

SAILESH R

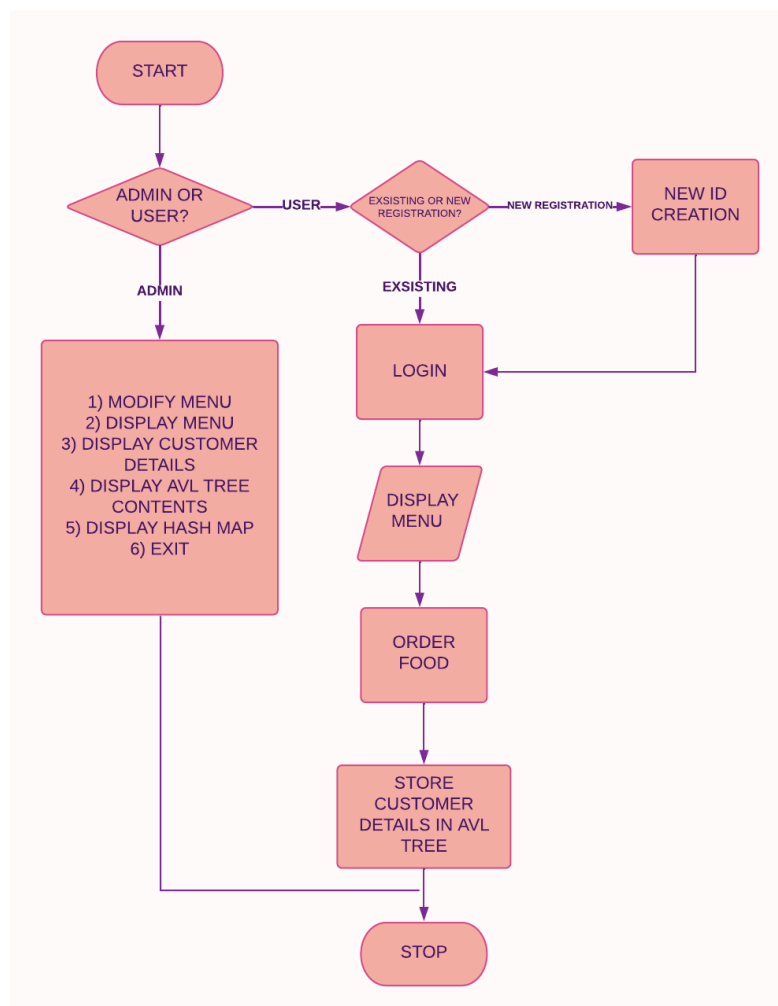
SAI VISHVESH V

RESTAURANT MANAGEMENT SYSTEM

PROBLEM DESCRIPTION:

To create an effective restaurant management system which helps the Restaurant manager (admin) to get details of its customers and to serve them better in the future and the customers to have a delightful food ordering experience during their visit to the restaurant.

FLOW DIAGRAM:



DATA STRUCTURES USED:

1) Hash table - We have used hash table in our program to store the Food menu of the restaurant which includes the food item as key and its price as the value and another hash table to store the security details of customers such as usernames and passwords.

2) AVL Tree - We have used an AVL Tree to store the details of the customers which can be accessed by the admin using a search operation and use the details to get to know about their customers.

OUTPUT SCREENSHOTS:

```
PS D:\College\docs\Project PONDAL> cd D:\College\docs\Project PONDAL\ ; if ($?) { g++ test2_1.cpp  
{ .\test2_1 }  
-----RESTAURANT MANAGEMENT SYSTEM-----  
-----  
1.RESTAURANT ADMIN  
2.RESTAURANT CUSTOMER  
ENTER YOUR CHOICE (1.Admin 2.Customer): 2  
1.REGISTER  
2.EXISTING USER  
ENTER CHOICE: 1  
Enter username:  
sri  
Enter password:  
data12  
Now enter username and password:  
Enter username:  
sri  
Enter password:  
data12  
Login Successfull !!
```

```
Do you want to order food?(y/n):y  
Food Item      Price  
Burger 250  
Lansanga 350  
Meal 550  
Mojito 150  
Pizza 200  
Steak 350  
Enter your order:Burger  
Enter Qty:3  
Add next food item (y/n): n  
Your Bill amt is: Rs.750
```

```

Your Bill amt: 107.750
-----Do you want place order-----
-----1.Place order, 2.EXIT-----
1
Enter customer name: sai
Enter id: 205080
Enter mno: 988747223
Want to continue to main menu? y/n: y
ENTER YOUR CHOICE (1.Admin 2.Customer): 1
RESTAURANT ADMIN CODE HERE
1.TO Insert new items in Menu
2.TO Display menu
3.To modify the given menu
4.Search
5.To Display the contents of AVL TREE
6.To Display the contents of Password Hash map
7.Press 7 to exit or any other number
Enter Choice:4

1. Search
0. Exit
Enter Choice: 1
Enter name of Customer: sai
DETAILS:
NAME: sai

Mobile number: 988747223

Customer ID: 205080
Bill amt: Rs.750

```

```

Do u want to continue to Admin menu? y
Want to continue to main menu? y/n: y
ENTER YOUR CHOICE (1.Admin 2.Customer): 1
RESTAURANT ADMIN CODE HERE
1.TO Insert new items in Menu
2.TO Display menu
3.To modify the given menu
4.Search
5.To Display the contents of AVL TREE
6.To Display the contents of Password Hash map
7.Press 7 to exit or any other number
Enter Choice:1
Enter Food item to be added:
vada
Enter price of the item:
50
TO EXIT Enter 00
Want to continue to main menu? y/n: y
ENTER YOUR CHOICE (1.Admin 2.Customer): 1
RESTAURANT ADMIN CODE HERE
1.TO Insert new items in Menu
2.TO Display menu
3.To modify the given menu
4.Search
5.To Display the contents of AVL TREE
6.To Display the contents of Password Hash map
7.Press 7 to exit or any other number
Enter Choice:2
    Food Item      Price
    Burger  250
    Lansanga 350
    Meal    550
    Mojito   150
    Pizza    200
    Steak    350
    vada     50
Want to continue to main menu? y/n: 

```

```
Enter the food item on the menu whose price is to be to be changed
Pizza
```

```
Enter the new price of the item you want to change150
```

```
Continue to modify the menu items? y/nn
```

```
Want to continue to main menu? y/n: y
```

```
ENTER YOUR CHOICE (1.Admin 2.Customer): 1
```

```
RESTAURANT ADMIN CODE HERE
```

- 1.TO Insert new items in Menu
- 2.TO Display menu
- 3.To modify the given menu
- 4.Search
- 5.To Display the contents of AVL TREE
- 6.To Display the contents of Password Hash map
- 7.Press 7 to exit or any other number

```
Enter Choice:2
```

Food Item	Price
Burger	250
Lansanga	350
Meal	550
Mojito	150
Pizza	150
Steak	350
vada	50

```
Want to continue to main menu? y/n: █
```

```
Want to continue to main menu? y/n: y
```

```
ENTER YOUR CHOICE (1.Admin 2.Customer): 1
```

```
RESTAURANT ADMIN CODE HERE
```

- 1.TO Insert new items in Menu
- 2.TO Display menu
- 3.To modify the given menu
- 4.Search
- 5.To Display the contents of AVL TREE
- 6.To Display the contents of Password Hash map
- 7.Press 7 to exit or any other number

```
Enter Choice:6
```

Name	password
john	aloha
kendrick	lamar
pedro	hello

```
Want to continue to main menu? y/n: █
```

RESULTS AND INFERENCES:

A Restaurant management system which helps in the maintenance of customer records and helps customers to select preferred appetite has been implemented in C++ with the help of Data structures such as hash tables and AVL trees was successfully programmed.

Data structures play a vital role in programming real life applications.

For example, Hash table can be used to store various types of records in a key, value format which can be retrieved very easily and efficiently.

AVL Trees on the other hand is a very important data structure which stores data in a tree format that enables it to access data in a very efficient and fast manner thus making the computation time very less.