

A Mini Project Synopsis on

APSIT CANTEEN MANAGEMENT SYSTEM

S.E. – Computer Science and Engineering-Data Science

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CERTIFICATE

This to certify that the Mini Project report on APSIT CANTEEN MANAGEMENT SYSTEM has been submitted by Sahil Mujumdar(21107050) , Ayush Mistry(21107029) ,Tanvi Mirgal(21107028) and Urvi Padelkar(21107054) who are a Bonafede students of A. P. Shah Institute of Technology, Thane, Mumbai, as a partial fulfilment of the requirement for the degree in Computer Science and Engineering(Data Science), during the academic year 2022-2023 in the satisfactory manner as per the curriculum laid down by University of Mumbai.

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TABLE OF CONTENTS

1. Introduction.....	1
1.1.5 Purpose.....	1
1.2. Objectives.....	1
1.3. Scope.....	2
2. Problem Definition.....	4
3. Proposed System.....	5
3.1. Features and Functionality.....	5
4. Project Outcomes.....	8
5. Software Requirements	10
6. Project Design.....	11
6.1 Design Standards.....	12
6.2 Output Specification.....	12
6.3 Input Specification.....	12
6.4 Main Design.....	13
6.5 Programming Language.....	18
6.6 System Requirements.....	18
6.7 Program Flowchart.....	23
7. Project Scheduling.....	20
8. Conclusion.....	21
References.....	22
Acknowledgement.....	23

CHAPTER 1

INTRODUCTION

Canteen Management System is an application, which will help restaurants Canteens to optimize and control over their restaurants and Canteen's menu. This application helps the Canteens to do all functionalities more accurately and efficiently. Canteen Management system reduces manual work and improves efficiency and rate of work. It is specifically designed for Canteen billing management and order taking management system. This software helps to take food orders and display them. Also, help to maintain records in system and display total sale report. It is keeping a proper record of the bills. The role of administrator is to maintain employee information including operations like modifying, deleting, updating the employee records and customer order record in the system.

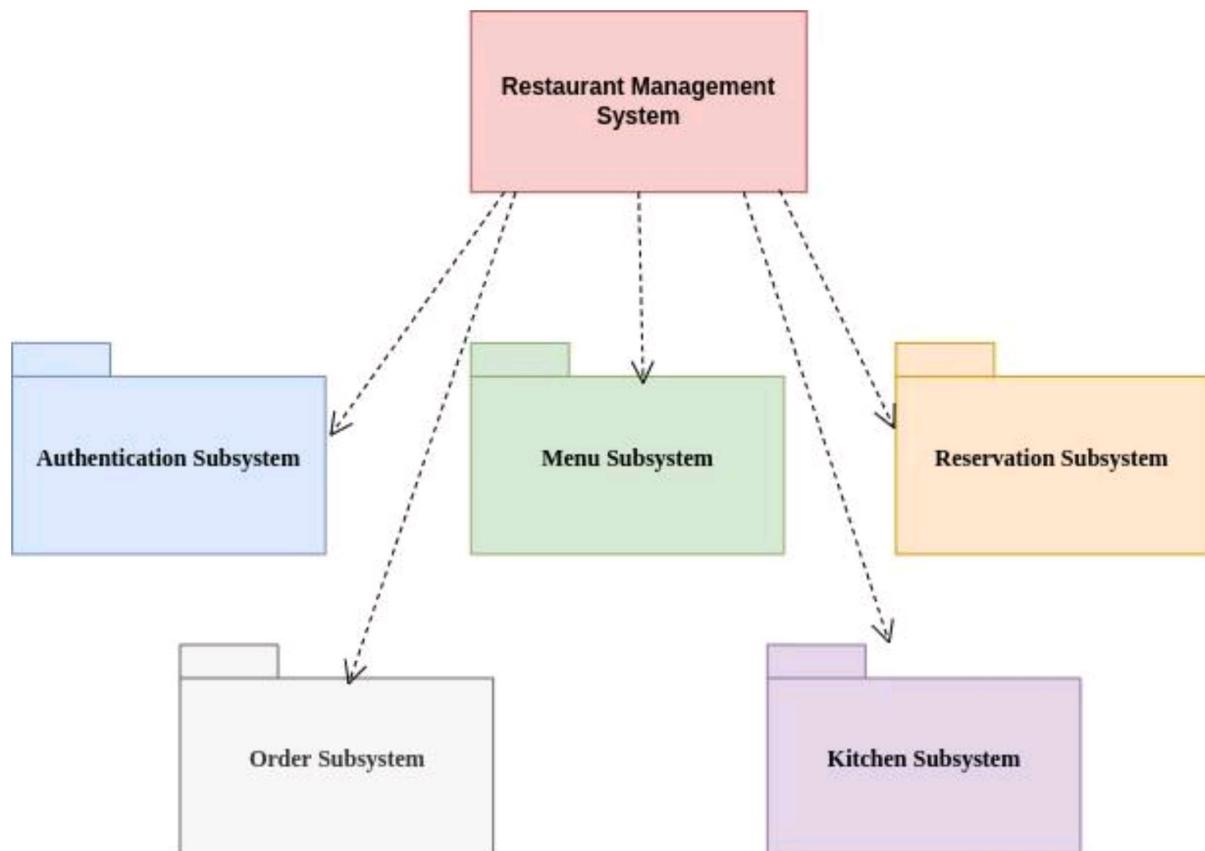
1.1 PURPOSE

The Canteen Management System helps the restaurant manager to manage the Canteen more effectively and efficiently by computerizing meal ordering, billing and inventory control. This software is designed such way that it will generate the bill automatically for every order in time. So, there won't much of worries. The software is also equipped with to enter the details of each employee in the organization, it helps them to track each employee. This being a Desktop based application is very easy to access. Data and Records are managed in centralized database. Data is secure and easy to retrieve, more and analysis, so chances of miscalculations and error are very less.

1.2 OBJECTIVE

The main objective of the project on canteen management system is that save customers time and avoid cashless transaction by promoting UPI based payment portal The purpose of the project is to the manual work for managing the Canteen, Students, Customer, Item. It tracks all the details about the Item, Stock, Sales information. The need for this system is to is to make advance plannings and reduce administrative works. Helps admins to track which food item is consumed more and which is least consumed this will Help to in securing sells and admin can keep track on weekly, monthly charts and can take decisions accordingly. The project is

completely built at the administrative end and thus only admin is guaranteed the access. This will reduce wastage of food This will increase customers satisfactions.



1.3 SCOPE

This system will help to manage and run the Canteen management system systematically. In this management system, we will provide a website that can user use to take order. So that owner can evaluate the whole system, this will ultimately lead to hire less waiters and create and opportunity to appoint more chefs and better shop to serve delivery faster. Employee can take payment which will be managed into the software. So that it provides an independent platform to college canteen also It focuses at canteen business process automation i.e., to digitalize all the processes and management of canteen. Efficient use of resources through

rising productivity by automation. This system will also maintain available menus with their rates and quantity. The system is going to maintain a calendar for canteen so that. Administrators can decide the menus for particular timeslot. Understanding the working of system is not complicated in case of both the users and the admin.

CHAPTER 2

PROBLEM DEFINATION

Often when one wishes to order delicious food from the canteen, he/she has to wait in long queues thus losing a considerable amount of time. Lots of time is spent in queues at a college canteen also work load on the staff of canteen is increased due to short amount of time.

Our project aims to resolve this problem by providing the customer features such as pre-order and advance seat book. The proposed of this project is effective in cutting the amount of time spent in the queue to send orders straight into the kitchen, placing orders before and with the option to use a Unified Payments System (UPI) payment system that reduces time spent in tendering changes This time can be used for any other purpose that must be relevant. Cash payment in canteens is nowadays the only option for making the payment. The situation was well adapted for small canteens for some large canteens, credit card facilities are offered but this is very unusual. The major downside of cash payment system is that the user seems to want to carry the cash all time and he / she has to pay the correct sum else there might be issues in providing the balance money

CHAPTER 3

PROPOSED SYSTEM

This system is generally advantageous for avoiding spending time waiting in the queue by posting orders directly to the kitchen without delay and also by scheduling orders ahead of time. It saves time and also the technique dealing with is easy. The proposed Canteen Management System is an adept solution for chaos at college canteens. Highlights of cloud for example auto-scaling, load adjusting and pay as you go improve the working of the system and to some extent unravel the motivation behind the proposed system.

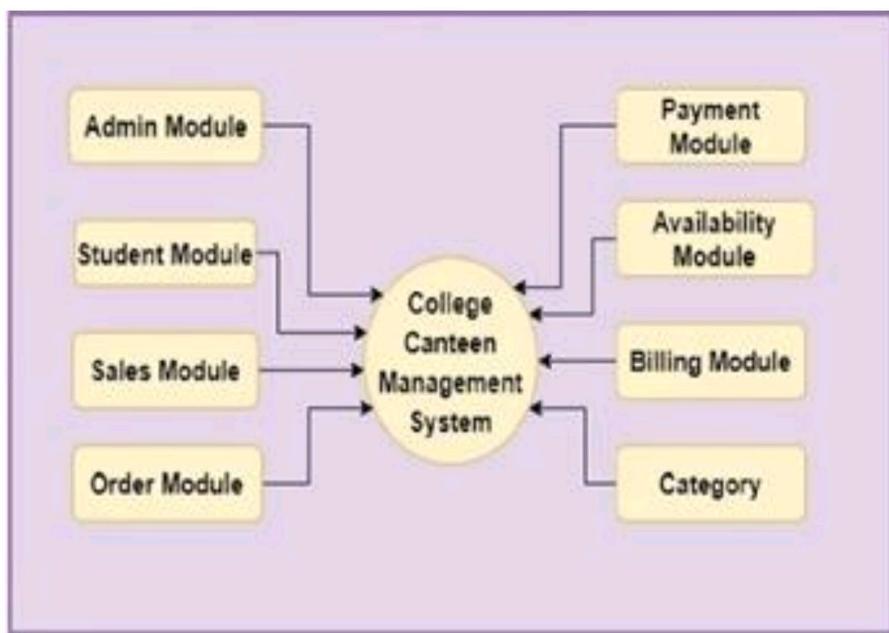
3.1 FEATURES AND FUNCTIONALITY

- **Admin panel:** Canteen Management System has admin user who controls all the system like privileges other members, inviting and removing member, changing member roles. Admin can manage the Food Admin, can edit/delete the Food and Admin can see the list of all Food Customer has ordered Food
- **Manager panel:** Manager keeps food menu information in the Canteen Management System. He generates the report of the organization.
- **Customer panel:** Customer is the most important user of the Canteen Management System. Customer can order in the Canteen management system after filling the proper details and by creating an account.
- **Tracks down sales:** All transactions are captured by the system including orders, payments and expenses, so sales data are accurate and spot on to the last item
- **Budget friendly:** There are many areas where you can squeeze out savings. Our website provides daily, monthly reward and many other rewards and offers according to the user interaction with the website.
- **Incoming Order Management:** Manager can manage incoming order by the system. Canteen Management System has order management system that is managed systematically. Each and every order has unique number
- **Analysis:** Canteen Management System has analysis system that generated monthly and weekly report. CRM (Customer relationship Management) will give access to a lot of data this data. The tool will also generate reports for better sense of data.

- **Better Customer service:** This is probably the best reason why use Canteen Management System to make customers happy. This module worth customer information like name contacts details and transactions. With more knowledge of customer that can deliver a more satisfying service.
- **Updates:** Canteen Management System updates as per the user requirement and their choices. Changes are made in the website so user can interact with website easily and efficiently. The new and upgraded menu system are available which customer should try and it give order.
- **Customer Information:** Canteen Management System has customer information. It includes like Customer name, mobile, e-mail and Address with this information Canteen employee can contact with customer for better relationship management. This information is kept private and safe
- **Bill Information:** Canteen Management System has bill information option that contain food items and payment information. With this information employee can give information to customers when customers want to know the price of foods or the summary of the order.
- **Fast Service:** It helps to provide fast service to customer by taking online order and deliver food. Thus, this software creates strong relationship with customers.
- **Universal Access:** Anyone can access the software by registering an account Customer can give order by online in staying anywhere.

The System enables searching facilities based on various factors. Such as Canteen, Orders, Products, Quantities, Report and Users. The proposed system also takes care of managing the order details, availability details, order details, payment details and user details. Shows the information and description of the canteen orders, products, payment and users. To increase the efficiency of canteen management. It deals with monitoring the information and transactions of product. Editing, adding and updating of records is improved which results in proper resource management in canteen data. It manages and generates the report of sales of the products.

- The SSL certificate provides security to data transmission between the user site and the server and the payment gateway.
- The system automatically sends payment receipt to the mail id provided by the user at the time of payment.
- It provides integration of records of orders at the administrator site



CHAPTER 4

OUTCOMES

1. The ultimate aim of the cashless canteen management system is to automate the existing traditional system which is manual, with the support of computerized equipment and full-featured computer applications, so that their valuable data can be retained for a prolonged period of time with quick access and management.
2. The appropriate software and hardware are readily accessible and easy to use. There is a huge line in the institution cafeteria throughout the break. From the wait at the payment desk to the serving point, a ton of time is spent waiting for the food, because of which, students and the faculty get late for their lectures.
3. All teachers and students do want to figure out a way to that or get rid of this waiting period. One way to resolve the issue would be to have a software arrangement in which, once the order has been put, it can be projected directly on the cafeteria monitor.
4. This will prevent out the time people spend at the payment desk as the server needs time to fulfil the previous orders before taking a fresh receipt and setting it up in the cafeteria.
5. Even, we could have the program to post orders in such a manner that his / her order is processed ready for the particular period that he / she prefers. The time wasted on waiting for change can also be diminished by enabling online payment.
6. The project's main objective on Cashless Canteen Management System is to manage canteen, product, and sales information. It manages all the details of canteen, product, orders and users.
7. The project is completely built at the administrative end and thus only admin is guaranteed the access.
8. A canteen managements system has been developed to override the problems prevailing in the practicing manual system.
9. The software is supported to eliminate and, in some cases, reduce the hardships faced by this existing system.
10. Thus, by this all it proves it is user friendly.
11. Canteen management system can lead to error free secure reliable and fast management system
12. It can assist the user to concentrate on the other activities rather than to concentrate on record keeping.

13. This is designed to assist in strategic planning and will help you ensure that your organization is equipped with the right level of information and details for your future goals.

CHAPTER 5

SOFTWARE REQUIREMENTS

Apache Net Beans Web browser-Chrome, Firefox JavaScript, All the validation task and animations has been developed by JavaScript, My SQL: MySQL database has been used as database for the project.

❖ The Requirements of the Project Are:

1. System needs to keep record of customers & Student id.
2. System needs to keep track of the menu.
3. System needs to keep staff information.
4. System also needs to generate a bill.

CHAPTER 6

PROJECT DESIGN

The basic design of the project is performed in the following in the following two parts:

Admin Panel:

1. Login - This module is used for admin to login.
2. Change Password Functionality- User is available to change their passwords according to their requirements.
3. Food Management Module- This is one of the main modules with the help of this admin can,
 - Adding New Food Details
 - Edit the Existing Food Details
 - View all the details of the Food
 - Listing of all Food
4. Sales Management Module- This module is created for the admin to keep daily tracks on the,
 - View all the details of the Sales
 - Listing of all Sales Reports of the project Restaurant
5. Management System - This module is used to give overall updates to the admin like,
 - Report of all Food
 - Report of all Sales

Customer Panel:

1. Login - This module is used for customer login.
2. Change Password Functionality- Same as admin forgot password module
3. Homepage- To get the information of available food items and vacancy of tables
 - Menu
 - Can apply/see available offers
4. Review the items added to the cart- To finalize the items before final payment make changes or edit the summarized order
5. Payment Gateway- Final payment and order confirmation

6.1 DESIGN STANDARD

The customers and canteen management team are provided with the project deployed, time consuming and paper-based process of the canteen business by digitalizing complete process. With this upgradation, the customers can order before they leave their class room or staff room and the payment can also be done seamlessly with the help of online payment method. The canteen management have the benefit of avoiding paper usage, there is no need of extra man power in bill counter and they can manage the old data easily which will be useful for future.

- Cart
- Check login
- Category details

6.2 OUTPUT SPECIFICATION

Our system is designed in such a manner that canteen management works are carried with an ease as it is subjected in very organized manner. The format for the several outputs is made available on the output pages. The description of the pages is:

1. Menu list: This displays the information about the updated menu
2. Order history: This shows items and billing history with date and time.
3. Contact us: It provides the customer with the contact details like tollfree no. for feedbacks.
4. View bill details: order details are provided according to the dates.

6.3 INPUT SPECIFICATION

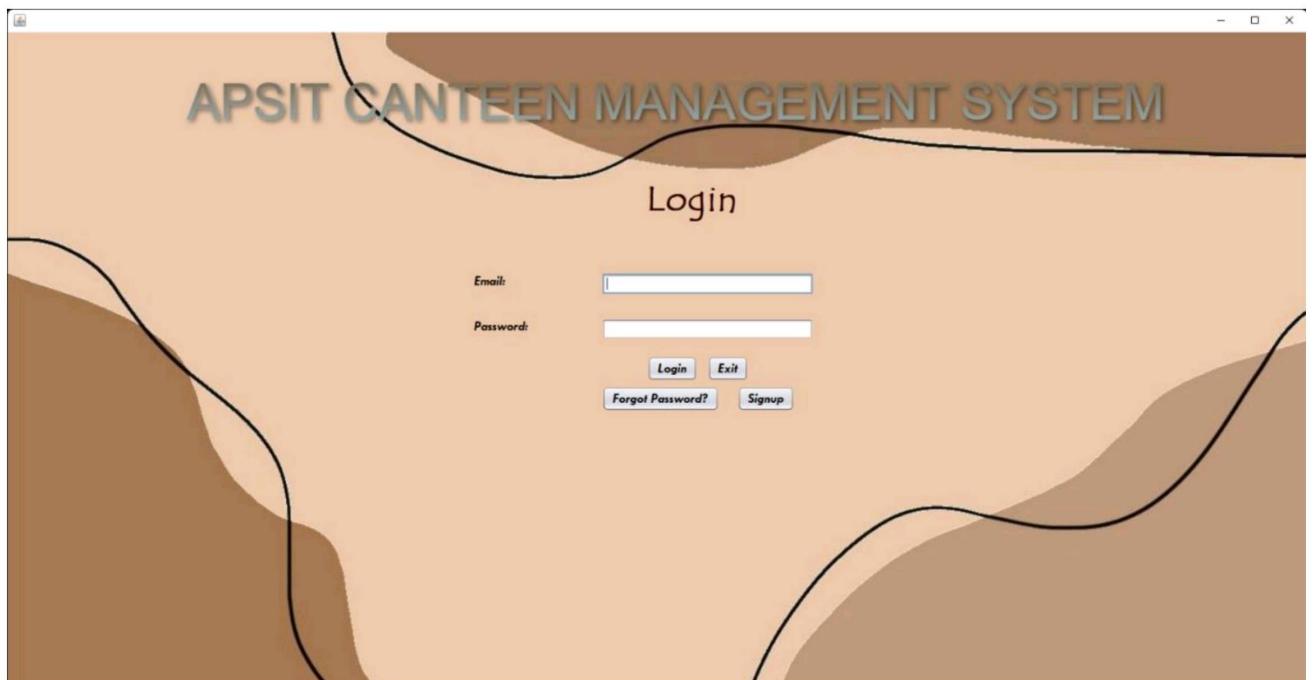
Our system is divided into two parts specifically which include customer panel and admin profile and the data of both parts are coordinated in an organized manner.

1. Customer panel: This is used to save customer details and customer order details like number, email address, previous bill details
2. Admin profile: This is used to track online orders, manage categories, user access \

MAIN DESIGN:

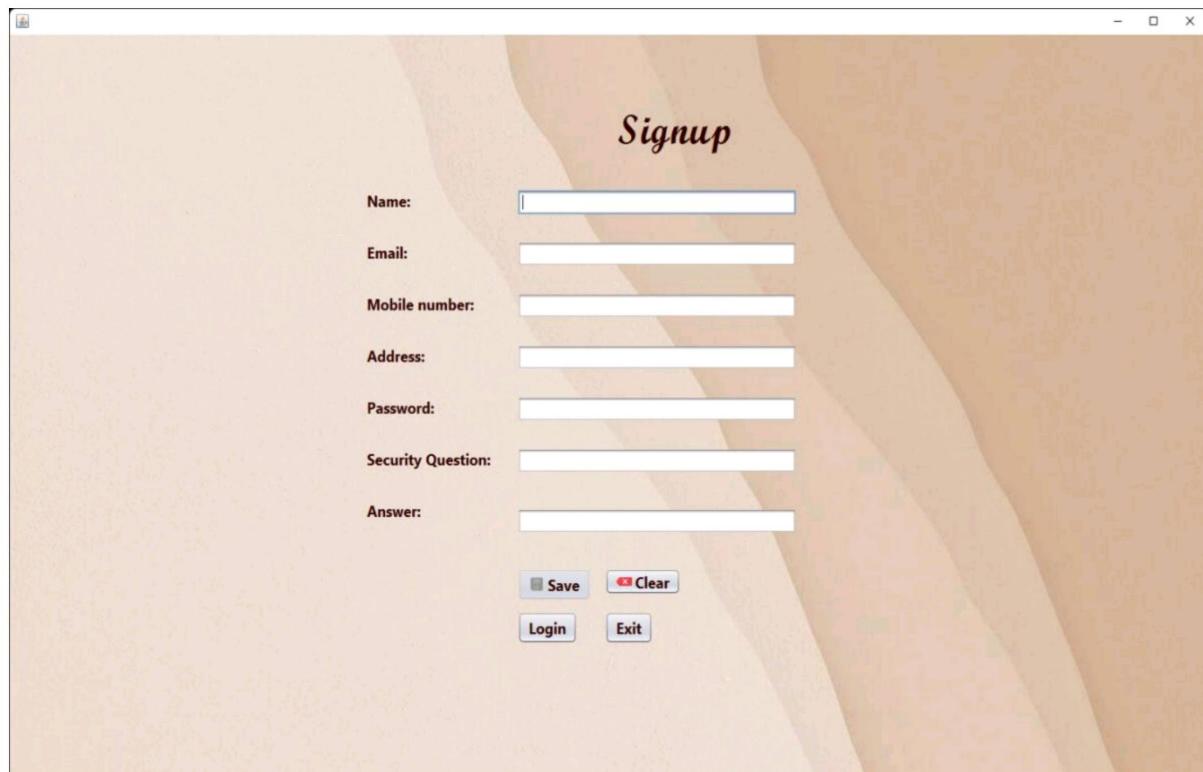
LOGIN:

- This is a very first page of canteen management system
- User needs to login with their respective email, mobile number
- If the user has forgotten their login credentials a forgot password option is also made available



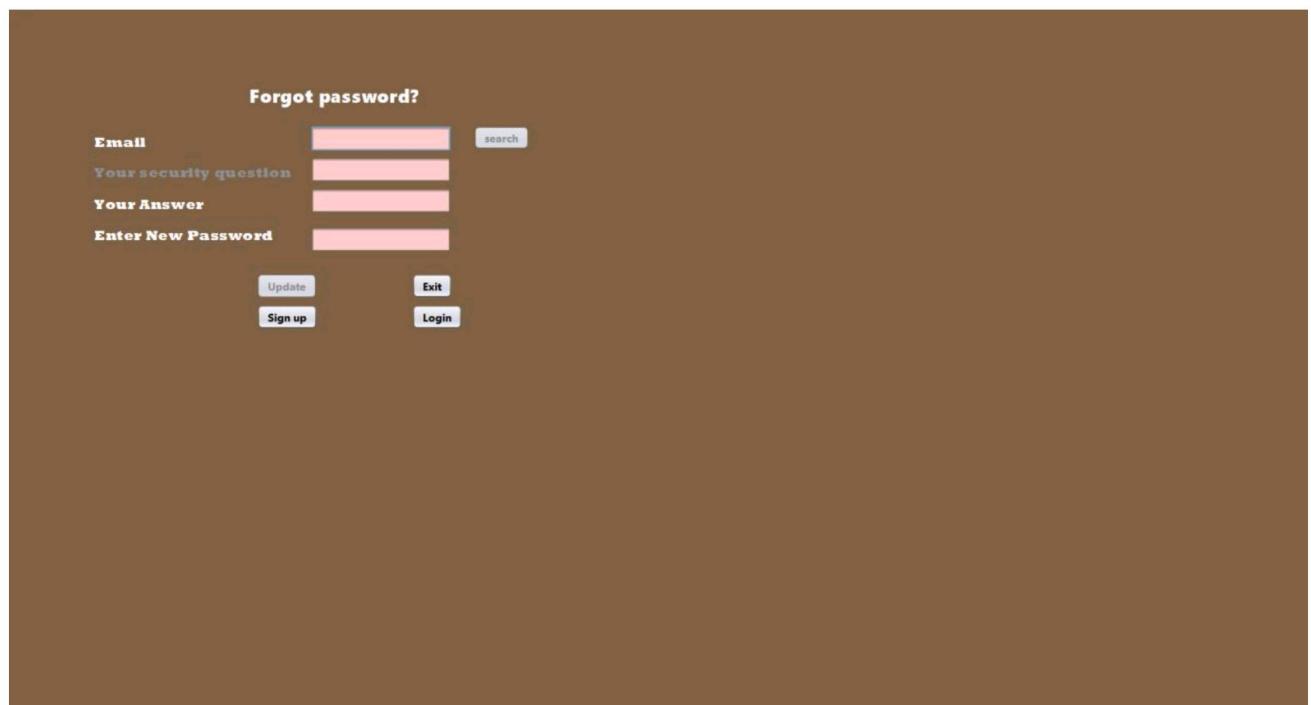
SIGNUP:

- If the user does not hold any account in the program
- A sign up page is made available for the user to do so
- From which details need to be registered like name, email, mobile number, password, security question



Forgot password:

- If the user has forgot his or her login credentials, the forgot password page helps them to recover their account and change the password for further access



HOME PAGE (for user):

- The home page is the main page of the whole program
- The homepage is where there are options available like placed order admin login, user login
- Change password option is also made available on home page
- Contact for feedbacks options is also made available to keep track on the feedbacks and reviews
- Option for bill details is also available on home page



ADMIN

Manage categories:

- Through manage categories admin can update the respective menu according to the updates



Add new products:

- Just like categories also new products can be updated according to admins choice through this option

A screenshot of a "New Product" addition form. The title "New Product" is at the top center. On the right side is a close button (X). The form contains three input fields: "Name" (empty), "category" (set to "Snacks"), and "Price" (empty). Below the fields are two buttons: "SAVE" and "Clear".

CUSTOMER:

Place order:

- With the help of place order page customer can edit their order according to their preference
- Options like product category, quantity and product name can be selected
- Also, other items can be browsed through this page

Place Order

Bill ID: 8	Category :	Name:	Price:
Customer Details:	Snacks		
Name:	Search:	Quantity:	Total:
Mobile Number:			
Email:			

Cart

Category	Name	Price	Quantity	Total

Grand Total:Rs 0

Actions:

- Clear
- Remove From Cart
- Add to Cart
- Generate Bill & Print
- Show QR for Payment



Payment:

- This page allows user to make the final payment after selecting their respective order.

Place Order

Bill ID: 8	Category :	Name:	Price:
Customer Details:	Snacks		
Name:	Search:	Quantity:	Total:
Mobile Number:			
Email:			

Cart

Category	Name	Price	Quantity	Total

Grand Total:Rs 0

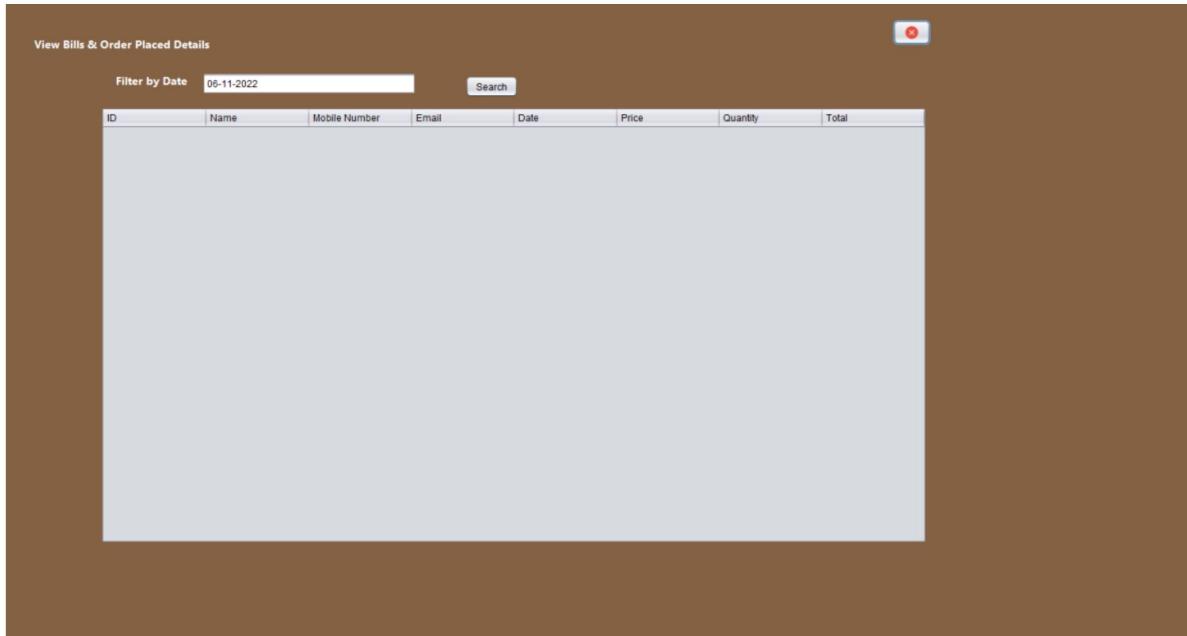
Actions:

- Clear
- Remove From Cart
- Add to Cart
- Generate Bill & Print
- Show QR for Payment



View bill:

- New generated bill can be viewed through this page
- Also, previous order bills are available if the user needs them



6.6 PROGRAMMING LANGUAGE

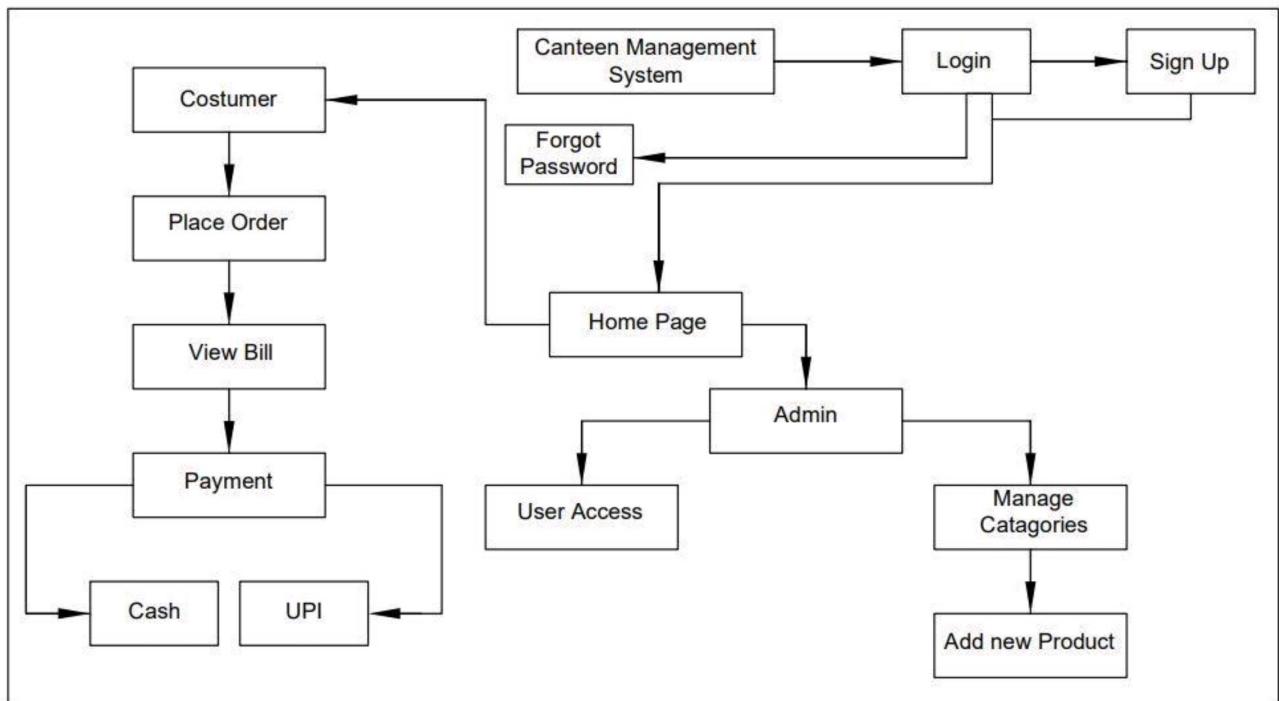
Many programming languages were put into consideration in the cause of designing this software. The database system used to implement the back-end of this system is MySQL: A relational database organizes data into one or more data tables in which data may be related to each other; these relations help structure the data. SQL is a language programmers use to create, modify and extract data from the relational database, as well as control user access to the database. In addition to relational databases and SQL, an RDBMS like MySQL works with an operating system to implement a relational database in a computer's storage system, manages users, allows for network access and facilitates testing database integrity and creation of backups. Java connector, MySQL provides connectivity for Java client applications with MySQL Connector/J, a driver that implements the Java Database Connectivity (JDBC) API. The API is the industry standard for database-independent connectivity between the Java programming language and a wide range of SQL databases, spreadsheets etc.

6.7 SYSTEM REQUIREMENTS

For the effective implementation of the new system, the following software has to be installed on the computer

1. Windows 10, Windows 11
2. MySQL
3. Java JDK 18.0.1
4. NetBeans

6.8 PROGRAM FLOWCHART



GANNT CHART TEMPLATE

Smartsheet Tip A Gantt chart visualizes when you can see details about activities as well as project dependencies.

PROJECT TITLE	INSTITUTE DEPARTMENT
PROJECT GUIDE	DATE

INSTITUTE DEPARTMENT
DATE
10/10/22



CHAPTER 8

CONCLUSION

In conclusion, Online Canteen management system is essential for you to run your Canteen efficiently and smoothly. You may not be at the Canteen at all times but you must have access to this data at all times and you can enjoy your meal anywhere the advantage of the use of this system is that the scale or size of the business does no longer make any difference to the system. This platform can be enforced on both small and large-scale businesses. Due to the user-friendly interface of the application, the particular viewer of the program doesn't have to be educated exclusively and can use the application easily. Admin can monitor and maintain of track of the entirety going on in his business which gives him a better manage over his business. The fully automated system eliminates the need to manipulate details in terms of the amount of food items sold on a regular basis, items available in the store. This study addresses the large-scale institution canteen business issue and ultimately suggests a working solution to the same.

At the end it is concluded that we have made effort on following points:

1. A description of the background and context of the project and its relation to work already done in the area.
2. Made statement of the aims and objectives of the project.
3. The description of Purpose, Scope, and applicability.
4. We define the problem on which we are working in the project
5. We describe the requirement Specifications of the system and the actions that can be done on these things.
6. We understand the problem domain and produce a model of the system, which describes operations that can be performed on the system.

7. We included features and operations in detail, including screen layouts.
8. We designed user interface and security issues related to system.
9. Finally, the system is implemented and tested according to test cases.

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