DESIGN AND IMPLEMENTATION OF COLD STORAGE WEB APPLICATION

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

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APPROVAL

This Project/internship titled **Design and Implementation of Cold Storage Web Application**, submitted by Aman Ullah Himel, ID No: 152-15-5993 to the Department of Computer Science and Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 06/12/2019.

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I hereby declare that, this project has been done by me under the supervision of **Abdus Sattar, Assistant Professor, Department of Computer Science and Engineering**, Daffodil International University. I also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.
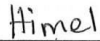
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ii

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I am really grateful and wish our profound our indebtedness to **Abdus Sattar**, **Assistant Professor,** Department of CSE Daffodil International University, Dhaka. Deep Knowledge and keen interest of my supervisor in the field of Web Development to carry out this project. His endless patience, scholarly guidance, continual encouragement, constant and energetic supervision, constructive criticism, valuable advice, reading many inferior draft and correcting them at all stages have made it possible to complete this project.

I would like to express my heartiest gratitude to the Almighty Allah and **Prof. Dr. Syed Akhter Hossain, Professor and Head,** Department of CSE, for his kind help to finish my project and also to other faculty member and the staff of CSE department of Daffodil International University.

I would like to thank my entire course mate in Daffodil International University, who took part in this discuss while completing the course work.

Finally, I must acknowledge with due respect the constant support and patients of our parents.

ABSTRACT

The web application has become a global revolution in communication and E-commerce. Our project **Design and Implementation of Cold Storage Web Application** is a web based application to book and manage cold storage using electronic devices from anywhere. Our project will help to store agricultural products using online. Bangladesh is an agricultural country, in most cases products are perished because products are not stores properly. Our online application will help to reduce perishes rate of agricultural products. We hope this project will help to digitalize agricultural department of our Digital Bangladesh.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

CHAPTER 1

INTRODUCTION

1.1 Introduction

Bangladesh is an agricultural country, in most cases agricultural products are perished because products are not stores properly. Due to insufficient cold storage, it is very hard to find space in storage. Besides most of agricultural products are transported from a long far due to road circumstances sometimes need to store products in nearby cold storage. My project will solve this problem. Using online application anyone can find nearby storage and also can booking space for products.

1.2 Motivation

Bangladesh is declared as Digital Bangladesh. Technology is growing rapidly in every sectors. Today we can get services easily by using online services. In my project I tried to digitalize the cold storage management system. This project will be helpful to find desired storage space in specific area and will provide proper management service.

1.3 Objectives

- To find cold storage easily using address.
- Store agricultural products properly.
- Reserve storage from anywhere using device (PC, Mobile etc.).
- Reduce perishable rate.
- Save time and provide efficient service.

1.4 Expected Outcome

In this web application users can find their desired storage according to specific price and location. Simply using electronic device anyone can get this service from anywhere. My goal is to provide digital storage service to all clients and reduce perishable rate by this web application.

1.5 Report Layout

Chapter 1: Introduction

There I have examine the target, inspiration and anticipated result of my undertaking. Next pursues is report format.

Chapter 2: Background

There I additionally examine the condition of my venture, similar work, similitude the different competitor framework and the difficulties of this task.

Chapter 3: Requirement specification

This chapter represents the useful necessity and non-useful prerequisite that was utilized in my task.

Chapter 4: Design Specification

This chapter talks pretty much full structure of my task such as front-end configuration, back-end plan, Interaction plan and the usage of my prerequisite.

Chapter 5: Implementation and Testing

This section examines the database and its usage, front-end structure and communications, test consequence of the venture.

Chapter 6: Conclusion and Future Scope

Development process is examined in the area that is progressively imperative to build state duty to the vision "Computerized BANGLADESH"

CHAPTER 2

BACKGROUND

2.1 Introduction

The significant property of a software is its application. In the project work that We need to complete a task appropriately We need to find out about the back-end and front-end issues. We need to think about increasingly more about similar or not similar works and research works. Foundation data of a venture has the pertinent and similar work of an undertaking. It likewise talks about the majority and clarification. It will help that individual who will read this report with the intelligent thought.

2.2 Related Work

Some of the works I discovered which are made based on the task yet not similar as my own. A few models are amangroupbd.com, agricoldstorage.com, mcraecold.com, kbg.com.bd/reza-cold-storage. Here are the front perspectives on their sites.
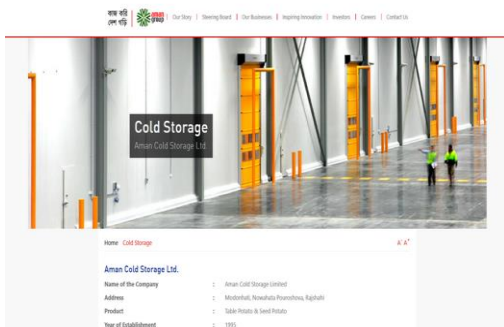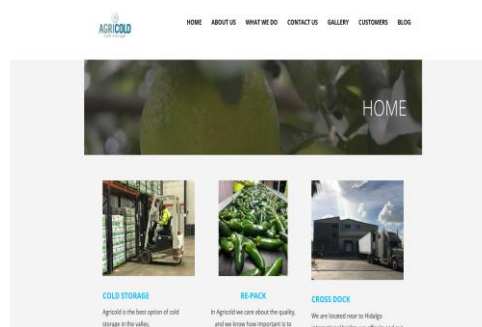

Figure 2.2.1:Amangroup BD[3]

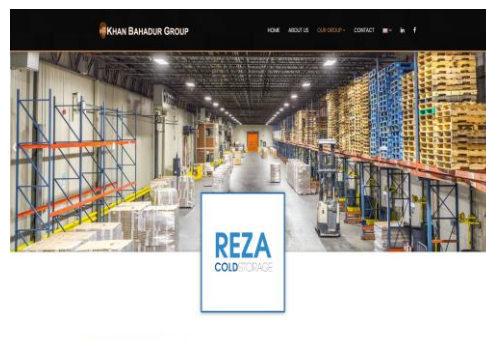Figure 2.2.2:AGRICOLD storage[4]

igure 2.2.3:McRae cold[5]

Figure 2.2.4:Kbg BD[6]

2.3 Comparative Studies

There is no online cold storage service in our country. The complexities of discovering immaculate cold stockpiling are very difficult. We altered that for everybody. We made an orderly structure that increasingly agreeable for new sites. We made a straightforward answer for this project. We need to improve our project work with an enormous number of asset distribution and we will develop our web application in Android platform. Our system has three administrator/user panels. The system is completely constrained by super admin, rest are acts as sub admin and user.

2.4 Scope of problem

I confronted some problems when i develop this project. A few issues are excessively troublesome while others are so natural for understanding. After fixing all the issues i develop the system completely. These are some issues I have looked to develop my project:

- To know the requirements of clients.
- Communication for collecting client's wants.
- Providing location, rent price and other information of cold storage.
- Collection of all the data for my system database.
- To cause something exceptional with the goal that individuals to get intrigued by my work and appreciate the UI.

2.5 Challenges

To develop this venture I have confronted a few difficulties. Those challenges are mentioned here:

- The usable features and the UI(User Interface) design
- To ensure efficiency of the system
- To provide users protection
- Adding inserted classification
- To combine three types of panel (super admin ,sub admin and user)

CHAPTER 3

REQUIREMENT SPECIFICATION

3.1 Business Process Modeling

BPM is a graphical model for framing a spilling layout. It builds a structure that demonstrates an appropriate data set. The capacity of endeavor could be depicted by BPM. In a general sense, all the structure have a business strategy appear. This framework show adaptability shows the challenge to both the user and the designer.

My undertaking, the areas are the segment. The major data of users are orchestrated in the application. The application will get the perfect advisor before the user after a real solicitation. The user can experience through various option of the app and find the necessary data self-sufficient than other person.

3.2 Requirement Collection and Analysis

This is fundamental for efficient task for any endeavor. The task overcasts in the half if the essentials are not broke down properly. Likewise, correspondingly, all the tasks and tries can futile. Then to develop a compelling endeavor, a productive need amassing and examination is a certain prerequisite.

On my endeavor, essential aggregation was a significant part. We segregated our assignment into a couple of segments as we have various spots requested in a couple of zones. We in like manner expected to get in contact with some particular places up close and personal to find the clear information. Resulting to get-together the necessities we separated them. Also, got an authentic way for starting the use of this endeavor.

3.3 Use Case Modeling and Description

A usage case model is a summary of exercises or event steps that describes associations between and performing craftsman and a system for achieving a goal. In site and systems making it is basically named use case illustrating. As indicated by the Unified Modeling Language, the customer is known as a performing craftsman,

which can be either a human or system mechanism. In the web application, customers (client) and the executives will entertainer and this system will provide all the key information of better ways as they get to [2].
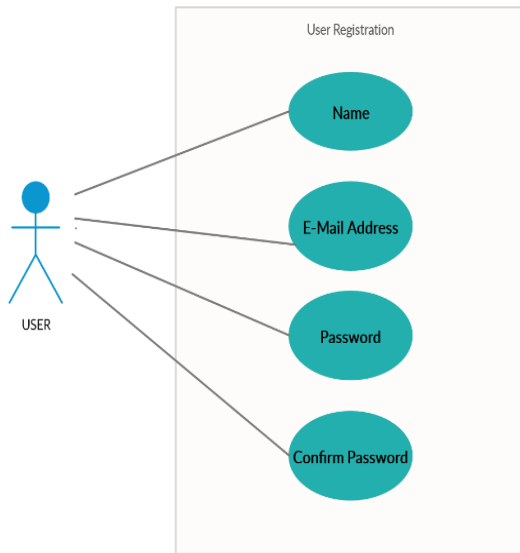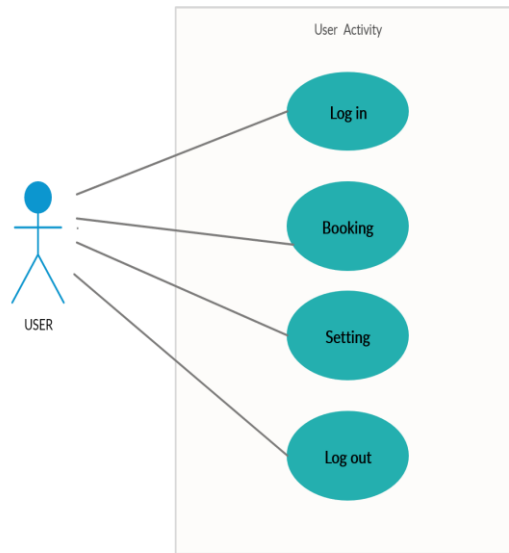

Figure 3.3.1: User Registration   Figure 3.3.2: User Activity

Use Case Description:

Use case 01: Enter into http://coldstorage.shunnosoft.com

Operation Actor: Users

Precondition: Internet connection

Entry Condition: http://coldstorage.shunnosoft.com enter the URL

Event Flow: Browse the features of the cold storage app

Exit Condition: Click the exit arrow in the top part

Use case 02: User Registration

Operation Actor: Users

Precondition: Enter into http://coldstorage.shunnosoft.com

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Event Flow: Complete registration by providing Name, E-mail, Password

Exit Condition: Log out and Click on the exit icon

Use case 03: User Log in

Precondition: Must be registered

Event flow: To log in provide valid information

Exit Condition: Log out

Use Case 04: Booking

Operation Actor: Users

Precondition: Must be sign in.

Entry Condition: Select Booking

Event Flow: Provide booking details , pay advanced and confirm booking

Exit Condition: Submit booking and log out

Use Case 05: Settings

Operation Actor : Users

Precondition: Must be logged in

Entry Condition: Select the setting

Event Flow: User can view profile and change password
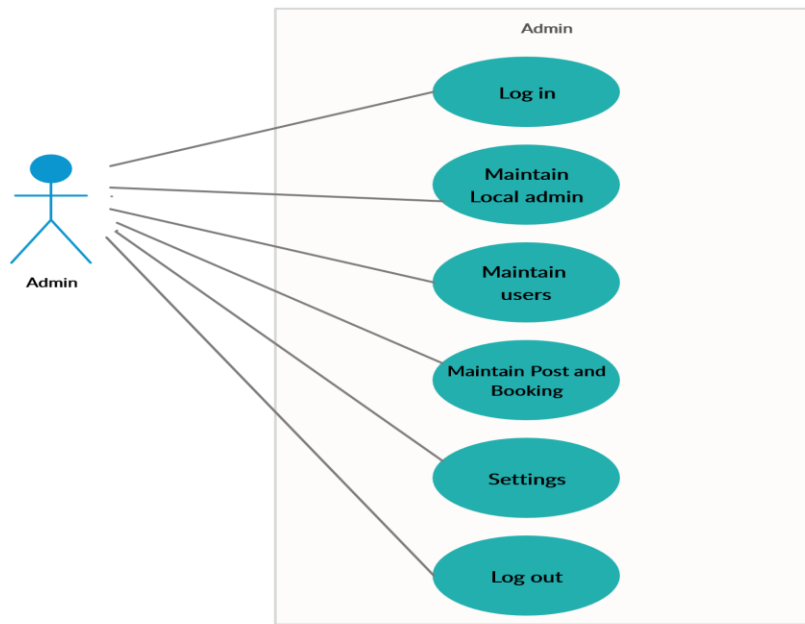
Exit Condition: Log out and click on exit

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Figure 3.3.3: Use case diagram – Admin

Use case 01: Login

Operation Actor : Admin

Precondition: Go to http://coldstorage.shunnosoft.com

Entry Condition: Select the Admin Login option

Event Flow: Provide admin log in information

Exit Condition: Click on the logout and exit

Use case 02: Maintain service provider

Operation Actor : Admin

Precondition: Must be sign in as Admin

Entry Condition: Click on local admin

Event Flow: View and create local admin

Exit Condition: Log out.

Use case 03: Maintain Users

Operation Actor : Admin

Precondition: Must be logged in as admin

Entry Condition: Click on Customer

Event Flow: View and create customer(user)

Exit Condition: Log out.

Use case 04: Maintain Posts and Booking

Operation Actor : Admin

Precondition: Must be logged in as admin

Entry Condition: Click on Post and Booking option

Event Flow: Accept and reject Posts and Booking

Exit Condition: Log out.

Use case 05: Setting

Operation Actor : Admin

Precondition: Must be logged in admin

Entry Condition: Click on setting

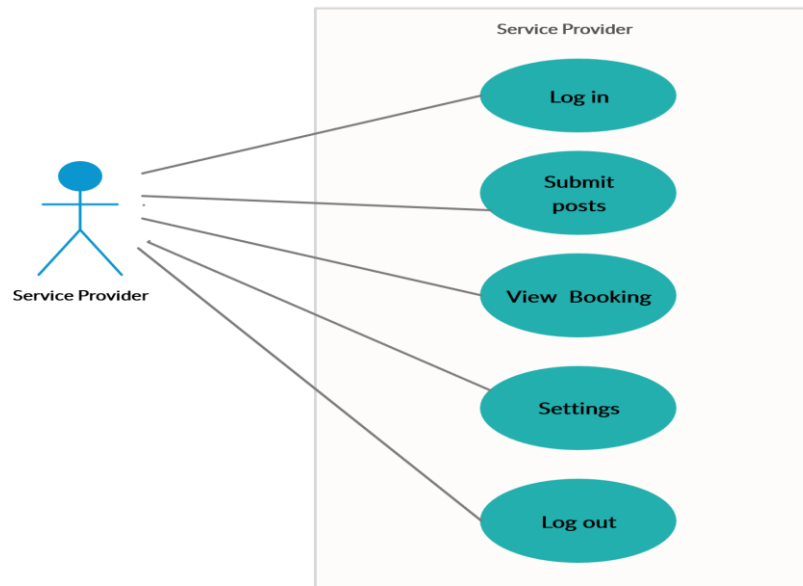**Event Flow:** View and change password, photo.

Exit Condition: Log out.

Figure 3.3.4: Use case diagram – Service Provider

Use case 01: Login

Operation Actor : Service Provider

Precondition: Go to http://coldstorage.shunnosoft.com

Entry Condition: Click on the Service Provider Login option

Event Flow: Provide log in information

Exit Condition: Click on the logout and exit

Use case 02: Submit Posts

Operation Actor : Service Provider

Precondition: Logged in as Service Provider

Entry Condition: Click on the post option

Event Flow: Provide storage information and submit post

Exit Condition: Click on the logout and exit

Use case 03: View Booking

Operation Actor : Service Provider

Precondition: Logged in as Service Provider

Entry Condition: Select the booking option

Event Flow: View booking list, check conditions and accept or reject booking.

Exit Condition: Click on the logout and exit

Use case 04: Setting

Operation Actor : Service Provider

Precondition: Logged in as Service Provider

Entry Condition: Select the setting option

Event Flow: view profile and change password

Exit Condition: Click on the log out and exit

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3.4 Logical Data Model

The Entity Relationship diagram represents the relationships of entity blocks of the system architecture.ER model becomes an abstract data model, that defines a data or information structure which can be implemented in a database, typically a relational database. After all, ER diagrams build the logical frame of databases.

The process of the element blocks of the database framework is appeared by the element relationship chart "ERD". The legitimate structure of a database framework is represented by the ERD model. Every one of the elements and relationship of the framework are incorporated into the ER outline. Every one of the traits of the substances are structured by the essential key and remote key. The ER chart of our application is referenced in beneath [1].
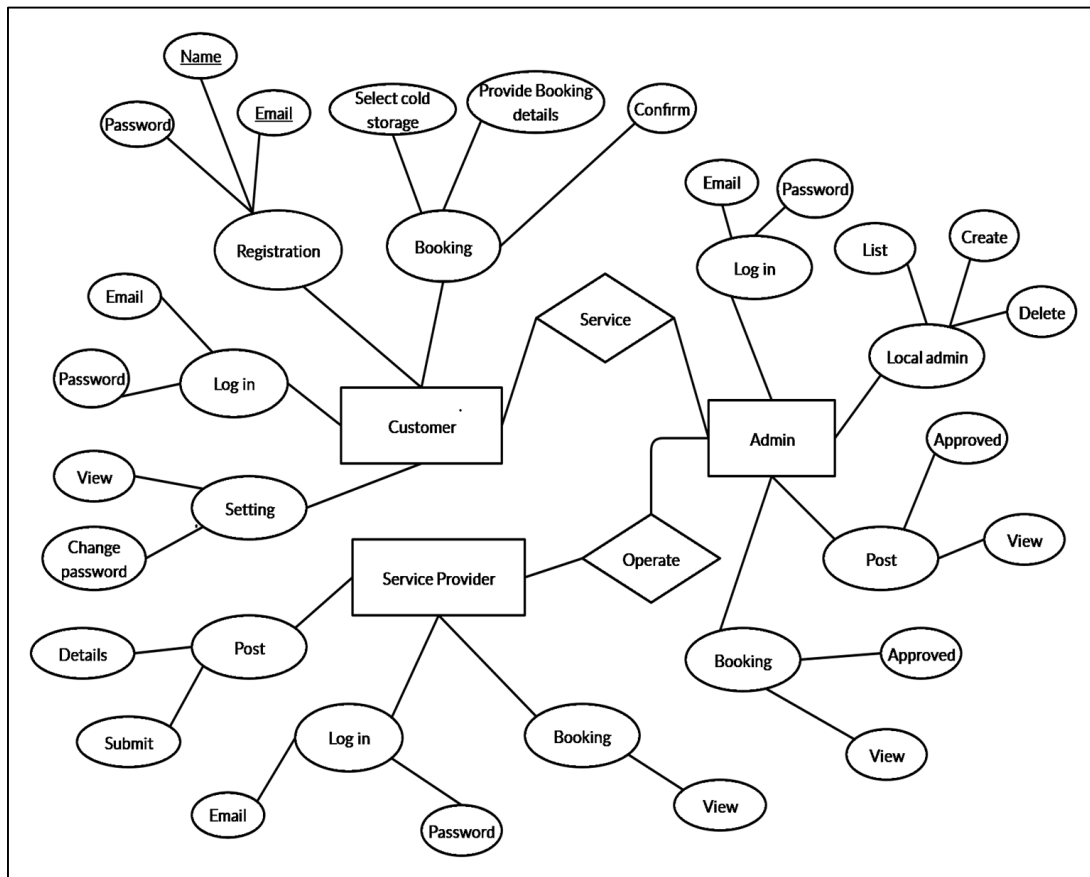

Figure 3.3.5: ER diagram

3.5 Design Requirements

For the system structure, the front end and the back end configuration assume an imperative work. The going with centers should be recalled while organizing the requirements:

Productive: The application is web-based. So users can access the application from anywhere by using any internet-capable devices. Users need not any specific device to use this and there is no charge to access or visit the site.

User Friendly: The UI (User Interface) of this web application is designed efficiently for users. All users can understand all features easily. It is "friendly" to the user, meaning it is not difficult to learn or understand. While "user-friendly" is a subjective term, the following are several common attributes found in user-friendly interfaces.

- There will be two types of Admin panel in this framework.
- There will be one user panel in this application.
- Users with the application get storage information.
- Users will find storage space by searching or using price bar.
- Users can view booking status.
- Users can view the process guide straightforwardly on the application.
- Service provider acts as sub admin. Service provider can submit storage posts.
- Admin accept and reject posts and also maintain the whole system.
- Admins can modify features from interface of the application.
- Admin can modification of add, modify and delete contents of database from system.

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CHAPTER 4

DESIGN SPECIFICATION

Plan attestation of a shape presentations how the improvement method will move for a particular system and how the forms of development are being finished. A structure confirmation is a factor through factor document giving records about the considered a venture to set criteria the organizers need to meet. Its utilization is called for where a structure or component ought to be surprisingly made to deal with an issue. In the going with a place, we can give the front give up and back end shape of our web site near to the devices and degrees used to build up the internet application internet site

.4.1 Front-end Design

The front give up of the website of Design and implementation of Cold Storage Management System has been designed with HTML and CSS. The arrangement has been stored plain with the objective that the consumer receives honest interface to surf around the apps. The clients need and green internet dating with the usage of the webpage as it's made subject to the consistent dataset thought.
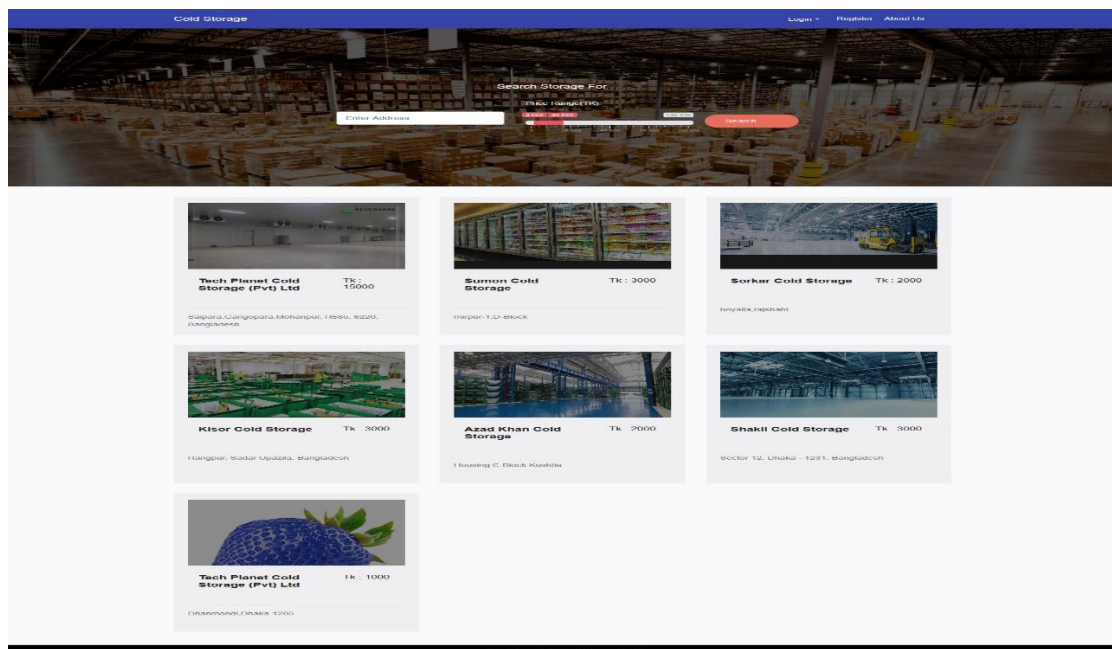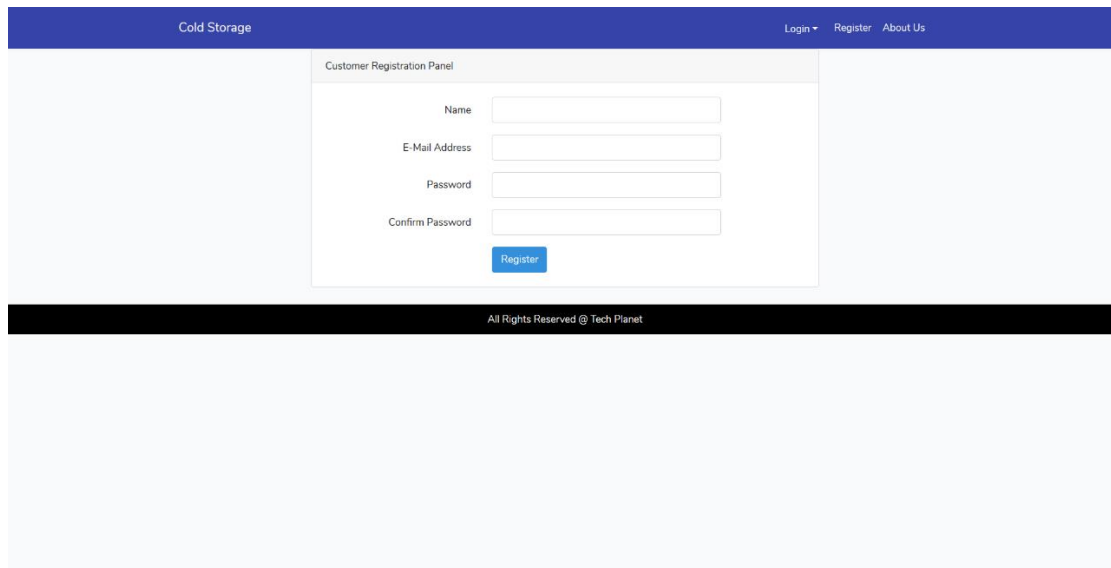

Figure 4.1.1: Home page
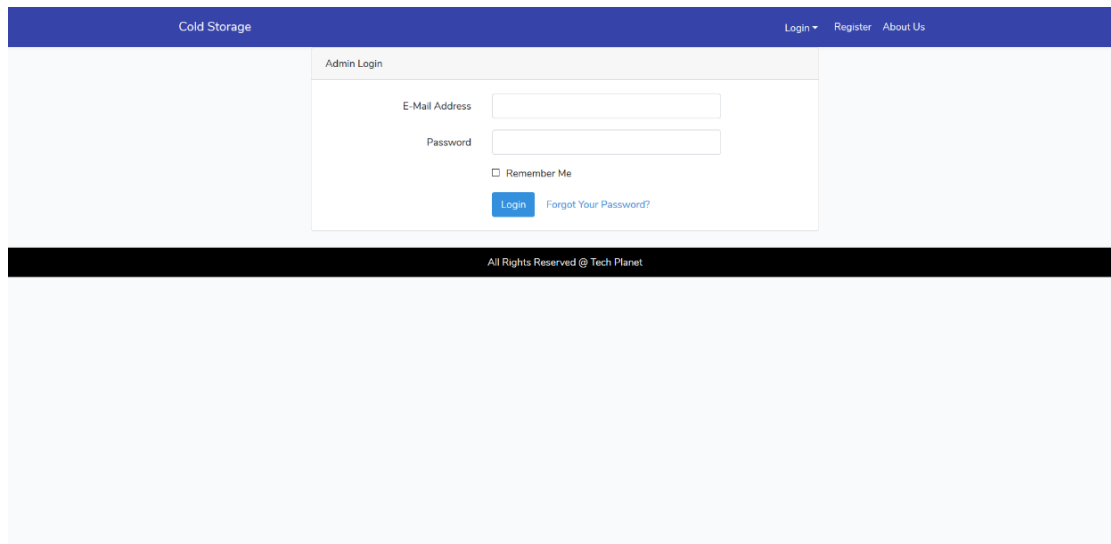
Figure 4.1.2: Sign up page
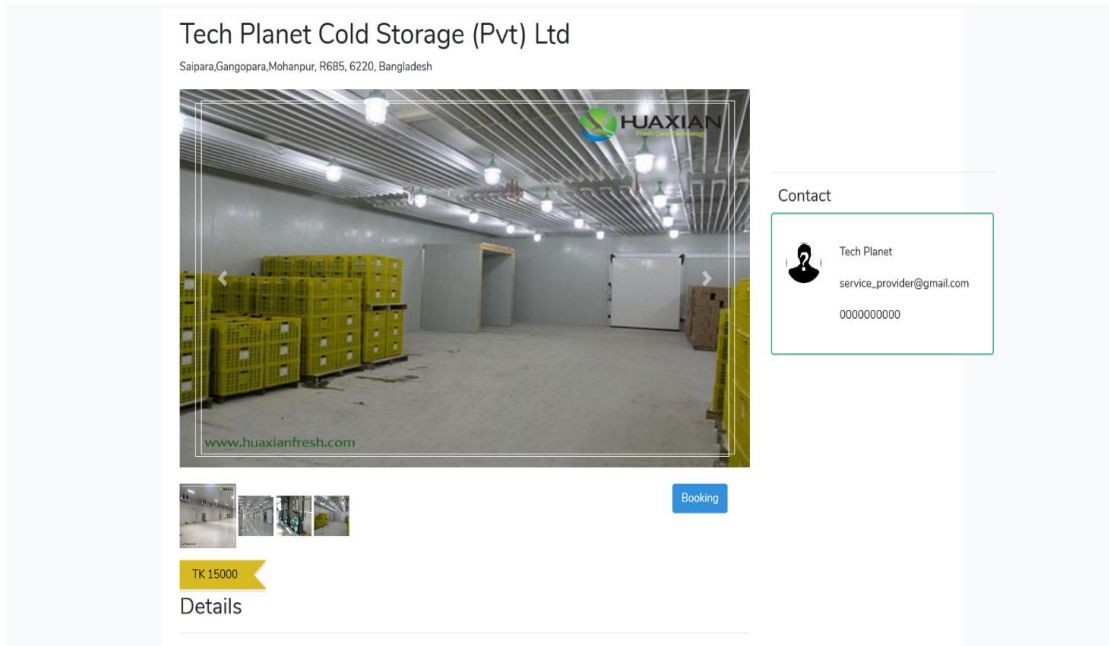

Figure 4.1.3: Log In page
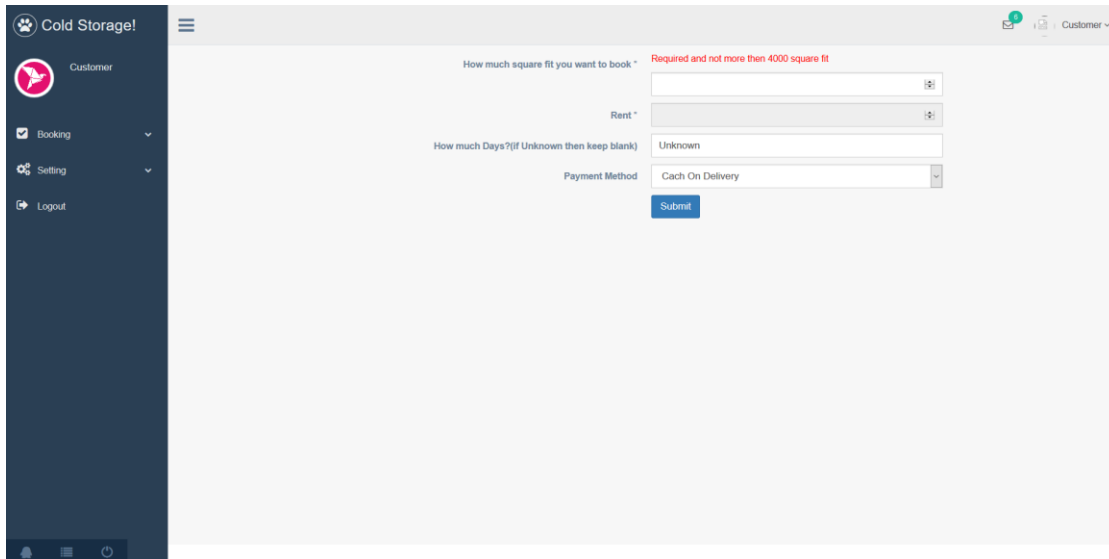
Figure 4.1.4: Booking Page.

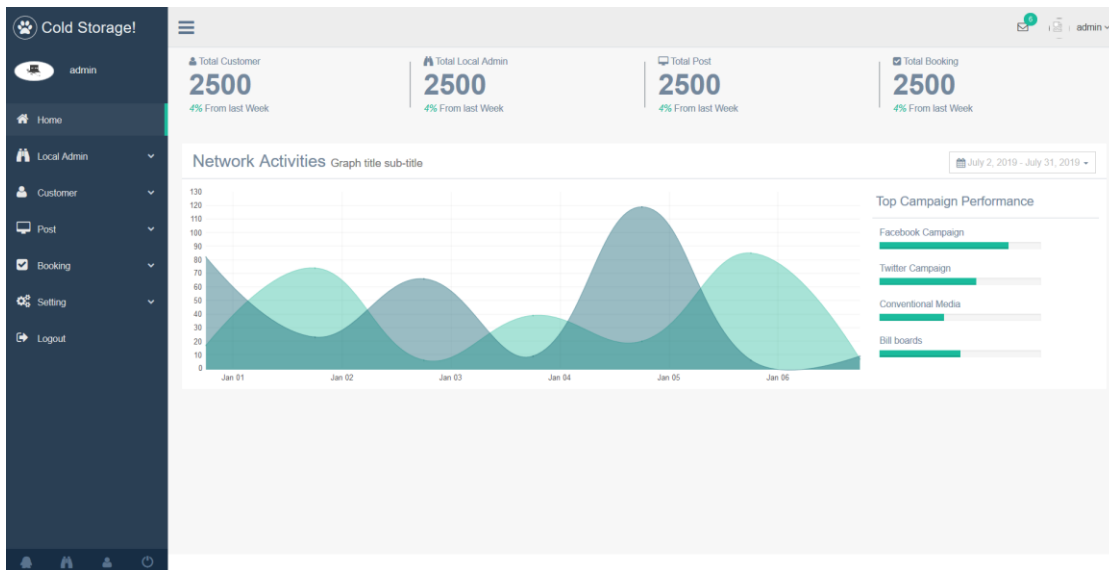Figure 4.1.5: Booking Activity

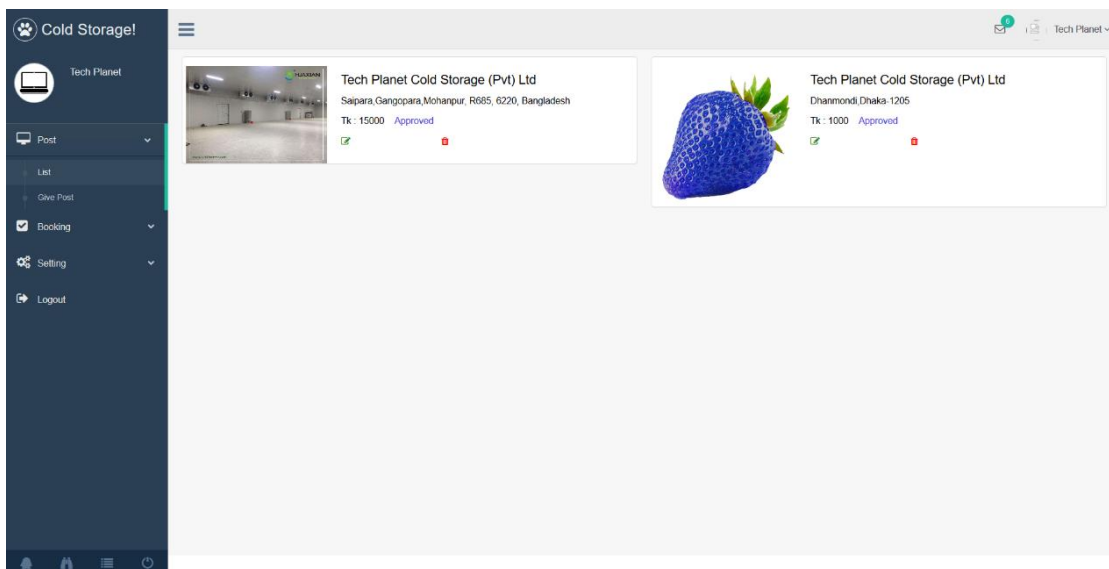Figure 4.1.6: Admin Panel.

Figure 4.1.7: Service Provider Panel.

4.2 Back-end Design

The backend of a domain is the most essential element. Each and each understandable thing arise right here. How the interface will be, the direction with the aid of which the activities will paintings, how things will be tended to the customer, in conviction the whole lot of the bits of the software relies at the lower back end of the web site. The languages utilized, the database, the safety of the internet.
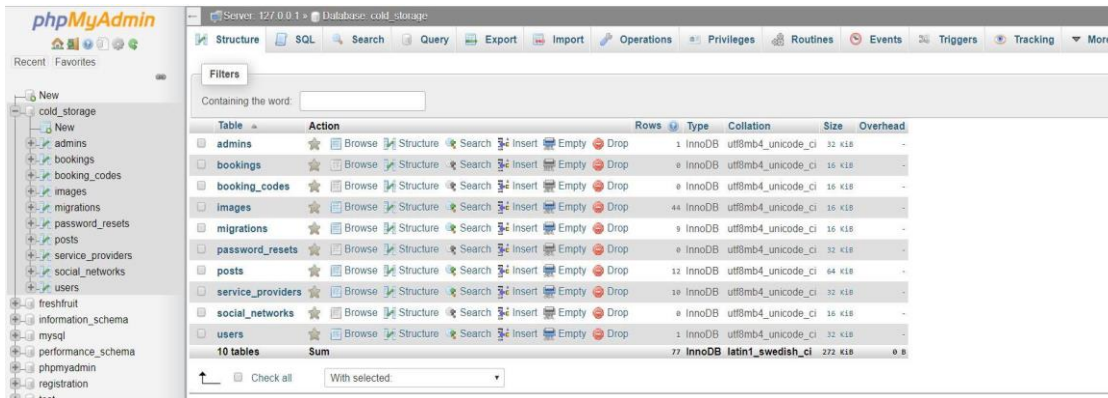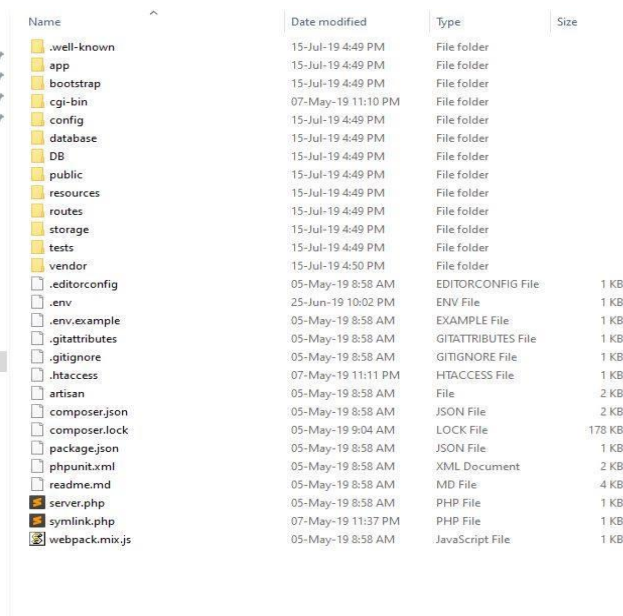

Figure 4.1.8: Database

Figure 4.1.9: Back end work.

CHAPTER 5

IMPLEMENTATION AND TESTING

5.1 Implementation of Database

A Web database is a database application expected to be regulated and gotten to through the Internet. Webpage heads can manage this gathering of data and present coherent results subject to the data in the online based database. The database has been a preferred position for associations, allowing the information event of obviously unending proportions of data from unbounded proportions of customers.

5.2 Implementation of Front-end Design

Login page for admin: Next feature is the login web page for directors of the website. Here inside the given field the administrator can put the admin mail and password to sign up to the admin panel of web site, so as to empower admin to feature new functions to the database.

5.3 Implementation of Interactions

To make the web page continuously powerful and responsive the UI (User Interface) has been applied as easy to apply. We understand that particular is aware that call to sports are higher for the mass client as opposed to substance data. Considering that has been joined the site for reserving and visiting the web site of the unique clarification. The administrator has the login desire through which they are able to register to feature the specialist co-op to the framework database.

5.4 Testing Implementation

Structure Testing is a component of the application testing where an aggregate and composed writing computer programs is attempted. System testing: The path toward testing an organized structure to affirm that it meets showed. The testing of the realized system is an expected methodology to develop project. The errors and irritates are found through real testing. The analyzer will recognize the complexity found with the site which drives the fashioner to perceive the bugs and resolve the issues. All through the headway system of the site "Design and Implementation of Cold Storage Management System" it has been attempted a couple of times by

different customers. The test evaluation of this application is given underneath:

Table 5.4.1: Test case assessment

Sl.	Test Case	Input	Expected Outcome	Obtained Outcome	Pass/ Fail	Testing Date
1	Log in	Log in for admins	Successful Log in	Successful Log in	Pass	20-07-2019
2	Log in	Log in for Service provider	Successful Log in	Successful Log in	Pass	20-07-2019
3	Log in	Log in for User	Successful Log in	Successful Log in	Pass	20-07-2019
4	Booking	User try to book a storage	Booking successful	Booking successful	Pass	20-07-2019
5	Post	Service Provider post for storage	Post submitted successful	Post submitted successful	Pass	20-07-2019
6	Not responding	All input data	Less errors	Less errors	Pass	20-07-2019
7	Sign out from all panel	Admin, customer, services provider	Logged out successfully	Logged out successfully	Pass	20-07-2019

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5.5 Test Results and Reports

The eventual outcomes of the testing of the site are amassed to installation the check file. The document depicts the effect of the checking out formally. It records the facts procured from the appraisal of the web site and thrashings the troubles. It is extremely good to assist to obtain the goals of the improvement. There are various varieties of testing:

- Usefulness
- Regression
- Safety
- Execution
- Restriction
- Versatility
- Ease of use

In the beyond phase, the analyses with the test results have confirmed up. From the test report, we are able to verify that the made site is a dominating one which can fulfill its clients. It has an unfathomably clean to apply interfaces and better designs. In addition, the utility is limitlessly perceived by means of the customers.

CHAPTER 6

CONCLUSION AND DEVELOPMENT

6.1 Discourse and Conclusion

It was an extraordinary encounter to build up the web application and actualize every one of the viewpoints highlights of it. We are exceptionally happy to build up this task will be useful and helpful to clients. The hardworking, dedication and encouragement have made us successful in developing such a project. The **Design and Implementation of Cold Storage Management System web application** will be convenient to the clients all things considered and we hope our work will make extraordinary progress.

All much gratitude I want to give to Almighty Allah to favor me with assurance to finish the task. We are grateful to our supervisor who has helped us every way to complete our project work.

6.2 Scope for Further Developments

Later on, I will develop the web application that can be updated to include new features. Some future development mentioned in below:

- The Project will be developed in Android platform
- I will also try to develop the project in IOS platform.
- I will add transportation service feature in this web application.
- I will use various API to provide efficient service.
- The user interface will be improved.

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REFERENCES

[1]   ER Diagram, Diagram Examples Drawn Using Creately, Copyright © 2008-2019 Cinergix Pty. Ltd. All Rights Reserved.   Available at: https://creately.com/diagram-examples, last accessed: July 2019.

[2]   Use Case Diagram, Diagram Examples Drawn Using Creately, Copyright © 2008-2019 Cinergix Pty. Ltd. All Rights Reserved.   Available at: https://creately.com/diagram-examples last accessed: July 2019.

[3]   Amangroup BD, http://www.amangroupbd.com/, last accessed: 5th October 2019.

[4]   AGRICOLD storage, http://www.agricoldcoldstorage.com/, last accessed: 5th October 2019.

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