# **COMPUTER SCIENCE**

PROJECT FILE

Submitted by

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of

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Class. XII-A

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COMPUTER SCIENCE PRACTICAL

SESSION 2021-2022

# **CERTIFICATE**

This is to certify that BHAVESH GUPTA, student of class

XII-A has successfully completed the project RESTAURANT MANAGEMENT SYSTEM during the academic year 2020-21 in partial fulfilment of COMPUTER SCIENCE practical examination conducted by All India Senior School certificate Examination, New Delhi, India.

# **ACKNOWLEDGEMENT**

I wish to express my gratitude to my teacher **Mr. Siddharth Bhardwaj**, for his guidance and support during the course of the project which are of utmost value.

I would also like to thank **Ishant Mittal and Kartikay Dimri**, my partners with whose help I was able to successfully complete this project.

I would also thank my principal Mr. Vincent Ashish Moses

I would also like to thank my parents for encouraging me during the course of the project.

Finally, I would also like to thank **CBSE** for giving me this opportunity to undertake this project.

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# **ABSTRACT**

This project is named as 'Restaurant Management System' which aims at providing an easy interface to manage the restaurant menu, records, and orders database online. This program makes managing the restaurant easier, by providing features and facilities such as menu display, ordering and cost of an order and order confirmation followed by appending the order details into a database. It also allows the employees to be able to make changes into the menu table like adding dishes as well as view all the records.

# **DESCRIPTION OF PROJECT**

This project allows an optimum management of a restaurant and provides facilities to both the restaurant admin and customer.

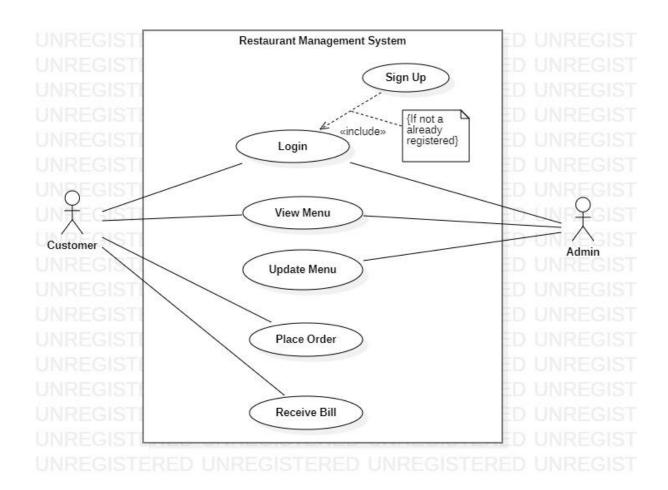
#### Restaurant admin:-

- 1. Can view all the databases such as the menu table, Customer details Table and the Order table.
- 2. Can add items to the menu.
- 3. Can delete items from the menu

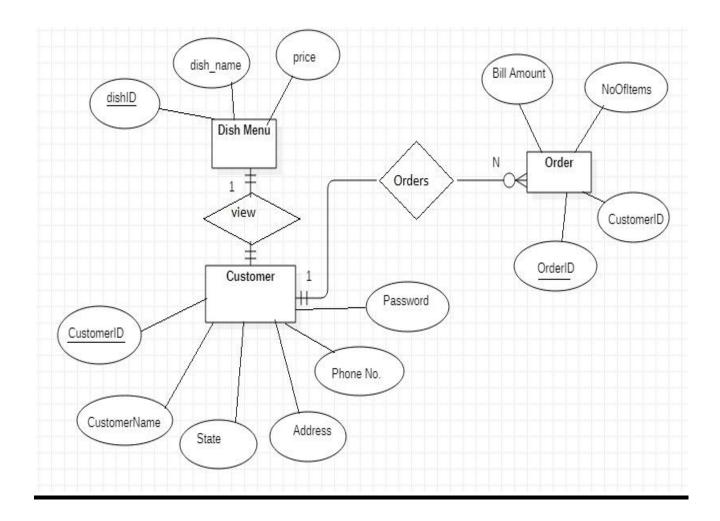
#### Customer:-

- 1. Creates an account or logs in if they have already created an account.
- 2. Sees the menu and can add items to their order.
- 3. Gets an order summary before confirming the order
- 4. Can cancel the order at the last moment if they so desire.

# **USE CASE DIAGRAM**



# **ER DIAGRAM**



# **SYSTEM REQUIREMENTS**

### **Hardware Requirements**

Windows					
Operating System	Microsoft Windows 10/8/7 (incl.64-bit)				
Processor	Single Core 1.0 Ghz				
RAM	1 GB RAM minimum 2 GB RAM recommended				
Screen Resolution	1024x768 minimum				
Graphics Card	64Mb Graphics Card (recommended)				

### **Software Requirements:**

Python 3.6.0 or higher
PyCharm Community Edition 2021.1 (IDE for development)
MySQL Workbench 8

### **PYTHON MODULES USED:-**

• mysql connector:

This has been used to link python with mysql database

• random:

This has been used to generate Customer ID as well as the Order ID

## **PYTHON CODE**

```
import mysql.connector
import random
mydb = mysql.connector.connect(
   host='localhost',
   user='root',
   password='76mysql31',
   port='3306',
   database='python projectbhavesh'
)
print('Press 1 if you are a customer, 2 if you are an Admin')
def login():
   hf = True
   print("************ LOGIN ************")
   while hf == True:
       ID=int(input('Enter your customer ID '))
       mycursor.execute("SELECT Password FROM customer WHERE CustomerID =
{} ".format(ID))
       Passver=mycursor.fetchall()
       for i in Passver:
           for j in i:
               a=i
       pswd=input('Enter password ')
       if pswd==a:
           print('Login Successful! ')
           hf = False
           return ID
       else:
           print('Incorrect ID or password')
def customer():
   print('First time visiting? press 1 to sign up!')
   print('Returning Customer? press 2 to log in!')
   td=int(input('Enter 1 or 2 '))
   if td==1:
       print("*********** SIGN UP ************")
       Name=input("Enter Name: ")
       State=input("Enter state: ")
       Address=input("Enter address: ")
       PhoneNo=int(input("Enter Phone Number: "))
       CustomerID = random.randint(0, 100000)
       vc=True
       while vc==True:
           Pasd = input('Create password ')
           passconf = input('Confirm Password ')
           if Pasd==passconf:
               sql = 'INSERT INTO customer (CustomerID, CustomerName,
```

```
State, Address, PhoneNo, Password) VALUES(%s, %s, %s, %s, %s, %s)'
                val = (CustomerID, Name, State, Address, PhoneNo, Pasd)
                mycursor.execute(sql, val)
                mydb.commit()
                print('Your CustomerID has been generated successfully and
is:-', CustomerID)
                #match ID with phone no in database incase customer forgets
ID
                print('Remember to keep this ID for future transactions')
                print('sign up successful')
                vc=False
            else:
                print('passwords do not match try again')
        ID=login()
    else:
        ID=login()
   mycursor.execute('select*from dish')
   menu = mycursor.fetchall()
    column names = [i[0] for i in mycursor.description]
   print(column names)
    for i in menu:
       print(i)
   ans = True
    list=[]
   NoI=0
   Food=[]
    while ans == True:
        dishid = int(input("Enter the Dish ID: "))
        mycursor.execute("SELECT dish name from dish WHERE dishID = {}
".format(dishid))
       NoD = mycursor.fetchall()
        qty = int(input("Enter quantity: "))
        am=[dishid, qty, NoD]
        list.append(am)
        NoI=NoI+qty
        ch = input("Do you want to add more Dishes? (y/n) ")
        if ch!='y'and ch!='Y':
             print('no of items=', NoI)
             total = 0
             print("Dish ID, Quantity, Dish name, price")
             for item in list:
                mycursor.execute("SELECT price from dish WHERE dishID = {}
".format(item[0]))
                res = mycursor.fetchall()
                # Converting tuple to integer
                for i in res:
                    for j in i:
                        print(item, j)
                        total = total + item[1]*j
             #adding GST to total
             total=total+total*18/100
             print("Bill Amount after adding GST: ", total)
```

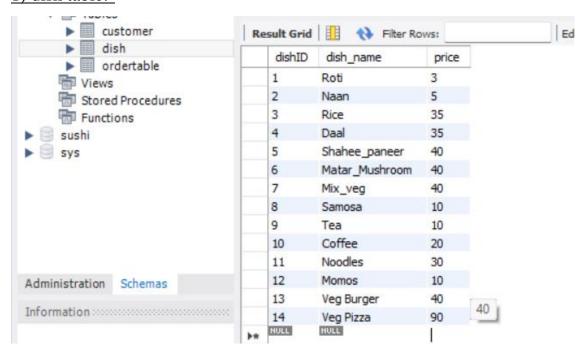
```
print('press 1 to confirm order')
            print('press 2 to cancel order')
            print('press 3 to add more items to your order')
            final=int(input('Enter your choice '))
            if final == 1:
                Order=random.randint(0, 1000)+ID
                orderdata='INSERT INTO ordertable (OrderID, CustomerID,
BillAmount, NoOfItems) VALUES (%s, %s, %s, %s)'
val = (Order, ID, total, NoI)
                mycursor.execute(orderdata, val)
                mydb.commit()
                print('Your order has successfully been placed!')
                ans = False
            elif final == 2:
                print('Your order has been cancelled successfully')
                ans = False
            else:
                ans = True
   print('*************Thank you for visiting!****************
def view():
   krm=True
   while krm==True:
       print('press 1 to view menu table')
       print('press 2 to view customer table')
       print('press 3 to view order table')
       print('press 4 to add dishes to the menu')
       print('press 5 to remove dishes from the menu')
       print('press 6 to exit the main menu')
       z=int(input('Enter choice: '))
       if z==1:
           mycursor.execute('SELECT*FROM dish')
           menu = mycursor.fetchall()
           column names = [i[0] for i in mycursor.description]
           print(column names)
           for i in menu:
               print(i)
           br = int(input('press 1 to continue to main menu and 2 if you
want to exit '))
           if br != 1:
               krm = False
       elif z==2:
           mycursor.execute('SELECT*from customer')
           customerdetails = mycursor.fetchall()
           column names = [i[0] for i in mycursor.description]
           print(column names)
           for i in customerdetails:
               print(i)
           br = int(input('press 1 to continue to main menu and 2 if you
want to exit '))
           if br != 1:
               krm = False
```

```
elif z==3:
            mycursor.execute('SELECT*from ordertable')
            orderdetails = mycursor.fetchall()
            column names = [i[0] for i in mycursor.description]
            print(column names)
            for i in orderdetails:
                print(i)
            br = int(input('press 1 to continue and 2 if you want to exit
'))
            if br != 1:
                krm = False
        elif z==4:
            hr=True
            while hr == True:
                dishID=int(input('Enter Dish ID: '))
                dishname=input('Enter Dish Name: ')
                dishprice=int(input('Enter dish price: '))
                sql = 'INSERT INTO dish (dishID, dish name, price)
VALUES(%s, %s, %s)'
                val = (dishID, dishname, dishprice)
                mycursor.execute(sql, val)
                mydb.commit()
                jj=input('do you wish to add more items into the menu?y/n')
                if jj!='y' and jj!='Y':
                    print('menu table updated')
                    hr=False
            br = int(input('Press 1 to continue to main menu and 2 if you
want to exit '))
            if br != 1:
                krm = False
        elif z==5:
            arg=True
            while arg==True:
                mycursor.execute('SELECT dish name FROM dish')
                existdish=mycursor.fetchall()
                print(existdish)
                f=''
                for i in existdish:
                    for j in i:
                        f=f+i
                dishName=input('Enter the name of the dish you want to
remove. ')
                if dishName in f:
                    sql = "DELETE FROM dish WHERE dish name =
'%s'"%dishName
                    mycursor.execute(sql)
                    mydb.commit()
                    print('Update successful')
                else:
                     print('Input dish is already not in the menu')
                conf=input('do you wish to continue deleting more items
from the menu?y/n')
                if conf=='n' or conf=='N':
                    arg=False
            br = int(input('press 1 to continue to main menu and 2 if you
```

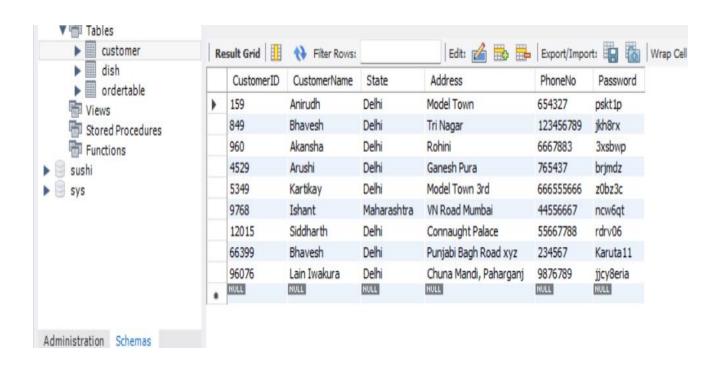
```
want to exit '))
            if br != 1:
                krm = False
        else:
            krm=False
            print("Exit successful")
mycursor = mydb.cursor()
passwd=1359
user=int(input("Enter 1 or 2: "))
if user==1:
   customer()
elif user==2:
   hrt=int(input('Enter password '))
    if hrt==passwd:
        print('access granted!')
        view()
    else:
       print('access denied')
else:
    print("invalid access")
```

### **DATABASE**:

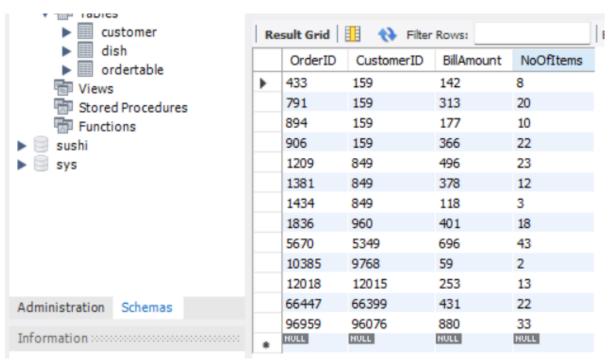
#### 1) dish table:-



#### 2) customer table:-



#### 3) order table:-



# Outputs:

### **ADMIN COMMANDS:-**

1) Viewing Databases, adding 2 Dishes then removing one of them

```
C:\Users\gupta\PycharmProjects\pythonProject2\venv\Scripts\python.exe C:/Use
        Press 1 if you are a customer, 2 if you are an Admin
     ₽
        Enter 1 or 2: 2
     =+
        Enter password 1359
        access granted!
        press 1 to view menu table
        press 2 to view customer table
        press 3 to view order table
        press 4 to add dishes to the menu
        press 5 to remove dishes from the menu
        press 6 to exit the main menu
        Enter choice: 1
        Enter choice: 1
        ['dishID', 'dish_name', 'price']
        (1, 'Roti', 3)
        (2, 'Naan', 5)
        (3, 'Rice', 35)
        (4, 'Daal', 35)
        (5, 'Shahee_paneer', 40)
        (6, 'Matar_Mushroom', 40)
        (7, 'Mix_veg', 40)
Structure
        (8, 'Samosa', 10)
        (9, 'Tea', 10)
        (10, 'Coffee', 20)
        (11, 'Noodles', 30)
Bookmarks
        (12, 'Momos', 10)
        (13, 'Veg Burger', 40)
        (14, 'Veg Pizza', 90)
```

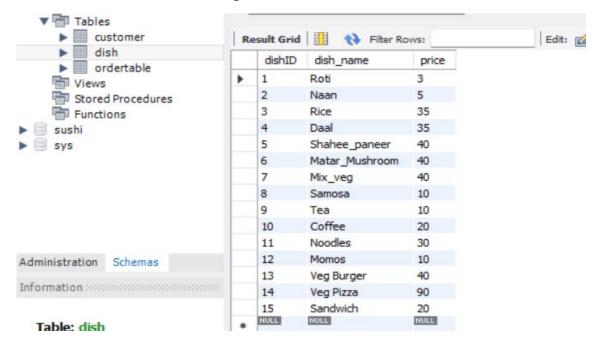
```
(14, 'Veg Pizza', 90)
    <u>-</u>
         press 1 to continue to main menu and 2 if you want to exit 1
         press 1 to view menu table
         press 2 to view customer table
         press 3 to view order table
         press 4 to add dishes to the menu
         press 5 to remove dishes from the menu
         press 6 to exit the main menu
         Enter choice: 2
         ['CustomerID', 'CustomerName', 'State', 'Address', 'PhoneNo', 'Password']
         (159, 'Anirudh', 'Delhi', 'Model Town ', 654327, 'pskt1p')
          ['CustomerID', 'CustomerName', 'State', 'Address', 'PhoneNo', 'Password']
          (159, 'Anirudh', 'Delhi', 'Model Town ', 654327, 'pskt1p')
          (849, 'Bhavesh', 'Delhi', 'Tri Nagar', 123456789, 'jkh8rx')
          (960, 'Akansha', 'Delhi', 'Rohini', 6667883, '3xsbwp')
          (4529, 'Arushi', 'Delhi', 'Ganesh Pura', 765437, 'brjmdz')
          (5349, 'Kartikay', 'Delhi', 'Model Town 3rd', 666555666, 'z0bz3c')
          (9768, 'Ishant', 'Maharashtra', 'VN Road Mumbai', 44556667, 'ncw6qt')
          (12015, 'Siddharth', 'Delhi', 'Connaught Palace', 55667788, 'rdrv06')
          (66399, 'Bhavesh', 'Delhi', 'Punjabi Bagh Road xyz', 234567, 'Karuta11')
          (66399, 'Bhavesh', 'Delhi', 'Punjabi Bagh Road xyz', 234567, 'Karuta11')
          (96076, 'Lain Iwakura', 'Delhi', 'Chuna Mandi, Paharganj', 9876789, 'jjcy8eria')
          press 1 to continue to main menu and 2 if you want to exit 1
Structure
          ****************
          press 1 to view menu table
          press 2 to view customer table
Bookmarks
          press 3 to view order table
          press 4 to add dishes to the menu
          press 5 to remove dishes from the menu
          press 6 to exit the main menu
```

```
press 4 to add dishes to the menu
     press 5 to remove dishes from the menu
     press 6 to exit the main menu
     Enter choice: 3
     ['OrderID', 'CustomerID', 'BillAmount', 'NoOfItems']
     (433, 159, 142, 8)
     (791, 159, 313, 20)
     (894, 159, 177, 10)
      (906, 159, 366, 22)
      (1209, 849, 496, 23)
     (1381, 849, 378, 12)
      (1434, 849, 118, 3)
      (1836, 960, 401, 18)
      (5670, 5349, 696, 43)
      (10385, 9768, 59, 2)
     (12018, 12015, 253, 13)
     (66447, 66399, 431, 22)
     (96959, 96076, 880, 33)
      press 1 to continue and 2 if you want to exit 1
press 1 to view menu table
press 2 to view customer table
press 3 to view order table
press 4 to add dishes to the menu
press 5 to remove dishes from the menu
press 6 to exit the main menu
Enter choice: 4
Enter Dish ID: 15
Enter Dish Name: Sandwich
Enter dish price: 20
do you wish to add more items into the menu?y/ny
Enter Dish ID: 16
Enter Dish Name: Pepsi
Enter dish price: 20
do you wish to add more items into the menu?y/nn
menu table updated
Press 1 to continue to main menu and 2 if you want to exit 1
press 1 to view menu table
press 2 to view customer table
```

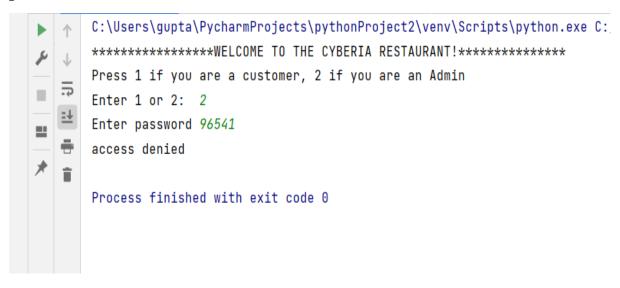
```
Enter dish price: 20
do you wish to add more items into the menu?y/nn
menu table updated
Press 1 to continue to main menu and 2 if you want to exit 1
**************
press 1 to view menu table
press 2 to view customer table
press 3 to view order table
press 4 to add dishes to the menu
press 5 to remove dishes from the menu
press 6 to exit the main menu
Enter choice: 5
[('Roti',), ('Naan',), ('Rice',), ('Daal',), ('Shahee_paneer',), ('Matar_Mushroom',), ('Mix_veg',), ('Sa
Enter the name of the dish you want to remove. Pepsi
Update successful
do you wish to continue deleting more items from the menu?y/nn
press 1 to continue to main menu and 2 if you want to exit 2
Process finished with exit code 0
```

```
'_Mushroom',), ('Mix_veg',), ('Samosa',), ('Tea',), ('Coffee',), ('Noodles',), ('Momos',), ('Veg Burger',), ('Veg Pizza',), ('Sandwich',), ('Pepsi',)]
```

### Menu Table after the changes:-



# 2) Invalid access into the admin menu (by entering incorrect password):-

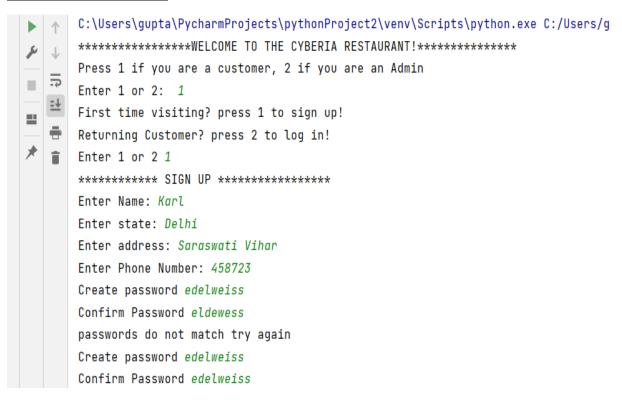


### 3)Attempt to remove a dish that is not in the table:-

```
Press 1 if you are a customer, 2 if you are an Admin
₽
   Enter 1 or 2: 2
   Enter password 1359
access granted!
press 1 to view menu table
    press 2 to view customer table
    press 3 to view order table
   press 4 to add dishes to the menu
    press 5 to remove dishes from the menu
    press 6 to exit the main menu
    Enter choice: 5
   [('Roti',), ('Naan',), ('Rice',), ('Daal',), ('Shahee_paneer',), ('Matar_Mushroc
    Enter the name of the dish you want to remove. Vadha Pao
    Input dish is already not in the menu
    do you wish to continue deleting more items from the menu?y/nn
    press 1 to continue to main menu and 2 if you want to exit 2
    Process finished with exit code 0
```

### **CUSTOMER COMMANDS**

1) Signing up followed by login and order of some dishes, then adding some more dishes after checking order details followed by order confirmation



```
Confirm Password eldewess

passwords do not match try again

Create password edelweiss

Confirm Password edelweiss

Your CustomerID has been generated successfully and is:- 20826

Remember to keep this ID for future transactions

sign up successful

****************************

Enter your customer ID 20826

Enter password edelweiss

Login Successful!

['dishID', 'dish_name', 'price']

(1, 'Roti', 3)

(2, 'Naan', 5)
```

```
['dishID', 'dish_name', 'price']
(1, 'Roti', 3)
(2, 'Naan', 5)
(3, 'Rice', 35)
(4, 'Daal', 35)
(5, 'Shahee_paneer', 40)
(6, 'Matar_Mushroom', 40)
(7, 'Mix_veg', 40)
(8, 'Samosa', 10)
(9, 'Tea', 10)
(10, 'Coffee', 20)
(11, 'Noodles', 30)
(12, 'Momos', 10)
(13, 'Veg Burger', 40)
(14, 'Veg Pizza', 90)
(15, 'Sandwich', 20)
Enter the Dish ID: 2
Enter quantity: 15
```

```
(15, 'Sandwich', 20)
      Enter the Dish ID: 2
      Enter quantity: 15
      Do you want to add more Dishes? (y/n) y
      Enter the Dish ID: 15
      Enter quantity: 8
      Do you want to add more Dishes? (y/n) y
      Enter the Dish ID: 9
      Enter quantity: 5
      Do you want to add more Dishes? (y/n) n
      no of items= 28
      Dish ID, Quantity, Dish name, price
      [2, 15, [('Naan',)]] 5
      [15, 8, [('Sandwich',)]] 20
      [9, 5, [('Tea',)]] 10
      Bill Amount after adding GST: 336.3
        [10, 0, [( Odnamiton //]] 20
        [9, 5, [('Tea',)]] 10
Bill Amount after adding GST: 336.3
        press 1 to confirm order
        press 2 to cancel order
        press 3 to add more items to your order
        Enter your choice 3
        Enter the Dish ID: 7
        Enter quantity: 4
        Do you want to add more Dishes? (y/n) n
        no of items= 32
        Dish ID, Quantity, Dish name, price
        [2, 15, [('Naan',)]] 5
```

### Customer table after the changes:-

	CustomerID	CustomerName	State	Address	PhoneNo	Password	
Þ	159	Anirudh	Delhi	Model Town	654327	pskt1p	
	849	Bhavesh	Delhi	Tri Nagar	123456789	jkh8rx	
	960	Akansha	Delhi	Rohini	6667883	3xsbwp	
	4529	Arushi	Delhi	Ganesh Pura	765437	brjmdz	
	5349	Kartikay	Delhi	Model Town 3rd	666555666	z0bz3c	
	9768	Ishant	Maharashtra	VN Road Mumbai	44556667	ncw6qt	
	12015	Siddharth	Delhi	Connaught Palace	55667788	rdrv06	
	20826	Karl	Delhi	Saraswati Vihar	458723	edelweiss	
	66399	Bhavesh	Delhi	Punjabi Bagh Road xyz	234567	Karuta 11	
	96076	Lain Iwakura	Delhi	Chuna Mandi, Paharganj	9876789	jjcy8eria	
	NULL	NULL	NULL	NULL	NULL	NULL	

# 2) Logging into an already existing account and then cancelling the order.

```
Press 1 if you are a customer, 2 if you are an Admin
Enter 1 or 2: 1
      First time visiting? press 1 to sign up!
       Returning Customer? press 2 to log in!
*
      Enter 1 or 2 2
       ********* LOGIN ********
      Enter your customer ID 4529
       Enter password brimdz
       Login Successful!
       ['dishID', 'dish_name', 'price']
       (1, 'Roti', 3)
       (2, 'Naan', 5)
       (3, 'Rice', 35)
       (4, 'Daal', 35)
       (5, 'Shahee_paneer', 40)
       (6, 'Matar_Mushroom', 40)
       (6, 'matar_musnroom', 40)
       (7, 'Mix_veg', 40)
      (8, 'Samosa', 10)
       (9, 'Tea', 10)
       (10, 'Coffee', 20)
       (11, 'Noodles', 30)
       (12, 'Momos', 10)
       (13, 'Veg Burger', 40)
       (14, 'Veg Pizza', 90)
       (15, 'Sandwich', 20)
      Enter the Dish ID: 15
      Enter quantity: 5
      Do you want to add more Dishes? (y/n) y
      Enter the Dish ID: 8
      Enter quantity: 5
      Do you want to add more Dishes? (y/n) y
      Enter the Dish ID: 12
```

Process finished with exit code 0

# **CONCLUSION**

This Restaurant Management System Project in Python fulfils all the primary tasks performed by customer and admin to function basic transactions for a restaurant. With features to add, update and delete that can be performed by admin, the system is flexible for long term changes.

The system felicitates customer to sign up with the restaurant and login for placing orders. Customer is able to place order and receive bill successfully.

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