DIU SMART CANTEEN SYSTEM

BY

KHADIZA AKTER

ID: 141-15-3138

REHANA PERVIN JHARNA

ID: 141-15-3307

SIRAJUM MUNIRA SOMA

ID: 141-15-3363

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

Supervised By

Prof. Dr. SYED AKTHER HOSSAIN

Professor and Head

Department of CSE

DAFFODIL INTERNATIONAL UNIVERSITY

DAFFODIL INTERNATIONAL UNIVERSITY

DHAKA, BANGLADESH

May 2018

APPROVAL

This Project titled **"DIU SMART CANTEEN SYSTEM"**, submitted by Khadiza Akter, **ID No:** 141-15-3138 Rehana Pervin Jharna, **ID No:** 141-15-3307& Sirajum Munira Soma, **ID No:** 141-15-3363 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 07 May 2018.

BOARD OF EXAMINERS

_____

Dr. Syed Akhter Hossain **Chairman**
Professor and Head
Department of Computer Science and Engineering
Faculty of Science & Information Technology
Daffodil International University

_____

Dr. Sheak Rashed Haider Noori **Internal Examiner**
Associate Professor and Associate Head
Department of Computer Science and Engineering
Faculty of Science & Information Technology
Daffodil International University

_____

Md. Zahid Hasan **Internal Examiner**
Assistant Professor
Department of Computer Science and Engineering
Faculty of Science & Information Technology
Daffodil International University

_____

Dr. Mohammad Shorif Uddin **External Examiner**
Professor
Department of Computer Science and Engineering
Jahangirnagar University

DECLARATION

We hereby declare that, this project has been done by us under the supervision of **Prof. Dr. Syed Akhter Hossain, Professor and Head, Department of CSE,** and Daffodil International University. We also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

Supervised by:

_____

Prof. Dr. Syed Akther Hossain
Professor and Head
Department of CSE
Daffodil International University

Submitted by:

_____

Khadiza Akter
ID: 141-15-3138
Department of CSE
Daffodil International University

_____

Rehana Pervin Jharna
ID: 141-15-3307
Department of CSE
Daffodil International University

_____

Sirajum Munira Soma
ID: 141-15-3363
Department of CSE
Daffodil International University

ACKNOWLEDGEMENT

First we express our heartiest thanks and gratefulness to almighty God for His divine blessing makes us possible to complete the final year project successfully.

We really grateful and wish our profound our indebtedness to **Prof. Dr. Syed Akhter Hossain**, **Head**, Department of CSE, Daffodil International University, Dhaka. Deep Knowledge & keen interest of our supervisor in the field of "Web based application" to carry out this project. Her endless patience ,scholarly guidance ,continual encouragement constant and energetic supervision, constructive criticism , valuable advice ,reading many inferior draft and correcting them at all stage have made it possible to complete this project.

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

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

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

ABSTRACT

With the advance of technology and internet people around the world are using digital and technology based services to make life easy. In this modern era in modern technology added simplicity and efficiency. Due to rapid growth of its smart approaches are getting widely use our everyday life. "**Project Smart Canteen**" we achieve to advent technology and digital frame to help a user in the delivery and serving of the food in the canteen. This project is designed based on user requirement and laid to the mix young energetic people. The system is design web technology framework user provided electrically see food and placing order. Implement system user with efficient in the future, the system will be based on technology.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLE

CHAPTER 1
INTRODUCTION

1.1 Introduction

Now day's age of fast canteen automation in the canteen, many canteens have chosen to focus on quick preparation and speedy delivery of orders. Until very recently, all of this delivery of orders were placed over the smart device, but there are many disadvantages to this system, including the inconvenience of the customer needing to have a physical copy of the menu, lack of a visual confirmation that the order was placed correctly, and the necessity for the canteen to have an employee answering the phone and taking orders.

The main advantage of an online ordering system is that it greatly simplifies the ordering process for the canteen and the customer. When the customer visits the ordering webpage, they are presented the up-to-date menu, complete with all available options and adding prices of all selected foods. After selecting the food options, then the item will be added to their list.
The system also can be ended the load of the canteen. As the whole process of order will be automated. Once an order is placed on the web page, it is entered into the database and then retrieved in pretty much real-time, by a web based application on the canteen's end. Within this application all items with minimal delay and confusion.

1.2 Motivation

Worldwide use of smart devices and internet has been in evolving at a rapid pace. The use of smart devices and internet in our country has been increased in a more rapid speed. Many countries are used the automation system for their canteen. Now a days the use of digital format means use of smart devices to use automation system getting more popular than manual system. Smart canteen system is the system where customers order their

food and receive food in the canteen without any delay as they can directly go and collect what they ordered without waiting for a turn or waiting time. This system motivations to accelerate customer's orders and customer's order system used by employees to access customer order.

The purpose of the system is to develop a simple canteen automation system and implement it.

We are trying to make our University smart.

The proposed "Smart Canteen" is economically feasible.

1.3 Research Questions:

Three research questions have been set for the purpose of our research. They are as follows;

1. What are the main problems in our University Canteen?
2. What we need in our canteen?
3. How can we solve our canteen's problem?

1.4 Project Objective

The objective of our website is

- To order food rapidly.
- To make it convenient for people who have limited time.
- Cost reduction.
- Reduce paper work.
- Computerized order system.

1.4 Expected Outcome

Expected Outcome of this research system which will help to save people's time and easily can know the food menu, what they have in their canteen. Through this system we get proficient application that hold overall canteen food menu of canteen admin and each user both via smart devices.

1.5 Report Layout

Chapter 1 provides the overview of this project. Motivation and rational of the study have been discussed first. Then research expected outcomes and methodologies of the project.
Chapter 2 presents works done in this domain before followed by the summery of the studies. Then the scope of the research was discovered and the challenges to this research was discovered the challenges to this research is described.
Chapter 3 elaborates the logical requirements of the project. The use case model of this project will be also provided through analysis for the application.
Chapter 4 describes the whole implication for our database and implementation of the testing.
Chapter 5 concludes the reports with the limitation and also with mentioning future scopes of the application.

1.7 Methodology:

- This project that we built is usable for our University Canteen.
- Our application mainly design for automation canteen purpose.
- Via smart devices the process are performed automatically by the users and admin.
- We picked up all requirements that we need.
- For this application our aim is to save times and reduce the waiter's work.

CHAPTER 2

BACKGROUND

2.1 Introduction

Now days the instant use of communication tools like mobile and computer devices have been recently introduced to support communication and collaboration processes in the working environments. Research suggests that the use of smart devices application also increased rapidly day by day due to social presence and awareness within a collaboration group. People are more interested in various type of web page and dynamical informative web application are one of the top most choice for its very significant matter. This kind of website helps to learn easily and patiently. Web application come in all kinds of sizes with all sorts of features and all sorts of prices. That's why web application development is also one of the top most choice of the developers in many areas. Here we use web application system to develop an automation informative canteen web app which will helpful for our canteen users and for admin. The focal point of this chapter is to study related work done in this domain before and to find the scope for our research and the challenges of the research.

2.2 Related Work

There has been more development in this field. We built automation canteen system for our University Canteen. But there are some related works are done in automation canteen area, these are not related with our project. So some websites are describing below;

2.2.1 Foodpanda:

The Foodpanda website is an online food order website for smart devices users.

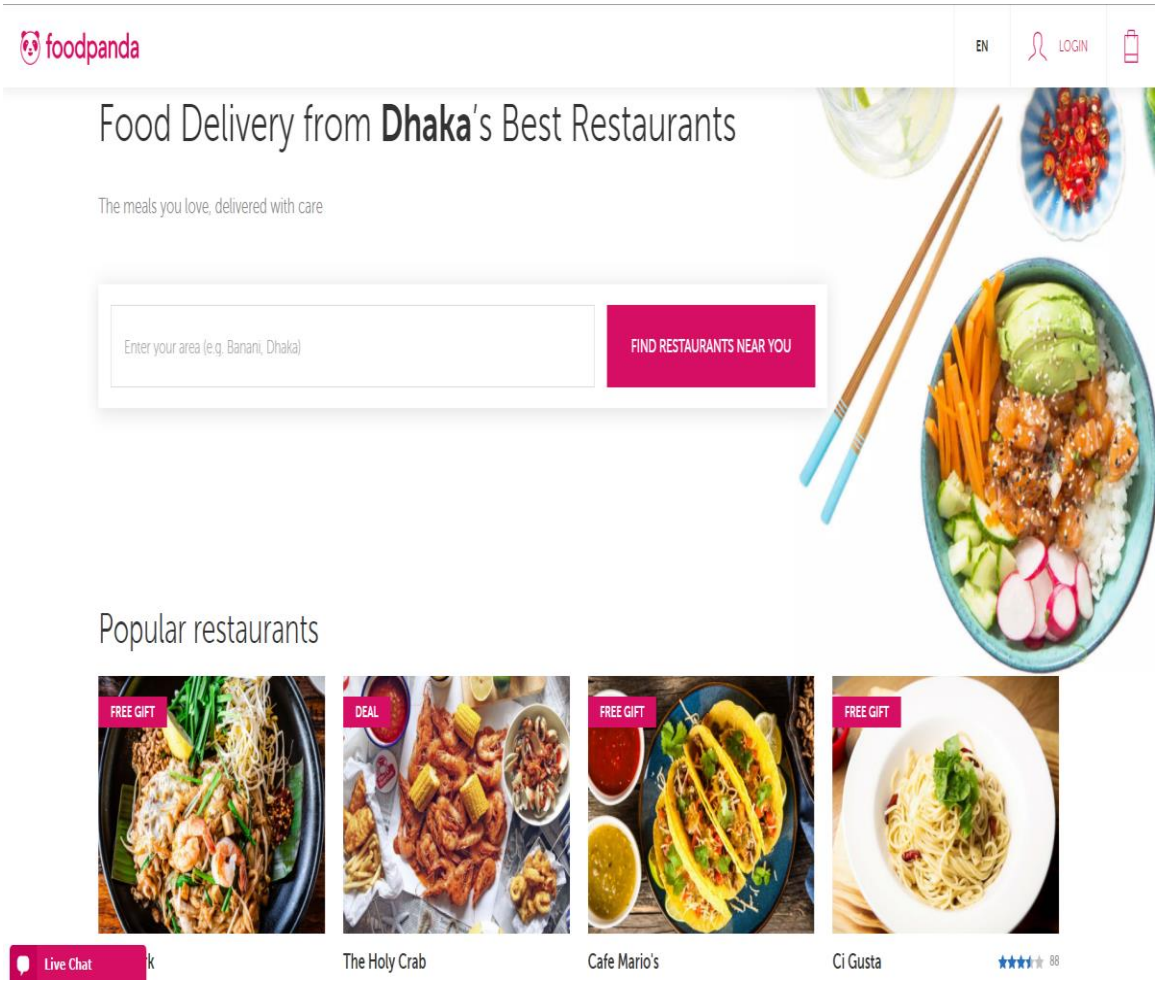

Fig: 2.1

Positive sides: An online food ordering site with many effects. It has impressive options. We can order food by simple four steps.

Negative Sides: It's a business type strong website I couldn't find any negative sides in this side.

2.2.2 Foodpeon:

The Foodpeon website is a homemade food an online smart devices websits.

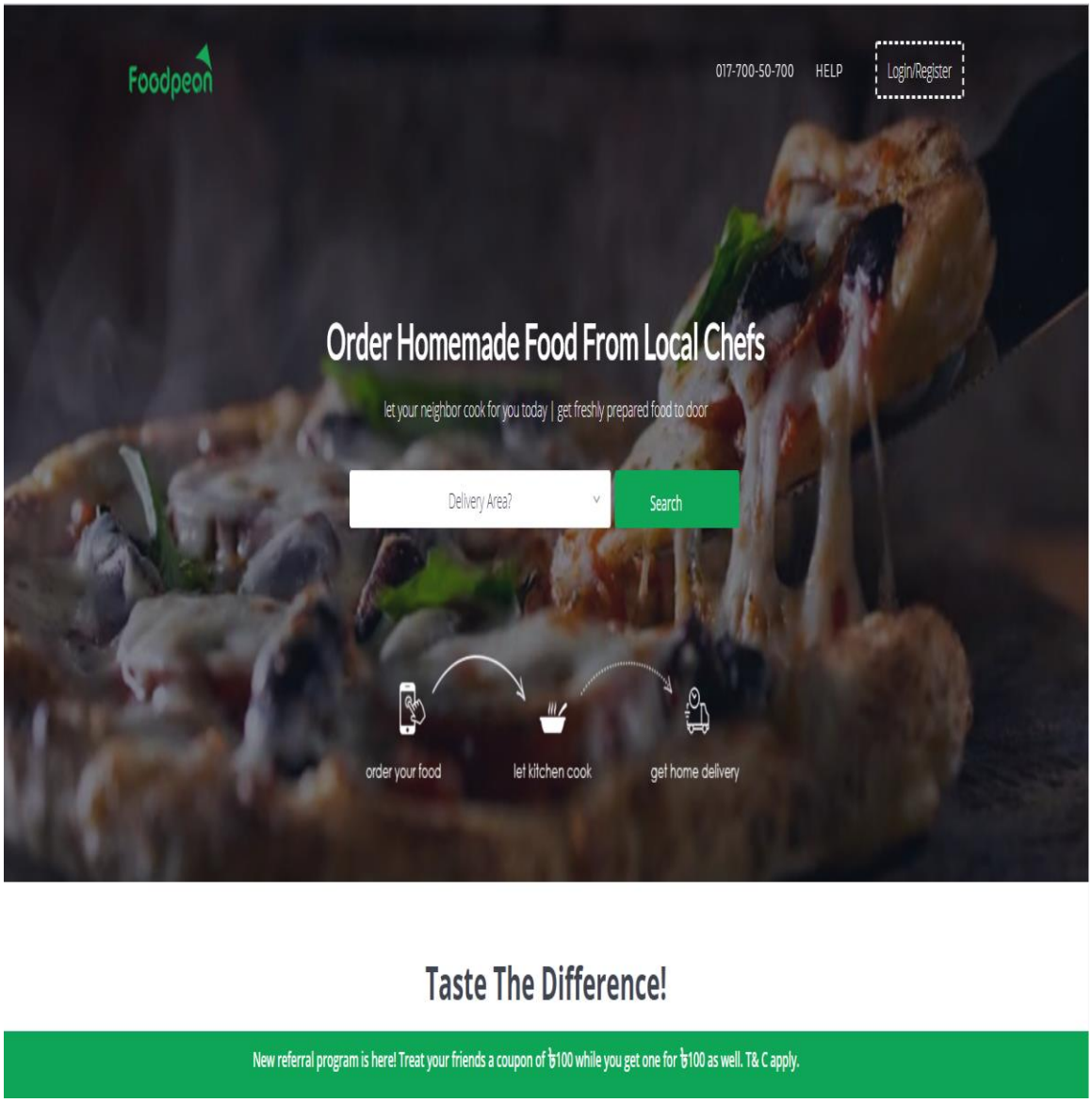

Fig: 2.2

Positive sides: Its good website for ordering online foods.

Negative sides: The website is little bit difficult to use for some people and it's a slow site

2.2.3 HungryNaki:

HungeryNaki is a big online food order website.

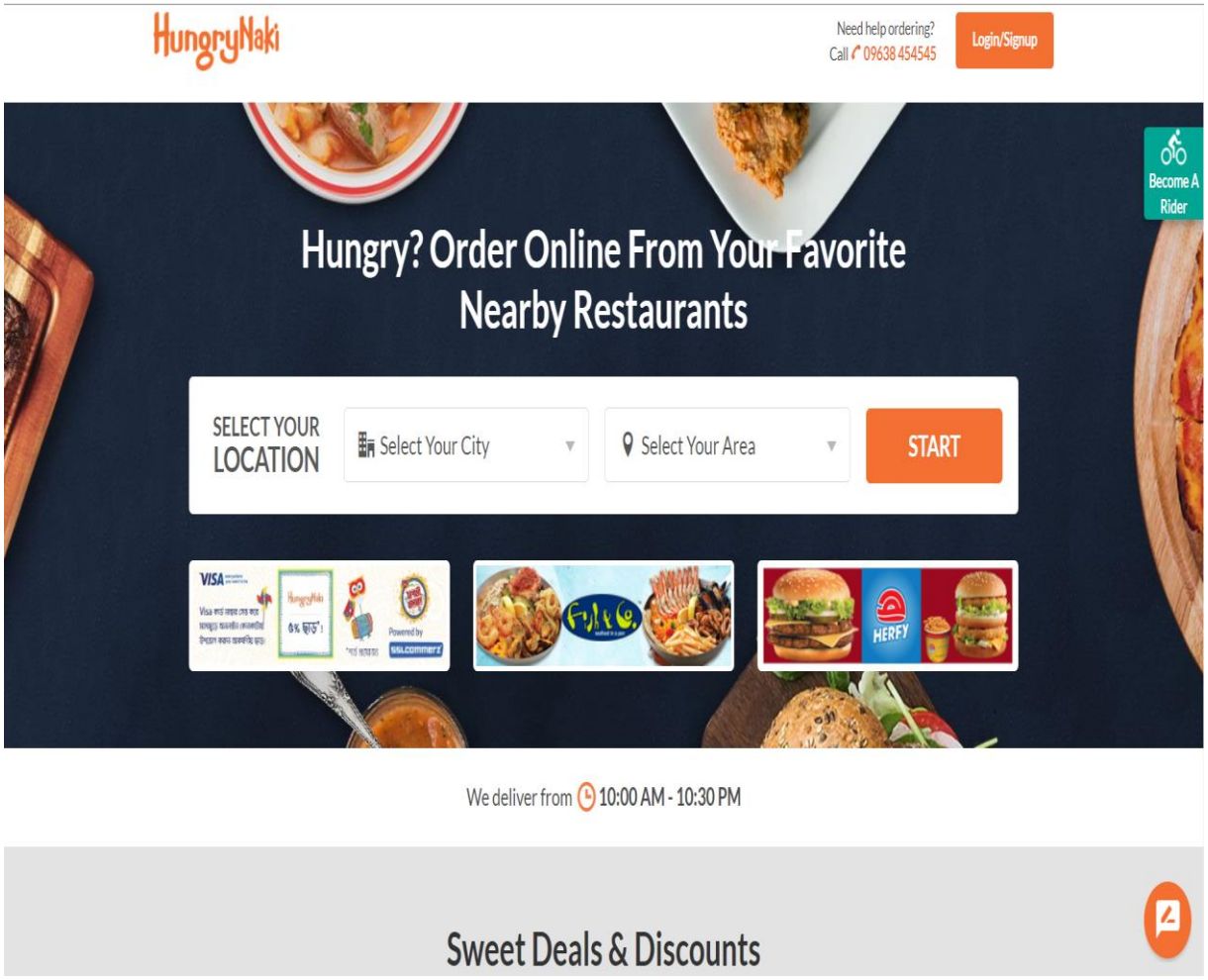

Fig: 2.3

Positive sides: It's a big and more attractive and active website. It's easy to use for any one.

Negative sides: it's a commercial website I couldn't find any negative side in this website.

2.3 Comparative Studies:

There have many earlier work on Automation Canteen System was done before. But in our country a website for canteen order system is very rare. The discussion above highlights that those are online financial websites for delivery food by online ordering but those are not any University Canteen personal website. We want to provide a personal canteen food website. We showed our bravery to making a University Canteen website to help our University's students, teachers and our staffs. We named our website "Smart Canteen."

2.4 Scope of the Problem

The website is comprised of MySQL, website to act on that database and others are graphical user interfaces.

2.5 Challenges

The main challenges of this research is to connect the database with the designed website. Though there has been many work done before in this topic, we are ready to challenge to do our work in this plot. There are some difficulties we are faced that sometimes it hampered out time and mentality also.

CHAPTER 3

SYSTEM DEVELOPMENT

3.1 Introduction

System development include the internal development of customized systems, the creation of database system, or the acquisition of third party developed software. This phase focuses on the detailed effective of the possible system. It emphasis on translating design and specification to performance specification.

3.2 System Tools

The various system tools have been used in developing both the front end and the back end of the project are being discussed in this chapter.

3.2.1 Design Requirements

Front end tools which are used in developing our online software marketing system are given bellow-

- HTML
- CSS
- JAVA SCRIPT
- BOOTSTRAP
- NOTEPAD++.

3.2.2 Front End Design list

Table.1 FRONT END DESIGN LIST

1	Login Screen
2 2.1 2.2 2.3	Home Screen Item Screen New Item User List
3	Not Input Screen
4	User Entry Screen
5	Order Place Screen
6	Data Entry Screen
7	Registration Screen
8	Not Input Screen
9	User List

3.2.3 Back End

- MySQL.

3.3 Tables:

3.3.1 Use case Table

A use case is a description of how end-users will use a software code. It describes a task or a series of tasks the user will accomplish using the software and includes the responses of the software to user actions.

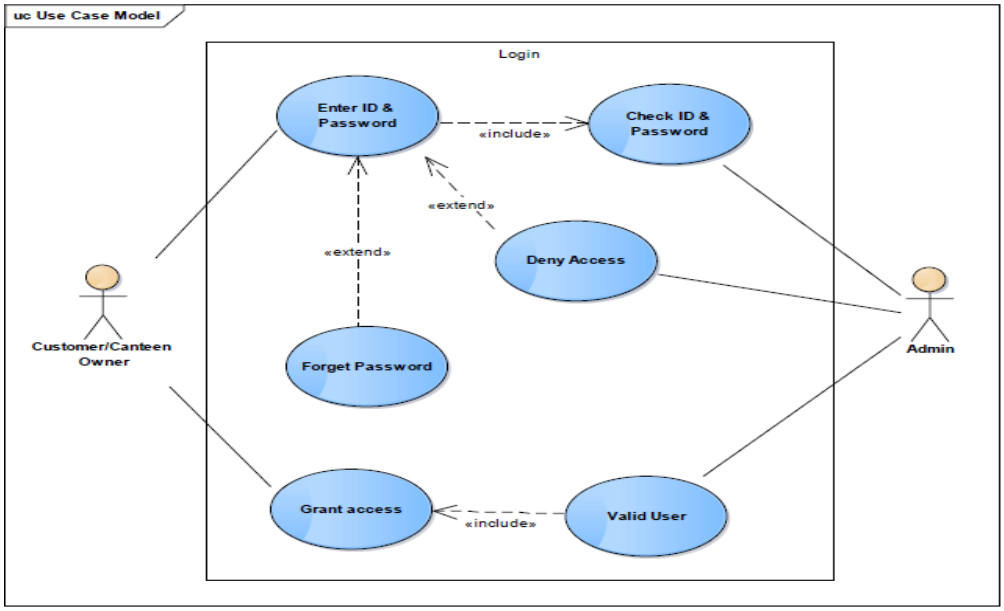

Fig: 3.2 Use Case Table for Login Page.

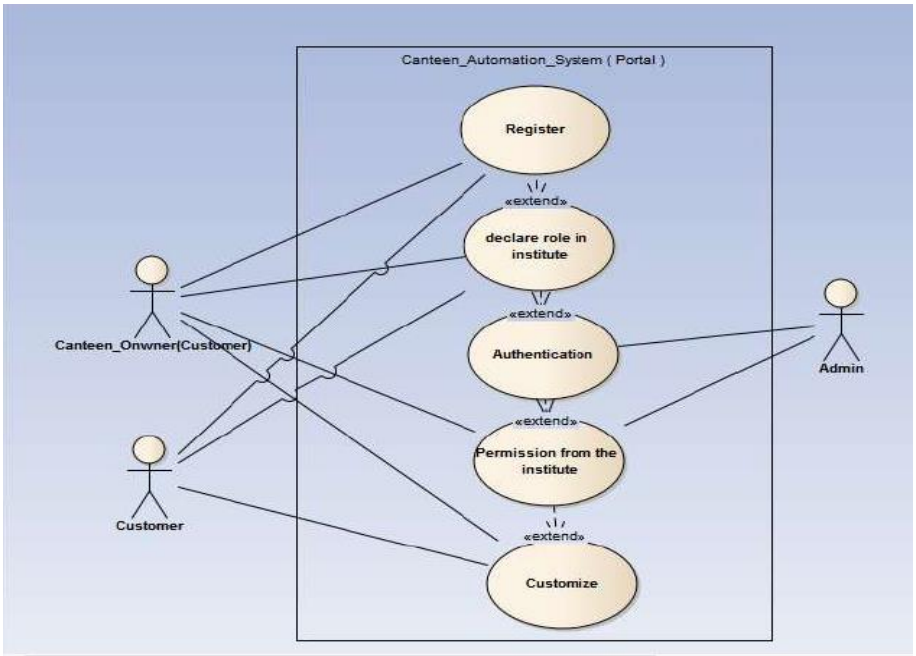

Fig: 3.3 Use Case Table for Registration.

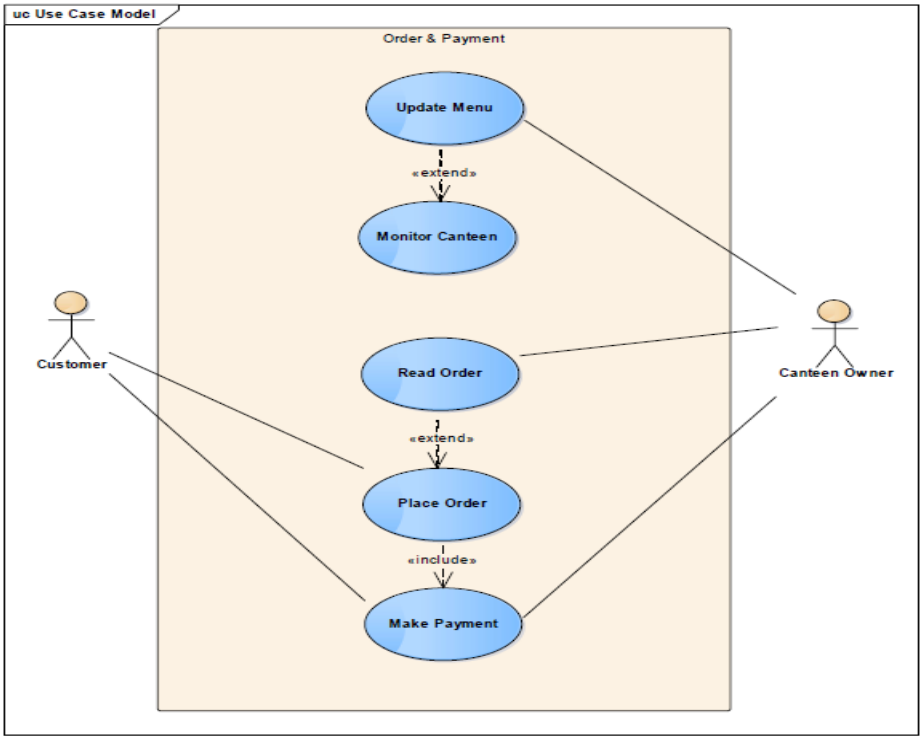

Fig: 3.4 Use Case Table for Order, Payment & Update.

3.3.2 Class Table

In the Unified Modeling Language (UML), a class diagram is a type of static structure diagram that describes the structure of a system by showing the system's classes, their attributes, and the relationship between the classes.

3.3.2.1: Class Tables for Our System:

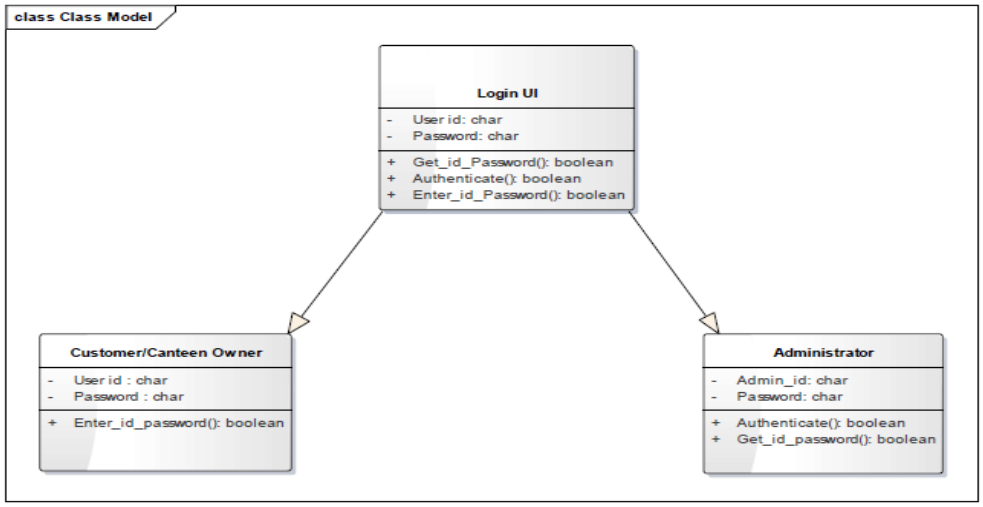

Fig: 3.5 Class Table of Login Page.

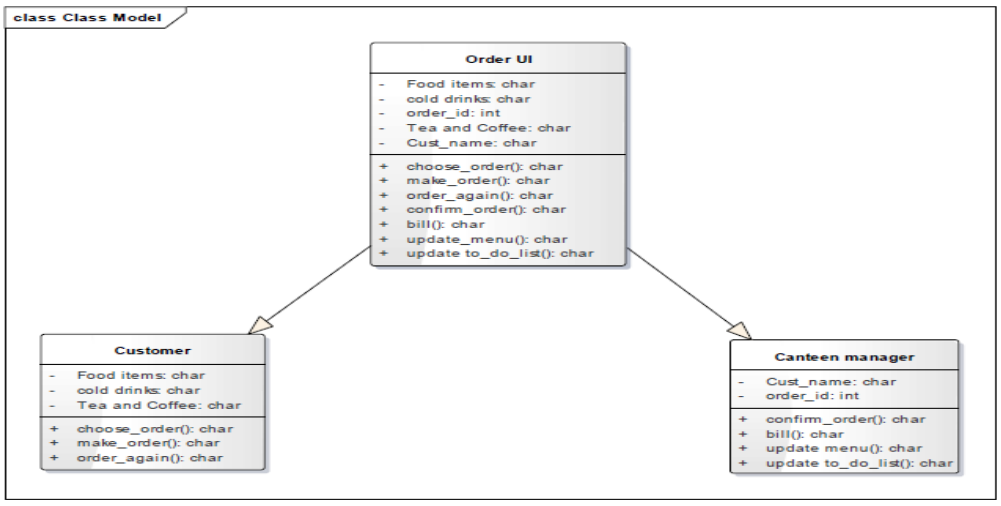

Fig.3.6 Class Table of Order and Update.

3.3.3 ER Table

An entity-relationship (ER) table is a specialized graphics that illustrates the interrelationships between entities in a database. ER table often use symbols to represent three different types of information. Boxes are commonly used to represent entities. Diamonds are normally used to relationships and ovals are used to represent attributes.

Symbols used in Entity-Relationship Table are as follows:

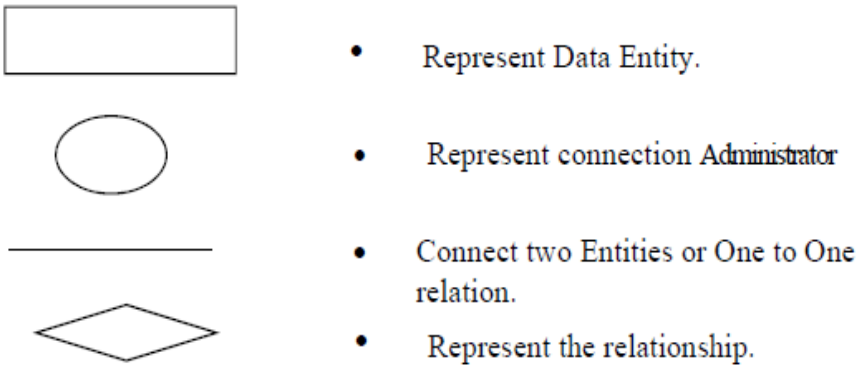

Fig: 3.7 Entity-Relationship Table.

3.3.3.1 ER Table for our System:

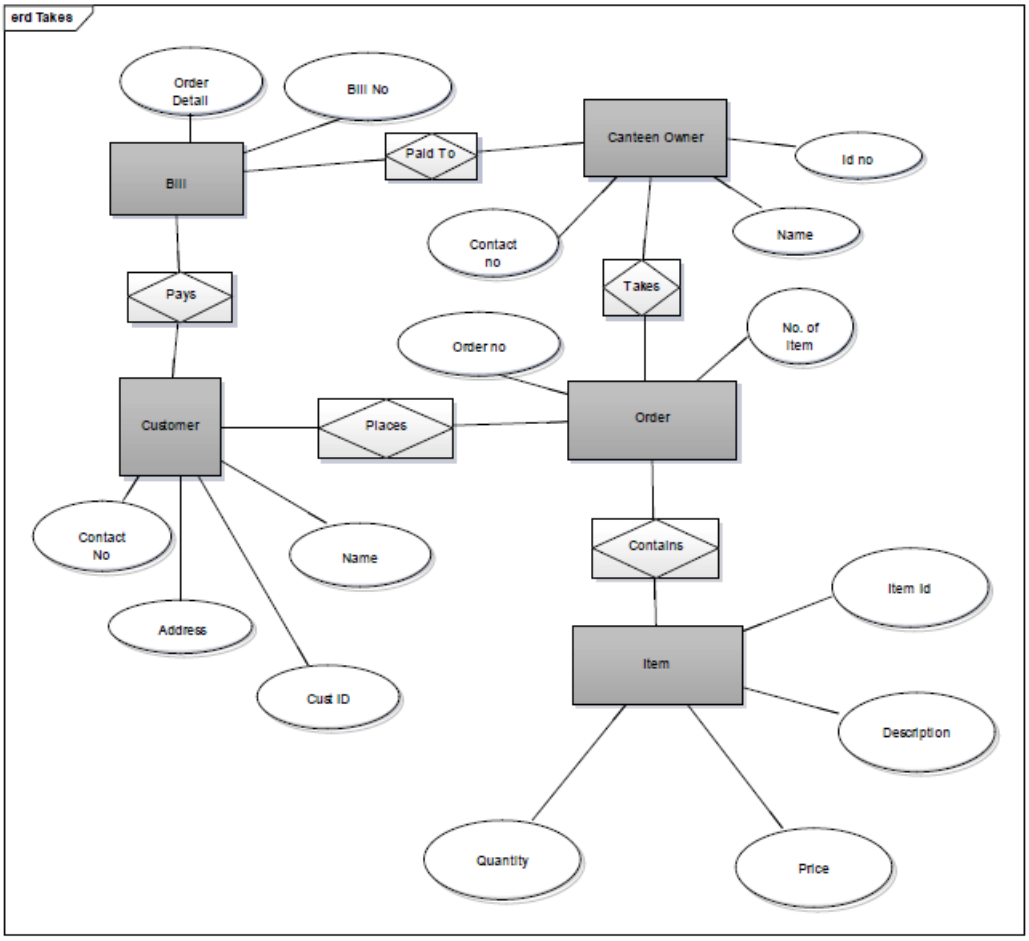

Fig: 3.8 ER Table.

3.3.4 Database Tables

3.3.4.1 Database for Back End Design

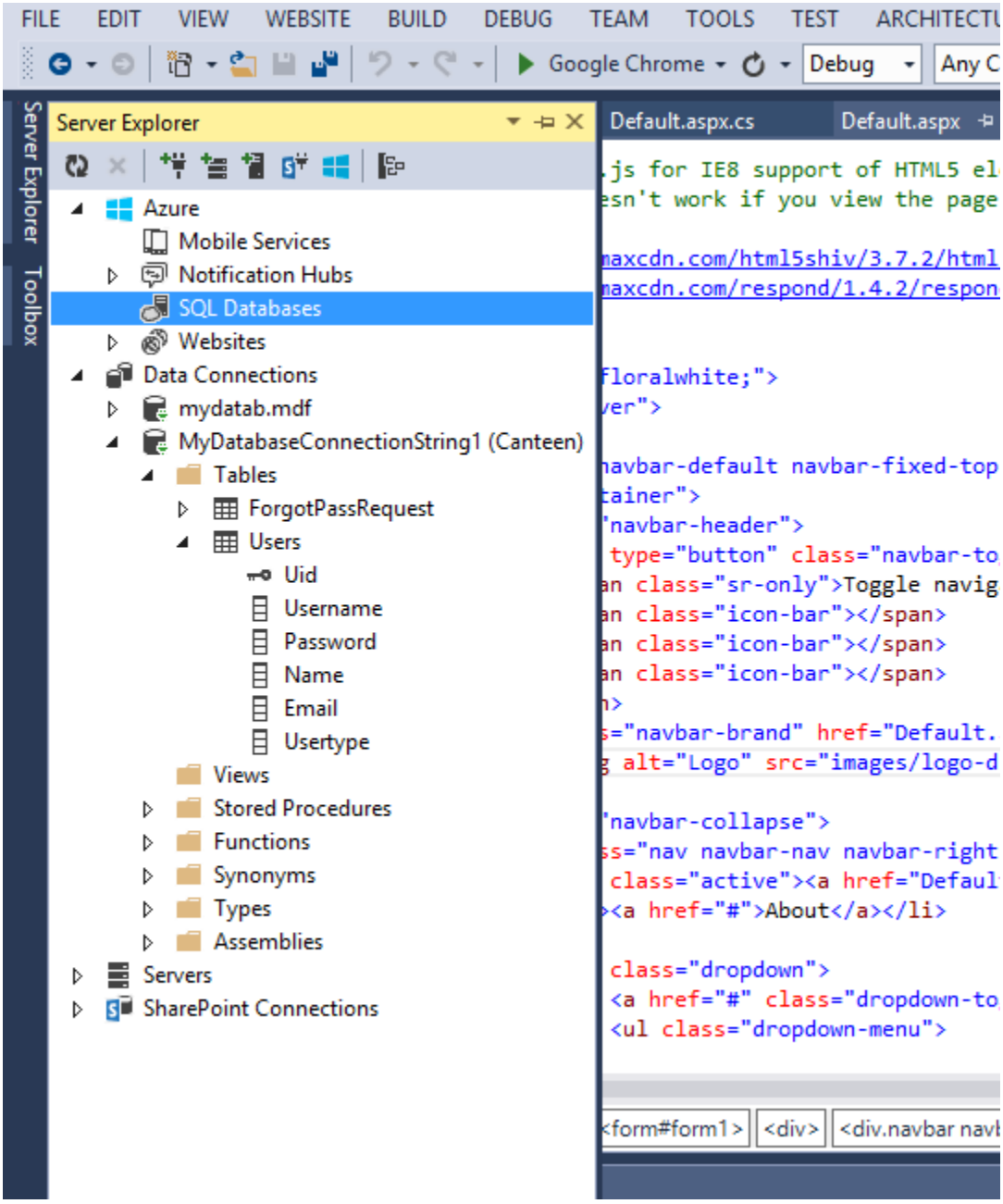

Fig: 3.9 Backend Design.

3.3.4.2 Database for Front End Design

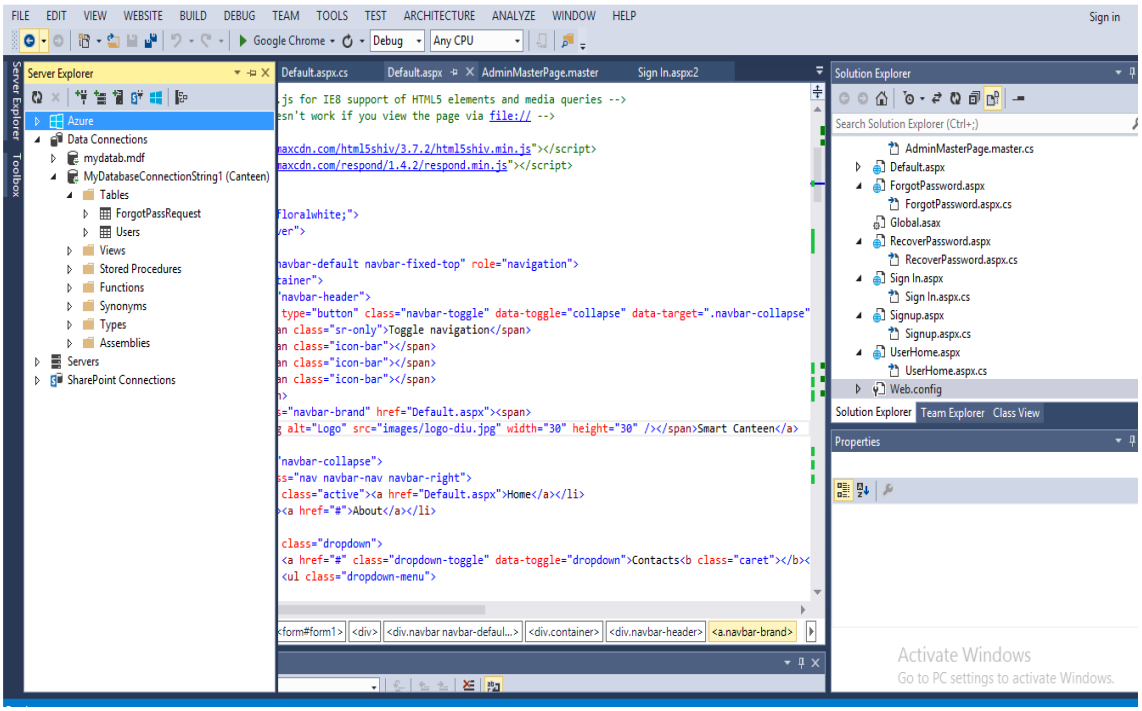

Fig: 3.10 Front end Design.

3.4 ASSUMPTION AND DEPENDENCY:

For this project it is important for the project admin to binding and handle all of the risk, assumptions, issues and allegiance for the project they are running.

3.4.1 User Competency

The user must have a primary knowledge of how to browse the internet. The end user must have internet access.

3.4.2 Software

Any kind of Operating system and internet connection is obligatory. This project is a web

based project. So some web languages have been used in this project. Such as PHP, HTML, CSS, JAVASCRIPT, BOOTSTRAP, MYSQL and NotePad++. For using this web application it is compulsory to know about internet using. It will facilitation in any operating system and smart phone.

3.4.3 Communication:

When someone have internet connection, can access this web application. When any registered person visit this web application or android apps for information of course it will be visible from anywhere and anytime.

3.4.4 Internet:

So internet is very important for this project. The end Client must have internet access and internet supported device. High speed internet access is preferred but not required.

3.5 Constraint:

3.5.1 Design:

Whole design of this project is user friendly. Present-day and updated design tools have been used for this project. It also new opinion have been weigh to make it user friendly.

3.5.2 Completion:

This project is going to about DIU Canteen System. Developer will be updated any time.

3.5.3 Summery:

Various development tools are used in this project that makes this system consummate. This project developed on PHP, HTML, JAVA Script platform because this platform is reputable and assured. If there will any problem we will find ways to solve that.

CHAPTER 4

IMPLEMATATION AND TESTING

4.1 Implementation of Front-end-Design

Screenshot

4.1.1 Homepage:

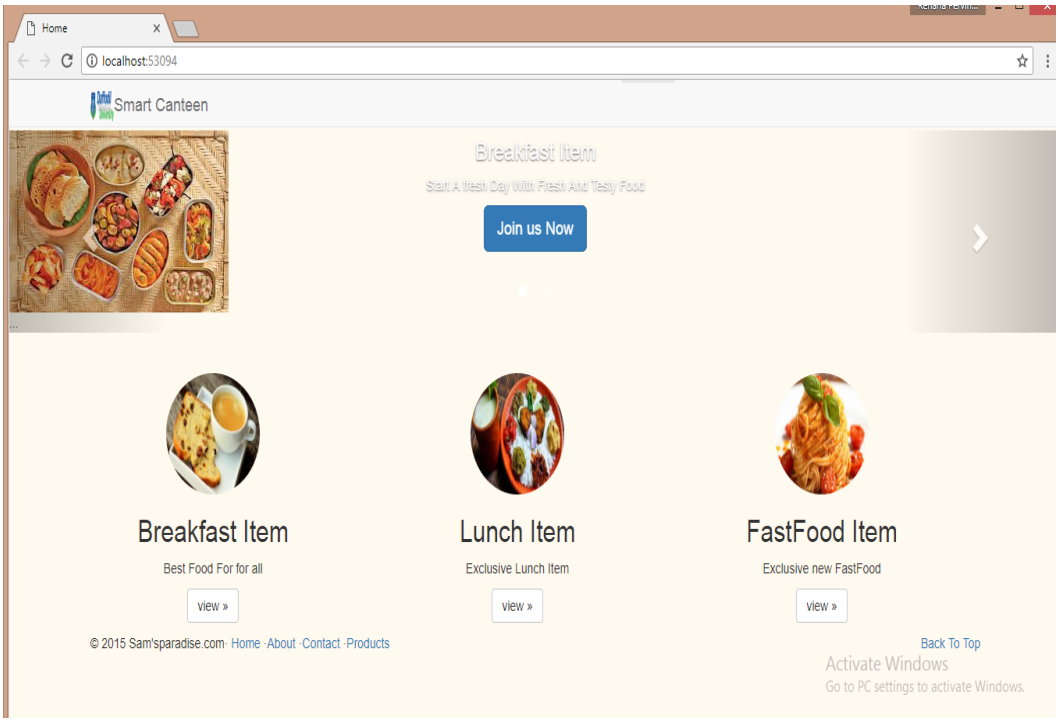

Fig: 4.1 Homepage

4.1.2 Registration Page:

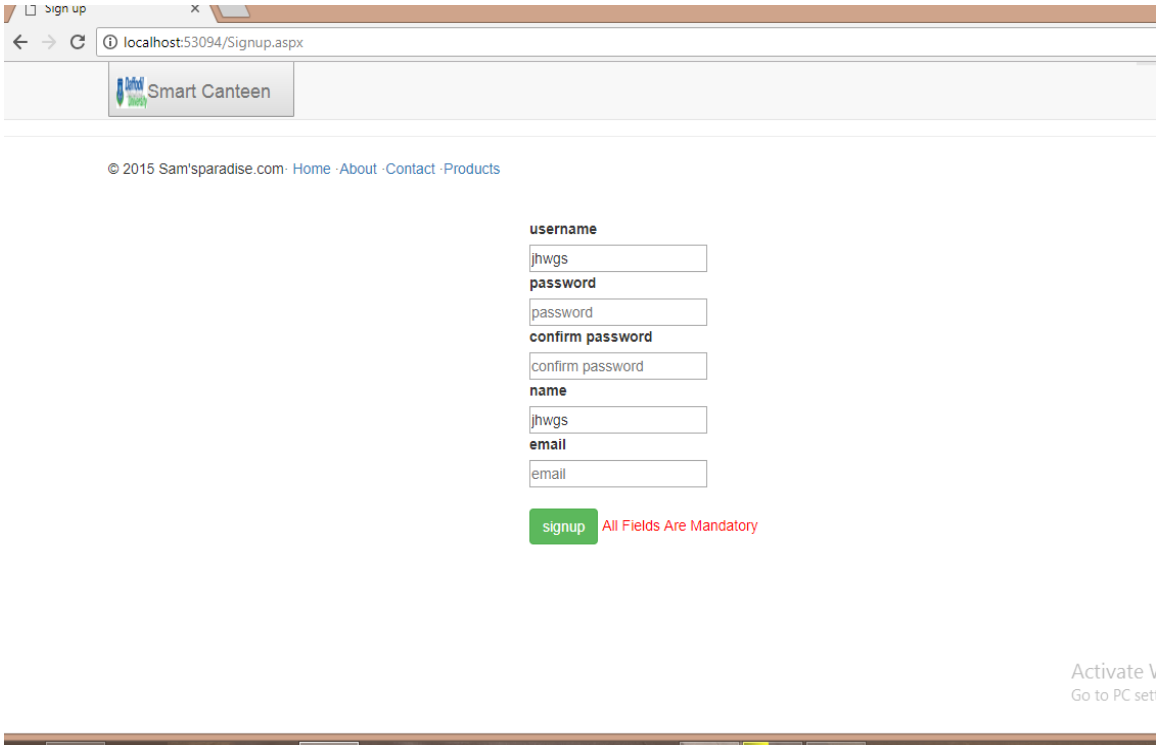

Fig: 4.2 Registration Page.

4.1.3 Login page:

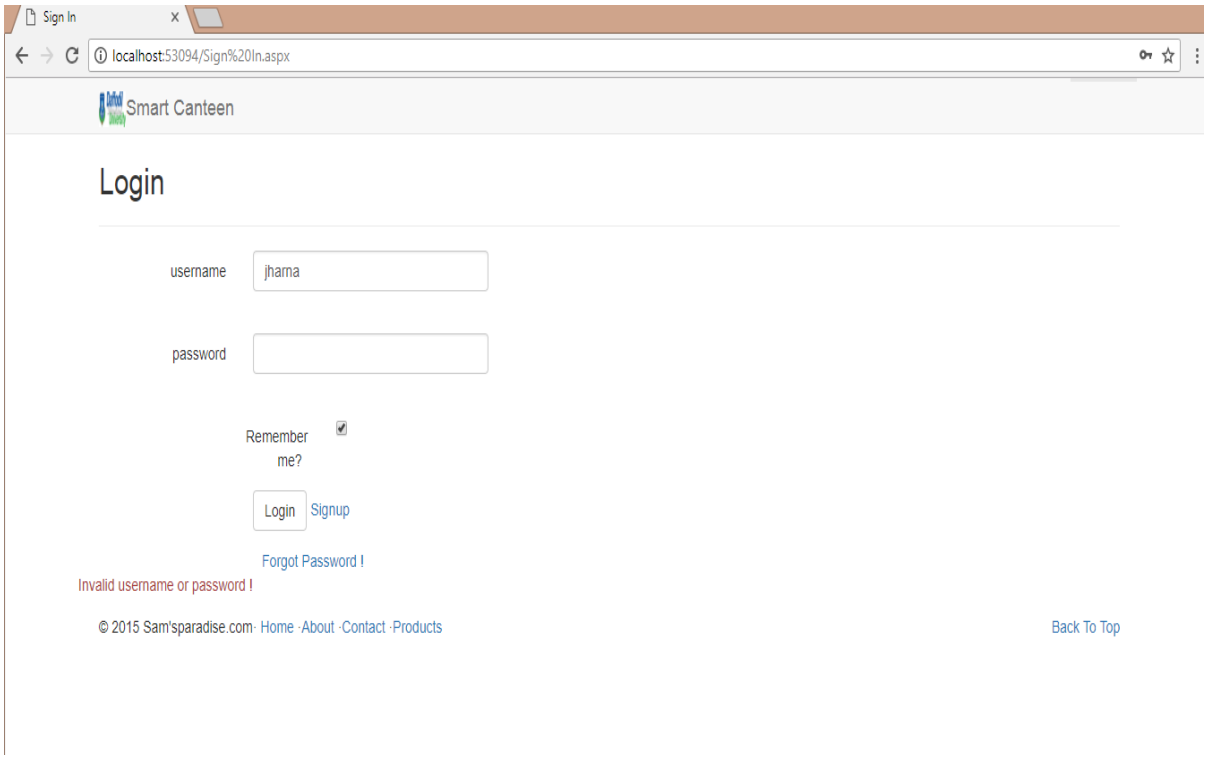

Fig: 4.3 Login Page.

4.1.4 Menu Page:

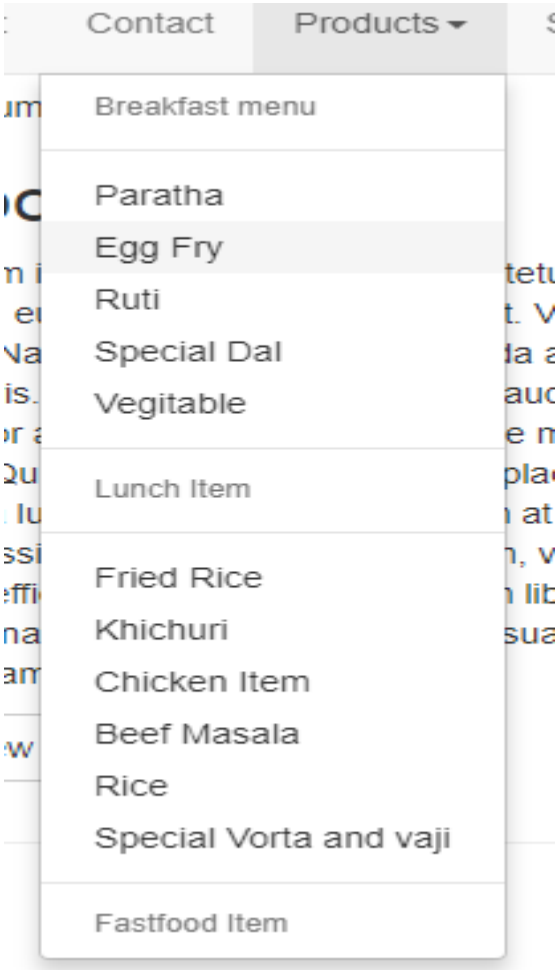

Fig: 4.4 Menu Page.

4.2 Testing Implementation:

4.2.1 Interface Testing

This section lists the functional requirements used for creating the test-case table, the test cases that were used to verify the interface table, and the results for the test-cases table.

Table 1 lists the functional requirements for the interface built for the system, along with a short description of each requirement.

Table 2. LIST OF FUNCTIONAL REQUIREMENTS.

Functional Requirement Number	Functional Requirement Short Description
FR01	This system will have two types of authentication. User authentication and Admin authentication.
FR02	The system will be accessible to all the consumers to browse all the categories.
FR03	The consumers will be able to view the details.

4.2.2 Test Cases

Table 2 shows the functional requirements used to write the best cases along the test-case numbers for each test case.

Table 3. LIST OF TEST CASE

Functional Requirements No.	Test Case No.	Test-Case Short Description
FR01	TC01	To test the Authentication interface for the Admin
FR02	TC02	To test the Authentication interface for Clients and Developers.
FR03	TC03	To test, clients can view details.

4.3: Test Results and Reports:

This section lists the results that were produced by running the test cases. Table 3 lists the test cases that were used while testing the interface along with the expected result and the actual results for test case.

Tables 4. LIST OF TEST RESULT

Test Case Number	Expected Result	Actual result
TC01	Pass	Pass
TC02	Pass	Pass
TC03	Pass	Pass

CHAPTER 5

CONCLUTION AND FUTUTRE SCOPE

5.1 Contribution:

We have successfully implemented the system "**DIU Smart Canteen**" with the help of different links and tools. We have been capable to provide a system which is helpful for our University canteen and our student, teacher and staffs. We have been successful in our effort to take care of the needs of the clients as the developer. Finally we promise that this will go a long way in popularizing the organization and making its work of appointment.

5.2 Benefits of This System:

- An easy platform to use for canteen.
- This project especially for DIU students so it must be helpful for them and also save their time.
- Anyone can see the food menu from anywhere and they can order online.
- Make this canteen system preferable to all.

5.3 Limitation:

Though we have successfully implemented the system "DIU Smart Canteen System" but there also some limitation in our project. Some feature are lacking here. In future we will add more features and technology try to fix all kinds of bugs. And cannot use our system without internet.

5.4 Future Scopes:

In future we have some plan for our project. Our future scopes are below;

- Making an Android Application.
- Add some new tools and features.
- Add RFID system.

REFERENCES

[1] Requirement Analysis, available at https://en.wikipedia.org/wiki/Automated_restaurant, last accessed 4th April 2018 at 3.00pm.

[2] Software Requirement Specification, available at https://en.wikipedia.org/wiki/Software_requirements_specification, last accessed on 6th April 2018 at 12am.

[3] Implementation Requirement, available at, https://en.wikipedia.org/wiki/Implementation_requirement, last accessed 9th April 2018 at 10.47pm.

[4] Study of The System Modules, available at, https://en.wikipedia.org/wiki/System_on_module, last accessed 10th April 2018 at 3.35pm.

[5] Learned about system Design, available at, https://www.youtube.com/watch?v=OJelXEK_nv8, last accessed 15th April 2018 at 7.50pm.

[6] Assumption and Dependencies, available at, https://scholar.google.com/scholar?q=assumption+and+dependency&hl=en&as_sdt=0&as_vis=1&oi=scholart&sa=%20x&ved=0ahukewjjk7_1ozjkahwsc44khbbtdvsqgqmigdaa, last accessed 22nd April 2018 at 10am.

[7] Resource Allocation, available at, https://en.wikipedia.org/wiki/Resource_allocation, last accessed 27th April 2018, 8.30pm.

[8] Implementation, available at, https://en.wikipedia.org/wiki/Implementation, last accessed 28th April 2018 at 7.08 am.

[9] Design Information's, available at, https://www.w3schools.com/default.aspps, last accessed 30th April 2018 at 11.40 pm.

[10] William, E. Lewis, "Software Testing and Continues Quality Improvement", CRC press, Chapter9.

Book References:

1. Lynn Beghley & Michael Morrison (2008). Head First PHP & MySQL.
2. Robin Nixon (2010) Learning PHP, MySql, JavaScript & CSS.
3. Ian Sommerville (2010) Software Engineering.

Plagiarism Check