if the protocol has been successfully delivered to the intended recipient.
- Recoverability: The process of recovering and restoring normal operating functions on a computer / laptop server is called server recovery.
- Maintainability: Our server and hosting are always maintained by Bashundhara housing's IT.

## 5.6.4 Product

### 5.6.4.1 Input

The image shows a screenshot of the Bashundhara Housing website. The top section features a registration form with the following fields: First Name, Last Name, Email, Password, and Confirm Password. A green 'Register Now' button is located below the fields. Below the registration form, there is a link that says 'Already have an account? [Login in](#)'. The website's slogan, 'For the People, for the Country', is displayed in a large, white, serif font. The navigation menu includes links for BG IT, HOME, SERVICE, ABOUT, and CONTACT. The main content area is divided into two sections: a green section on the left with the text 'BASHNDHARA HOUSING' and 'BASHUNDHARA GROUP For the People, for the Country', and a red section on the right with a login form. The login form includes a 'Login Here' button, an 'Enter Email Here' field, and an 'Enter Password' field. A tooltip shows the email address 'rakibulhasan012931@gmail.com' entered in both fields. Below the login form, there is a 'Login' button, a link for 'Don't have an account Sign up here', and social media icons for Facebook, Instagram, and Google+. The footer of the website is a solid green color.

Figure-4 (input)

### 5.6.4.2 Output

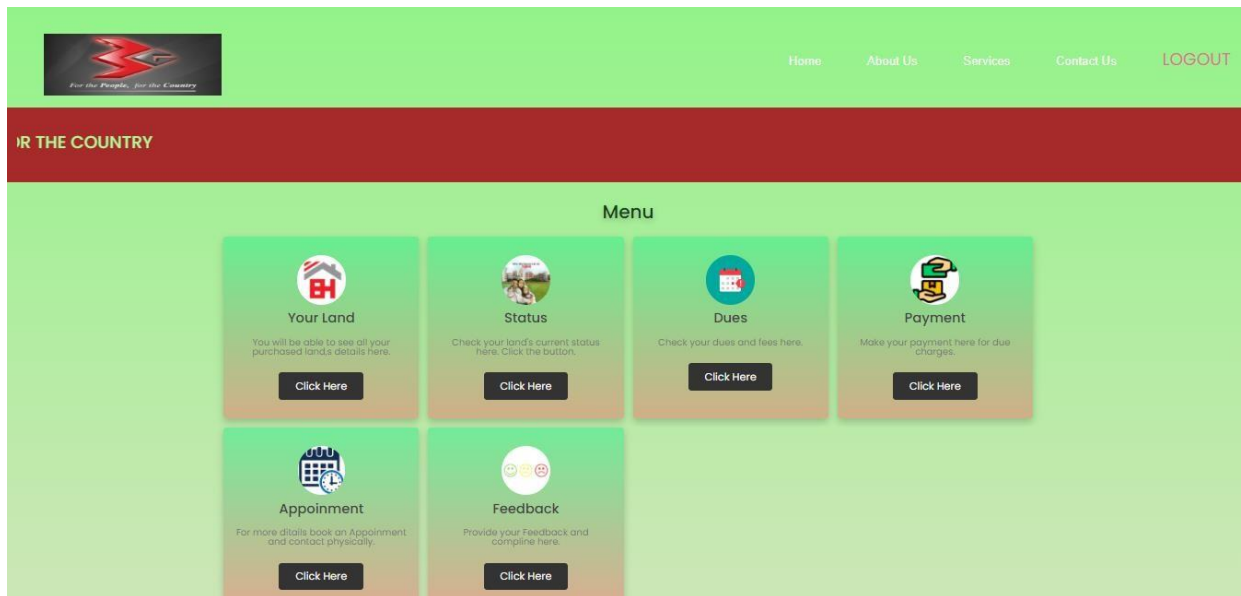


Figure-5 (output)

### 5.6.4.3 Features

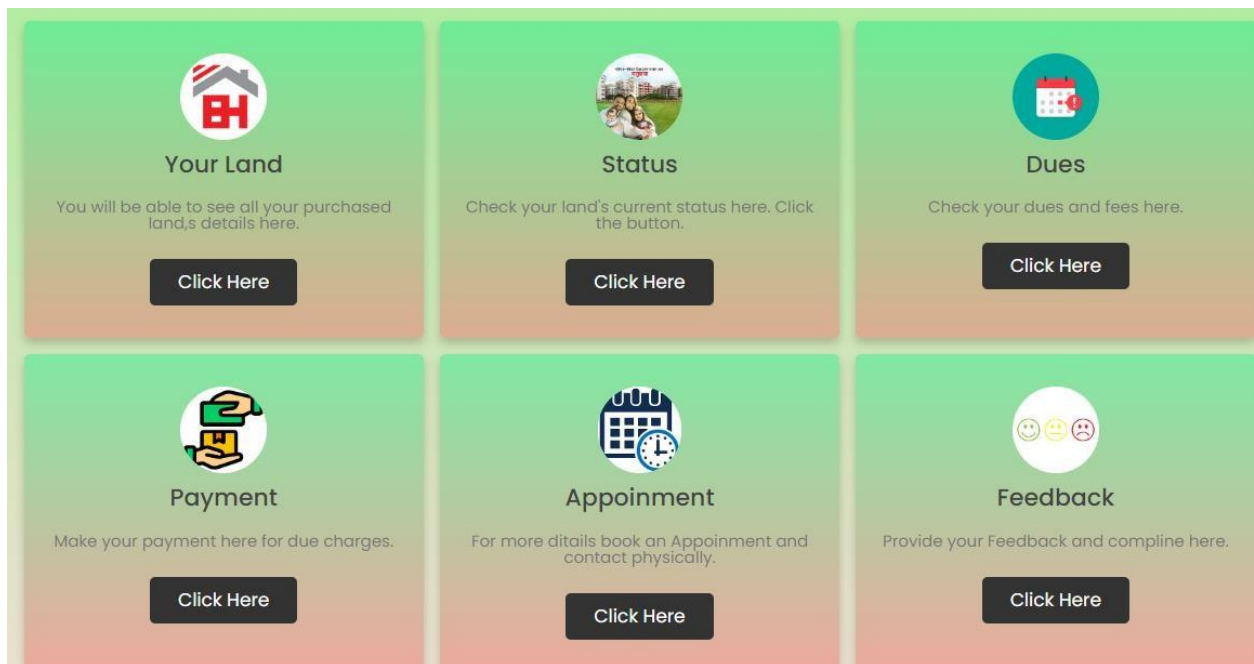



Figure – 6 (Features)

# Our Services



Environment

We ensure better environment and safe house



Loan facility

Paymet with imf facility



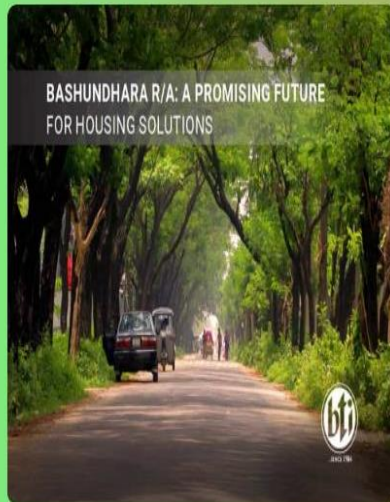
Education

We have best Educational environment and best Educational instiute in Bashundhara.



Safety

We have best security system and safe road.



## About

Plot # 125/A, Block- A, Level-1,  
Bashundhara RA, Dhaka - 1229.  
Phone - 8431071, 8431428, 8431061, 8432485  
PABX - +88-02-8432008-17  
Fax - +88-02-8431495  
Email - ewpd@bg.com.bd, shahdat.hossain@bg.com.bd

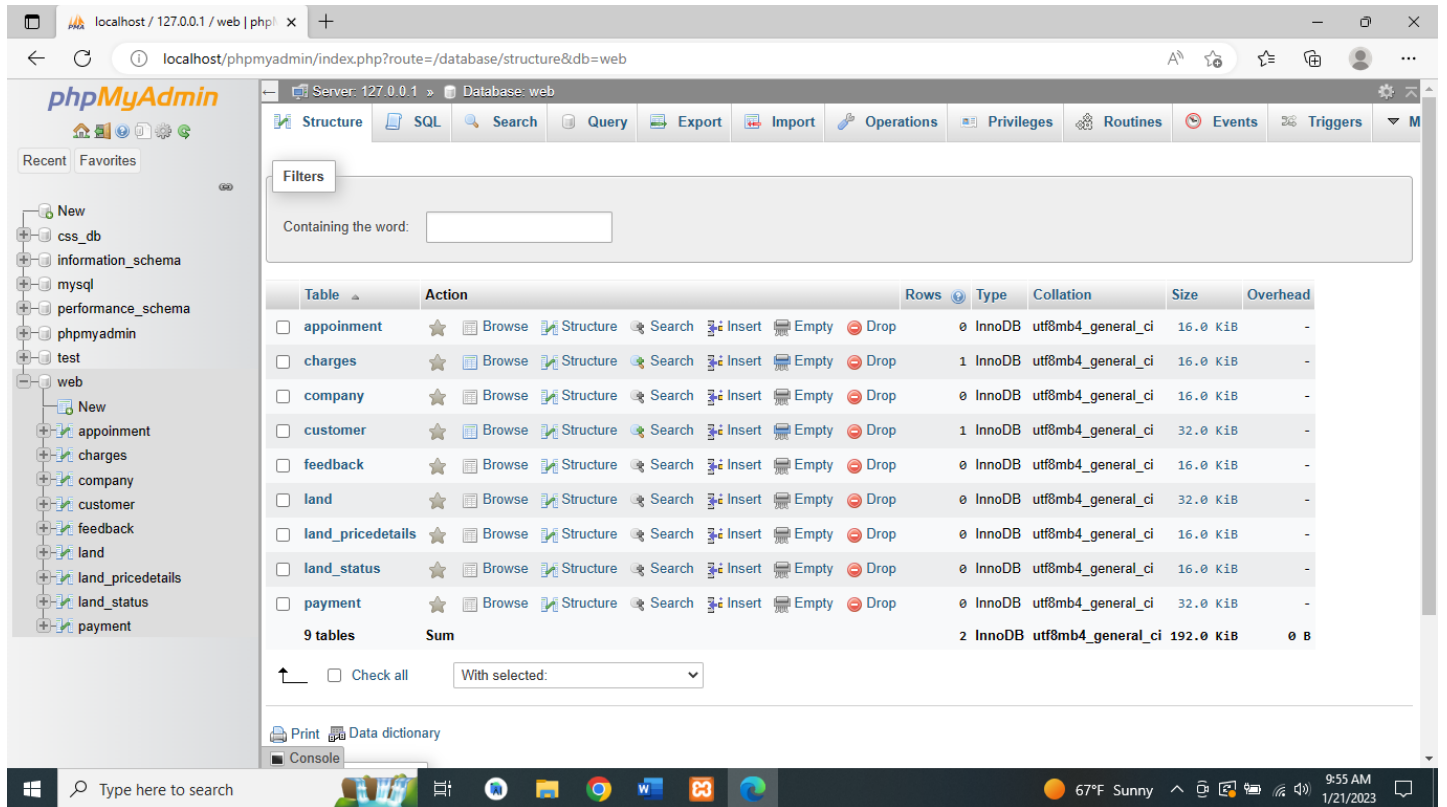


Figure-7 (Database and table)

```

<form method="post" action="{{ route('appointment.booking') }}">
  @csrf
  <fieldset>
    <legend>Booking Information</legend>
    <table>
      <tr>
        <td><label for="name" id="name-label">Name:</label></td>
        <td>...</td>
      </tr>
      <tr>
        <td><label for="address">Address:</label></td>
        <td>...</td>
      </tr>
      <tr>
        <td><label for="email">Email: </label></td>
        <td>...</td>
      </tr>
      <tr>
        <td><label for="phone">Phone: </label></td>
        <td>...</td>
      </tr>
      <tr>
        <td><label for="phone">Appointment Date </label></td>
        <td>...</td>
      </tr>
      <tr>
        <td><label for="phone">Appointment Details</label></td>
        <td>...</td>
      </tr>
    </table>
  </fieldset>
  <div id="submitButton">
    <button type="submit" id="submit" style="padding: 15px 20px; cursor: pointer;">Booked Now</button>
  </div>
</form>

```

Appointment Booking form

Figure- 8 (Code for appointment booking)

```

64     ContactFormSubmit::create($request->all());
65     Notify::success('Message Successfully Submitted', 'Success');
66     return redirect(route('index'));
67 }
68
69 public function feedback_submit(Request $request){
70     $request->validate([
71         'name' => 'required|min:2',
72         'company_name' => 'required',
73         'email' => 'required|email',
74         'phone' => 'required',
75         'message' => 'required',
76     ]);
77     Feedback::create($request->all());
78     Notify::success('Successfully Submitted Your Feedback', 'Success');
79     return redirect(route('index'));
80 }
81
82 public function appointment_booking(Request $request){
83     $request->validate([
84         'name' => 'required|min:2',
85         'address' => 'required',
86         'email' => 'required|email',
87         'phone' => 'required',
88         'date' => 'required',
89         'details' => 'required',
90     ]);
91     AppointmentBooking::create($request->all());
92     Notify::success('Successfully Submitted Your Feedback', 'Success');
93     return redirect(route('index'));
94 }
95 }
96
97 }
98 }
99 }
    
```

Figure-9 (Connection to database to store Appointment’s data)

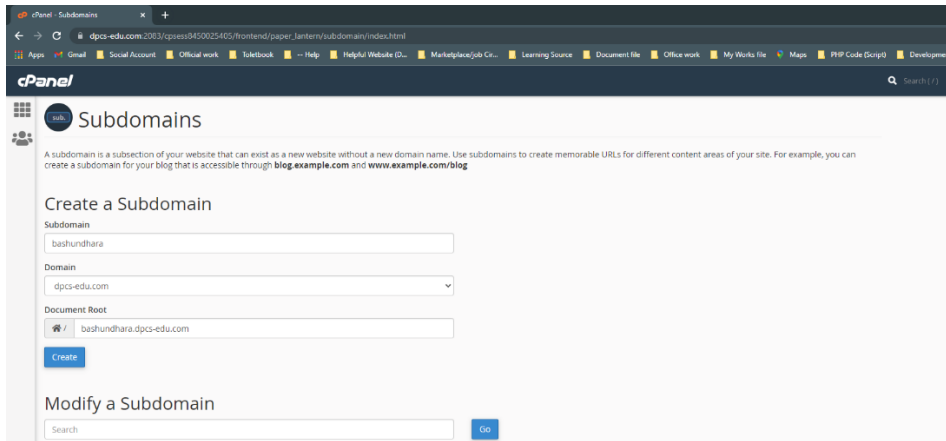


Figure – 10 (Hosting)

### 5.6.4.4 Architecture

Architecture defines the backbone of any structure. It is drawn to show how the structure is shown. For servers, the server architecture defines the structure of the server. Server behavior, data transfer method and storage location.



Figure 11 (architecture)

**ADMIN TO SERVER TO CUSTOMER TO SERVER TO ADMIN**

This is the architecture of my project. For details, we can refer to the architecture we designed for our project. Here is the diagram clearly illustrates that users can only see and interact with the server.

# Chapter 6

## 6.1 Results & Analysis

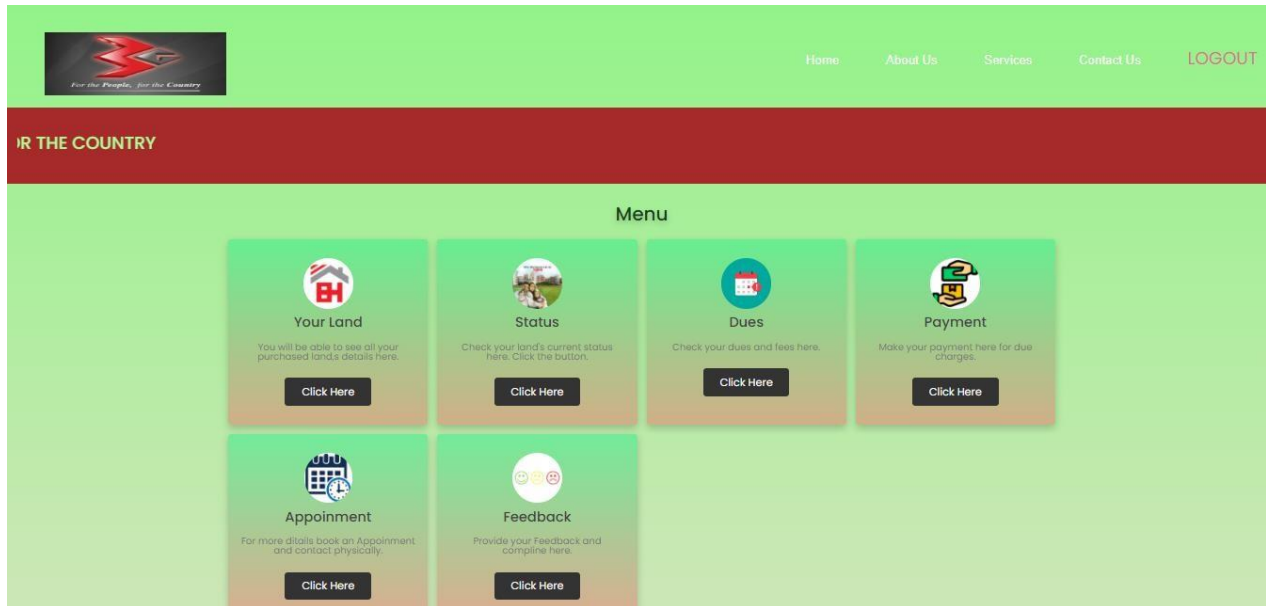


Figure-12 (Result and analysis)

The customer service portal project, carried out by the company's IT services division, has significantly improved the company's technical infrastructure. I will discuss the results and impact of the project here. It was an IT infrastructure monitoring project with the additional responsibility of managing the supply of technical equipment to increase technological capabilities. Understanding the health of your infrastructure and systems is important to ensure the reliability and stability of your services. In accordance with the objectives of the project, effectively established virtual relation with the customers. Since it is impossible to provide 100 percent availability, website helps reduce the impact of inability to office. Provides 24/7 monitoring of network components. This ensures clarity and transparency of the network infrastructure and performance. With an immediate warning, IT administrators can immediately begin troubleshooting. As a result, end users may not even notice the problem. Improvements in technological infrastructure will alleviate the past shortage of workers in this private sector. In this project, network monitoring improves the performance and availability of the customer service in the BG Housing.

In the above pictures of website portal, we have run this site from xampp software and all the features are connected with database to store data and print data as report.

As a result, I have successfully completed feedback feature in this project. I have created html page and designed it with css then I used php code for backend connection. Then the feature has implemented with the main project in the website portal.

# Chapter - 7

## 7.1 Lesson Learned

In this part I had to write about the objectives of the project that I had to describe: the objectives, the purpose of the project. I had to identify the objective of the project, also I had to identify the size of the project. I learned Reading literature helps me better understand current research before starting a new project. The review literature will give you a much clearer picture on the subject and help you get the project done. I review the literature, articles or any books related to my work to get a clear picture of the project.

Here we mainly focused on planning, budgeting, time management based on project work and resource allocation based on tasks. Time management for a project helps break up the project and the assigned task and also help to complete it on time. In this section we have knowing about time management, even before starting a project, the budget and goal should be clear which will help complete the project and give success. So we should set the time for each work and we have to finish the work on time. The budget should be clear because it helps to save time and money and helps to complete the whole process smoothly during the project work. I also analysis the project and I do work breakdown of my project and described all the stage of my work breakdown. Here I also do my six-element analysis and in feasibility analysis i mentioned how my project is helps us to understand specific aspects of a project and how those aspects can help in project development. In rich picture and UML diagram I draw, It helps identify one or more topics that participants may want to pursue further explore and deal with, and in UML diagram, I draw use case diagram and activity diagram for more clarity of my project process. In the step of input and output of my report template, I display some pictures of my projects and in output section I showed my project's output. I also mentioned my future plans /works of this project.

## 7.2 Problems Faced During this Period

I faced some problem during configuration of my project in my internship period. Proper configuration for a server /software is most important for running the server/software. During Configuration server I faced middle of the configuration some command was not working.

## 7.3 Solution of those Problems

To solve above problem I have mentioned during my project, we have to update yum and all the commandlines have to be placed accurately for configuration my server in website. For avoid version problem of xampp, appropriate and updated version is very important for connecting and website running with each other.

# Chapter 8

## 8.1 Project as Engineering Problem Analysis

### 8.2 Sustainability of the Project/Work

Project/project sustainability is a business approach that balances the environmental, social and economic aspects of a project activity to meet the current needs of stakeholders without compromising or harming future generations. The ability of a project to be maintained and upgraded is called its sustainability. It is crucial to understand and develop the ideas of sustainability and appropriate sustainability plan to avoid project failure. Product durability can be categorized into 3 parts:

### 8.3 Community sustainability:

The term “community sustainability” refers to the way in which a large part of the community or data centers who will use the website for maintaining, will support the project long-term viability. Our service will be maintained if we can work effectively with the availability of our portal services monitoring and reasonable use of technology Infrastructure.

### 8.4 Financial sustainability:

Our company’s prices for building the website do not it only covers all the costs associated with maintaining the service, but it also generates profits. This will ensure that the financial stability of the company/data center is maintained and that the profit is made in the future.

### 8.5 Organizational sustainability:

Our company always invests in development our services with the support of our employees who are constantly trying to improve their knowledge and web developing skills, which will help us strategically address unique obstacles in this market and allowing us to compete with other companies.

## 8.6 Social and Environmental Effects and Analysis

### 8.6.1 Social impact:

Our project will have a good social impact on our company. Work/service providing becomes easier and more effective on a daily basis. Our system allows a self-service and see status between situation and products. More importantly, the accuracy of customer’s desire is an improved benefit for companies.

### **8.6.2 Environmental impact:**

Networking initiatives have adverse effects on surroundings. Its will be effect less as we are do this project virtually and we also used most of virtual components. The use of the internet alone causes emissions of approximately 2,330,041 tons of CO2 and consumes 2,339,400 MWh of electricity every day. At a granular level, every single internet search consumes about 0.3 Wh of energy and contributes to the release of 0.2g of CO2 in the environment.

# Chapter 9

## 9.1 Future Work

Working as an intern at Bashundhara Group encouraged me to pursue a career as a web developer. Working in a web design and developing organization was an important aspect of learning on the functions of work in the field of website developing, which commercial work. There are several categories of web developing in Bangladesh, including banking companies, ISPs such as BBTS and Housing companies like BG. Working for an ISP is a great way to do these foundations of the web. I wasn't just learning and working on web development project at GC, but I was also prepared for future non job opportunities only in the company, but also as a professional in various fields, such as: frontend and backend developer and fullstack developer.

## 9.2 Conclusion

Bashundhara Group provided me with an excellent learning opportunity during my internship. Because I live so far away from the workplace, it was difficult to stay committed to visiting office hours and it helps me to manage my time management and improve my communication skills. This internship gave me the opportunity to get a taste of what server and hosting in a website would be like. I had also adjusted to the business culture. This internship allowed me to study the fundamentals of web-developing and organizations that are completely dependent on information and technology need an efficient network infrastructure. Since 100 error can be mitigated by maintaining. web monitoring has become an integral part of any network extension providing an overview 24/7 online component. I am happy to announce that I have successfully completed all stages of my project during internship. Strength, perseverance and focus at every stage of writing.

# Bibliography

- Barrell, Dylan. *Agile Accessibility Explained: A practical guide to sustainable accessible software development*, Amazon Digital Services, 2019.
- Blanck, Peter. *eQuality: The Struggle for Web Accessibility by Persons with Cognitive Disabilities*, Cambridge Disability Law and Policy Series, 2015.
- Burgstahle, Sheryl. *Creating Inclusive Learning Opportunities in Higher Education*, Harvard Education Press, 2020.
- Burgstahle, Sheryl. *Universal Design in Higher Education: From Principles to Practice*, Harvard Education Press, 2008.
- Byrne, Jim. *60 hot to touch Accessible Web Design tips – the tips no web developer can live without!*, Jim Byrne, 2006, (ISBN: 978-1-4116-6729-7).
- Chisholm, and May. *Universal Design for Web Applications: Web Applications That Reach Everyone*, O'Reilly Media, 2008.
- Clark, Joe. *Building Accessible Websites*, New Riders Publishing, 2002.
- Cunningham, Katie. *The Accessibility Handbook*, O'Reilly Media, 2012.
- Duckett, Jon. *Accessible XHTML and CSS Web Sites Problem Design Solution*, Wrox, 2005.
- Feingold, Lainey. *Structured Negotiation: A Winning Alternative to Lawsuits*, American Bar Association, 2016.
- Gilbert, Regine M. *Inclusive Design for a Digital World: Designing with Accessibility in Mind (Design Thinking)*, Apress, 2020.
- Hamraie, Aimi. *Building Access: Universal Design and the Politics of Disability*, University Of Minnesota Press, 2017.
- Hassell, Jonathan. *Including your missing 20% by embedding web and mobile accessibility*, BSI British Standards Institution, 2014.
- Henry, Shawn Lawton. *Just Ask: Integrating Accessibility Throughout Design*, ET\Lawton, 2007.
- Holmes, Kat. *Mismatch: How Inclusion Shapes Design*, MIT Press, 2018.
- Horton, Sarah and Quesenbery, Whitney. *Universal Design for Web Accessibility*, Rosenfeld Media, 2014.



## An Undergraduate Internship/Project on Customer service portal Of Bashundhara Housing

By

**MD RAKIBUL HASAN**

Student ID: 1730174

**Autumn, 2022**

### **Consent from Supervisor**

The student modified the internship final report as per the recommendations made by his/her academic supervisor and/or panel members during and/or before final viva, and the department can use this version for archiving as well as the OBE course material for CSE499.

(Signature of the Supervisor)

Mr. Md Abu Sayed

Department of Computer Science & Engineering

Independent University, Bangladesh