

RANKING SCHEME OF RESTAURANT

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

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APPROVAL

This Project titled “**RANKING SCHEME OF RESTAURANT**” submitted by Syeda Tabassum Rahman and Md. Shaiful Islam Rana, ID No: 151-15-4909 and ID No: 151-15-4763 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 24 November, 2018.

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We hereby declare that, this project has been done by us under the supervision of **Md. Azizul Hakim, Lecturer, Department of CSE** 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.

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Finally, we must acknowledge with due respect the constant support and patients of our parents. We appreciate and admire it with respect and gratitude.

ABSTRACT

“Ranking Scheme of Restaurant” is a website where a customer/user gets all sorts of information regarding restaurants in particularly Dhaka city. In our website “Ranking Scheme of Restaurant”, there are some sorted features such as restaurant category, restaurant type, and restaurant location. All the similar restaurants list of that category and price according to the rank of price, quality and environment are updated. There is also a section for giving review and feedback. Restaurant’s features such as menu, environment pictures are also added. For creating new owner business profile there are some options such as adding restaurant’s environment pictures, menu etc. After agreeing the terms and condition they can do advertisement.

The website and application runs on Open Source software, the website is written in PHP and the admin panel application is written in PHP & Java Script uses MySQL as the database manager. Respectfully judging the other restaurant related websites, we can assure that this system is the most users friendly and nourished information based website indeed.

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CHAPTER 1

Introduction

1.1 Introduction

Who doesn't like to have dinner in restaurant? Less or more, in modern times everyone goes to tavern for different purposes. Corporate meeting to romantic dinner date, every ages of people approach to restaurant not only fulfill their hunger but also spend quality time with their fellows. But can people find the right places for their occasion? Do people get confused for choosing the desire one? From these issues, we come through a conception. A revolutionary website where we can find desire restaurant according to our intentions, we can find peoples opinion regards to that particular place and also place a good review to encourage the restaurant owners. The possible outcome of this website will be auspicious not only patron but also the restaurant claimant. We will also try to fabricate this website in ecommerce platform officially.

1.2 Motivation

Now a day's going to restaurant become so popular that not only for teenagers but also family get together also happen there. So that usage of restaurant increasing day by day. But we find some obstacles such as sometimes we may not find our desire restaurant. Sometimes we don't know about the quality of any new place's restaurant that's why we just waste our money and time. We don't know which restaurant is for family dinner and which one is for gossiping. Even we don't get verified review and feedback from any platform about any restaurant. So that we can't justify, compare similarities between the qualities of the restaurants. For a new restaurant owner it is difficult to reach them to the customer in a short period. For overcoming these obstacles, we came through an idea which will be solution of all in one platform for this.

1.3 Objectives

In our website there are some sorted features but we emphasize on some selected elements such as restaurant category, restaurant type, restaurant location. But first of all there is a selection option for suitable location. Then we will find the category, types. Then you will get all the similar restaurant list of that category and price according to the rank of price, quality and environment. There is also a section for giving review and feedback. On the other hand, there is also area of restaurant's features such as menu, environment pictures and so on. For creating new owner business profile there are some options such as adding restaurant's environment pictures, menu etc. After agreeing the terms and condition they can do advertisement.

1.4 Expected Outcomes

After completing this website, we will have a platform where we can find similar types of restaurant according to quality best to worst in a particular area. So that it is easier for a customer to find a restaurant in a convenient place and also he can estimate the quality or remark the similarity and dissimilarity between them. A customer can get knowledge about the menu, price, amount, environment and quantity etc. before visiting a specific restaurant. Also after visiting any restaurant a customer is eligible to give his/her feedback, share experience and most important delegate rank for that restaurant. So that if a restaurant is in first position , after surveying that rank and feedback it may send that restaurant to last position. And it is also visible to the restaurant owner. So that they will be conscious about their quality and so they have the intention to improve it more and more. A new restaurant proprietor can promote their restaurant by creating a free portfolio in our ranking scheme restaurant website. It will help them to reach to customer effortlessly and effectively.

Customers:

Customers can get the all latest information from the website and can search for their desire investigation regards this.

Customer can deliver their valuables comment and feedback in comment section to express their thoughts and views. Also they can suggest their choices, expectation and scope of improvement according to their experiences.

The website is immaculately created so that it is effortless to find the specific category of restaurant from here and it is conducive for the customers.

Restaurant Owners:

Restaurant owner can create free account and can promote their restaurant through this website. Also they can publish latest offers and discounts here.

To control the security issues of the owners there is a purifier added to protect the account from the malicious codes.

To recover the forgotten password and other issues there is also a forgot password and recovery option is added to the website.

Chapter 2

Background

2.1 Introduction

To proceed the actual project, we have to research and investigate about the already exist project to further approach. This is known as background study. In background study it helps us to recognize about the limitations of the existing project and also encourage us to implement those limitations in our project. Also it gives the idea of not to break down the copyright issues in future. For this reasons background study is the must to implement any development project. In doing background study we also compare, criticize with other related work in this field and went to the depth of the project. We divide the part in some segments such as related works, comparison works, scope of the problem and challenges.

2.2 Related Work

After so many researches we found some website similarly work like website. Let's discuss about their states and circumstances. The first work in Bangladesh about this type of project is **“foodiez”, “foodpanda”, “hungrinaki”**.

“foodiez” is a restaurant website in Dhaka city. Restaurants are categorized according to different types of varieties. Also there the restaurants have the details of the menu and places. Different types of deals and offers are featured in the website. Also news of restaurants is available in the website. Anyone can book or reserve the restaurant from this website. Blogger can review or write content about restaurant and experiences from this website. For this someone has to resister first and then can blog thoroughly.

“foodpanda” is a restaurant website in Dhaka city. It's a worldwide website but also has the access to Bangladesh. From this what we get is given below:

Customers can find different types restaurant according to their cities. Also they can see the menu but can't find the quality or environment of the restaurant from this. Restaurants owners can open a free account and can prompt their deals and offers from this website. Anyone from anywhere can deliver food through this website in their cities nearer restaurants.

“hungrinaki” is a restaurant website in Dhaka city. It's a worldwide website but also has the access to Bangladesh. From this what we get is given below:

Customers can find different types restaurant according to their cities. Also they can see the menu but can't find the quality or environment of the restaurant from this. Restaurants owners can open a free account and can prompt their deals and offers from this website. Anyone from anywhere can deliver food through this website in their cities nearer restaurants.

2.3 Comparative Studies

After research we found that every project has its own specialty. We found that the key features of that particular restaurant. They are:

Description about foodiez:

“Foodiez” is a restaurant website in Dhaka city. From this what we get is given below:

1. Restaurants are categorized according to different types of varieties. Also there the restaurants have the details of the menu and places.
2. Different types of deals and offers are featured in the website. Also news of restaurants is available in the website.
3. Anyone can book or reserve the restaurant from this website.
4. Blogger can review or write content about restaurant and experiences from this website. For this someone has to resister first and then can blog thoroughly.

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2. Restaurants owners can open a free account and can prompt their deals and offers from this website.
3. Anyone from anywhere can deliver food through this website in their cities nearer

Description about hungrinaki:

“Hungrinaki” is a restaurant website in Dhaka city. It’s a worldwide website but also has the access to Bangladesh. From this what we get is given below:

1. Customers can find different types restaurant according to their cities. Also they can see the menu but can’t find the quality or environment of the restaurant from this.
2. Restaurants owners can open a free account and can prompt their deals and offers from this website.
3. Anyone from anywhere can deliver food through this website in their cities nearer restaurants.
4. In this website latest deals and offers are shown in an interesting manner to reach customer fast. So that customer can know the offers and others with a matter of time.

This the comparative studies of the existing websites. Now let’s discuss about the project which created by us. The features and function are given below. It’s categorized in two parts which is similarity and non-similarity.

Similarity:

1. Customers can find their desire restaurants by their own location. Nearest restaurants are showing before than other restaurants.
2. All the restaurants are updated with menu, environment, quality etc.
3. Customers can give feedback and comments in a particular section. Also can rank the quality of the restaurants. Giving suggestion to improve also included here.
4. Restaurants are not scattered here. They are categorized in a well manner so it is easy to find a particular cuisine food in different restaurants.
5. Latest deals and offers are visible to customers in an attractive manner. Also new town offers are visible.

Dissimilarity:

1. Restaurant owners can open free account to prompt their restaurant. It's very helpful to new restaurant owners to reach the customers fast.
2. The rating and ranking system is updated with artificial intelligence. So that the highest rating of the restaurant comes forward automatically. It's convenient for someone to distinguish which restaurant is popular in this comparative field.
3. The design of the website is completely different from the other existing website. It's more attractive to the customers, user friendly, easy to understand and more polished.

2.4 Scope of the Problem

After discussing the features and comparison studies we understand that some features are similar and some are not. The problems we found which is not to similar to other restaurants website and cannot find in these. They are:

Restaurant owners can open free account to prompt their restaurant. It's very helpful to new restaurant owners to reach the customers fast.

The rating and ranking system is updated with artificial intelligence. So that, the highest rating of the restaurant comes forward automatically. It's convenient for someone to distinguish which restaurant is popular in this comparative field.

2.5 Challenges

The challenges is the problem someone is confronted and how they solves that particular problems. The problems we generate, now we have to diminish that problems. The problems are:

- Creating restaurant owners account sections.
- Implementing artificial intelligence to rank the restaurants automatically based on customers uses.
- Implementation of different design and attractive design is also a major challenge.

So by implementing and derived this successfully, we can comfort that we diminish our challenges.

Chapter 3

Requirement Specification

3.1 Business Process Modeling

The term modeling is a form of simulation where a series of related steps form a process, and these processes are then analyzed, studied, and repeatedly performed with a goal of improving business process performance. Simply stated, the more efficient a process becomes, the less it will cost to complete and will, therefore, lower business costs. The intent of business process modeling (BPM), then, is to optimize efficiency when performing business processes and activities associated with producing products and services.

BPM helps businesses to manage complex systems and processes. It helps them view their systems from multiple angles and helps them discover causes and effects of using model traceability. BPM also helps to increase business understanding through visual analysis.

We implement two types of business process modeling here. From first model we visualize the basic model of the whole system. We can see the user as customer and system as admin. From this we get the basic idea of this whole business process in a simple manner. Also there is workflow and connections from which part is doing their significant works. If we see the model user as customer interacts with the system they don't need to open account. Restaurant owner opens account, register themselves, post or delete any updates etc. From this overview we can summarize the whole process in a nutshell.

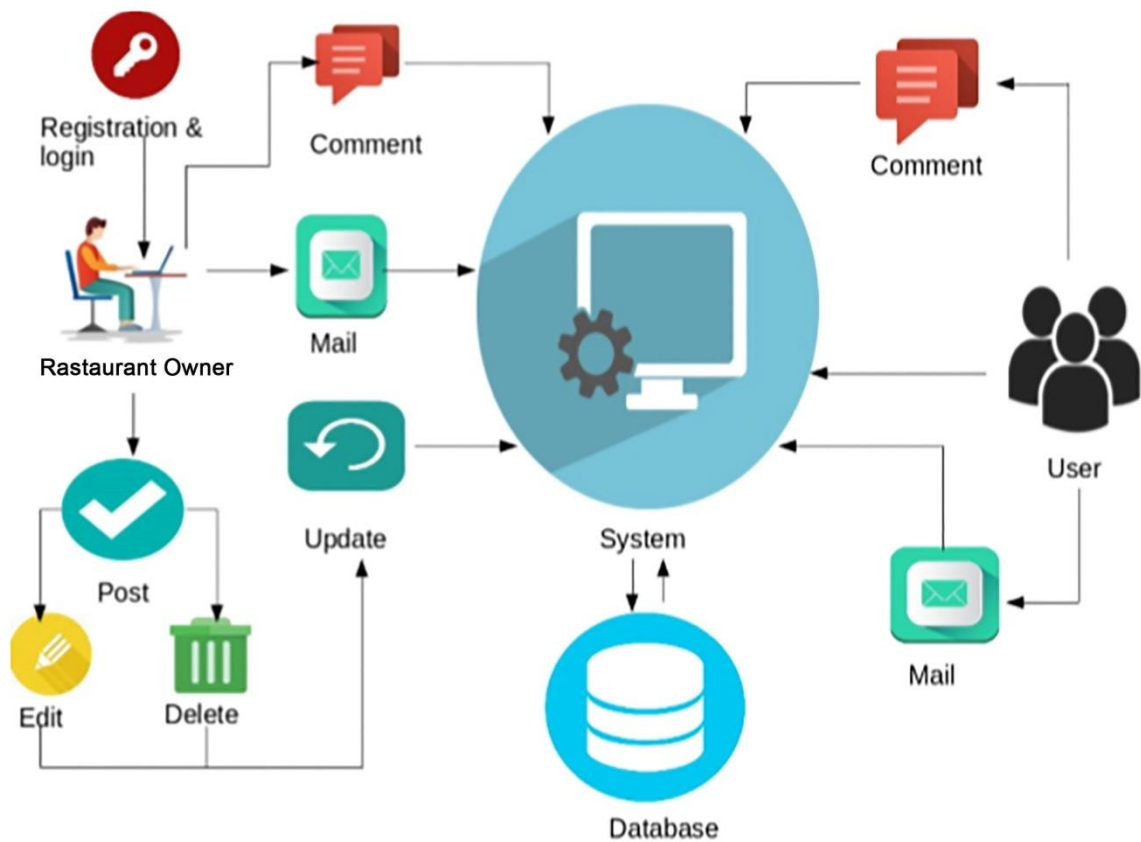


Figure 3.1.1: Business Process Model.

The second model is actual business process which is used all over. There are some particular signs and symbols used to implement this business model. In this model we can see there is three lanes: customer as user, admin, and restaurant owner. Users can visit restaurants, give comments and ratings etc.

Admin has all the access to all the lanes. They can update the database; modify it according to their choice. Restaurant owners can open account and store their information such as restaurant's menu, offers, deals, notices, promotions policies etc.

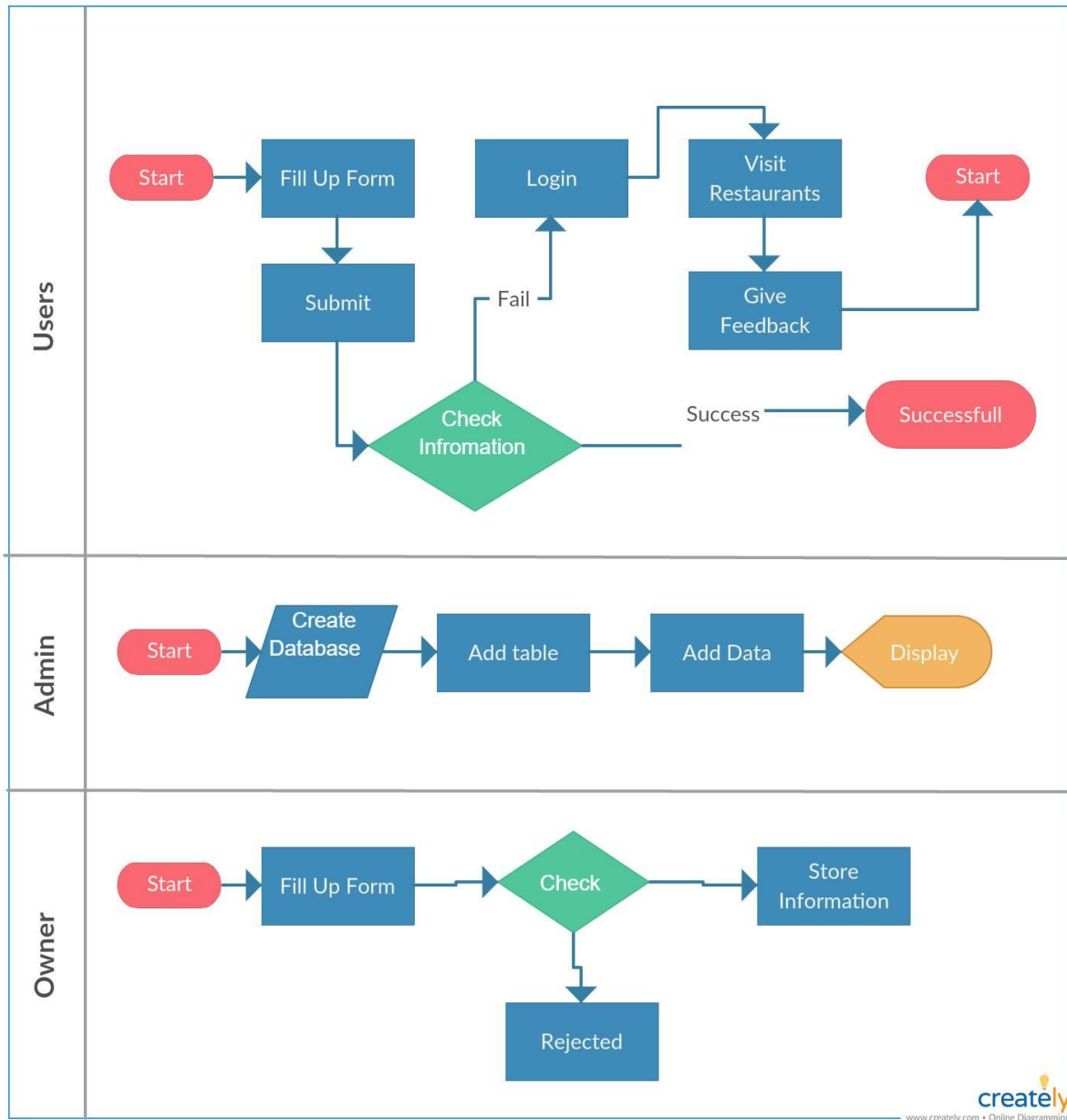


Figure 3.1.2: Business process model.

3.2 Use Case Modeling and Description

Use case model description is given bellows -

A use case is a tactic used in system analysis to identify, clarify, and categorize system requirements. The use case is made up of a set of possible sequences of interactions between systems and users within an environment and related to a particular goal. The use case should contain all system activities that have significance to the users within a given system.

Use cases are used during the analysis phase of a project to identify system functionality. They separate the system into actors and use cases. Actors represent roles that are played by users of the system. Users may be humans, other computers, or even other software systems. In this article, I will examine the importance of Use cases with a help of a simple case study.

Two parts of it is given bellows -

Actor: An actor is something with behavior, such as a person, computer system, or organization.

Scenario: A scenario is a specific sequence of actions and interactions between actors and the system under discussion; it is also called a use case instance. It is one particular story of using a system, or one path through the use case; for example, the scenario of successfully using an ATM machine to withdraw cash.

Importance:

- Holding Functional Requirements in an easy to read and tracking format.
- Representing the interaction between an actor and the system.
- Multi-level, one use case can extend the functionality of another.

In this use case, There three actors: admin, customers, and restaurants owners.

Admin:

- Search for restaurants
- View restaurants categories and see featured restaurants.
- Get latest update and collection of restaurants.
- Add and update and delete restaurants table.
- Fetch all data on site and control all menus.
- Add restaurants details and modify it I necessary

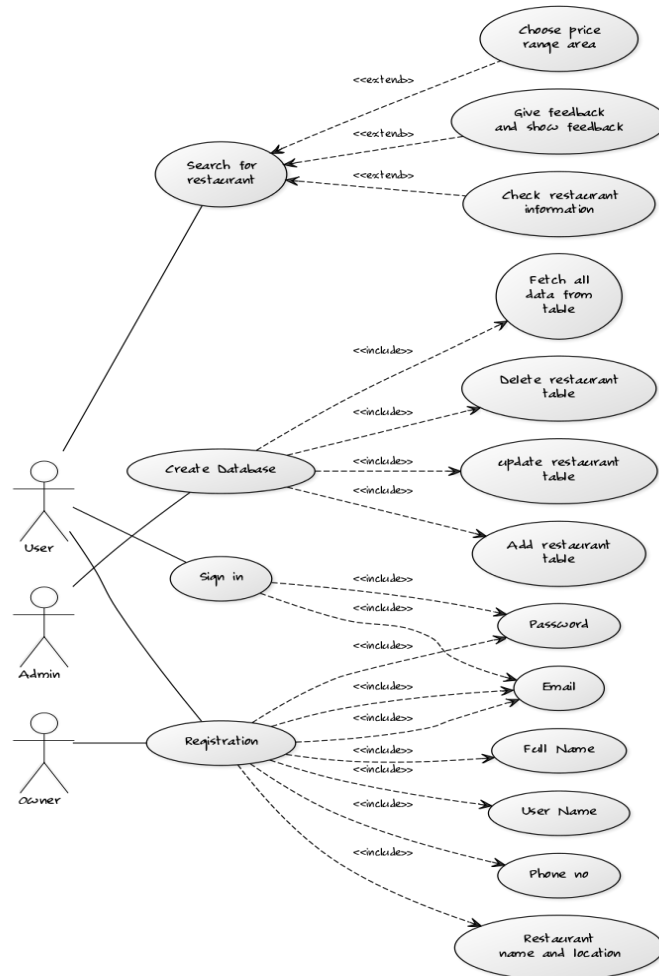


Figure 3.2.1: Use case Diagram

User/Customer:

- User registration and login.
- Update profile and delete it.
- Search for restaurants
- View restaurants categories and see featured restaurants.
- Get latest update and collection of restaurants.
- Choose price range and check restaurant location.
- Get feedback and give comments and rankings.
- Detect restaurant menu and time zone.

Restaurants owner:

- User registration and login.
- Update profile and delete it.
- Search for restaurants
- View restaurants categories and see featured restaurants.
- Add restaurants details and modify it I necessary
- Fetch all data on site and control all menus.

3.3 Logical Data Model

A logical data model represents the organization of a set of data by standardizing the people, places, things (entities) and the rules and relationships between them using a standard language and notation. It provides a conceptual abstract overview of the structure of the data. Logical data modeling does not provide any information related to how the structure is to be implemented or the means (technologies) that are needed to implement the data structure shown. It is a technology-independent model of data that is developed from the initial structures identified by the conceptual model of data.

Some of the information presented by a logical data model includes the following

- Entities
- Attributes of entities
- Key groups (primary keys, foreign keys)
- Relationships
- Normalization

From the website we can see that there are roughly nine entities. They are: Restaurants, Users, area, and Restaurant menu, Collection of restaurants, offers of restaurants, facilities of restaurants, category and feedback.

Every different entity has its own characteristics. This is known as attributes. Let's consider about the User entity. It has unique ID, Mail Id, and Password. Also have name, gender, address and image etc. It can add, update and delete in the system. The rest are work as a same.

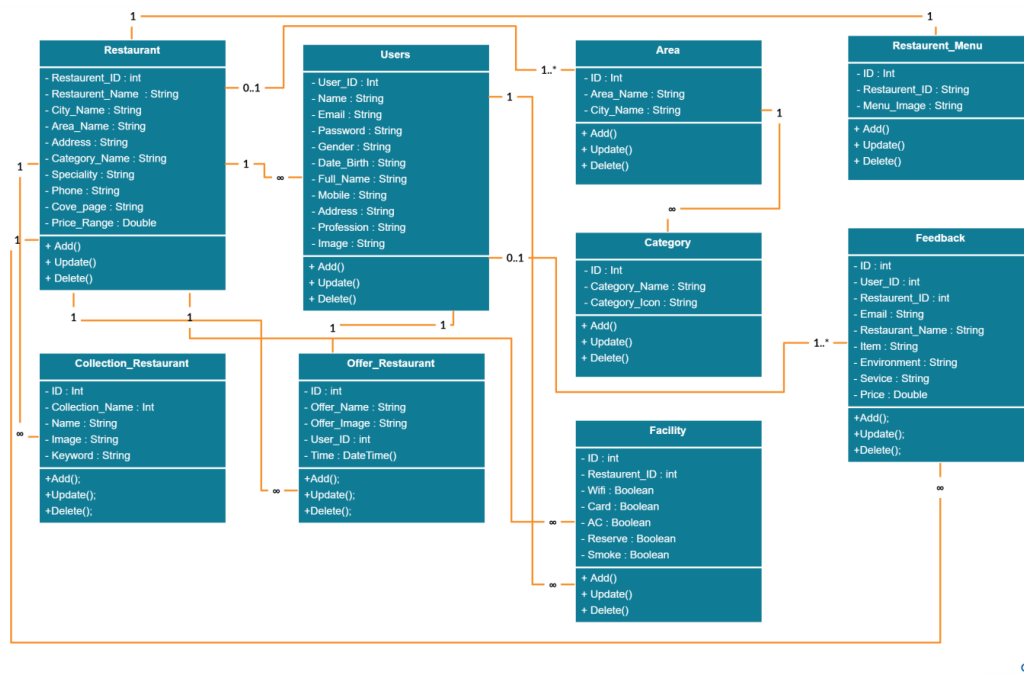


Figure 3.3.1: Logical Diagram

3.4 Design Requirements

To implement design, there are two parts are discussed.

Front end design specification is given bellows -

While web design is the way a website looks, front end development is how that design actually gets implemented on the web. The visible part to the customer or user is known as front design. The more attractive front design is more acceptable to the users and others. To design the front end there is some specific language and frame is used. We used HTML, CSS, and JavaScript to design our website. [1]

HTML (Hyper Text Markup Language) and CSS (Cascading Style Sheets) are the common building block of any website. It's also work as skeleton of website. Without this the website becomes unformatted and a plain texts. Also without this images cannot add to the website.

JavaScript allows us to do interactive elements. It also helps to navigate the website and do real time action with matter of time, makes the interface easy to reload, and add versatile functionality to the website.

We also use design framework known as Bootstrap. Bootstrap is a free and open-source front-end framework for designing websites and web applications. It contains HTML- and CSS-based design templates for typography, forms, buttons, navigation and other interface components, as well as optional JavaScript extensions. Unlike many earlier web frameworks, it concerns itself with front-end development only.

Claim your authentic profile

Our sales team will soon be in touch with you to help set up your free account with us.

Restaurant Name and location

Phone

Contact person name

Email address

Some background on your business and how authentic may help you

☐ I agree with the term and conditions

Send

Activate Windows
Go to Settings to activate Windows.

Figure 3.4.1: Demo of a front end design

Back End Design specification is given bellows -

The backend usually consists of three parts: a server, an application, and a database. We get the information and data from front end and implement it through application or software. After getting the data we store that in database and run by server. The whole coding for this implementation, run and store is known as back end design. For coding we use HTML, CSS, JavaScript and php. [1]

Software:

Net beans, notepad++: provides support for several languages (PHP, JavaFX, C/C++, JavaScript, etc.) and frameworks.

Server:

Apache, XAMPP: an application which allows you to setup a web server and database server instantly without any additional configuration. [3] [4]

Database:

MySQL: Oracle-backed open source relational database management system based on Structured Query Language (SQL). [2]

HTML & CSS:

HTML (Hyper Text Markup Language) and CSS (Cascading Style Sheets) are the common building block of any website. It's also work as skeleton of website. Without this the website becomes unformatted and a plain texts. Also without this images cannot add to the website.

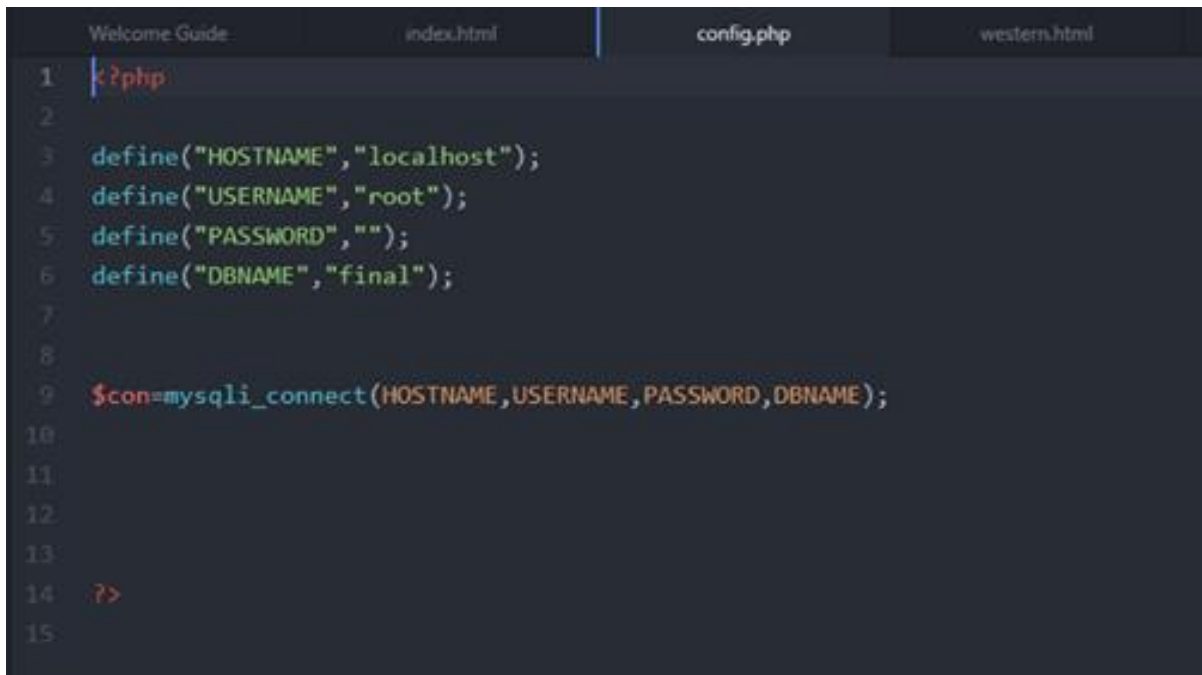
JavaScript:

JavaScript allows us to do interactive elements. It also helps to navigate the website and do real time action with matter of time, makes the interface easy to reload, and add versatile functionality to the website.

PHP:

A server side scripting language is used to develop Static websites or Dynamic websites or Web applications. It is extremely simple for a newcomer, but offers many advanced features for a professional programmer.

The demo of the back-end design assigned below. We can see the how database connection implemented by php and run to the server.



The image shows a code editor with four tabs at the top: 'Welcome Guide', 'index.html', 'config.php', and 'western.html'. The 'config.php' tab is active. The code is written in PHP and is as follows:

```
1 <?php
2
3 define("HOSTNAME","localhost");
4 define("USERNAME","root");
5 define("PASSWORD","");
6 define("DBNAME","final");
7
8
9 $con=mysqli_connect(HOSTNAME,USERNAME,PASSWORD,DBNAME);
10
11
12
13
14 ?>
15
```

Figure 3.5.1: database connection.

Chapter 4

Design Specification

We accomplish the front end design and back end design to our project in various ways. In this section we demonstrate each and every part of the design and codes are discussed fully. At the end of the discussion we implement the database table.

4.1 Front-End Design

While web design is the way a website looks, front end development is how that design actually gets implemented on the web. The visible part to the customer or user is known as front design. The more attractive front design is more acceptable to the users and others. To design the front end there is some specific language and frame is used. We used HTML, CSS, and JavaScript to design our website.

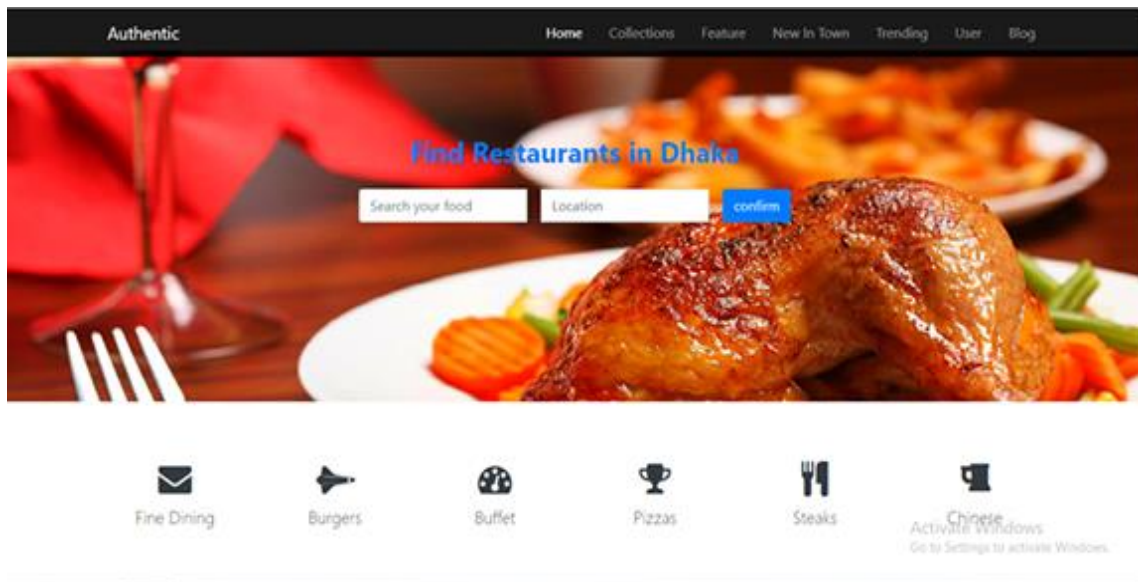


Figure 4.1.1: Home page

This is the homepage of our website. You can see the location bar and food item bar where you can find the suitable food according to your location.

There are also menu bar and categories of the food item to find the food according to our taste bud.

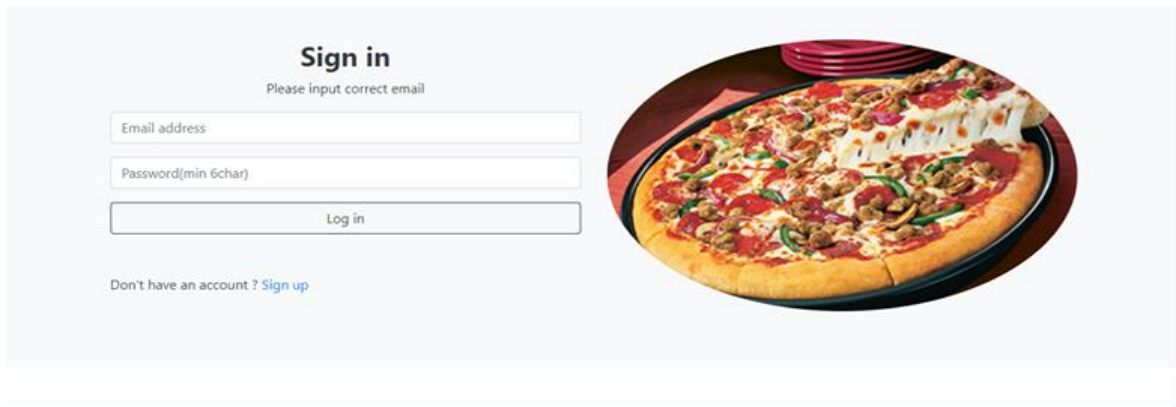
The image shows a login page with a light blue background. On the left, there is a 'Sign in' section with the text 'Please input correct email' below the title. It contains two input fields: 'Email address' and 'Password(min 6char)'. Below these fields is a 'Log in' button. At the bottom of this section, there is a link that says 'Don't have an account ? Sign up'. To the right of the login form is a large, appetizing image of a pepperoni pizza on a wooden tray.

Figure 4.1.2: Login page

This is login page. User has to sign up for the login page by giving their email id and password. If you don't have your account, you can create new account and then you can login.

The image shows a signup page with a blue background. On the left, there is a 'Sign Up Today' section with the text 'Please fill out this form to register' below the title. It contains three input fields: 'Username', 'Email', and 'Password'. Below these fields is a 'Submit' button. To the right of the signup form is a large, appetizing image of a plate of skewered meat and vegetables, garnished with fresh herbs.

Figure 4.1.3: Signup page

This is signup page. If you don't have account you can't login. So that to create a new account, you have to sign up first. Just put the name and password you are good to go.

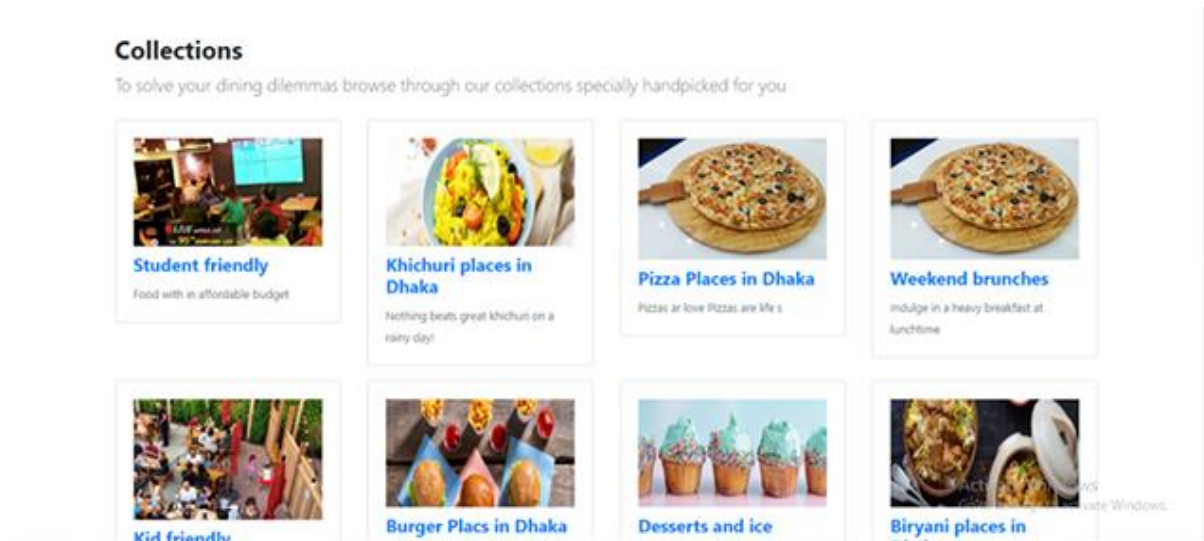


Figure 4.1.4: Collection of restaurant

Here the collection of restaurants is displayed. Different types of categories such as dessert, fast food etc. are added here. If you click the segment of this category, then all the restaurants will be shown up in different location. Such as dessert category clicked so that all the dessert serving restaurants will be displayed.

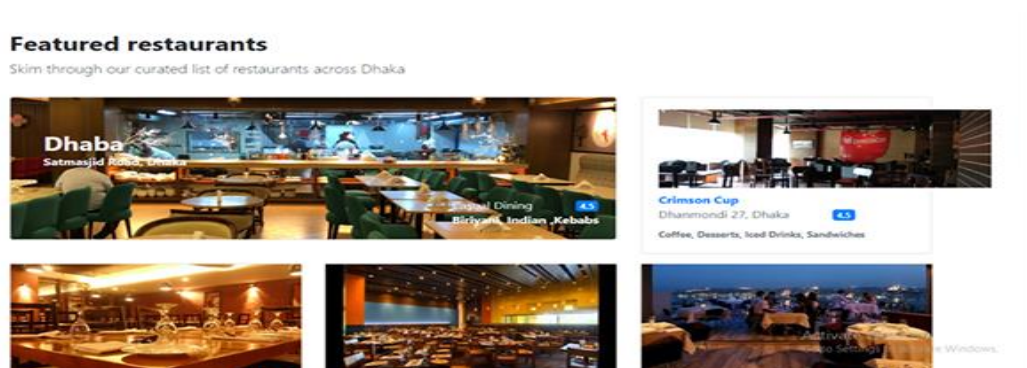


Figure 4.1.5: Featured page

In featured category the most famous and popular restaurant will be displayed.

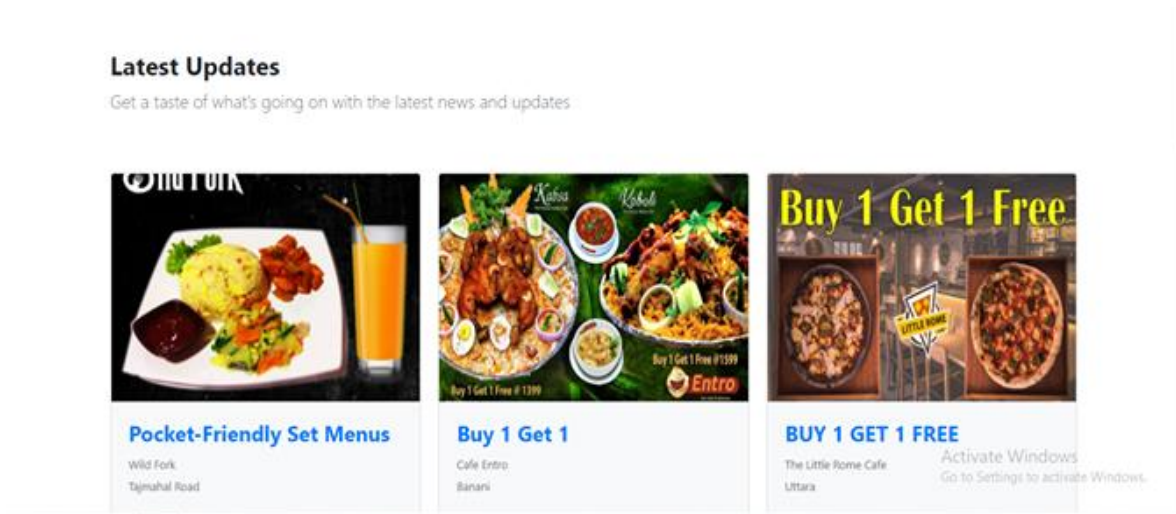


Figure 4.1.6: Latest update

The restaurants offers and deals are advertised here. It can be updated by the admin also restaurants owner can also provide the information and update this section.

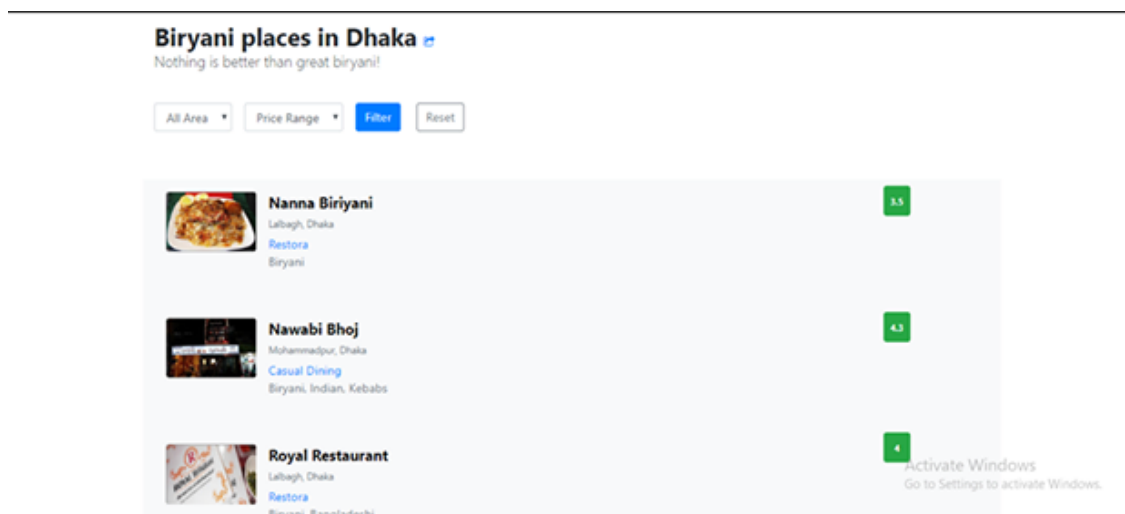
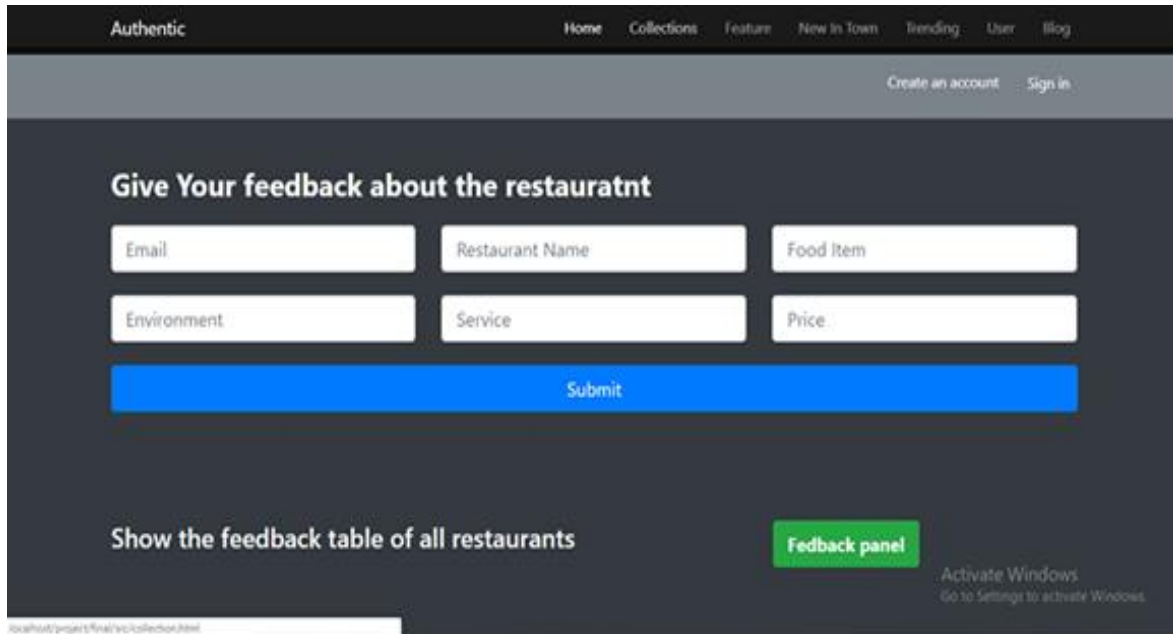


Figure 4.1.7: List of restaurant.

The lists of the entire restaurants are displayed here. Here you can also see the rating of this restaurant such as if the restaurant quality is high then it will appear first.



The screenshot shows a web application interface for a feedback form. At the top, there is a navigation bar with the word 'Authentic' on the left and links for 'Home', 'Collections', 'Feature', 'New In Town', 'Trending', 'User', and 'Blog' on the right. Below the navigation bar, there is a secondary bar with 'Create an account' and 'Sign in' links. The main content area has a dark background and features the title 'Give Your feedback about the restaurant'. Below the title, there are six input fields arranged in two rows: 'Email', 'Restaurant Name', and 'Food Item' in the first row; 'Environment', 'Service', and 'Price' in the second row. A large blue 'Submit' button is positioned below the input fields. At the bottom of the form, there is a link 'Show the feedback table of all restaurants' and a green button labeled 'Feedback panel'. In the bottom right corner, there is a small 'Activate Windows' watermark with the text 'Go to Settings to activate Windows.' The browser's address bar at the very bottom shows the URL 'localhost/project/final/vs/collection.html'.

Figure 4.1.8: Feedback page

In feedback page there are many criteria to give feedback to a restaurant. Such as environment, quality of the food item, service quality, price ranges are acceptable or not. If the user or customer will find that any discomforts he can suggest to change or improve the criteria.

Type

Casual Dining

Speciality

Biryani, Indian, Kebabs, Quick Bites

Phone

+8801783391571

RATING SUMMARY

Food Quality

Customer Service


Value for Money

Interior

RECOMMENDED FOOD ITEMS

Address

House 54, Road 10/A, Satmasjid Road, Dhanmondi, Dhaka 1209



Estimated price range per person

200tk - 300tk

- Wi-fi available
- Accepts cards
- Air-conditioned
- Takes reservations
- Smoking area

Are you a owner or manager of this restaurant?


Activate Windows
Go to Settings to activate Windows.

Figure 4.1.9: Single restaurant overview 1

In single overview restaurant will show the description of any particular restaurant. Such as type, specialty, phone number, location, description of environment etc. Also the image of the restaurants also provided.

Create an account

Sign in



Dhaba

Satmasjid Road, Dhaka

4.5

Open Now

Type

Casual Dining

Speciality

Biryani, Indian, Kebabs, Quick Bites

Address

House 54, Road 10/A, Satmasjid Road, Dhanmondi, Dhaka 1209

Estimated price range per person

200tk - 300tk

- Wi-fi available

Activate Windows
Go to Settings to activate Windows.

Figure 4.1.10: Single restaurant overview 2

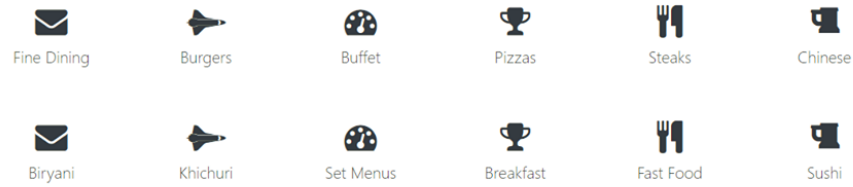


Figure 4.1.11: Restaurant category

Restaurants category are visible here. Such as burgers, pizzas, steaks, fast food, set menus etc. If you click any of these categories you will find similar restaurants in different location.

Restaurant owner can open account and login by this page. Owner has to put restaurant name, location, contact number etc.

Figure 4.1.12: Restaurant owner login page

4.2 Back-End Design

The backend usually consists of three parts: a server, an application, and a database. We get the information and data from front end and implement it through application or software. After getting the data we store that in database and run by server. The whole coding for this implementation, run and store is known as back end design. For coding we use HTML, CSS, JavaScript and php.

Software:

Net Beans, notepad++: provides support for several languages (PHP, JavaScript, etc.) and frameworks.

Server:

Apache, XAMPP: an application which allows you to setup a web server and database server instantly without any additional configuration.

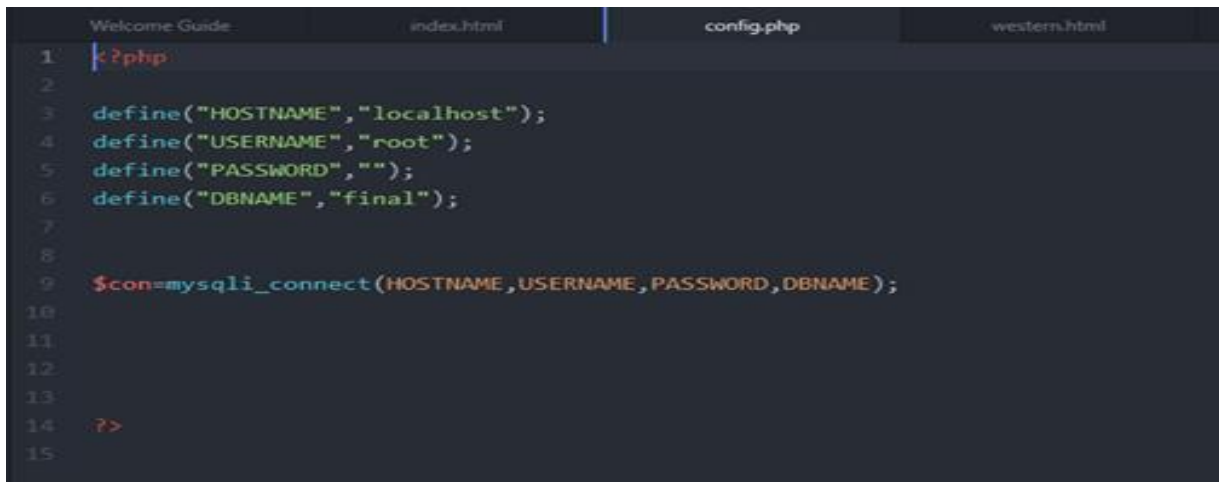
Database:

MySQL: Oracle-backed open source relational database management system based on Structured Query Language (SQL).

Language:

PHP:

A server side scripting language that is used to develop Static websites or Dynamic websites or Web applications. It is extremely simple for a newcomer, but offers many advanced features for a professional programmer.



```
1 <?php
2
3 define("HOSTNAME","localhost");
4 define("USERNAME","root");
5 define("PASSWORD","");
6 define("DBNAME","final");
7
8
9 $con=mysqli_connect(HOSTNAME,USERNAME,PASSWORD,DBNAME);
10
11
12
13
14 ?>
15
```

Figure 4.2.1: Database connection

From this section database is connected by the whole system.



```
7
8 if(isset($_POST['login'])) {
9
10 try {
11
12     $email= $_POST['email'];
13     $password=md5($_POST['password']);
14
15     $query="SELECT * FROM register WHERE email='$email' AND password='$password'";
16     $fire = mysqli_query($con,$query) or die("Can not insert data into database. ".mysqli_error($con));
17
18 if(mysqli_num_rows($fire)>0) {
19
20     session_start() ;
21     $_SESSION['name']='feedback';
22     header('location:index.html');
23 }
24
25 else {
26     throw new Exception ('Your information is not correct');
27 }
28
29 }
30
31 catch(Exception $e) {
```

Figure 4.2.2: Login code 01

```

5
6 <?php
7
8 require "../config/config.php";
9
10 ?>
11
12 <?php
13
14
15
16 if(isset($_POST['submit']))){
17
18
19     $email= $_POST['email'];
20     $r_name= $_POST['r_name'];
21     $item= $_POST['item'];
22
23     $environment= $_POST['environment'];
24     $service= $_POST['service'];
25     $price= $_POST['price'];
26
27     $query="INSERT INTO feedback(email,r_name,item,environment,service,price)
28 * VALUES('$email','$r_name','$item','$environment','$service','$price')";
29     $fire = mysqli_query($con,$query) or die("Can not insert data into database. ".mysqli_error($con));

```

Figure 4.2.3: Login code 02

Login code is built up here. By inserting email, name service, price. This section is for restaurant owner login section.

```

5
6 <?php
7
8
9
10 if(isset($_POST['submit']))){
11
12     try {
13         $username= $_POST['username'];
14         $email= $_POST['email'];
15         $password= $_POST['password'];
16
17
18         //Check Username
19
20         if(!empty($username)){
21             if(strlen($username) > 2 && strlen($username) <=30) {
22                 if(!preg_match('/^[a-zA-Z\s]/',$username)){
23
24                     $query="SELECT username FROM register WHERE username='$username'";
25                     $fire = mysqli_query($con,$query) or die("Can not insert data into database. ".mysqli_error($con));
26
27                     if(mysqli_num_rows($fire)>0){
28
29                         throw new Exception ('user name already exist');
30
31                     }
32

```

Figure 4.2.4: Signup code 01

```

register.php
91     }
92 }
93
94 else {
95     throw new Exception ('password can not be empty');
96 }
97
98
99
100 $query = "INSERT INTO register(username,email,password) VALUES('$username', '$email', '$password')";
101 $fire = mysqli_query($con,$query);
102
103 $query_rows=mysqli_num_rows($fire);
104
105 if($query_rows >0) {
106     header("location:user.php");
107 }
108
109
110
111
112 }
113
114
115 catch(Exception $e) {
116     $error_message=$e->getMessage();
117 }
118
119

```

Figure 4.2.5: Signup code 02

From this part if you have data that you logged in then you can sign up. If the data is not matched it will not allow signing up. So that, user should make sure to match the data what he has to be given.

Above all, we get the knowledge regarding backend coding data. We just summarize the whole coding part and give some preview about it. But the coding part is generally more than describe. We will showcase it in actual project presentation.

4.3 Implementation Requirements

A database connection lets you access database data sources. With a database connection, you can read data from database tables perform SQL queries or insert records into database tables. These actions are taken by the components using a database connection. The visible part to the customer or user is known as front design. The more attractive front design is more acceptable to the users and others. To design the front end there is some specific language and frame is used.

We used HTML, CSS, and JavaScript to design our website. The backend usually consists of three parts: a server, an application, and a database. We get the information and data from front end and implement it through application or software. After getting the data we store that in database and run by server. The whole coding for this implementation, run and store is known as back end design. For coding we use HTML, CSS, JavaScript and php.

CHAPTER 5

Implementation and Testing

5.1 Implementation of Database

A database connection lets you access database data sources. With a database connection, you can read data from database tables perform SQL queries or insert records into database tables. These actions are taken by the components using a database connection.

There several steps to form a database:

- Define Scope of the Database Project
- Organize Database Project
- Select Database Management System Products
- Develop Initial Implementation Plan and Schedule
- Design Database
- Perform Training
- Install and Test Database
- Develop Detailed Conversion Plan
- Convert Existing Applications
- Periodically Review Database Performance

Here after completing the database we get 16 database tables. Every database table has its own identity. Here every table has column name, its type, attributes, and default value.

The tables are shown below and the names of the tables are also attached.

Table 5.1.1: Database Category

Column	Type	Attributes	Null	Default
id	int(11)		No	auto_increment
cat_name	varchar(40)		No	
cat_icon	varchar(40)		No	

Table 5.1.2: Database City

Column	Type	Attributes	Null	Default
id	int(11)		No	auto_increment
city_name	varchar(20)		No	

Table 5.1.3: Database Area

Column	Type	Attributes	Null	Default
id	int(11)		No	auto_increment
area_name	varchar(40)		No	
city_name	varchar(40)		No	

Table 5.1.4: Database Collection

Column	Type	Attributes	Null	Default
id	int(11)		No	auto_increment
collection_name	varchar(40)		No	
collection_image	varchar(40)		No	
collection_keyword	varchar(40)		No	

Table 5.1.5: Database Category

Column	Type	Attributes	Null	Default
id	int(11)		No	auto_increment
res_id	int(11)		No	
wifi	tinyint(1)		No	
card	tinyint(1)		No	
air_condition	tinyint(1)		No	
reserve	tinyint(1)		No	
smoke	tinyint(1)		No	

Table 5.1.6: Database Restaurant Facility

Column	Type	Attributes	Null	Default
id	int(11)		No	auto_increment
cat_name	varchar(40)		No	
cat_icon	varchar(40)		No	

Table 5.1.7: Database Featured Restaurant

Column	Type	Attributes	Null	Default
id	int(11)		No	auto_increment
res_id	int(11)		No	

Table 5.1.8: Database Feedback

Column	Type	Attributes	Null	Default
id	int(11)		No	auto_increment
email	varchar(40)		No	
r_name	varchar(40)		No	
item	varchar(40)		No	
environment	varchar(40)		No	
service	varchar(40)		No	
price	varchar(40)		No	

Table 5.1.9: Database Restaurant Like

Column	Type	Attributes	Null	Default
id	int(11)		No	auto_increment
res_id	int(11)		No	
user_id	int(11)		No	
time	varchar(40)		No	

Table 5.1.10: Database Restaurant Menu

Column	Type	Attributes	Null	Default
id	int(11)		No	auto_increment
res_id	varchar(40)		No	
menu_image	varchar(40)		No	

Table 5.1.11: Database Location

Column	Type	Attributes	Null	Default
id	int(11)		No	auto_increment
location_name	varchar(40)		No	

Table 5.1.12: Database Offer

Column	Type	Attributes	Null	Default
id	int(11)		No	auto_increment
offer_name	varchar(40)		No	
offer_image	varchar(40)		No	
res_id	int(11)		No	
time	varchar(40)		No	

Column	Type	Attributes	Null	Default
id	int(11)		No	auto_increment
Res_name	varchar(40)		No	
city_name	varchar(40)		No	
Area_name	int(11)		No	
Full_address	varchar(40)		No	

Table 5.1.13: Database of Restaurant

Column	Type	Attributes	Null	Default
Cat_name	int(11)		No	auto_increment
speciality	varchar(40)		No	
phone	varchar(40)		No	
G_lat	varchar(40)		No	
G_lon	varchar(40)		No	
Res_cover	varchar(40)		No	
Price_range	varchar(40)		No	
Res_owner_id	int(11)		No	

Table 5.1.14: Database Restaurant Review

Column	Type	Attributes	Null	Default
id	int(11)		No	auto_increment
res_id	int(11)		No	
user_id	varchar(40)		No	
rating	varchar(40)		No	
image	varchar(40)		No	
detail	varchar(40)		No	
time	varchar(40)		No	

Table 5.1.15: Database Opening Hour

Column	Type	Attributes	Null	Default
id	int(11)		No	auto_increment
res_id	int(11)		No	
day	varchar(40)		No	
time	varchar(40)		No	

Table 5.1.16: Database User

Column	Type	Attributes	Null	Default
id	int(11)		No	auto_increment
user_name	varchar(40)		No	
email	varchar(40)		No	
password	varchar(40)		No	
gender	varchar(40)		No	
date birth	varchar(40)		No	
full name	varchar(40)		No	
phone	varchar(40)		No	
address	varchar(40)		No	

5.2 Implementation of Front-end Design

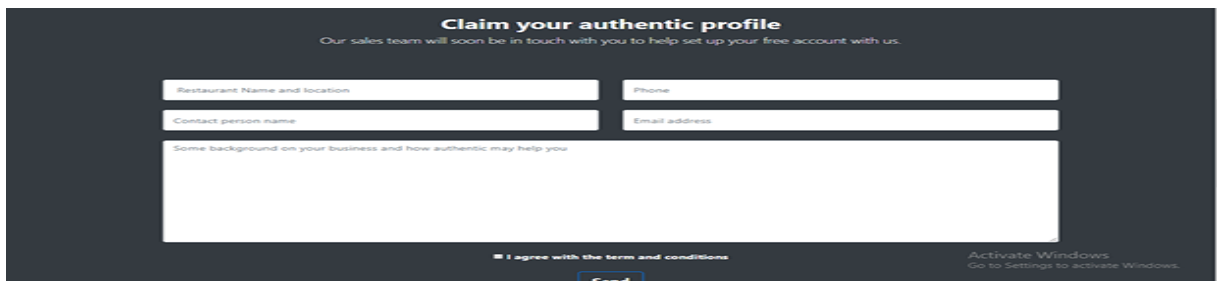
While web design is the way a website looks, front end development is how that design actually gets implemented on the web. The visible part to the customer or user is known as front design. The more attractive front design is more acceptable to the users and others.

To design the front end there is some specific language and frame is used. We used HTML, CSS, and JavaScript to design our website.

HTML(Hyper Text Markup Language) and CSS(Cascading Style Sheets) are the common building block of any website. It's also work as skeleton of website. Without this the website becomes unformatted and a plain texts. Also without this images cannot add to the website.

JavaScript allows us to do interactive elements. It also helps to navigate the website and do real time action with matter of time, makes the interface easy to reload, and add versatile functionality to the website.

We also use design framework known as Bootstrap. Bootstrap is a free and open-source front-end framework for designing websites and web applications. It contains HTML- and CSS-based design templates for typography, forms, buttons, navigation and other interface components, as well as optional JavaScript extensions. Unlike many earlier web frameworks, it concerns itself with front-end development only.



Claim your authentic profile
Our sales team will soon be in touch with you to help set up your free account with us.

Restaurant Name and location Phone

Contact person name Email address

Some background on your business and how authentic may help you

☐ I agree with the term and conditions

Activate Windows
Go to Settings to activate Windows.

Figure 5.2.1: Demo of a front-end design

5.3 Testing Implementation

We ran initial tests on our project. The result and discussion over it is given below-

Id	Command	Test Method	Outcome	Status
Test Case 1	Registration Request	Black box	Registration completed	Pass
Test Case 2	Login	Black box	Access to the system	Pass
Test Case 3	Create post	Black box	Writing form	Pass
Test Case 4	Upload media	Black box	Browsing option	Pass
Test Case 5	Select tags	Black box	Tags selected	Pass
Test Case 6	Categorize	Black box	Categorized	Pass
Test Case 7	Save	Black box	Post created	Pass
Test Case 8	View all posts	Black box	Show Posts	Pass
Test Case 9	Edit post	Black box	Save changes	Pass
Test Case 10	Delete	Black box	Post deleted	Pass
Test Case 11	Blogs	Black box	Show recent blogs	Pass
Test Case 12	Comment	Black box	Comment posted	Pass
Test Case 13	Send mail	Black box	Mail sent	Pass
Test Case 14	Log out	Black box	Logged out	Pass

Figure5.3.1: Test Case

We did black box testing to our project. It was a primary approach and all the tests passed through Lets have a detailed look to all the tests from registration to log out.

To test registration we inputted mail address which was taken and stored in the database along with the password token, Also the password matching option with the “confirm password” was passed.

To test the login option we inputted the email and password which were already provided during registration. The system was able to match the email and password with database and gave access to the system.

In our system, to create post a template is given. Which works perfectly when a blogger access this option? We included a text editor called “WYSIWYG” to write the blog. Every component in this editor like bold, italic, font changing, header, footer etc. works perfectly.

We tested to upload .jpg and .png format picture to attach in our blog post which passed the test. After clicking on upload photo button, the browser opens to select photo to attach.

There are bunch of tags like food, security, culture, transport etc. which can be included with the posts to make it easy to find. We tried to include this tags in our posts and it worked. Also we were able to create, edit and delete tags.

There will be many types of writing in our blog. So to manage these posts in a categorized way there is this option “Category”. Just like Tags, we could manage to keep a post in any category. We were able to create, edit, delete category.

After storing the posts into database we tested if we could retrieve the posts from database and show into the blog. The test worked perfectly.

We successfully could edit a post. After edition, the post was able to update and vies in the database perfectly.

To delete a post there is a dedicate button “Delete” to make the operation. We viewed any random posts in our blog and clicked on the “Delete” button and the post was completely erased from the blog. Also the post got deleted from the database. So this test passed successfully.

The “Blogs” tab is to show recently created posts. The last created post should appear first, previously created post should appear in second position and so on. When we clicked on the “Blogs” tab the posts were showed as it should be.

We already know there is comment option to share opinions of the users to any posts. To test this option we inputted the mail address, name, body of the comment and post the comment in a blog post. And it worked perfectly.

In our system a “Contact” template is given to make contacts with the blogger. We tested the contact system by inputting the email address, subject of the mail, body of the mail and send it to the blogger. Every component of this contact template worked fine.

After completing all the tasks we proceed to the logout button to get out of the system. After clicking on the “Log out” button we successfully could logged out from the system.

Chapter 6

Conclusion and Future Scope

6.1 Discussion and Conclusion

“Ranking Scheme of Restaurant” is a website where a customer/user gets all sorts of information regarding restaurants in particularly Dhaka city.

In our website “Ranking Scheme of Restaurant”, there are some sorted features such as restaurant category, restaurant type, and restaurant location. All the similar restaurants list of that category and price according to the rank of price, quality and environment are updated. There is also a section for giving review and feedback. Restaurant’s features such as menu, environment pictures are also added. For creating new owner business profile there are some options such as adding restaurant’s environment pictures, menu etc. After agreeing the terms and condition they can do advertisement.

The website and application runs on Open Source software, the website is written in PHP and the desktop application is written in JAVA uses MySQL as the database manager.

We have a platform where we can find similar types of restaurant according to quality best to worst in a particular area. So that it is easier for a customer to find a restaurant in a convenient place and also he can estimate the quality or remark the similarity and dissimilarity between them. A customer can get knowledge about the menu, price, amount, environment and quantity etc. before visiting a specific restaurant. Also after visiting any restaurant a customer is eligible to give his/her feedback, share experience and most important delegate rank for that restaurant. So that if a restaurant is in first position , after surveying that rank and feedback it may send that restaurant to last position. And it is also visible to the restaurant owner.

So that they will be conscious about their quality and so they have the intention to improve it more and more. A new restaurant proprietor can promote their restaurant by creating a free portfolio in our ranking scheme restaurant website. It will help them to reach to customer effortlessly and effectively.

6.2 Scope for Further Developments

In our website “Ranking Scheme of Restaurant”, there are some sorted features such as restaurant category, restaurant type, and restaurant location. All the similar restaurants list of that category and price according to the rank of price, quality and environment are updated. There is also a section for giving review and feedback. Restaurant’s features such as menu, environment pictures are also added. For creating new owner business profile there are some options such as adding restaurant’s environment pictures, menu etc. After agreeing the terms and condition they can do advertisement.

But still we have some limitations. In our project there is no system for delivery the food. In future we will include this section and people can have food in their home. So people will get the facility of delivery system and dine-in in one website.

The website will improve and give better performance by more uses of the customer. If the customers give review and ranking in daily basis then it’s possible to get more perfect output data from this website. Because more uses and more feedbacks allow to give more accurate information.

REFERENCES

- [1] "What's the Difference Between the Front-End and Back-End? | Plural sight." [Online]. Available at: <https://www.pluralsight.com/blog/film-games/whats-difference-front-end-back-end>. [Accessed: 03-Nov-2018].
- [2] "Host website over local network - Server Fault." [Online]. Available at: <https://serverfault.com/questions/147140/host-website-over-local-network>. [Accessed: 03-Nov-2018].
- [3] "What is HTTP (Hypertext Transfer Protocol)? – Definition from WhatIs.com." [Online]. Available at: <https://searchwindevelopment.techtarget.com/definition/HTTP>. [Accessed: 21-Nov-2018].
- [4] How DNS Works: Domain Name System(DNS) | Microsoft Docs." [Online]. Available at: [https://docs.microsoft.com/en-us/previous-versions/windows/it-pro/windows-server-2003/cc772774\(v=ws.10\)](https://docs.microsoft.com/en-us/previous-versions/windows/it-pro/windows-server-2003/cc772774(v=ws.10)). [Accessed: 03-Nov-2018].
- [5] "Diagram Maker | Online Diagram Software | Creately", Creately.com, 2018. [Online]. Available at: <https://creately.com/> [Accessed: 22- Nov- 2018].
- [6] "Food Guide, Restaurants, Restaurant Reviews & Reservation in Dhaka, Bangladesh - Foodiez", #Foodiez, 2018. [Online]. Available at: <http://www.foodiez.com.bd/>. [Accessed: 22- Nov- 2018].
- [7] "HungryNaki.com", HungryNaki.com, 2018. [Online]. Available at: <https://www.hungrynaki.com/> [Accessed: 22- Nov- 2018].
- [8] "Software Testing Tutorial", www.tutorialspoint.com, 2018. [Online]. Available at: https://www.tutorialspoint.com/software_testing/ [Accessed: 22- Nov- 2018].
- [9] "Order online ~ Express Food Delivery in Bangladesh", Foodpanda.com.bd, 2018. [Online]. Available at: <https://www.foodpanda.com.bd/> [Accessed: 22- Nov- 2018].

