VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI - 590018

A MINI-PROJECT REPORT ON
"RESTAURANT MANAGEMENT SYSTEM"

Submitted in partial fulfillment of the requirements of the award of degree of

**BACHELOR OF ENGINEERING
IN
COMPUTER SCIENCE & ENGINEERING**

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CERTIFICATE

This is to certify that the mini-project report entitled **"RESTAURANT MANAGEMENT SYSTEM"** is a bona fide work carried out by **Taurunika Shivashankaran** (4VV16CS115),

Dhruv Nrupesh Patel (4VV16CS123) students of 5th semester Computer Science and Engineering, **Vidyavardhaka College of Engineering, Mysuru** in partial fulfillment for the award of the degree of **Bachelor of Engineering** in **Computer Science & Engineering** of the **Visvesvaraya Technological University, Belagavi**, during the academic year **2018-2019**. It is certified that all the suggestions and corrections indicated for the internal assessment have been incorporated in the report deposited in the department library. The report has been approved as it satisfies the requirements in respect of mini-project work prescribed for the said degree.

Signature of the Guide   **Signature of the Guide**   **Signature of the HOD**

(Mr.Natesh M)   **(Ms.Harshitha K)**   **(Dr. Ravi Kumar V)**

Name of the Examiners   **Signature with Date**

1)

2)

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ABSTRACT

The mini project titled **"Restaurant Management System"** is a web-based application. **"Restaurant Management System"** is a computer software product that coordinates and integrates all the inherent activities involved in managing various products and their related categories, customer orders and order details. This application is developed to fully computerise the manual operations and reduce the wastage of time and effort. The system will display all the food items available along with the cost and the customer can select out of those displayed in the menu.

"Restaurant Management System" is a powerful tool which can offer better assistance from technical and economic point of view. This tool is very effective and useful because it is economically feasible.

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CHAPTER 1

INTRODUCTION

1.1 Background

The profession of managing restaurant is known as "Restaurant management". Restaurant management System is a user-friendly application software which is used by the restaurant to record the customer details, food details, staff details.

Handling restaurants manually is very difficult. Therefore, nowadays almost all the restaurants maintain a database where various records about staff, customer, food items etc are stored.

This project includes the features of a database that is adding, deleting and searching of a required record using MySQL, PHP and HTML. This is a database project that can efficiently handle and manage various activities of a restaurant and all these activities will be happening under the supervision of the administrator. The businesses in restaurants are now growing constantly.

The best advantage of maintaining a database for restaurant is the any details regarding the restaurant like branch details, or food menu or number of customers visiting the restaurant and their review and also the details regarding the staff like the staff designation etc can be retrieved or searched very easily instead of manually checking them since retrieving takes very less time and is easy while manually doing the same takes more time and is also difficult as well.

Therefore, a restaurant management system database is common in almost all the restaurants nowadays, since development of database takes very less time for the admin or owner and thus it will increase the restaurant profit as well.

1.2 Introduction about the Project

Restaurant Management System (RMS) is a crucial technology that enables a single outlet or enterprise to better serve its customers with food and beverages and also train the employees in order to better serve the customers

The main aim of this project is to computerize all the processes which happens in the Restaurant. It is a database created in order to retrieve efficient information for subsequent analysis, manipulation and application.

A computer-based management system is designed to handle all the primary information required to manage the restaurant. This project intends to introduce more user friendliness in the various activities such as record updating, maintenance and searching. The searching of records been made quite simple as all details of the customer can be obtained by simple keying in the identification of that customer.

The admin has to maintain records of each sales and purchase to keep track of maintain the restaurant efficiently.

The admin also has to maintain a food menu which contains a list of the food items available in the restaurant. The customers visiting the restaurant at different time will order food items and thus, this record will be maintained in orders record.

CHAPTER 2
HARDWARE AND SOFTWARE REQUIREMENTS

2.1 Software Requirements

- ✓ Front-end : PHP,HTML
- ✓ Back-end : MySQL server
- ✓ Operating System: Windows 10

2.2 Hardware Requirement

- ✓ 32-bit processor
- ✓ 8 GB RAM
- ✓ Speed: 2.60 Hz
- ✓ Hard Disk: 1Tb

WAMP

- WAMP Stands for "Windows, Apache, MySQL, and PHP."
- WAMP is a variation of LAMP for Windows systems and is often installed as a software bundle (Apache, MySQL, and PHP).
- It is often used for Web development and internal testing, but may also be used to serve live websites.
- The most important part of the WAMP package is Apache (or "Apache HTTP Server") which is used run the web server within Windows. By running a local
- Apache web server on a Windows machine, a web developer can test webpages in a web
- The two most commonly used technologies for creating dynamic websites are MySQL and PHP which are included in WAMP.

- MySQL is a high-speed database, while PHP is a scripting language that can be used to access data from the database.
- By installing these two components locally, a developer can build and test a dynamic website before publishing it to a public web server.

While Apache, MySQL, and PHP are open source components that can be installed individually, they are usually installed together. One popular package is called "WampServer," which provides a user-friendly way to install and configure the "AMP" components on Windows.

MySQL

MySQL is a fast, easy-to-use RDBMS being used for many small and big businesses. MySQL is developed, marketed and supported by MySQL AB, which is a Swedish company. MySQL is becoming so popular because of many good reasons −

- MySQL is released under an open-source license. So, you have nothing to pay to use it.
- MySQL is a very powerful program in its own right. It handles a large subset of the functionality of the most expensive and powerful database packages.
- MySQL uses a standard form of the well-known SQL data language.
- MySQL works on many operating systems and with many languages including PHP, PERL, C, C++, JAVA, etc.
- MySQL works very quickly and works well even with large data sets
- MySQL is very friendly to PHP, the most appreciated language for web development.
- MySQL supports large databases, up to 50 million rows or more in a table. The default file size limit for a table is 4GB, but you can increase this (if your operating system can handle it) to a theoretical limit of 8 million terabytes (TB)

- MySQL is customizable. The open-source GPL license allows programmers to modify the MySQL software to fit their own specific environments.

HTML

- HTML stands for Hyper Text Markup Language,

- It is the most widely used language on Web to develop web pages and websites

- HTML was created by Berners-Lee in late 1991 but "HTML 2.0" was the first standard HTML specification which was published in 1995.

- HTML 4.01 was a major version of HTML and it was published in late 1999.

- Though HTML 4.01 version is widely used but currently we are having HTML-5 version which is an extension to HTML 4.01, and this version was published in 2012.With Cascading Style Sheets (CSS) and JavaScript, it forms a triad of cornerstone technologies for the World Wide Web. Browsers do not display the HTML tags, but use them to interpret the content of the page.

PHP

- PHP stands for Hypertext Preprocessor and was earlier called as Personal Home Page.

- PHP is a widely used open source general purpose scripting language that is especially suited for web development and can be embedded into HTML

- Instead of lots of commands to output HTML, PHP pages contain HTML with embedded code that is enclosed in special start and end processing instructions that is <?php for start and?> for end.

- The best thing about PHP is hat is extremely simple.

Discussion of code segments

✓ To connect from HTML page to PHP page, form action is used.

```
<form action="http://localhost/projects/filename.php">
```

✓ To get connected to the database using PHP, the following lines of code are included:

```php
<?php
$con=mysqli_connect("localhost:3306","root","");
mysqli_select_db($con,"project");
?>
```

✓ Inserting values to any the table can be done using following code:

```
Ex:-
$val1=mysqli_query($con,"insert into restaurant values
('$bid','$bname','$loct','$bcno')");
```

✓ Deleting values to any the table can be done using following code:

```
Ex:-
$val2=mysqli_query($con,"delete from restaurant where Br_id='$bd'");
```

✓ Retreiving values from any table can be done using following code:

```
Ex:-
$val3=mysqli_query($con,"select * from restaurant where Br_id='$bid'");
```

CHAPTER 3
DESIGN AND IMPLEMENTATION

3.1 Schema Diagram
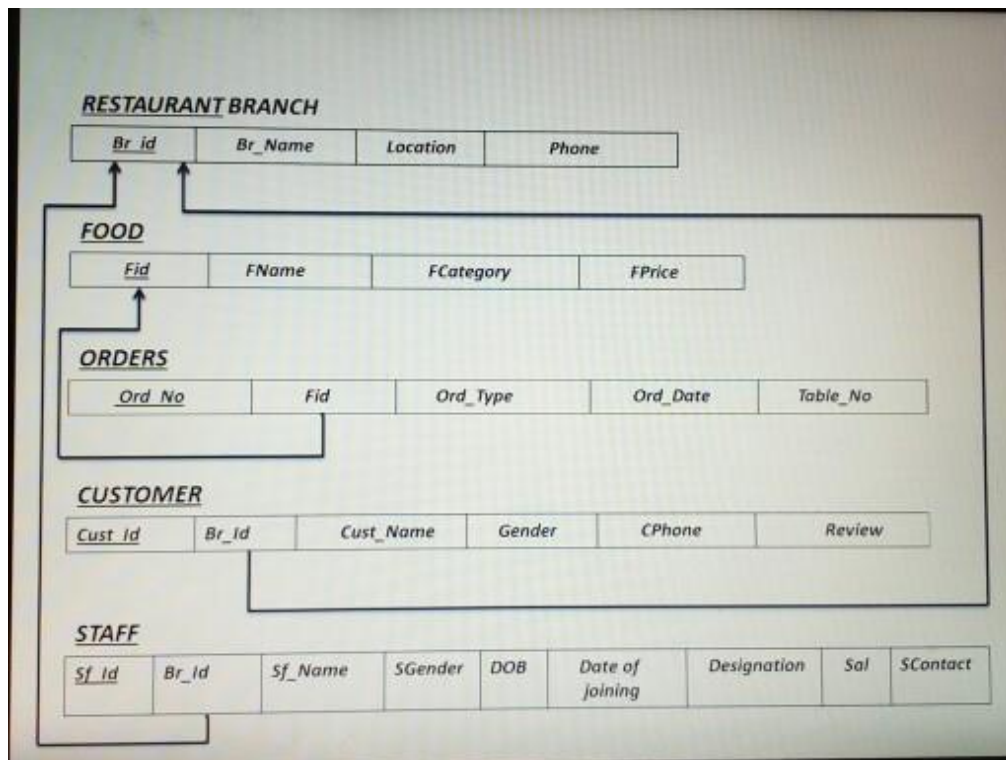
Figure 3.1 Schema Diagram from Restaurant Management System

A schema is the structure behind data organization. It is a visual representation of how different table relationships enable the schema's underlying mission business rules for which the database is created. Br_id is a primary for restaurant branch table and it acts as a foreign key to customer and staff tables. Fid is a primary of the table Food and it acts as a foreign key to the table orders.

3.2 Entity-Relationship Diagram
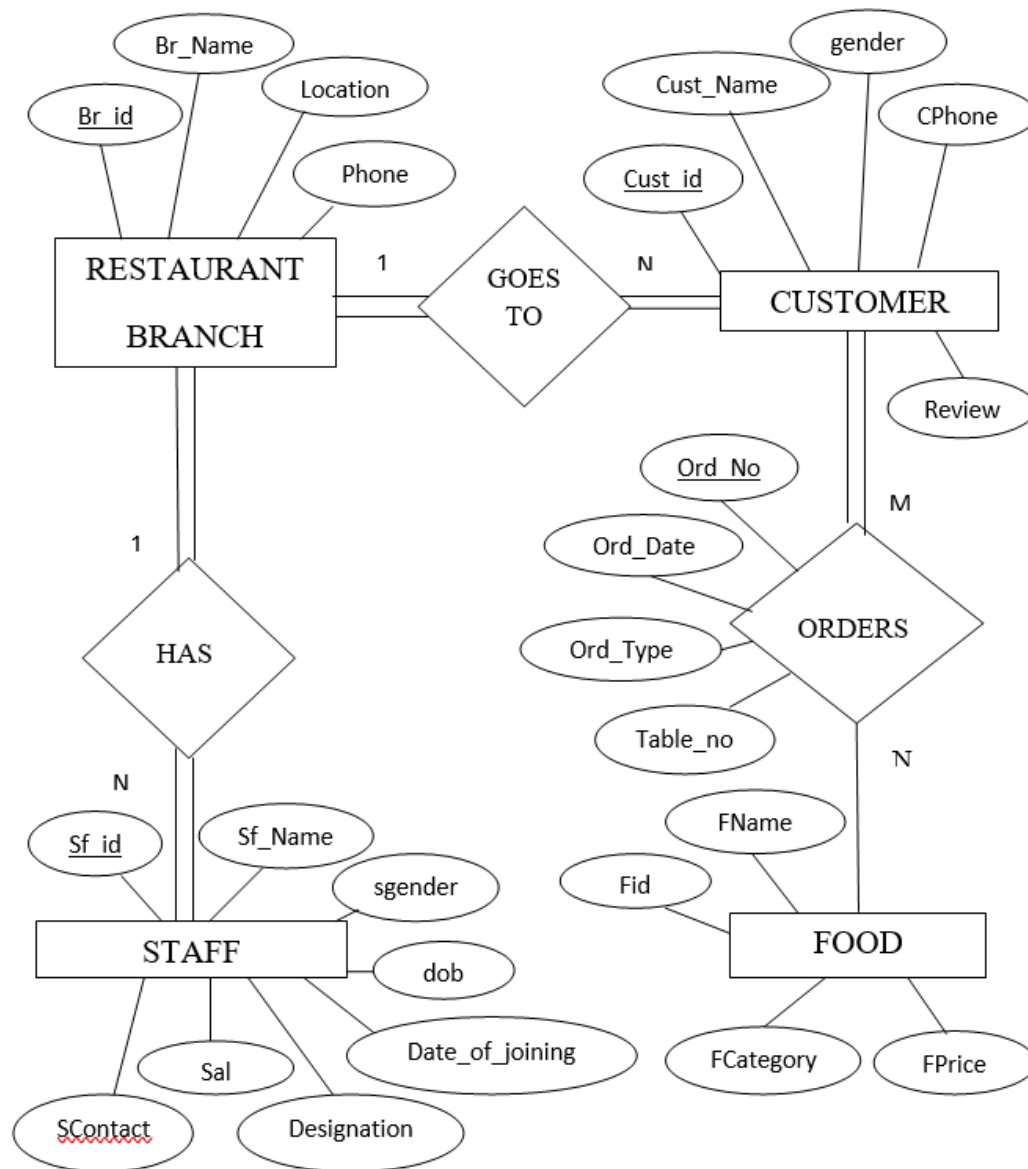
Figure 3.2 Entity-Relationship Diagram from Restaurant Management System

An entity-relationship diagram (ERD) is a data modeling technique that graphically illustrates an information system's entities and the relationships between those entities.

An ERD is a conceptual and representational model of data used to represent the entity framework infrastructure.

In the above ER diagram for RMS, there are

- 4 entity types represented in rectangles namely restaurant, food, customer and staff
- 3 relationships represented in diamond boxes namely orders, has and goes to
- Attributes represented in ovals
- Key attributes are underlined

Cardinality ratio is the maximum number of. relationship instances that an entity can. participate in. In RMS ER diagram the following are the cardinality ratios

- Restaurant branch – Customer

  A Restaurant branch is visited by 'N' customers at a time. Therefore, the cardinality ratio is 1: N. All the customers visit at least one restaurant branch and all the Restaurant branches are visited by customers and thus both are total participations.

- Customer – Food

  'M' customers order 'N' food items. Therefore, the relationship is M: N. All the food items are not ordered by the customers and thus it is partial participation and all the customers will order at least one food item and thus it is total participations

- Restaurant branch – Staff

  Each restaurant branch has 'N' number of staff. Therefore, relationship is 1: N. All the restaurant branches will have staff and all staff will be working in some restaurant branch. Therefore, it is total participation.

3.3 Modules and their Description

➢ First welcome page

Figure 3.3 Snapshot of welcome page

➢ Login Page: There are two options for login

• LOGIN AS ADMIN

• LOGIN AS USER
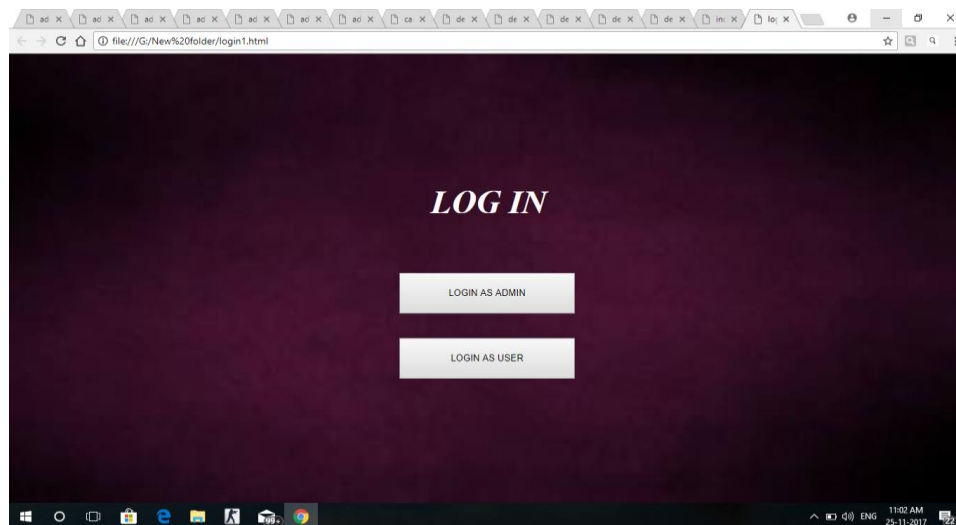
Figure 3.4 Snapshot of login page

➢ LOGIN AS ADMIN

In this login only the admin or owner having a particular username and password can login .
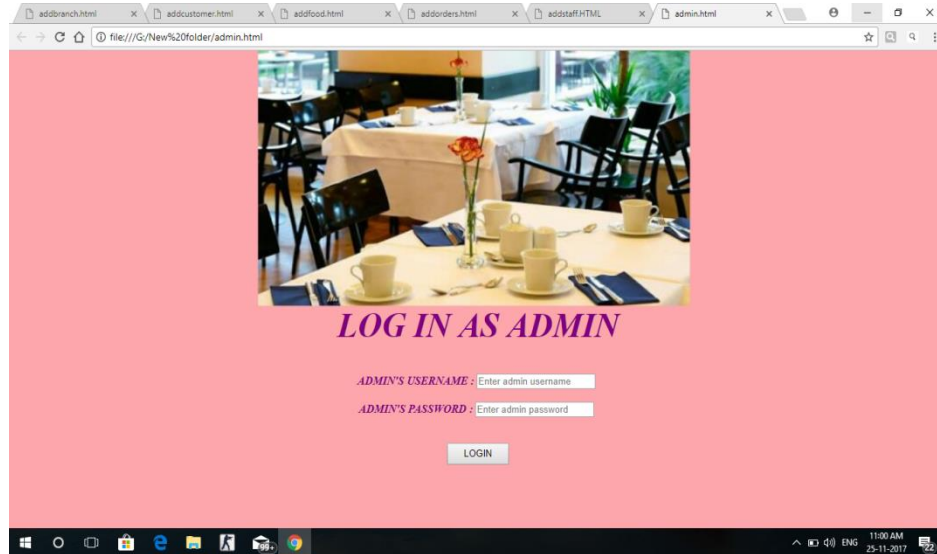
Figure 3.5 Snapshot for 'LOGIN AS ADMIN'

➢ LOGIN AS USER

In this login any user with any username and password can login.
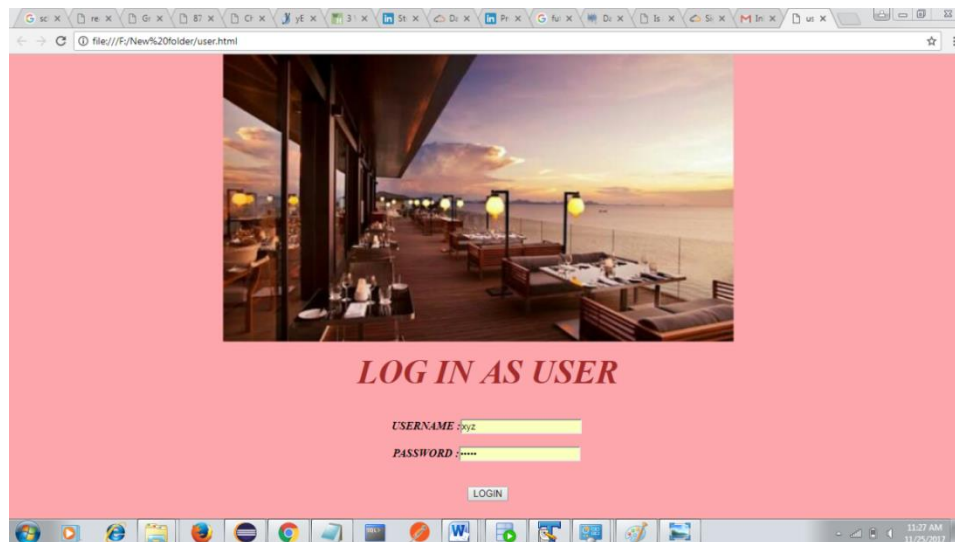
Figure 3.6 Snapshot for 'LOGIN AS USER'

➢ Admin options:

It specifies the options available for admin. Admin can insert, delete as well as view all the data in the database.
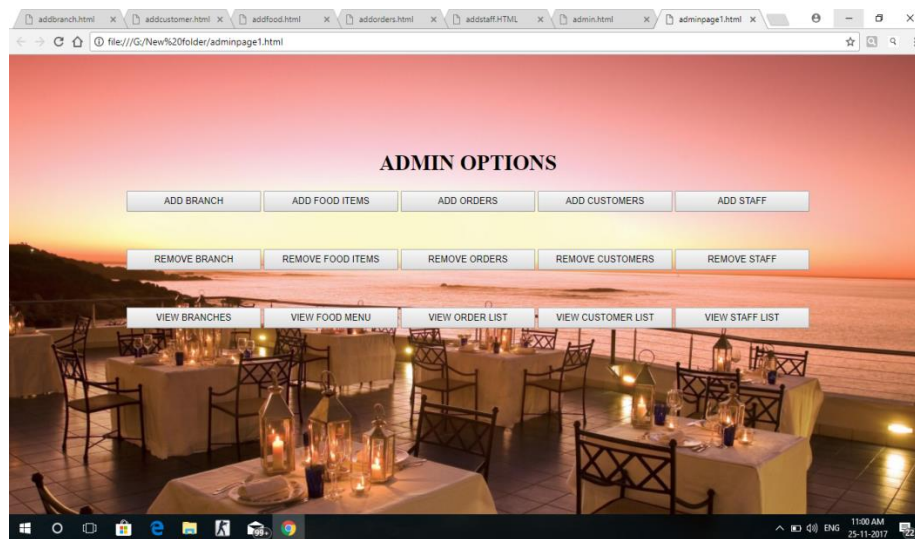
Figure 3.7 Snapshot of admin options

➢ User options:

User has privileges only to view the data present in the tables but can apply any operations to those data.
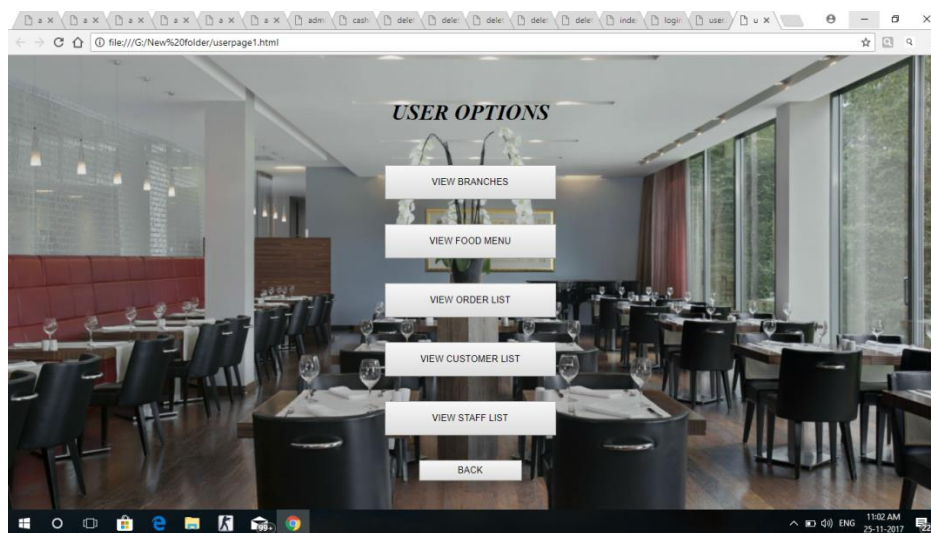
Figure 3.8 Snapshot of user options
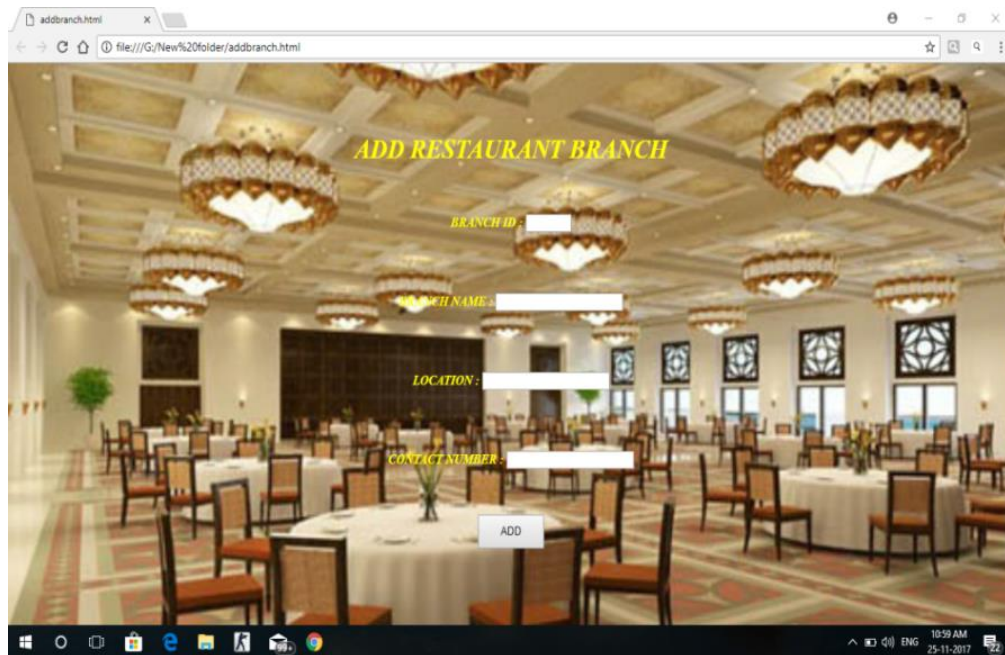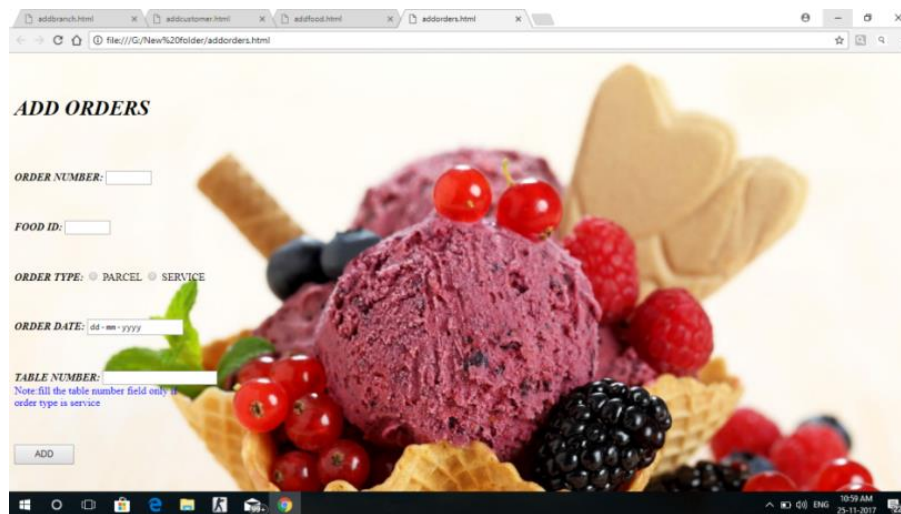
Figure 3.9 Snapshot of the form to add branch details

Figure shows the form where a new branch details can be added. The form consists of branch id, branch name, location of the branch and contact details of the branch.
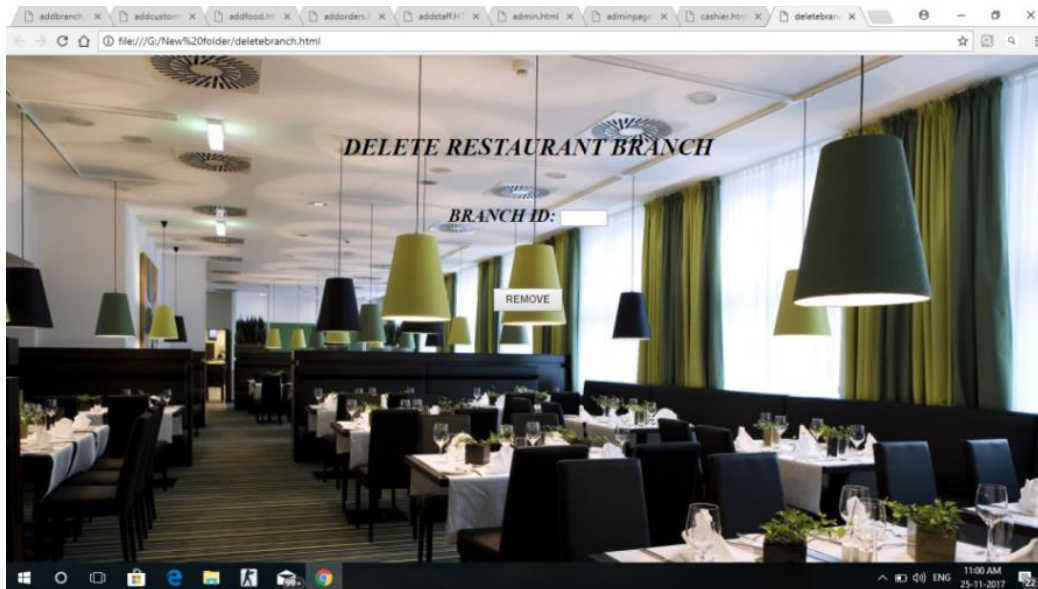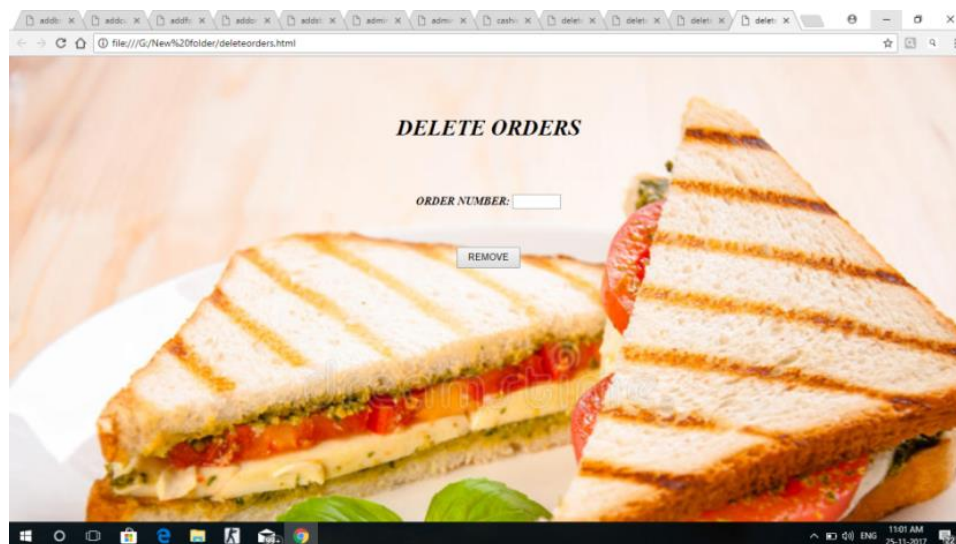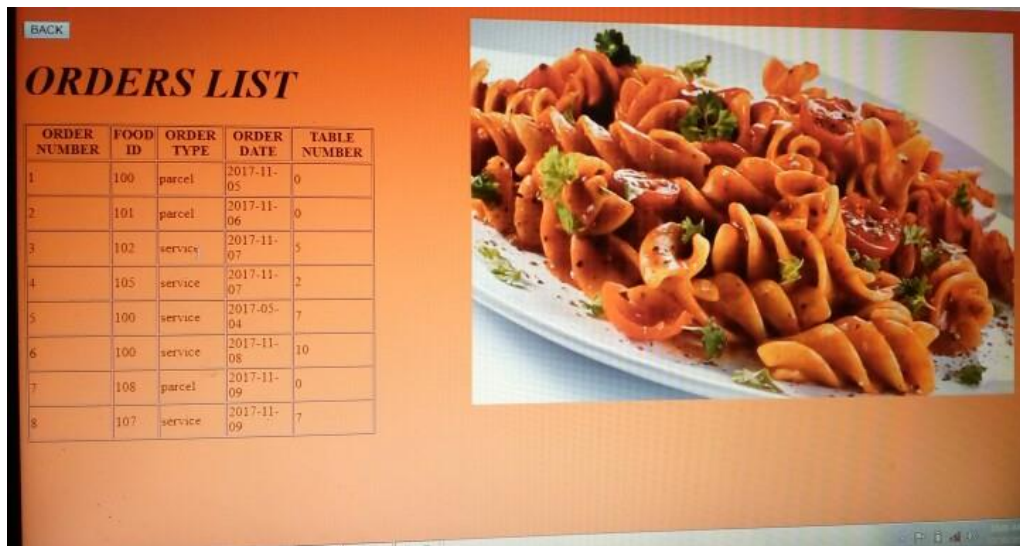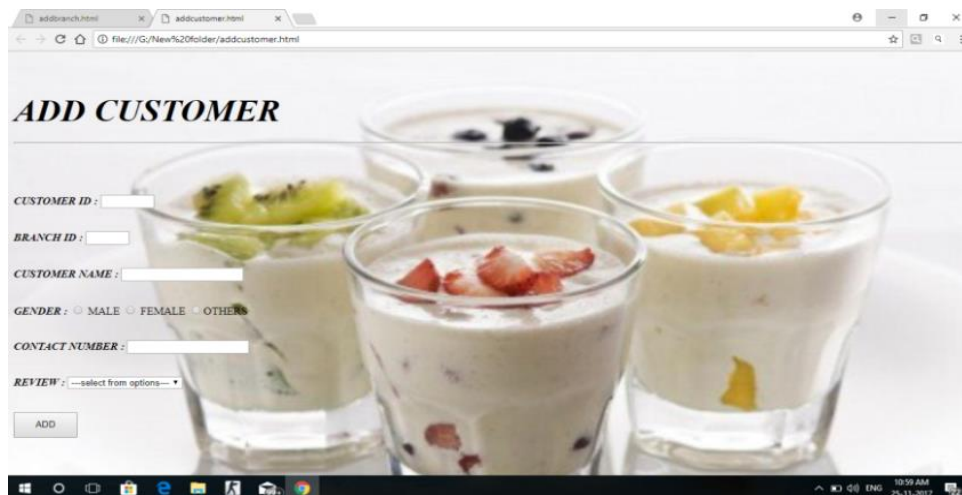

Figure 3.10 Snapshot of the form to remove any branch

Figure shows the form where any branch can be removed from the database. In this form only the branch id of the branch to be deleted has to be specified.
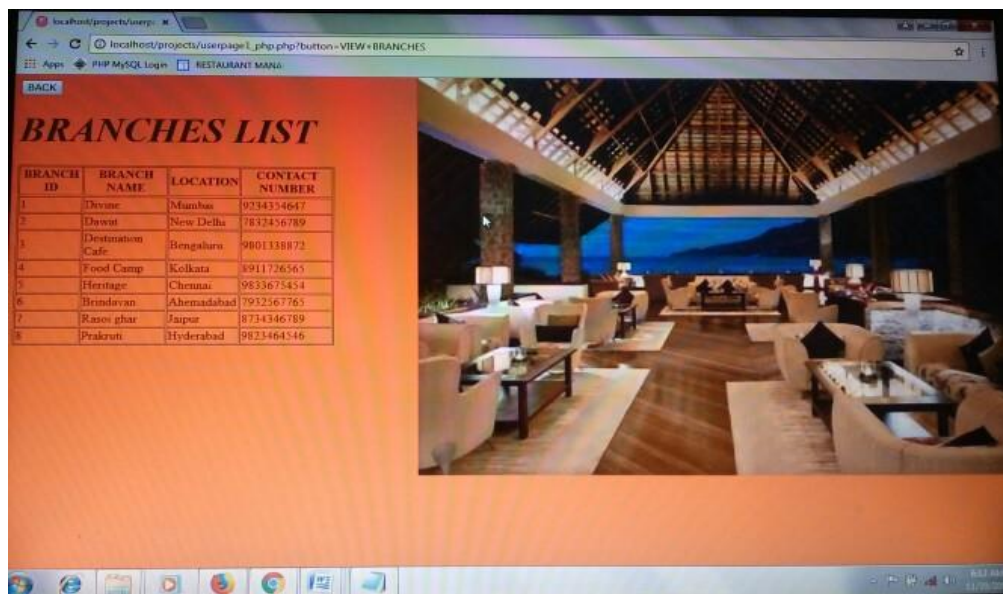
Figure 3.11 Snapshot of view of restaurant branch details

Figure shows the branch details of the all the branches of the restaurant.

All the branches of restaurant can be seen here.
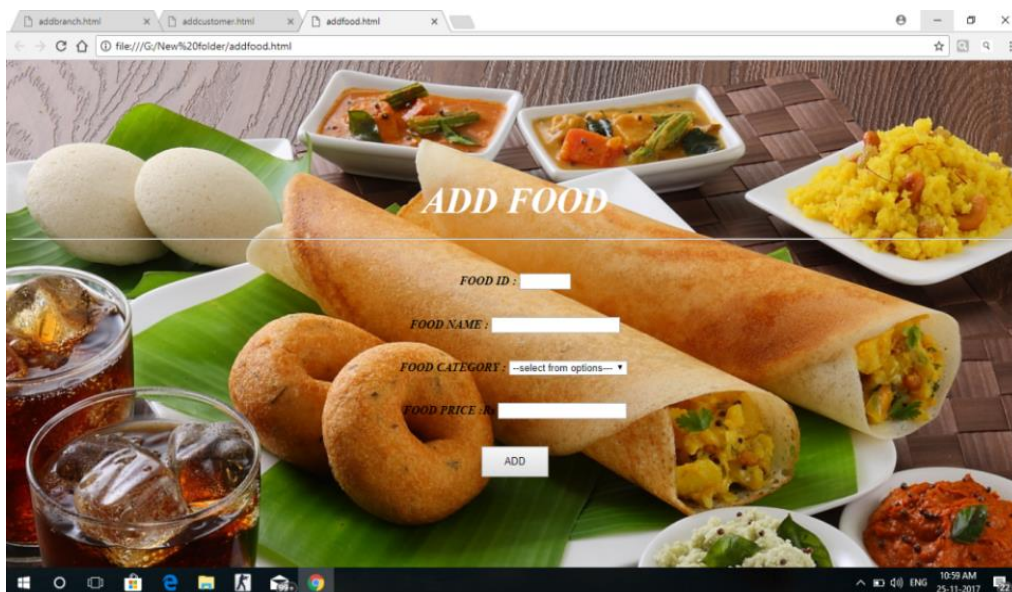
Figure 3.12 Snapshot of the form to add food items details

Figure shows the form where a new food items with its details can be added. The form consists of food id, food name, category of the food item like Indian, chats, Italian, juice, desserts, Chinese etc. and price of the food

Figure 3.13 Snapshot of the form to remove any food item

Figure shows the form where any food item can be removed from the database. In this form only the food id of the food to be deleted has to be specified.
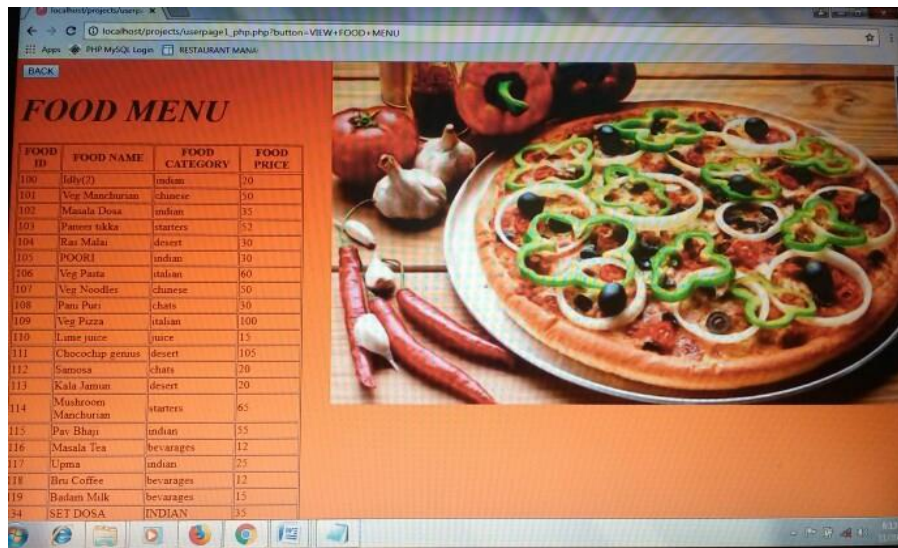
Figure 3.14 Snapshot of view of food items

Figure shows the food menus of the restaurant. All the food items of restaurant can be seen here.

Figure 3.15 Snapshot of the form to add order details

Figure 3.15 shows the form where a new order with its details can be added. The form consists of order no, food id representing the food ordered, order type i.e. parcel or service, order date and the table number.

Figure 3.16 Snapshot of the form to remove any order

Figure shows the form where any order placed can be removed from the database. In this form only the order number of the order to be deleted has to be specified

Figure 3.17 Snapshot of view of order details

Figure 3.17 shows the orders placed and its details. All the orders of restaurant can be seen here.

Figure 3.18 Snapshot of the form to add customer

Figure shows the form where customer details can be added. The form consists of customer id, customer name, branch id representing the restaurant branch where the customer has visited, customer's gender, contact details and review of the customer about that particular branch.
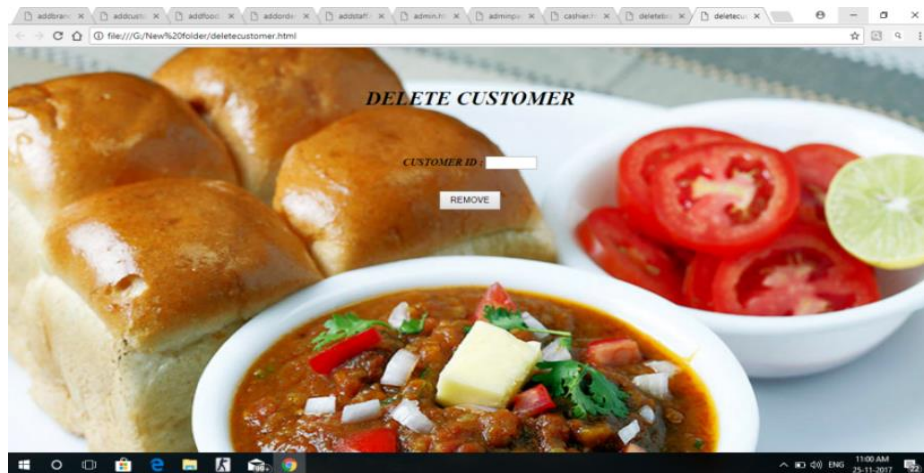
Figure 3.19 Snapshot of the form to remove customer

Figure shows the form where any customer details can be removed from the database. In this form only the customer id of the customer to be deleted has to be specified
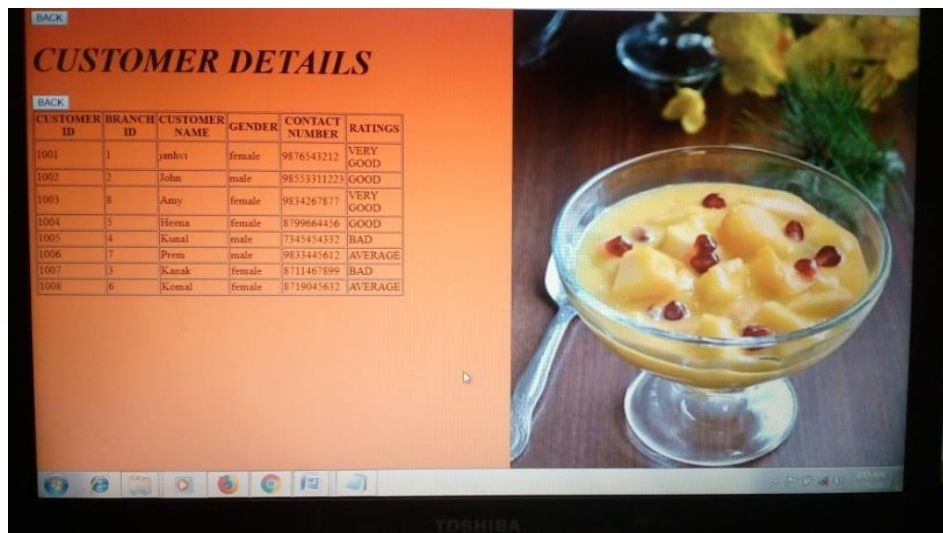

Figure 3.20 Snapshot of view of customer details

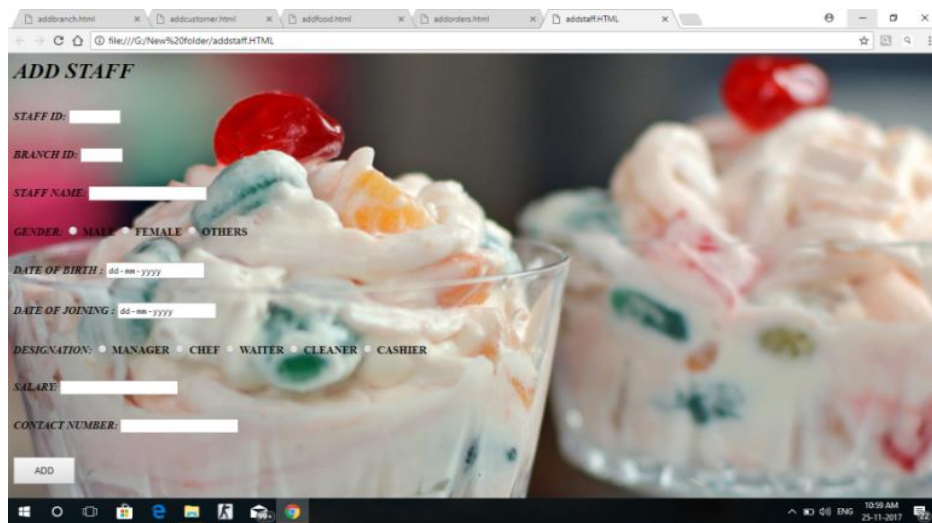Figure shows the customer details. All the customers visiting different restaurant branches can be seen here.

Figure 3.21 Snapshot of form to add staff details

Figure shows the form where staff member details can be added. The form consists of staff id, staff name, branch id representing the restaurant branch where the staff is working in, staff member's gender, date of birth and date of joining of the staff member, contact details and salary of the staff member.
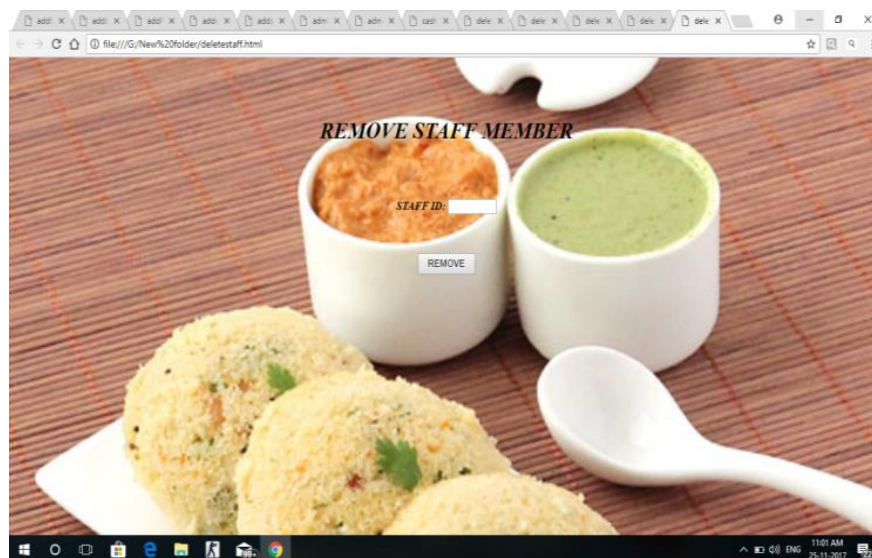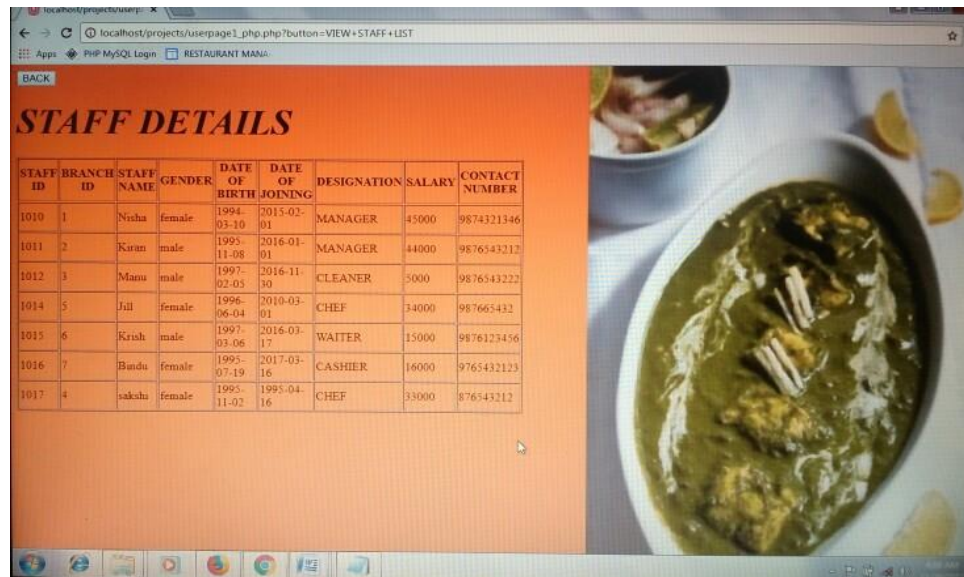

Figure 3.22 Snapshot of form to remove staff

Figure shows the form where any staff details can be removed from the database. In this form only the staff id of the staff to be deleted has to be specified

Figure 3.23 Snapshot of view of staff list

Figure shows the staff details. All the staff working in different restaurant branches can be seen here.

CHAPTER 4
APPLICATIONS AND CONCLUSION

4.1 Applications of the project work

- ✓ This database can maintain records of various branches of the restaurant and hence can be used to maintain a real-world restaurant.
- ✓ Since only the admin or owner with a specific username and password can add and remove data, we can tell its secure.
- ✓ Restaurant management system seamlessly increases the efficiency and cost effectiveness of a restaurant.
- ✓ Restaurant management system gives the owner a proper control on his/her restaurant to manage things effectively and enables the owner to serve his/her customers in a better way.

4.2 Conclusion and Future Enhancements

As discussed before this database can maintains records for various restaurant's data and retrieve the data successfully whenever needed. It can calculate the number of customers visiting the restaurant branch, number of orders placed by each customer. It also maintains a food menu indicating number of and typed of food items available in the restaurant. The admin can add, delete and view data. The user can just view the data.

This database can be used to maintain a real-world restaurant database having various branches in different locations. This database can be implemented in real world by adding some more features like

1. Online food ordering,

2. Advance booking of tables and

3. Delivering food

CHAPTER 5
REFERENCES

[1] Fundamentals of Database Systems, Ramez Elmasri and Shamkant B. Navathe,7th Edition,2017, Pearson.

[2] Database management systems, Ramakrishnan Gehrke,3rd Edition, 2014, McGraw-Hill

[3] www.stackoverflow.com

[4] www.w3schools.com

[5] www.tutorialspoint.com