A Mini Project Synopsis on

Food Ordering System

S.E. - I.T Engineering

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CERTIFICATE

This is to certify that the Mini Project report on Food Ordering System has been submitted by **Purvesh Gangapurkar (20104063), Rahul Patil (20104073), Ambadas Malegave (20104112), and Om Chavan (20104056**) who are Bonafede students of A. P. Shah Institute of Technology, Thane, Mumbai, as partial fulfilment of the requirement for the degree in Information Technology, during the academic year 2020-2021 in a satisfactory manner as per the curriculum laid down by University of Mumbai.

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Chapter 1

Introduction

Nowadays, every technical field is trying to style human life at ease. With the rapid growth in the use of the internet and the technologies associated with it, several opportunities are coming up in the web or mobile application. This is made possible through the use of an electronic payment system. It is possible for everyone to order any goods from anywhere on the internet and have the goods delivered to his/her home. Basically, "Food Ordering System" can be defined as:

A simple and convenient way for the customers to purchase food online, without having to go to the restaurant.

This system is very useful to those who are very busy at work or in-home and do not have the time to go outside or cook food. Customers don't really need to have the technical knowledge to operate it. Because it is designed in a very modest way.

Therefore, as per this system, the customer visits the restaurant's app or website, browses through the various food items available there, and goes ahead and selects and purchases the items he or she needs. These items will then be delivered to the customer at his or her doorstep. Payments for such online orders can be made through debit cards, cash on delivery.

In short, it's easy, convenient, completely transparent software and a customer-friendly food ordering system.

The system will become an important tool for a restaurant to improve the management aspect. This can be done by the use of a computer system to connect each and every transaction instead of manually recording data on it. It can assist the user to concentrate on their other activities rather than concentrate on record keeping. Thus, it will help the organization in better utilization of resources.

1.1 Purpose:

With the improvement of technology, food ordering systems are becoming a popular topic. That's because they are serving the ever-increasing demand for convenience. The main purpose of a food ordering system is to provide customers with a way to place an order over the internet.

So why is this important?

The main reason is that it benefits both the customer and the business. With a website or mobile app, customers can easily browse all the dishes the restaurant has available, customize the order to their requirements and place an order.

From the restaurant's perspective, they no longer spend time taking the customer's order, stop worrying about communication errors and streamline their order management workflow.

The purpose of the Online Food Ordering System is to automate the existing manual system with the help of computerized equipment and full-fledged computer software, fulfilling their requirements, so that their valuable data/information can be stored for a longer period with easy accessing and manipulation of the same. The required software and hardware are easily available and easy to work with.

Online Food Ordering System, as described above, can lead to error-free, secure, reliable, and fast management systems. It can assist the user to concentrate on their other activities rather than concentrate on record keeping. Thus, it will help the organization in better utilization of resources. The organization can maintain computerized records without redundant entries. That means that one need not be distracted by information that is not relevant while being able to reach the information.

1.2 Objectives:

- The main objective of the project is to develop an online ordering system in restaurants as our project will help restaurants to increase the sales of their food items.
- To provide a user-friendly interface so that users can order food with few clicks.
- To provide online menu information for the customer, this feature allows user to choose their favourite dish from a wild variety of dishes.
- To Increase Efficiency through detailed reporting. (For both customer and restaurants)
- It deals with monitoring the information and transactions of the customer.
- Online Food Ordering System also manages the Delivery Address details online for Customer details.
- It tracks all the information of Item Category, Delivery Address, Customer, etc.
- To Show the information and description of the Food, Shopping Cart.
- To Integrate all records of Order.

1.3 Scope:

We can use our Online food ordering system in various fields to benefit customers as well as restaurants. It provides you with a convenient way to sell from your Food ordering app. You can use this app as your own hotel. This app makes it easy for users to order food with easy steps and hotels can get easy orders. Our application aims at business process automation, i.e., we have tried to computerize various processes of online food ordering systems.

- This application can be useful for restaurants to increase their sales as they are going physical to digital.
- Can be helpful for a customer to get food to deliver in the safe environment of a home.
- Discounts and vouchers can be available for the customers.
- To utilize resources efficiently by increasing productivity through automation.
- Customers can choose one or more items to place an order which will add to the cart.
- Have a good user interface.
- It is easy to understand by the user and operator.
    - It satisfies the user requirement. Delivered on schedule within the budget.
    - The system generates types of information that can be used for various purposes.
- In a very short time, the collection will be obvious, simple, and sensible.

Chapter 2

Problem Statement:

The challenges encountered by the existing system serve as a major drawback to the realization of efficiency and customer satisfaction.

The other problem in the foodservice industry is that restaurants are not realizing the efficiencies that would result from better application of technology in their daily operations. The food business is a very competitive business and one way to stand out from competitors is through improving the business process where business process automation can assist business improvement.

The old manual system was suffering from a series of drawbacks. Earlier the whole of the system was managed manually. Thus the process of keeping, maintaining, and retrieving the information was very tedious and lengthy. The records were never used to be in a systematic order. If any information was to be found it was required to go through the different registers, documents there would never exist anything like report generation. There would always be unnecessary consumption of time while entering records and retrieving records. One more problem was that it was very difficult to find errors while entering the records. Once the records were entered it was very difficult to update these records.

The reason behind it is that there is a lot of information to be maintained and has to be kept in mind while running the business. For this reason, we have provided various features. The present system is partially automated (computerized), the existing system is quite laborious as one has to enter the same information at three different places.

Chapter 3

Proposed System:

The proposed system aims to develop a system of improved facilities. The proposed system can overcome all the limitations of the existing system.

This system is a bunch of benefits from various points of view. This online application enables the end-users to register to the system online, select the food items of their choice from the menu list, and order food online. Also, the payment can be made through online mode or at the time of home delivery depending upon the customer's choice and convenience.

With this application, the workload of the staff in the hotels is reduced, or in some situations, their work is abolished. One of the various benefits of this is system is that if there is a rush or a huge crowd present in the restaurant then in that case sometimes unavailability of tables cut down the restaurant's customer.

- Security of data.
- Ensure data accuracies.
- Separate admins page.
- Minimize manual data entry.
- Minimum time needed for the various processing.
- Greater efficiency.
- Better service.
- User-friendliness and interaction.
- Minimum time required.

3.1 Features & Functionality:

1. User Friendly and Easy to Use:

- Customer panel features allow users to find and order their favourite foods with just a few clicks.

2. Menu Page:

- Customer can order their favourite food from sorted menu cards.

3. Cart:

- You can Keep Track of your Order.
- You can Add or Remove your food items.

4. Payment Page:

- The customer can choose whether he wants to pay online or COD.
- The customer can store their card details in the application.

3. Review Section:

- Customer can share their Experience/Opinion by rating the app.

4. Banners:

- Today's special dishes and offers are displayed.

5. Invoice page:

- Invoice is generated automatically and the user can print or download it in pdf format.

6. Some Extra Features:

- Online Food Ordering System stores the Delivery Address details online for Customer details, Order details, Food.
- It tracks all the information of Item Category, Delivery Address, Customer, etc
- Shows the information and description of the Food, Shopping Cart.
- To increase the efficiency of managing the Food, Item Category.
- It deals with monitoring the information and transactions of Customers.
- Manage the information of the Customer.
- Product and Component-based.
- Simple Status & Resolutions
- Multi-level Priorities & Severities.
- Robust database back-end.
- Accuracy in work.
- Easy & fast retrieval of information.

Chapter 4

Project Outcome:

The main outcome of the project is to save time and resources simultaneously. As a user can order food with a few clicks he is saving his time as well as resources. As our application is easy to use i.e it has a user-friendly interface, customers can order food easily. There are a lot of options for the user to order their favourite food. Our food ordering system is equally beneficial to restaurants also, Restaurants can keep all the data stored in their database. Restaurants can reach many customers at a time easily by using our online food ordering system.

1. User Can Log In.

2. Users can search for available Food options.

3. Customers can order food online with just a click of a button maintaining minimum human interaction in this pandemic.

4. Benefits for Restaurants: -

- Efficient customer and order management.
- Can reach Thousands of Customers at a time.
- Free and Cheap Marketing.

5. Provides the searching facilities based on various categories. such as Maharashtrian, Chinese, south Indian, and north Indian.

6. Manage the information of food ordered.

7. He can add, update or delete details of Food ordered.

8. Customer can select the food according to their need i.e starters or main course.

9. It deals with monitoring the information and transactions of the ordered food.

Chapter 5

Software Requirement:

Technology Used:

- **Front-end**: Java Swing
- **Back-end**: MySQL 8.0.26.0 (using PHPMyAdmin 8.0.13)
- **Integrated Development Environment (IDE)**: Eclipse
- **Platform**: Windows 10/11

We have used **XAMPP 1.8.2** which is a free and Open Source Cross-Platform Web Server Solution Stack. It comes with Apache Web Server, MySQL Database, PHP and Perl Programming Languages.

A couple of advantages of using **XAMPP** for development are:

1. You can start and stop the whole web server + database stack with one command.
2. XAMPP is portable so you can carry it around on a thumb drive.
3. The security settings are strict by default, nobody but you will be able to access the web server.
4. PHP error reporting is enabled by default, which helps when debugging scripts.
5. Easy to install.

MySQL :

MySQL is easy to use, yet extremely powerful, secure, and scalable. And because of its small size and speed, it is the ideal database solution for Web sites.

Some of its advantages include the following:

1. **It's easy to use:** While a basic knowledge of SQL is required—and most relational databases require the same knowledge—MySQL is very easy to use. With only a few simple SQL statements, you can build and interact with MySQL.

2. **It's secure:** MySQL includes solid data security layers that protect sensitive data from intruders. Rights can be set to allow some or all privileges to individuals. Passwords are encrypted.
3. **It's inexpensive:** MySQL is available by free download from MySQL Web site.
4. **It's fast:** In the interest of speed, MySQL designers made the decision to offer fewer features than other major database competitors, such as Sybase* and Oracle*. However, despite having fewer features than the other commercial database products, MySQL still offers all of the features required by most database developers.
5. **It's scalable:** MySQL can handle almost any amount of data, up to as much as 50 million rows or more. The default file size limit is about 4 GB. However, you can increase this number to a theoretical limit of 8 TB of data.
6. **It manages memory very well:** MySQL server has been thoroughly tested to prevent memory leaks.
7. **It runs on many operating systems:** MySQL runs on many operating systems, including Novell NetWare, Windows* Linux*, many varieties of UNIX* (such as Sun* Solaris*, AIX, and DEC* UNIX), OS/2, FreeBSD*, and others.

I**t supports several development interfaces**: Development interfaces include JDBC, ODBC, and scripting (PHP and Perl), letting you create database solutions that run not only in your NetWare 6.5 environment, but across all major platforms, including Linux, UNIX, and Windows.

Eclipse IDE:

In the context of computing, Eclipse is an integrated development environment (IDE) for developing applications using the Java programming language and other programming languages such as C/C++, Python, PERL, Ruby etc.

The Eclipse platform which provides the foundation for the Eclipse IDE is composed of plug-ins and is designed to be extensible using additional plug-ins. Developed using Java, the Eclipse platform can be used to develop rich client applications, integrated development environments and other tools. Eclipse can be used as an IDE for any programming language for which a plug-in is available.

The Java Development Tools (JDT) project provides a plug-in that allows Eclipse to be used as a Java IDE, PyDev is a plugin that allows Eclipse to be used as a Python IDE, C/C++ Development Tools (CDT) is a plug-in that allows Eclipse to be used for developing application using C/C++, the Eclipse Scala plug-in allows Eclipse to be used an IDE to develop Scala applications and PHPeclipse is a plug-in to eclipse that provides complete development tool for PHP. Every year, since 2006, the Eclipse foundation releases the Eclipse Platform and a number of other plug-ins in June.

Java:

Java is a multi-platform, object-oriented, and network-centric language. It is among the most used programming language. Java is also used as a computing platform.It is considered as one of the fast, secure, and reliable programming languages preferred by most organizations to build their projects.

Java is a general-purpose, class-based, object-oriented programming language designed for having lesser implementation dependencies. It is a computing platform for application development. Java is fast, secure, and reliable, therefore. It is widely used for developing Java applications in laptops, data centers, game consoles, scientific supercomputers, cell phones, etc.

Java Swing:

Java Swing is a lightweight Java graphical user interface (GUI) widget toolkit that includes a rich set of widgets. It is part of the Java Foundation Classes (JFC) and includes several packages for developing rich desktop applications in Java. Swing includes built-in controls such as trees, image buttons, tabbed panes, sliders, toolbars, color choosers, tables, and text areas to display HTTP or rich text format (RTF). Swing components are written entirely in Java and thus are platform-independent.

Swing offers customization of the look and feel of every component in an application without making significant changes to the application code. It also includes a pluggable look and feel feature, which allows it to emulate the appearance of native components while still having the

advantage of platform independence. This particular feature makes writing applications in Swing easy and distinguishes it from other native programs.

Swing was distributed as a downloadable library and has been included as a part of Java standard edition 1.2. Originally, the graphics library for Java, developed by Netscape Communication Corporation, was called Internet Foundation Classes (IFC). The first release of IFC was on December 16, 1996. The evolution of JFC can be traced back to 1997, when Sun Microsystems and Netscape Communication Corporation came up with the idea of merging IFC with other technologies.

Chapter 6

Project Design:

In this phase, a logical system is built which fulfils the given requirements. The design phase of software development deals with transforming the customer's requirements into a logically working system. Normally, design is performed in the following two steps:

1. Primary Design Phase:

In this phase, the system is designed at the block level. The blocks are created based on analysis done in the problem identification phase. Different blocks are created for different functions emphasis is put on minimizing the information flow between blocks. Thus, all activities which require more interaction are kept in one block.

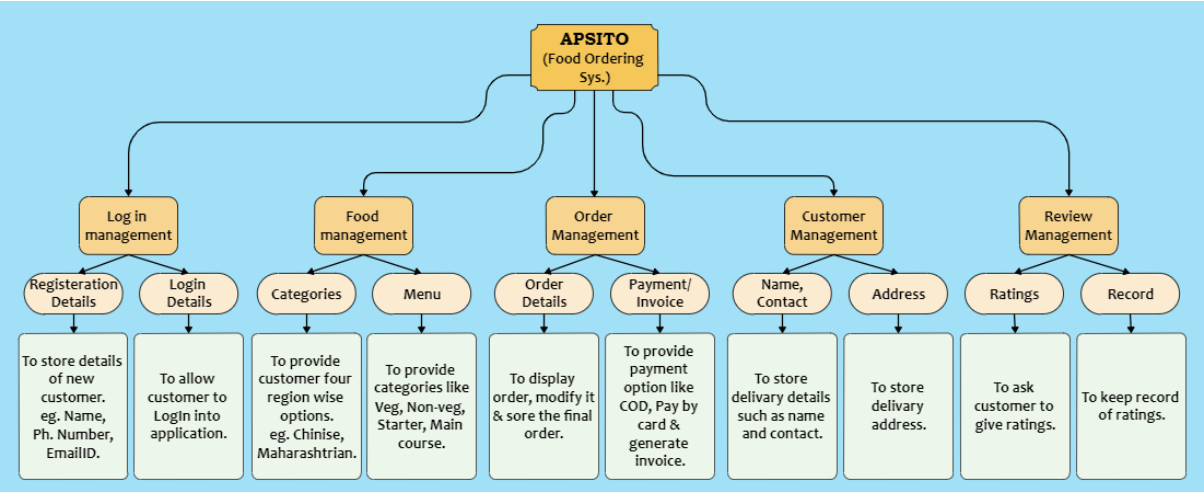

Figure 6.1: Block Diagram.

2. Secondary Design Phase:

In the second phase, the detailed design of every block is performed.

General tasks involved in the project design process are following:

- Design various blocks for overall system processes.
- Design smaller, compact, and workable modules in each block.
- Design various database structures.
- Specify details of programs to achieve the desired functionality.
- Design the form of inputs and outputs of the system.
- Perform documentation of the design.
- System reviews.

6.1 User Interface Design:

User Interface Design is concerned with the dialogue between a user and the computer. It is concerned with everything from starting the system or logging into the system to the eventual presentation of desired inputs and outputs. The overall flow of screens and messages is called a dialogue.

The following steps are guidelines for User Interface Design:

- The system user should always be aware of what to do next.
- The screen should be formatted so that various types of information, instructions, and messages always appear in the same general display area.
- Message, instructions, or information should be displayed long enough to allow the system user to read them.
- Use display attributes sparingly.
- Default values for fields and answers to be entered by the user should be specified.
- A user should not be allowed to proceed without correcting an error.
- The system user should never get an operating system message or fatal error.

Registration Page: New users can enter their details and email and create his account. The ‘Register’ button will direct the user to the Login page.

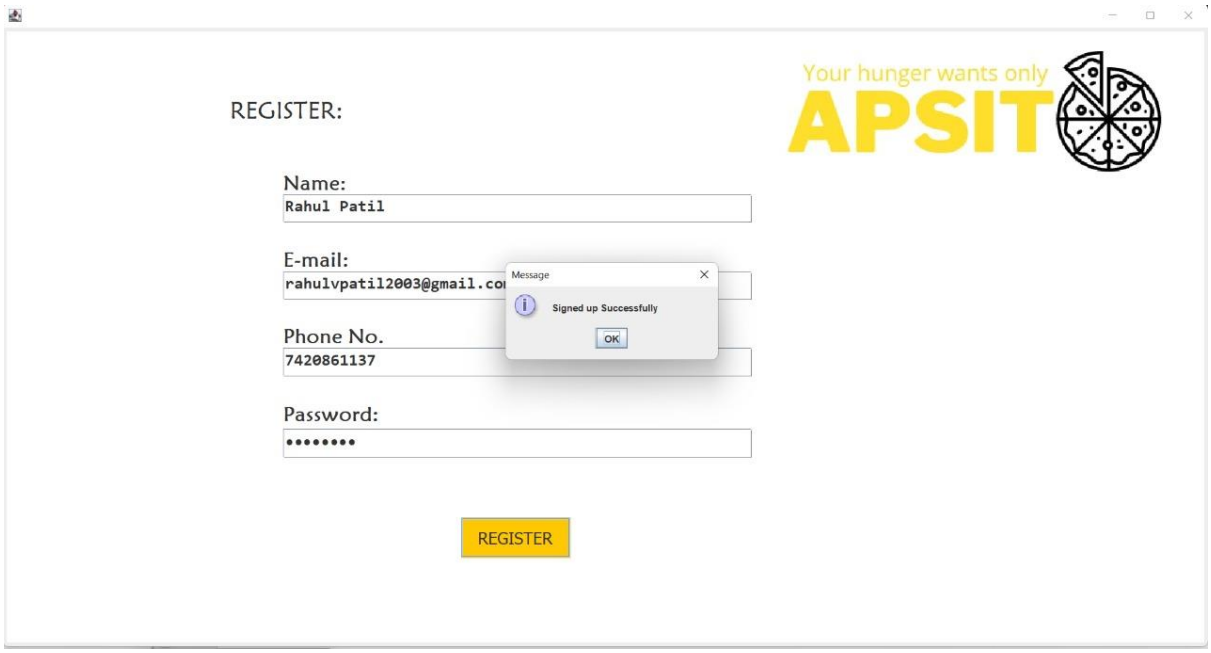

Figure 6.2 : Registration/SignUp Page.

Login Page: Registered users and Admins can log in through this page. The ‘Login’ button will take them to home page/Admin page.

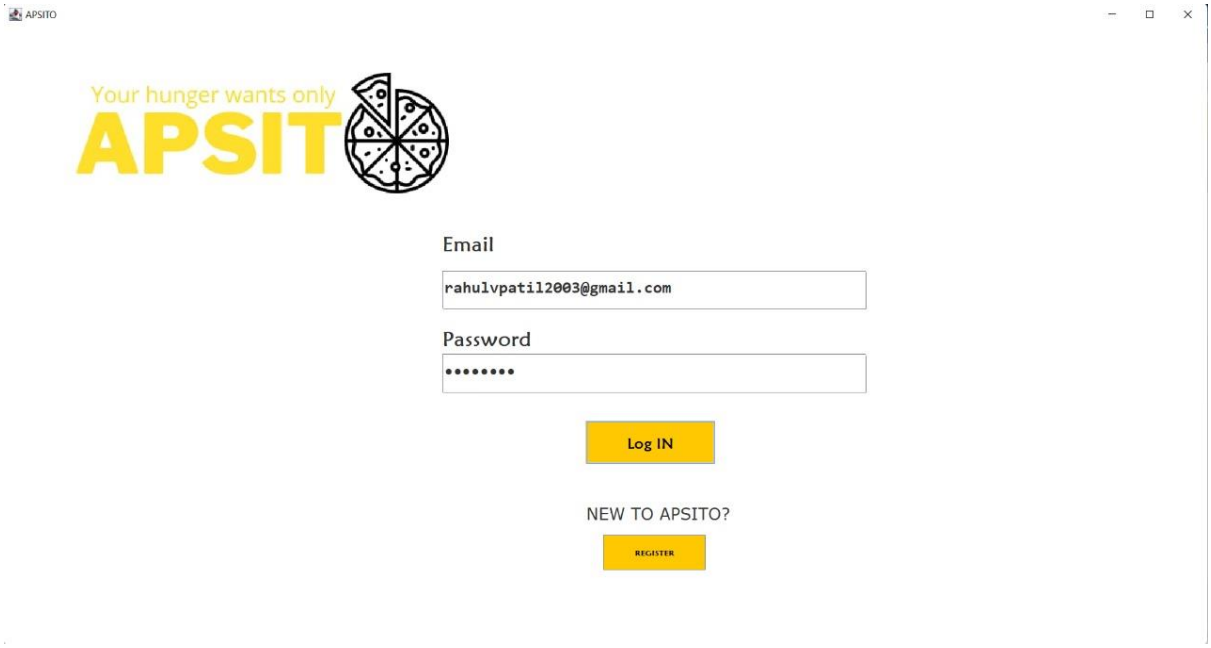

Figure 6.3 : LogIn Page.

Home Page: Customer can select his favourite categories. Banners displaying offers and a special menu are present.

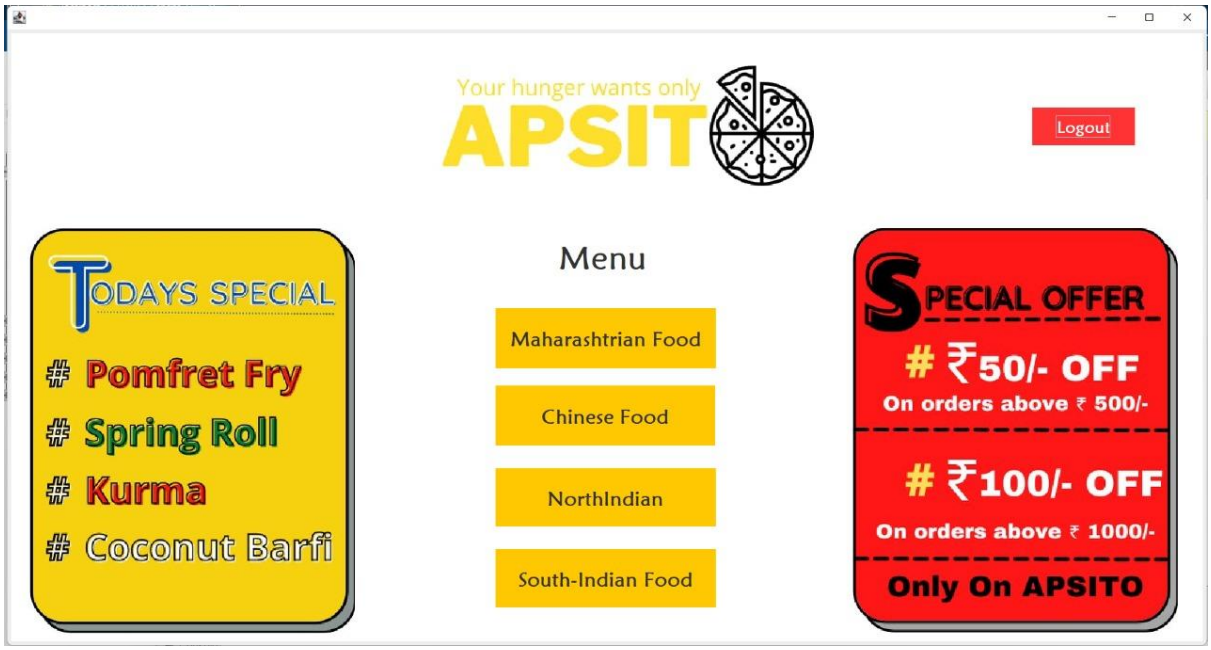

Figure 6.4 : Home Page.

Menu Page: Users can choose from verities like Veg, Non-veg, Starters, and Main course. 'Add' button adds selected item into order list. Users can also travers through other categories.

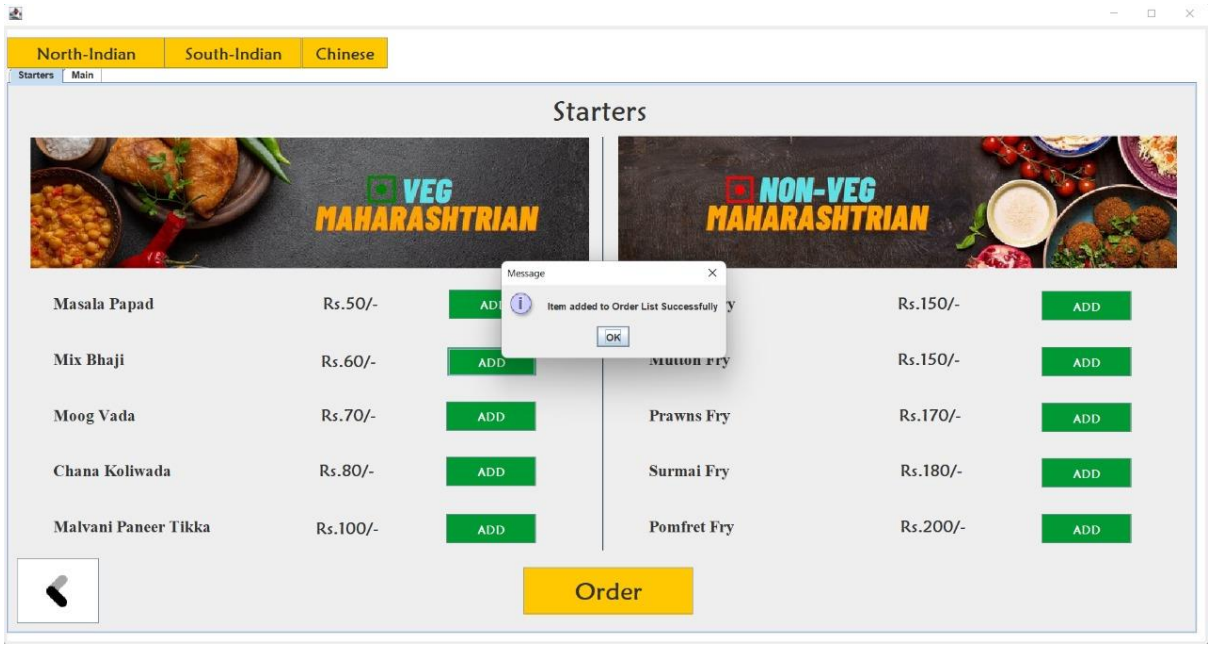

Figure 6.5 : Menu Page.

Order Details Page: Selected items are displayed along with GST added total amount. Users can remove items. Customer details are stored. Two payment modes are available (COD & Pay by card). Users can avail offers by clicking on ‘Apply Offer’ button.

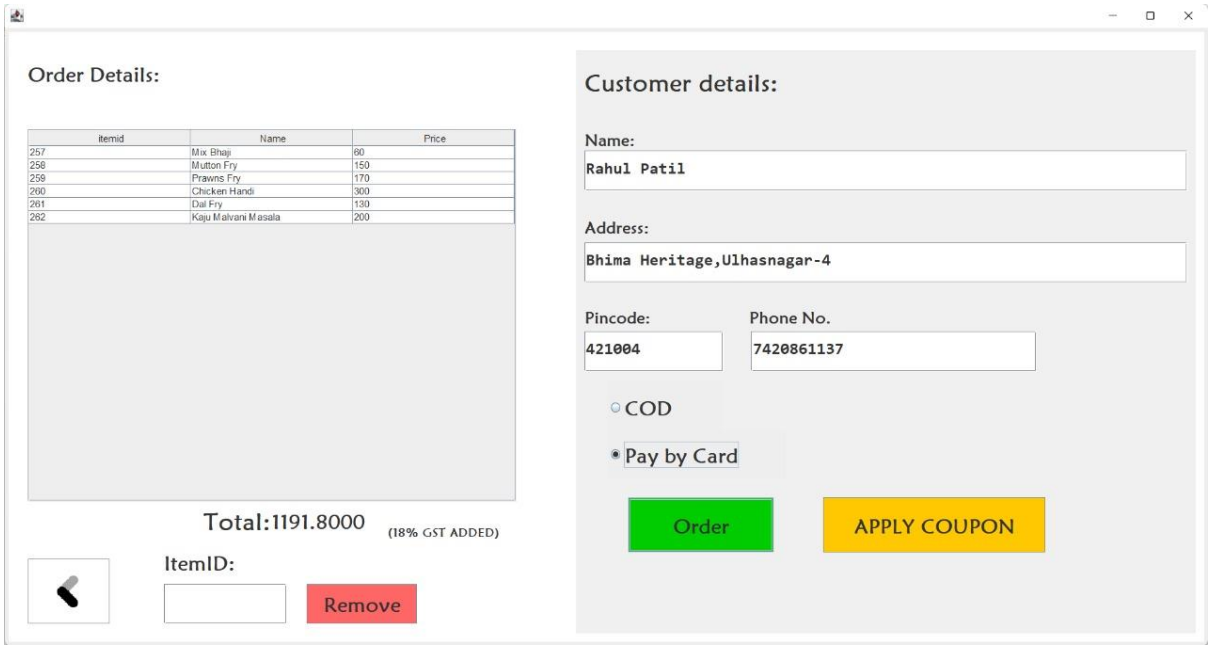

Figure 6.6 : Order/Customer Details Page.

Card Detail Page: New user can add his card details such as card number and expiry date. If the card is already added they can skip this process by clicking on ‘Skip’ button.

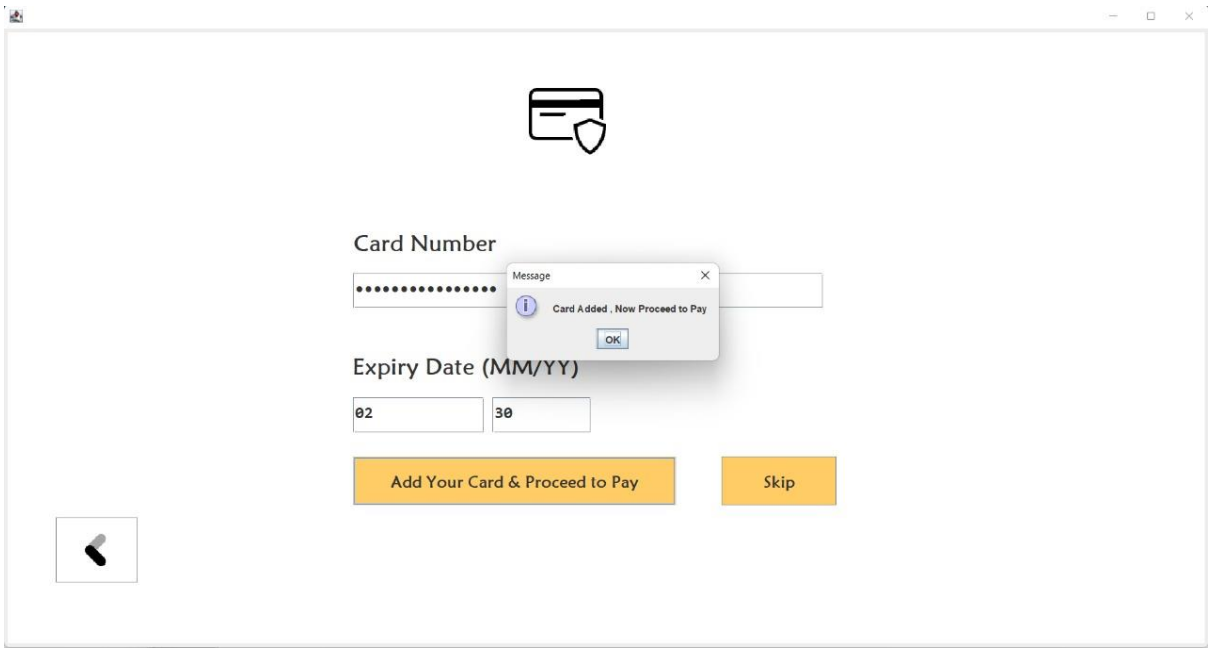

Figure 6.7 : Card Details Page.

Payment Page: The user should enter correct card details to make payment.

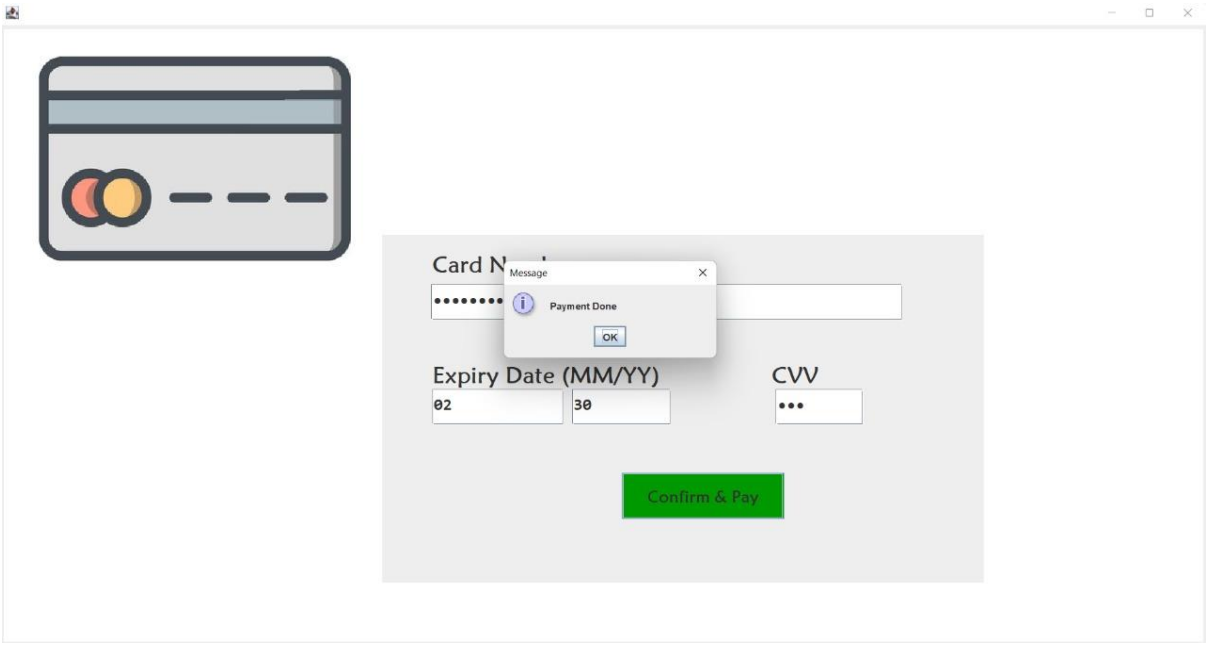

Figure 6.8 : Payment Page.

Invoice Page: Invoice is generated and user can either print it or download it in pdf form.

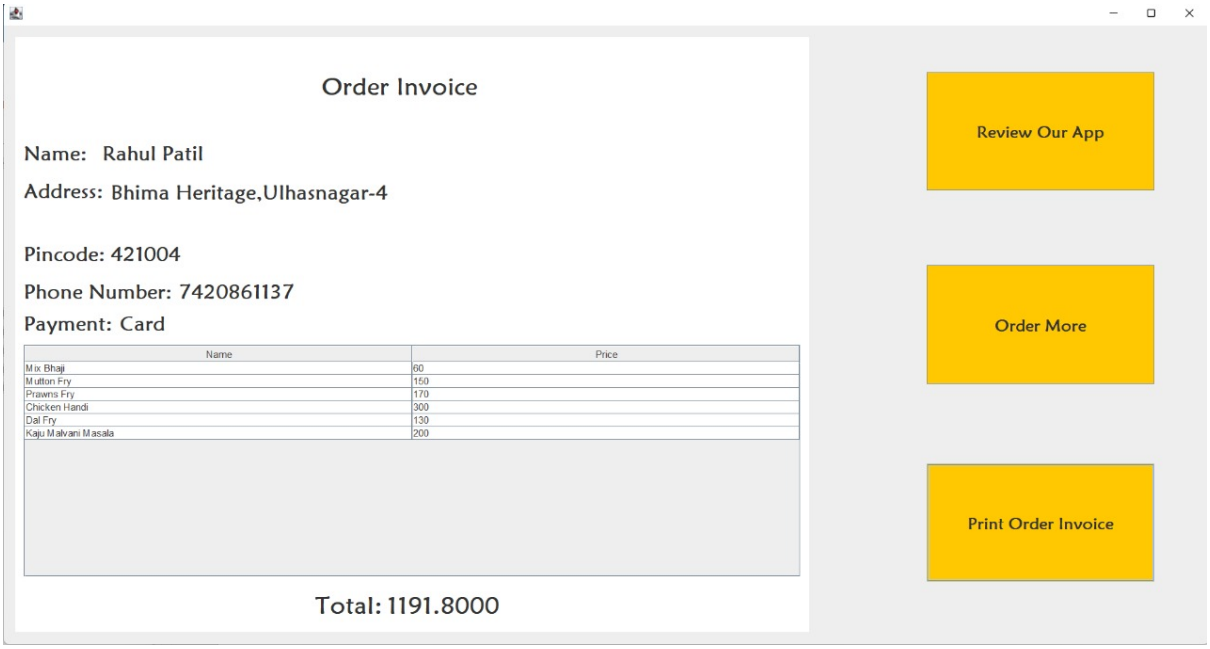

Figure 6.9 : Invoice Page.

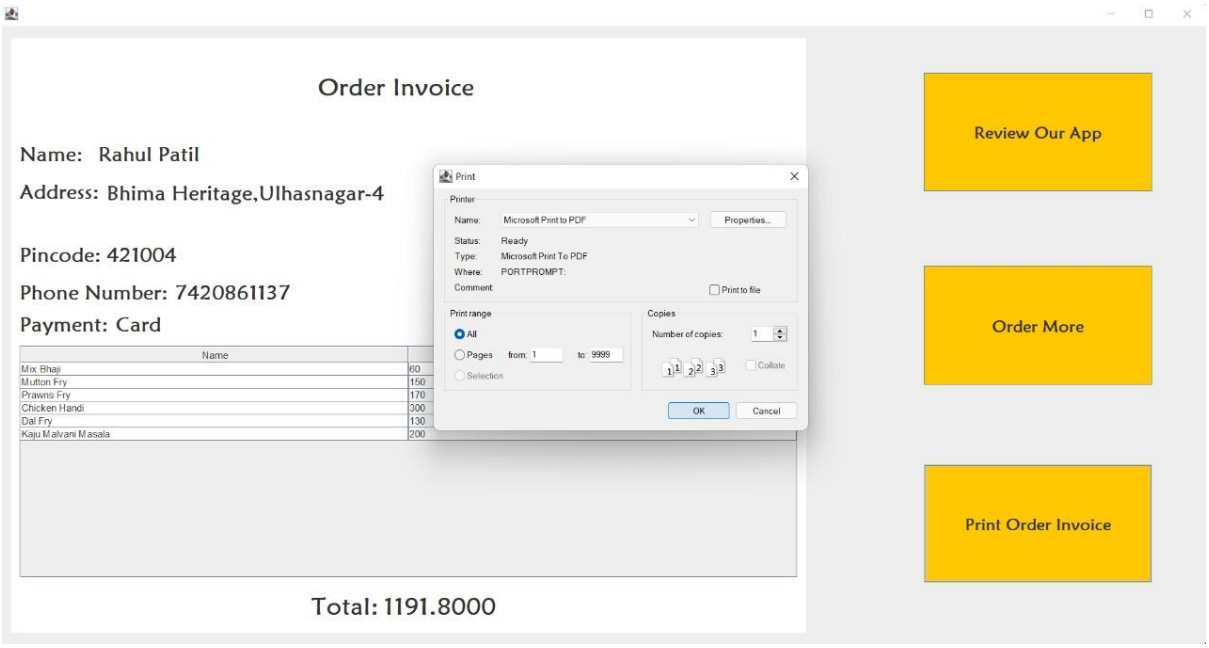

Figure 6.10 : Print Invoice.

Review/Rating Page: User can share their experience by rating the app. This rating method differs from traditional method as artistic emojis are used.

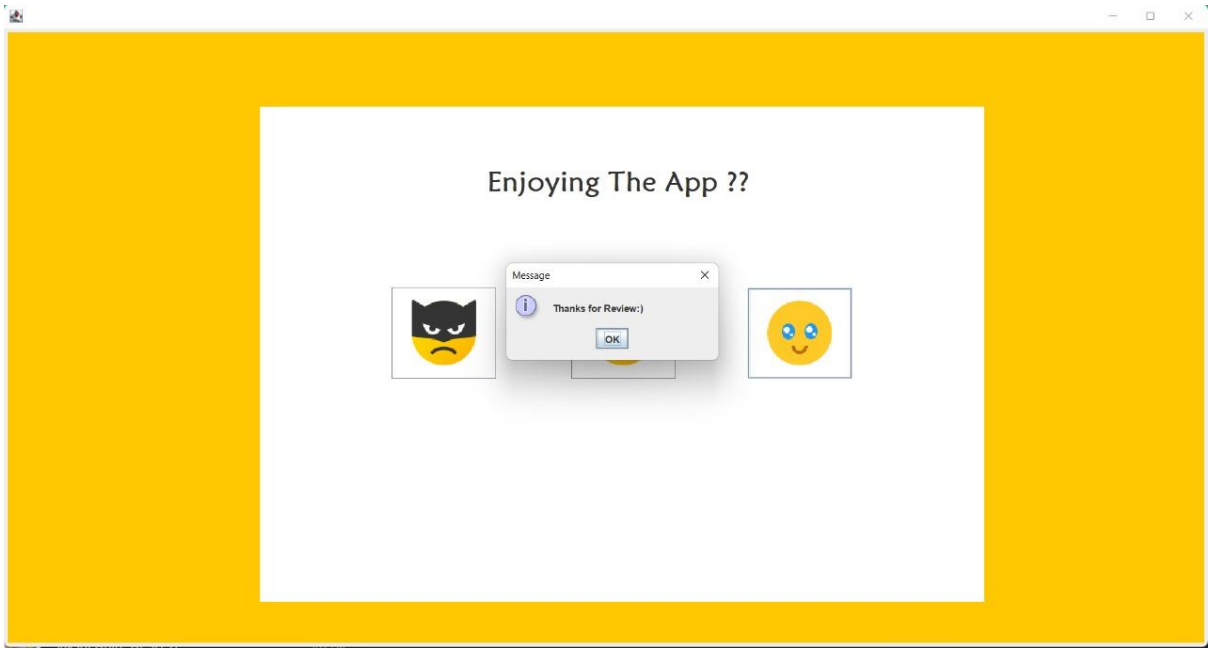

Figure 6.11 : Review Page.

Admin Page: Existing Admin can add new Admin if needed. Detailed information of orders placed till now is displayed. Also ratings are displayed along with time stamp.

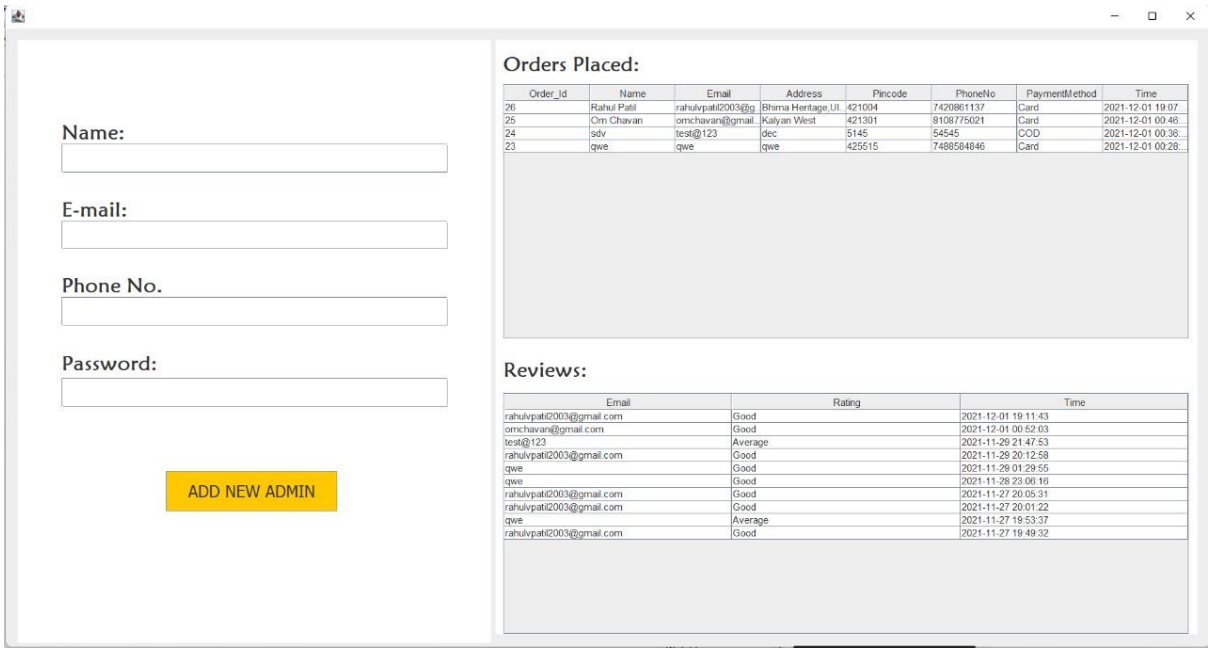

Figure 6.12 : Admin's Page.

Chapter 7

Project Scheduling Template:

Sr. No	Names	Time duration	Work to be done
1	Purvesh Gangapurkar. Rahul Patil. Ambadas Malegave. Om Chavan.	3rd week of September to End of September	Designing phase of User Interface
2	Purvesh Gangapurkar. Rahul Patil. Ambadas Malegave. Om Chavan	1st and 2nd week of October	Implementation and testing of Design.
3	Purvesh Gangapurkar. Rahul Patil. Ambadas Malegave. Om Chavan	3rd and 4th week of October	Database Phase1: Creating Database.
4	Purvesh Gangapurkar. Rahul Patil. Ambadas Malegave. Om Chavan	1st and 2nd week of November	Database Phase2: Connection of Database to UI.
5	Purvesh Gangapurkar. Rahul Patil. Ambadas Malegave. Om Chavan	3rd week of November	Final testing of Application and Resolving issues if any.

Chapter 8

Conclusion:

Our project is only a humble venture to satisfy the needs to manage their project work. Several user-friendly coding has also been adopted. This package shall prove to be powerful in satisfying all the requirements of the school.

In the end, it is concluded that we have made effort on the following points…

• Made a statement of the aims and objectives of the project.

• The description of Purpose, Scope, and applicability.

• We define the problem on which we are working on the project.

• We describe the requirement Specifications of the system.

• We understand the problem domain and produce a model of the system, which describes operations that can be performed on the system.

• We designed the user interface and security issues related to the system.

• Finally, the system is implemented and tested

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