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An Undergraduate Internship/Project on Website Development of Akboria Limited

By

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Summer, 2022

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Sep 13, 2022

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 certify that the report titled ”Website Development” is completed by me, Shanaz Razia Fidda (1731389), submitted in partial fulfillment of the requirement for the Degree of Computer Science and Engineering from Independent University, Bangladesh (IUB). It has been completed under the guidance of Mr. Bijoy Rahman Arif sir (Supervisor). I also make sure that all my work is the first one I learned during my Internship. All sources used for this project and report are duly accepted into it.



13.9.22

_____ _____

Signature Date

Write Your Name Here

Shanaz Razia Fidda

_____

Name

Acknowledgement

First of all, I would like to thank Almighty Allah (SWT), for his kindness in completing my internship report on time. I would like to extend my thanks to the Faculty of Computer Science and Engineering department to maintain internship debt in the graduation program curriculum once give me a wide range of tasting taste of industry-oriented activities and the field of work in my interest. I would like to say a special and heartfelt thanks to my manager, Mr. Bijoy Rahman Arif, Lecturer, Department of Computer Science and Engineering, Independent University, Bangladesh, who encouraged me and guided me on his progress, guidance, helpful instructions, encouraging suggestions, and thoughtful advice on time follow this application and update this report. Thanks again to my technical manager Md Andalibur Rahman sir, CTO, Akboria Limited from the center of my heart for his good support, guidance, uplifting, guiding, instructing and advising and encouraging me to do read smoothly at Akboria Limited. I feel proud and satisfied that I have been closely monitored by the Website Development team and received direct advice from my supervisor. Here, with daily reporting and psychological and professional support enhances my knowledge in internship life.

Letter of Transmittal

Mr. Bjioy Rahman Arif

Lecturer

Department of Computer Science and Engineering

School of Engineering and Computer Science

Independent University, Bangladesh

Subject: Submission of Internship Report for the completion of Graduation.

Dear Sir,

I am submitting my Reading report, which is part of the Bachelor Program Computer Science and Engineering curriculum. It is a great achievement to work under it your effective monitoring. The report is based on, ”Akboria Limited Internship”. I had the opportunity to work at Akboria Limited for three months, under surveillance of Md Andalibur Rahman, CTO, Akboria Limited. This training has given me both academic and operational exposure. The internship has given me the opportunity to improve the network and business environment. I tried to make this report as informative as possible with the information I have gained during my internship. In order to prepare a formal internship report, I follow the guidelines and explain the required fields in sufficient detail, however, I sincerely believe that this report will serve the purpose of my learning program.

I will be very responsible if you are kind enough to receive this report and provide yours important judgment. It would be my great pleasure if you found this report helpful too information to have a clear view of the matter.

Sincerely Yours,

Shanaz Razia Fidda

ID: 1731389

Department of Computer Science and Engineering

Independent University, Bangladesh

Evaluation Committee

Bijoy Rahman Arif

Signature

September 25, 2022

Name: Bijoy Rahman Arif

.....

Supervisor

Sabrina Alam

Signature

Sabrina Alam

Name

.....

Panel Member-1: Sabrina Alam

Mohammad Motiur Rahman

Signature

Mohammad Motiur Rahman

Name

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Panel Memebr-2: Mohammad Motiur Rahman

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Dr. Mahady Hasan
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Abstract

Internship is defined as the acquisition of practical information for various organizations contributes to the building of a connection between theory and practice information. It is very important because this is the first time I as a student can do something at organization level. When given an internship at Akboria Limited, I had the opportunity to work and study with a team of industrial workers. The purpose of this project was to create a website using pure HTML that would show case different aspects of the company. This report covers every project I learned during my study period. I had to complete my study periods before working on any project, and this time lesson, I was assigned to work with a team from the organization, who gave me all sort of information that would be needed to stay in the website. It was almost like a skill check before one real shared project. I had to work with people from various areas to collect information of the website. It gave me the opportunity to improve my communication and technical skills.

Table of Contents

Attestation 2

Acknowledgement 3

Letter of Transmittal 4

Evaluation Committee 5

Abstract 6

Chapter 1: Introduction 9

1.1 Overview/Background of the Work 9

1.2 Objectives 9

1.3 Scopes 10

Chapter 2: Literature Review 11

2.1 Relationship with Undergraduate Studies 11

2.2 Related works 11

Chapter 3: Project Management & Financing 12

3.1 Work Breakdown Structure 12

3.2 Process/Activity wise Time Distribution 12

3.3 Estimated Costing 13

Chapter 4: Methodology 14

Chapter 5: Body of the Project 15

5.1 Work Description 15

5.2 System Analysis 15

5.2.1 Six Element Analysis 16

5.2.2 Feasibility Analysis 16

5.2.3 Problem Solution Analysis 17

5.2.4 Effect and Constraints Analysis 18

5.3 System Design 19

5.3.1 Rich Picture 19

5.3.2 UML Diagrams 19

5.3.3 Functional and Non-Functional Requirements 24

5.4 Product Features 26

5.4.1 Input 26

5.4.2 Output 27

5.4.3 Architecture 27

Chapter 6: Results & Analysis 29
6.1 Software Testing 29
Chapter 7: Project as Engineering Problem Analysis 31
7.1 Sustainability of the Project/Work 31
7.2 Social and Environmental Effects and Analysis 31
7.3 Addressing Ethics and Ethical Issues 32
Chapter 8: Lesson Learned 33
8.1 Problems Faced During this Period 33
8.2 Solution of those Problems 33
Chapter 9: Future Work & Conclusion 34
9.1 Future Works 34
9.2 Conclusion 34

Chapter 1: Introduction

Internship is a learning experience as a professional job. It offers mostly practical work based on real life scenario related to the student's (internee's) major subject or career interest. Also, an internship provides a student an opportunity to relate their theoretical knowledge with the tough real world environments. Through internship, a person can gain enough skill for getting a job related to that field in the future. For me, it also game me the opportunity to observe, learn and practice under a professional's supervision of that field. Being a student of Independent University, Bangladesh (IUB), I must complete my internship from a reputed company on a respected field so that I can get job in future on that same field or other. I worked for around 3 months.

1.1 Overview/Background of the Work

As an intern, I faced multiple challenges other than learning new programming languages. For example, managing time for every tasks and report it to my supervisor. I started my internship at Akboria Limited on 10th May 2022 as a Junior software developer – intern and was given the task to develop a website for the company.

This website is a portfolio of the company and their products.

1.2 Objectives

Project objectives are what we plan to reap by the cease of our undertaking. The goals of a assignment are particular, measurable and should meet time, finances and most importantly meet the customer's necessities. the principle goals of this software are described beneath:

• Theme: The website will have a similar look and feel with the premium sweets website.

• Home Page: The website will contain a homepage that will be the main landing page of the website. It will have an overall information of the company.

• Reservation and Booking Form: The website will contain reservation form for booking rooms, and a booking table form to book a table in the restaurant. All these forms will send an email when submit button is clicked.

• Company and Product Portfolio: In the website, there will be detailed information on the company and its branches. Also it will contain the information of all the products.

• News Page: There will be a news page in the website. It will synchronize posts from the company's Facebook page.

1.3 Scopes

This website will be accessible by all users. There is no need to login. Users will be able to view all the information from the website. Moreover, they will be able to send query via “Contact us” page. Also they will be able to send booking requests.

The news page will be loaded dynamically. It will update the page based on the company’s Facebook page’s stream.

Chapter 2: Literature Review

2.1 Relationship with Undergraduate Studies

Literature review is a short summary of a studies paper primarily based at the same subject matter. It encompass numerous varieties of books, papers, article, and so on. which means it is basically explains the modern-day take a look at with the vital records that might be useful for the ongoing venture of that equal subject matter.

Similarity with the undergraduate education:

• Object oriented programming(CSE213): To build the classes with contact us and reservation, the data first need to be created. And this is done with the concept of object oriented programming. CSE213 or Object oriented programming is a course that teaches students how to create data types (classes) and use inheritance, polymorphism, etc. to implement real world system into efficient programming. This course taught me how a user can become a datatype and use inheritance to build multiple users that fall under the same type of users. Also how to implement each type of users' ability as method of a class.

• Web application(CSE309): The following system is a web based application system. This means that this course is the main course that helped me and will throughout my entire internship. This course taught me how build a website from scratch.

2.2 Related works

This is a company portfolio website. Many company has similar websites. Even I was given a sample website of Premium Sweets as a reference. Since, Akboria Limited is a food company, the website of Premium Sweets is more similar to it.

Chapter 3: Project Management & Financing

3.1 Work Breakdown Structure

A sequential structure that shows the division of the project into smaller parts is called a Work Breakdown Structure (WBS). In this project, we have produced WBS so that our work is integrated. WBS covers views of all scopes, risks, points communication, obligations, costs and guarantees that do not exceed value delivery. By combining mindfulness and collaboration, it is the right tool for the team. In this case, the WBS was used the way to the top.



Fig 3.1: Work Breakdown Structure

3.2 Process/Activity wise Time Distribution

In order to complete a project within the estimated time needs a process/activity wise time distribution. This distribution will help to organize all task as it will be divided into sections to make it work more efficiently. Besides, a person can work with more flexibility and easily when the entire project is divided into sub groups. The most important challenge in designing the right way application time management. Therefore, the content should fixed, and progress must be based on this context. A better time

management can lead to take less time to complete a task related to project. The critical path method for the website is given bellow:

Task	Duration
Planning	June 1st to 4th
Data Collecting	June 15th to 16th
Cost & Schedule	June 19th to 21st
Risk Analysis	June 24th to 26th
Design & Implementation	June 17th to September 20th
Testing	September 20th to 25th
Deployment	September 30th

Fig 3.2: Critical Path Method for the website.

3.3 Estimated Costing

Costing is calculated by the requirements and features that is going to be offered by the following project ordered by the client(s). The requirements and features of the project depends on the size, functionalities and design of the website including prototype(s) of the project, designing necessaries(themes, logo designs, custom pictures, etc.), total number of pages, SEO(search engine optimization), authentication, etc. Also the cost of developer and resources used have been taken into account. For the entire project, the final estimated cost was 60,000, sixty thousand, BDT.

Features	Cost in BDT
Internet Bills	3,000/-
Domain Bills	2,000/-
Hosting Bills	4,000/-
Designer	21,000/-
Frontend and Backend Developers	30,000/-
Total costs	60,000/-

Fig 3.6: Estimated Costs

Chapter 4: Methodology

Methodology is an in depth little by little method that identifies, technique and examine diversity of facts approximately particular subjects. It involves analyzing the manner of how the proposed machine works and switch it to in a platform with more simplified efficient of that gadget. The web utility that i have been operating on, on my internship, used the concept of methodology to feature numerous features and functions to the internet site to make it extra bendy for the customers. the usage of the idea of methodology, I've first understood how the farming control works. Then I divided the device into many components on the way to understand them deeply in order that i can truly the device wherever I'm able to. thus converting it into extra simplified device that is simple to run. additionally the simplified system is easy to understand and put into effect as an internet software. As I need to make recognize how my utility goes to make my client's work easy, methodology helped me to make it clean to convert it into virtual utility.

Chapter 5: Body of the Project

The theme of the project in the report is a detailed discussion of the work of those students who want to know about the depth and completeness of something done. The body of the project shows what is being done, how it is done, what the results are, and what conclusions and recommendations can be made.

5.1 Work Description

The website of Akboria is a portfolio of the Company and all it's products. It also contains a news page that contains news updates from the company's Facebook page. It also allows the users to send information via the "Contact us", "Reservation", and "Book a table" form.

There is no option for users to login in the website.

It consists of three modules. These are:

• Contact us: A person visits the website and goes to the "Contact us" page. After filling up the form, the user clicks on "Send Message" button. An email will be sent to a specific email address of the company.

• Book a table: A person visits the website and goes to the "Book a table" page. After filling up the form, the user clicks on "Book a table" button. An email will be sent to a specific email address of the company.

• Reservation: A person visits the website and goes to the "Reservation" page. After filling up the form, the user clicks on "Book a room" button. An email will be sent to a specific email address of the company.

5.2 System Analysis

System analysis is a problem-solving process that involves looking at a broad approach, segmentation, and finding out how they work to achieve a goal. It is used in information technology, where computer-based systems need to be configured once design analysis.

5.2.1 Six Element Analysis

Process	Human	Non Computing Hardware	Computing Hardware	Software	Database	Network & Communication
Contact us	1. User visits the Contact us page. 2. Fills up the form 3. Clicks the "Send message" button	Monitor, mouse, keyboards and other devices needed to access internet.	Desktop, Laptop, or smartphone	Internet browsers like Chrome, Firefox, Safari, Microsoft Edge, etc.		Internet connection
Book a table	1. User visits the Book a table page. 2. Fills up the form 3. Clicks the "Book a table" button	Monitor, mouse, keyboards and other devices needed to access internet.	Desktop, Laptop, or smartphone	Internet browsers like Chrome, Firefox, Safari, Microsoft Edge, etc.		Internet connection
Reservation	1. User visits the Reservation page. 2. Fills up the form 3. Clicks the "Book a room" button	Monitor, mouse, keyboards and other devices needed to access internet.	Desktop, Laptop, or smartphone	Internet browsers like Chrome, Firefox, Safari, Microsoft Edge, etc.		Internet connection

5.2.2 Feasibility Analysis

Possible studies show the functioning of the system vision, it will help: to explain the goals and objectives of building a system in the most efficient, developmental way the best plan and practice. Observation is used to determine which one mental functioning, which includes ensuring that the work is legal and professional possible in addition to economic forgiveness. We will be able to see whether or not what is being done is really worth the support — in a few cases, the business may not work.

The new work system needs to hear whether it is possible to think about it for a specific end purpose to produce a productive effect. This is advised on all issues that can be, in particular, performance or financial matters and how to resolve them by introducing new technologies, operations and financial skills in their project. The most important research feature is the possibility find out if the project has a good chance of success. Split spending compare client needs and more. There are many types of research possible such as operational, technical and economic aspects.

Some of the terms of feasibility analysis are as follows:

• Technical Feasibility: Technical Feasibility looks at small components of how to transfer the object or organization (i.e., equipment, work, delivery, the business will find out what areas, development needed, etc.). Think of a technical feasibility study such as strategic planning or strategy how your business will create, store, transfer, and track its products or services. Technical competency research is an incredible and long-term research tool harvest planning. With a few features, it completes as a framework for your product resources grow and you go about your business for your physical gain your market. Also, do not say that the performance of the technology is about how you will deliver product or service.

• Operational Feasibility: Potential Performance is part of the problem-solving problem with the support of another proposed program. It helps to use open doors and satisfies the condition as dividing the time between project development. It is important to know that management and clients support the work. There they are the six pieces of structure that can cause the division of performance issues to be resolved. They are performance, knowledge, economy, control, efficiency and resources with a clinical management plan the project must focus on something complete the goal of success.

• Schedule Feasibility: Schedule Performance is indicated as a project opportunity completed during the allotted time. In case the project is of a high standard, chances of ending after a fixed date, at that time the possibility of a schedule it is thought to be high. The possibility of a schedule ensures that the project can be completed before a project or technology expires or has no purpose.

• Economic Feasibility: The id function of the economic feasibility study is shown the total benefit of the proposed project to tolerate or distribute electrical goods/ benefits, to combine benefits and costs with the agency, in another case. offices, and the general public.

5.2.3 Problem Solution Analysis

Problem solving involves thinking and understanding. Although it may seem easy, identifying a problem can be a challenging process. One of the main problems is dealing with them top with a variety of

changes in technology day by day. Troubleshooting is an act of to explain the problem; to find the cause of the problem; identification, prioritization, and choosing alternative solutions; and apply the solution.

Solutions of a problem can be found by using the following methods:

• Define the problem: Check the situation to focus on the problem, not just its symptoms. Practical ways to solve problems include using flowcharts identify the expected process steps and cause-effect diagrams to be defined and analyze the causes. The sections below help explain how to solve important issues steps. These measures support the involvement of interested parties, the application of facts knowledge, expected comparisons and realities, and a focus on the causes of a problem

• Evaluate and select an alternative: Skilled problem solvers use a series of considerations when choosing the best option.

• Implement and follow up on the solution: Leaders can be called guide others to use the solution," sell" the solution, or facilitate implementation with the help of others. Involving others in use is an effective way to gain acquisition and support and reduce resistance to subsequent changes.

5.2.4 Effect and Constraints Analysis

Effect: The company website is very essential as it contains the company portfolio and various information of the company. It is also supposed to showcase all the products of the company. Realtime news is shown on the news page that shows news from the Facebook page. Contact us page shows all possible ways to communicate with the admin of the company. It also has a form that submits data directly to the admin's email address. Through booking a table and reservation page user can directly request to book room or table. It makes communication easier between the customer and the admin users of the company. Without the website, it is very difficult to get the company information, also it is difficult to communicate with the company.

Constraints Analysis: There are some limitations to the website. Such as, most of the pages of the website are static pages. If the company wants to update the pages they can't do it themselves. So, updating the website is difficult. Also, the "Contact us", "Book a table", "Reservation" pages have limited fields. User might need to send additional information to the admin users, but they can't.

5.3 System Design

Process or technique for defining hardware and software architecture, components, modules, interactions, and computer system data to meet specific needs. One can see it as the application of system theory to a computer. Some are scattered with system analysis instruction seems inevitable. Design tools like UML now fix some of the problems of computer systems and connectivity.

5.3.1 Rich Picture

The rich picture is a graphical tool that produces cartoon like representations of problem situations within organizations. Knowledge is gained from multiple stakeholders and differing viewpoints usually within a workshop context. A rich picture is used as one of the 3 primary tools in his soft system method maintaining that it must not be structured. The rich picture tool is popular amongst many analysts but has been increasingly criticized over the years for its lack of syntax, structure and rules.

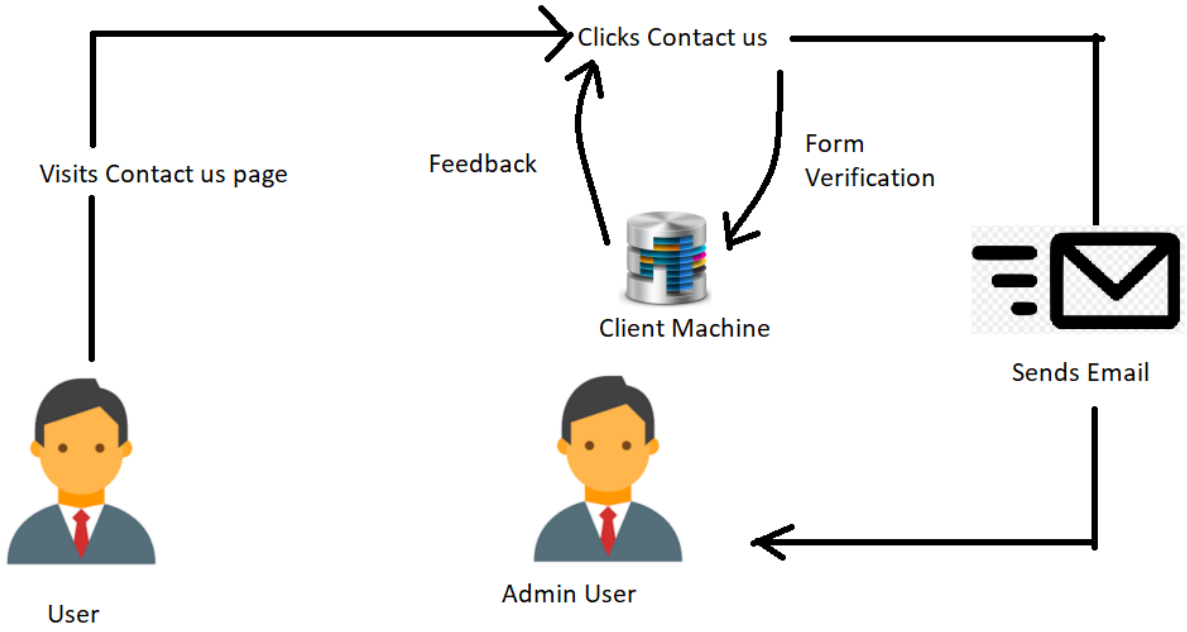


Fig 5.3.1: Rich Picture

5.3.2 UML Diagrams

Integrated Modeling Language (UML) is a common, evolving target language, which exemplifies the field of software engineering aimed at providing quality. how to detect system configuration. Any complex system is better understood to make some kind of drawings or pictures. These drawings have a better

effect on us understanding. If we look around, we will see that paintings are not a new concept but it is widely used in different ways in different industries.

Use Case Diagram: A usage case diagram describes how to use it charges were made. For example, let's explain the charge for using a Withdrawal. This the process is done in many steps, such as Enter card, Enter PIN, Select value, take withdraw money and issue a card. Of course, all these services come from customers opinion - but this sequence should not be included in the use case diagram. Other drawings are recommended for that, like a work sketch. A working case diagram should describe the desired function of the system and associate it with the use of cases and characters. Thus it can represent the existing ideas of the system and how it is interpreted in a different way - only then can the needs be fully understood.

Use Case diagrams of the website are given below:

Module 1: Contact us

Actors: Sender (User) and receiver (Admin user)

Description: The diagram below represents the contact us process of the website:

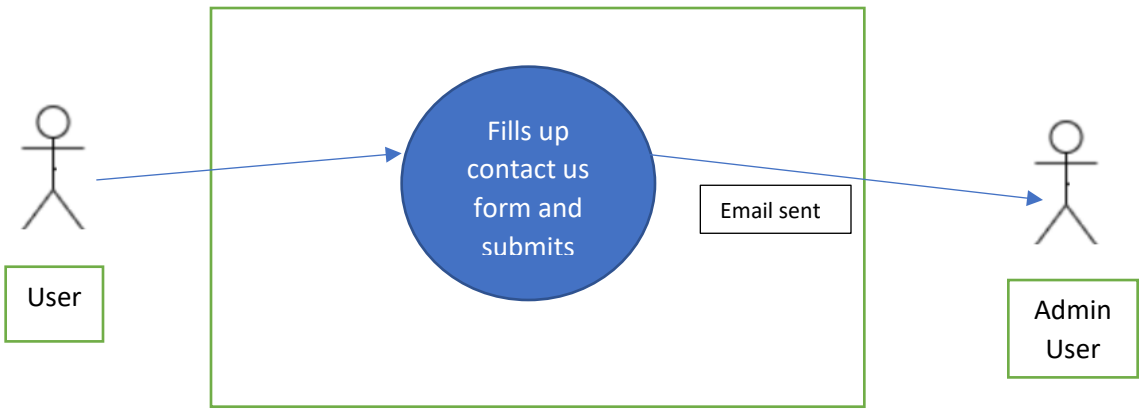


Fig 5.3.1: Contact us

Module 2: Book a table

Actors: Sender (User) and receiver (Admin user)

Description: The diagram below represents the book a table process of the website

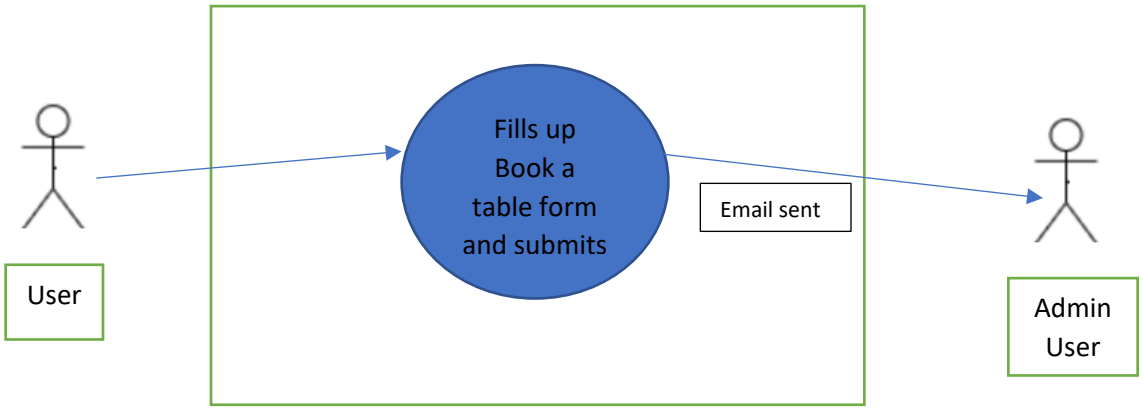


Fig 5.3.2: Book a table

Module 3: Reservation

Actors: Sender (User) and Receiver (Admin user)

Description: The diagram below represents the reservation process of the website

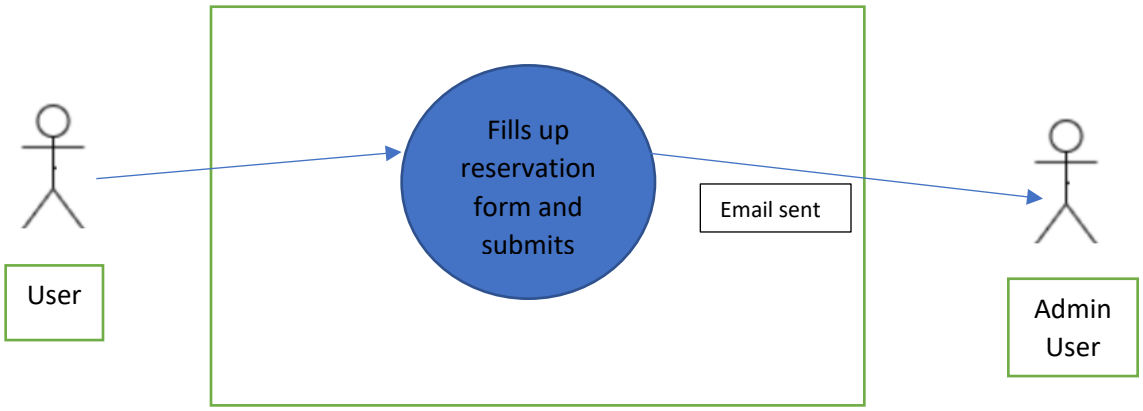


Fig 5.3.3: Reservation

Activity Diagram:

In UML, an activity diagram provides a view of the behavior of a system by describing the sequence of actions in a process. Activity diagrams are similar to flowcharts because they show the flow between the actions in an activity; however, activity diagrams can also show parallel or concurrent flows and alternate flows. In activity diagrams, you use activity nodes and activity edges to model the flow of control and data between actions.

Activity diagrams are helpful in the following phases of a project:

- Before starting a project, you can create activity diagrams to model the most important workflows.

- During the requirements phase, you can create activity diagrams to illustrate the flow of events that the use cases describe.

- During the analysis and design phases, you can use activity diagrams to help define the behavior of operations.

The following topics describe model elements in activity diagrams:

- Activities: In UML, activities are container elements that describe the highest level of behavior in an activity diagram. Activities contain several activity nodes and activity edges that represent the sequence of tasks in a workflow that result in a behavior.

- Actions: In UML, an action represents a discrete unit of functionality in an activity. Actions have incoming and outgoing activity edges that specify the flow of control and data to and from other activity nodes. The actions in an activity start when all of the input conditions are met. Input pins and output pins can be added to specify values that are passed to and from the action when it starts.

- Control nodes: In activity diagrams, a control node is an abstract activity node that coordinates the flow of control in an activity.

- Object nodes: In activity diagrams, an object node is an abstract activity node that helps to define the object flow in an activity. An object node indicates that an instance of a classifier might be available at a particular point in the activity.

- Activity edges: In activity diagrams, an activity edge is a directed connection between two activity nodes. When a specific action in an activity is complete, the activity edge continues the flow to the next action in the sequence.

The activity diagrams of the website is given below:

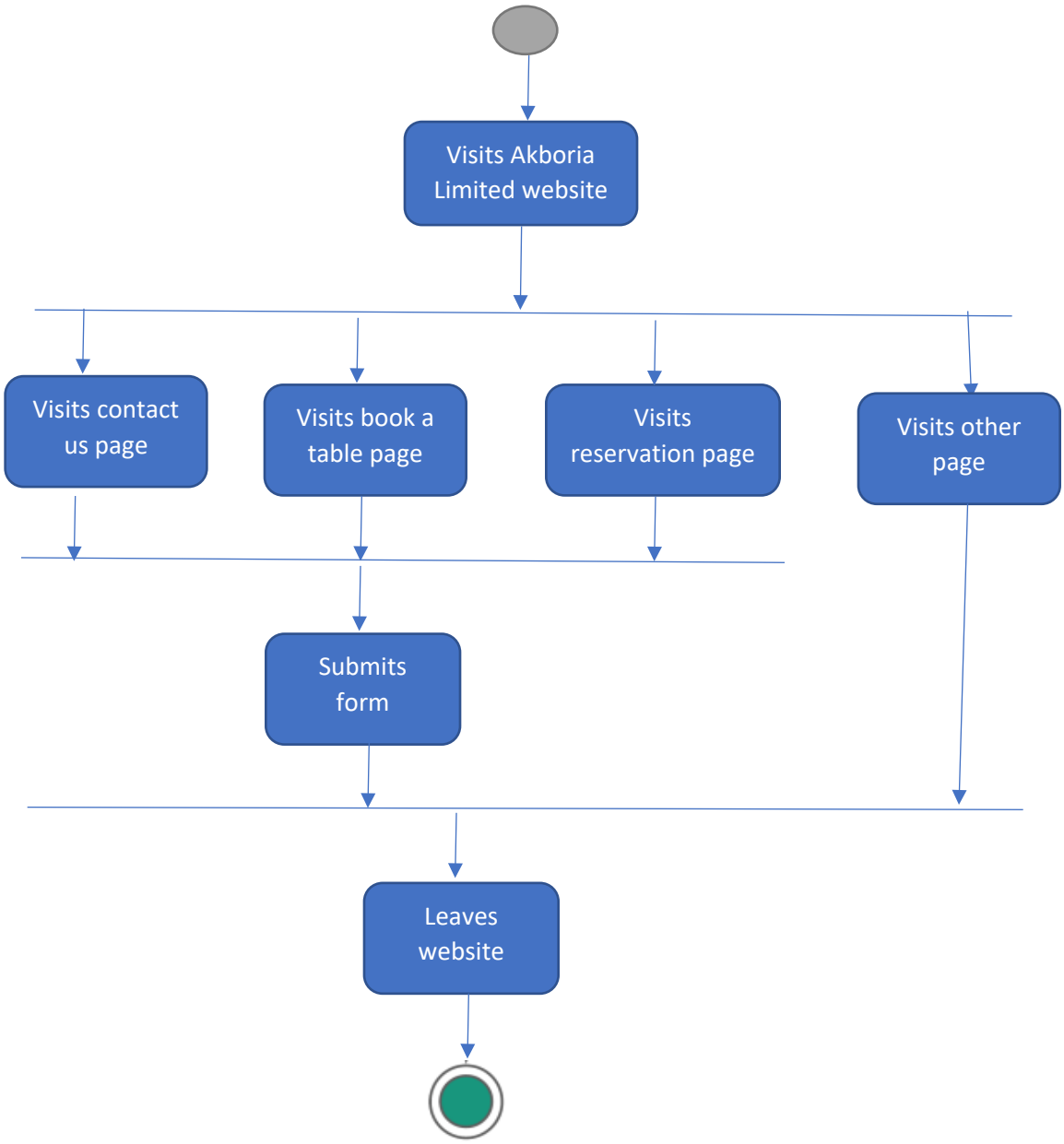


Fig 5.3.2.6: Activity Diagram of the website

Entity Relationship Diagram: An entity relationship diagram describes how entities relate to each other. In simple terms, it's a picture or a framework of your business or a certain business process. Entities are the things we need to store data about. It's an aspect of your business that needs to store data, such as a department – or sales, revenues, maybe clients. It also gives a snapshot of how these entities relate to each other. We can call it the blueprint that underpins your business architecture, offering a visual representation of the relationships between different sets of data (entities).

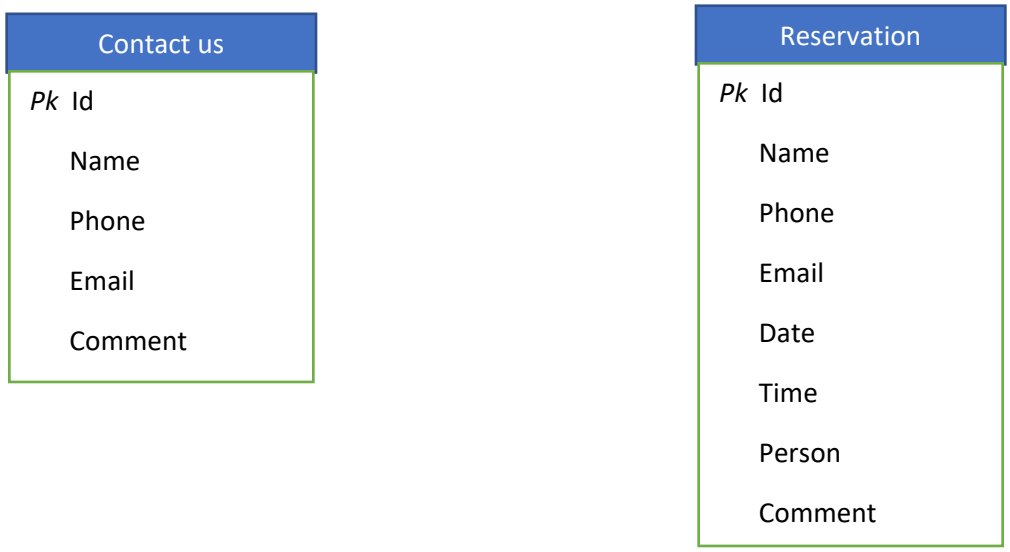


Fig 5.3.3: ER Diagram

5.3.3 Functional and Non-Functional Requirements

Functional Requirements: We need a written description of a feature or strength that a new or improved product design should incorporate. It usually has a lot of details, and it explains what should be given, not how it will be provided. In other words, it does not include usage details. The requirements, as well as the documents from which it is made, are legally binding and therefore the language used in them is very clear.

Function: Contact us		
Input: Name, Phone, Email, Comment	Process: Collects the data from the form and submits	Output: Send email with the collected information and shows success message
Precondition: Must have internet access with a browser. Must fill up required fields.		
Postcondition: User views success message and admin user receives email.		

Fig 5.3.3: Contact us

Function: Book a table		
Input: Name, Phone, Email, Date, Time, Person, Comment	Process: Collects the data from the form and submits	Output: Send email with the collected information and shows success message
Precondition: Must have internet access with a browser. Must fill up required fields.		
Postcondition: User views success message and admin user receives email.		

Fig 5.3.3: Book a table

Function: Reservation		
Input: Name, Phone, Email, Date, Time, Person, Comment	Process: Collects the data from the form and submits	Output: Send email with the collected information and shows success message
Precondition: Must have internet access with a browser. Must fill up required fields.		
Postcondition: User views success message and admin user receives email.		

Fig 5.3.3: Reservation

Non - Functional Requirements: Inactive requirements are a set of requirements that determine how well the system will work as opposed to operating requirements that focus on the specific business functionality applied for he does. How the app will work is nothing but a specified quality parameters such as accessibility, efficiency, reliability, usability, etc. on the basis of that app quality is rated.

Some of the attributes of non - functional requirements are as follows:

- Usability : Usability is defined as the measure of the degree to which an application can be easily used and operated. For example, in the case of a new application, the easier the flow of the application is for the user to operate it smoothly, the better will be the usability.

- Scalability : Scalability is defined as the ability of the system to cater to the growing usage of the application. It is of two types horizontal and vertical scaling. This horizontal scaling can be achieved more by adding more machines. Vertical scaling is provided by adding more CPU and RAM to the available machines.

- Security : Security is one of the most important attributes of non – functional requirements. It is the measure of the resilience of the application under any type of malicious attack.

- Accessibility : Accessibility is the ability of an application to cater to the needs of the user with special needs or disabilities using some assistive technology like screen readers.

- Data integrity : Data integrity deals with the integrity, consistency, and correctness of the data in the application.

- Durability : Durability is the measure of the ability of the application to cater to the requirements for a long period of time.

- Maintainability : Maintainability is defined as the ease with which an application can be restored to working conditions after a failure.

- Performance : Performance is a non-functional requirement that deals with the measure of the response time of the application under different load conditions.

- Reliability : Reliability of a software system makes use of the Mean Time Between Failure (MTBF) parameter that is the time elapsed between 2 failures. The longer the MTBF the more reliable is the application.

- Robustness : The robustness of a software application is the measure of the ability of a software application to deal with invalid or erroneous input effectively.

5.4 Product Features

A product is an object or service designed to meet the specific needs of people or firms. The product feature includes features and attributes that provide value customers and separate the product from the retail center. Manufacturing companies and selling a product or service should ensure that there are certain features like any other product on the market. This ensures that the business has a competitive advantage in the marketing world. In other words, the product feature says skills are usually provided by a software program that allows the user to do something accordingly.

5.4.1 Input

Inputs of the website are as follows:

Input of the website	
Process	Field Type
Contact us	Name – string Phone – string Email – string Comment – string
Reservation	Name – string Phone – string Email – string Date – datetime Time – datetime Person - integer Comment – string

Fig 5.3.3: Input

5.4.2 Output

Outputs of the website are as follows:

Output of the website	
Process	Field Type
Contact us	On Success: Sends email to admin user and shows a success message to user. On Failure: Shows error message to user.
Reservation	On Success: Sends email to admin user and shows a success message to user. On Failure: Shows error message to user.

Fig 5.3.3: Output

5.4.3 Architecture

A web application is a program that uses an Internet browser to do something jobs. Comes with middleware and UI that connects both client, server, and details (domains). While backend scripting saves data, frontend transfers that data to consumers who support data exchange. In simple terms, the design of a web application is a way The system works during your daily browsing - enter the web address, view site, and communication - while the browser is transferring data to the server.

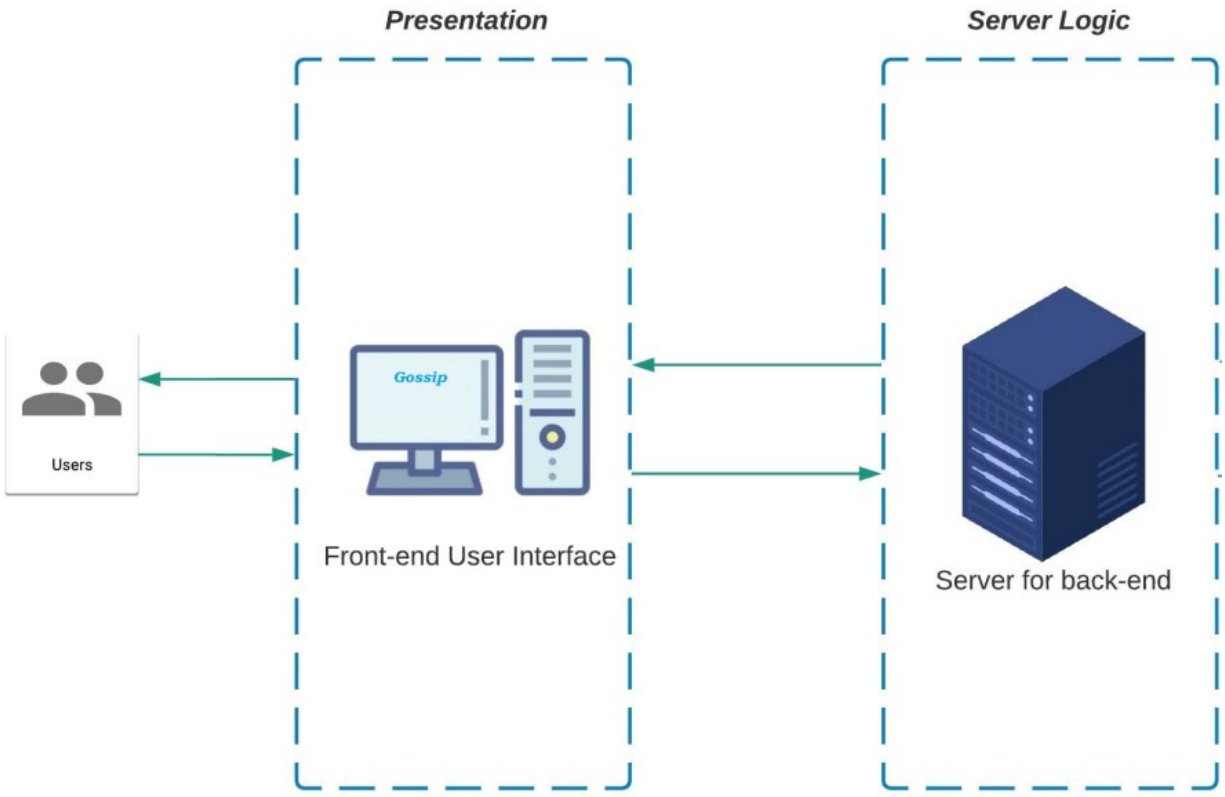


Fig 5.4.3: Architecture

Since the user submission interacts with the front-end, the front-end receives input requests and transfers it to a web server that handles that request using the required intelligence using the website and/or file system where required. And finally he came back feedback returns at the end where the user can see it as an output.

Chapter 6: Results & Analysis

On one website, all features once activities are analyzed and evaluated as well as progress that is passed step by step. Debugging the app has made a significant and significant change in both ends and application back-end enhancement. There were various cases to prove that they were done exactly as planned from the beginning. The project did not move further progressively developed until each test returns the expected output. Through this method, the application is made gradually and lively.

6.1 Software Testing

Software testing can be defined as a software verification process or the application has no interruptions, meets the technical requirements as directed structure and development, and meets the needs of consumers effectively and efficiently with help to manage all unusual situations and limitations.

The statistics below show the test and effect of all web application methods. The following tasks are provided if certain conditions are met successfully

Test ID	Test Case	Description	Steps to be executed	Expected result	Actual result	Pass/ Fail
T1	Contact us	User sends a message with other required information to the admin user	1. Go to “Contact us” page. 2. Fills up the form 3. Clicks on the “Send message” button.	The information will be collected and send to admin user	The information was checked with required fields. Email was sent to admin user. User was shown a success message.	Pass
T2	Book a table	User sends a message with other required information to the admin user	1. Go to “Book a table” page. 2. Fills up the form 3. Clicks on the “Book a table” button.	The information will be collected and send to admin user	The information was checked with required fields. Email was sent to admin user. User was shown a success message.	Pass
T3	Reservation	User sends a message with other required information	1. Go to “Reservation” page. 2. Fills up the form	The information will be collected	The information was checked with required fields. Email was sent to admin user. User	Pass

		to the admin user	3. Clicks on the “Book a room” button.	and send to admin user	was shown a success message.	

Fig 6.1 Test mode of website

Chapter 7: Project as Engineering Problem Analysis

The problem can be solved by carefully analyzing and producing but solutions to the problem and then deciding which one would be the most appropriate solution. Building a problem tree, identifying a major problem with cause and effect, and creating multiple functional solutions is known as engineering problem analysis. Project sustainability is a business approach that balances the environmental, social, financial aspects of goal-oriented activities primarily to achieve the participants' best interests without compromising or burdening future generations.

This is a web application designed to work on a desktop or laptop computer. However, if necessary, it can be upgraded as a mobile app as most people in Bangladesh today have smartphones more than ever and will feel more flexible than using a computer application.

The following project can be sustainable in one of the main three categories:

7.1 Sustainability of the Project/Work

• Social sustainability: Social sustainability is an effective way to manage and identify business impacts on employees, employees in value chains, customers, and local groups. Businesses that promote the importance of social sustainability understand the importance of their relationships with individuals, groups and communities. Social responsibility becomes part of their core business approach and they see how their activities affect people.

• Financial sustainability: Financial stability is understood as the ability of government officials to continue with current and future policies without causing an increase in debt. This means how the application costs will be managed after the application is issued. The operating costs of this application include: server, website, etc.

• Organizational Sustainability: The leadership, talent, global awareness and transformational strategies needed to maximize the unique challenges facing organizations today are known as Organization Sustainability. It has many features that are scheduled to be used in the future after release. As it has many programs, the application will be updated with minor changes with the major programs. We can therefore say that the following web application is invited by the organization.

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7.2 Social and Environmental Effects and Analysis

Environmental and social impact assessment involves an integrated approach, which includes assessing the economic components of a project - based on cost and benefit estimates - and the environmental impact of project implementation.

Social effect: Managing direct calls to people who might not be available is difficult. Message structure concerns primarily with how either the data or the claim are presented in per-suasive communication.

The relative effectiveness of explicit versus implicit messages. Less intelligent receivers require an explicit conclusion for understanding, whereas more intelligent receivers can comprehend implicit conclusions. Another potential moderator is involvement.

Environmental effect: The environmental impact is the result of the environmental impact on human health and well-being. The term is also used in a similar way to natural influence. For both theoretical and practical purposes, message feature definitions based on effects should be avoided in favor of definitions based on intrinsic features. To do this, the owner must be physically present and thus call on all other necessary requirements to support you. On one hand, variations in message effects variables are caused by the intrinsic features of the message. The relationships among these two types of variables and persuasion outcomes would thwart progress in under-standing of the effects of message features on persuasion and understanding of the persuasion.

7.3 Addressing Ethics and Ethical Issues

The moral code in everyday life acts as a moral code, incorporating a moral code that describes behavior as right or wrong. The Web offers a great store of information as well as great communication power, and unscrupulous users can use these skills to gain personal and financial benefits by paying others. The Internet Code of Conduct provides an online guide to proper behavior, adjusting the general ethical standards to provide a framework for online navigation. Moral issues are situations in which ethical conflicts arise and should be resolved. In other words, it is a time when moral standards are not being questioned.

Fraud and Identity Theft: Enabling third-party software is not included in these websites which can be very harmful to both the application and the application site. The order option prompts the customer to identify a contact number to place an order when needed. Therefore, no payment gateway is used in the system.

Data Security: All users are protected by guaranteed login. This means that without verifying the correct login, no user can access their desired information or perform any activity related to the site beyond their limit.

Chapter 8: Lesson Learned

Internship is something new to me. Although I have faced some challenges and problems; However, I have to find solutions to those problems. I learned a lot of new ways to solve problems in my training and enjoyed it.

8.1 Problems Faced During this Period

The problems that I have faced on my internship are as follows:

News page: The news page needs to be dynamic. It needs to synchronize post from the company's Facebook page. I didn't have any idea on how to do that.

Bootstrap: There was minimum knowledge about bootstrap, what it is and how it is used and where.

Email sending: There was a requirement to send email from the contact us, book a table and reservation form. I didn't have any idea to do that.

8.2 Solution of those Problems

Solutions of the above problems are given below:

News page: After doing RnD, I was able to implement this using Facebook page plugin.

Bootstrap: I have learnt some part of bootstrap. It has some built in css classes, that help make the page responsive.

Email sending: I had to add php code with the website. By using the mail function of php, I was able to send email to the admin users.

Chapter 9: Future Work & Conclusion

The future of work describes changes in the way work will be done over the next ten years, have contributed to technological change, generation and society.

9.1 Future Works

There are many features that can be added to the website:

- CMS: We can add CMS feature to the website. The admin users would be able to update the contents by themselves without asking the developers.
- E-Commerce: We can add e-commerce to the website. Customers would be able to add the items to cart and place order. We can also add multiple payment gateways so that customers can pay online.

9.2 Conclusion

My internship experience was one of my best work experience. The supervisor and all the other elders helped me whenever I needed help from them, especially in studying in some technical issues with bootstrap, HTML and css. They helped me a lot with my work.

Working as a web developer for full stacks for the first time for me. I have gained a lot of experience working in this field and working with such a wonderful team and coaches is a privilege for me. The concept of this web application seems simple, but when I started developing it, a lot of ideas started to emerge and when I shared with my coaches, they were happy and wanted me to use it.

In conclusion, I would like to thank both my internal and external managers whose guidance and inspiration have motivated me to strive for success in this career and fight for success.

An Undergraduate Internship/Project on Website Development (Akboria Limited)

By

Shanaz Razia Fidda

Student ID: **1731389**

Summer, 2022

Consent Form

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

On recommendation of the board

(Signature of the Supervisor)

September 25, 2022

Mr. Bijoy Rahman Arif

Department of Computer Science & Engineering

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