

Supermarket Management System



GAURANG SANTORIA

[XIIA]

Roll No.



BGS INTERNATIONAL PUBLIC SCHOOL

SECTOR- 5, DWARKA

CERTIFICATE

This is to certify that of class XII (2021-22)
Roll Number has worked under my guidance on the project

.....

It is an original piece of work to the best of my knowledge.

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Principal

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Acknowledgment

I wish to express my deep gratitude and sincere thanks to the Principal Ms. Punam Gupta for her support and encouragement.

This project would not have been successfully completed without the proper and rigorous guidance of my Computer Science teacher Ms. Anupama Srivastava who guided me throughout this project in every possible way.

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Introduction

Python is an interpreted, high-level, language, general-purpose programming language; created by **Guido van Rossum** and first released in **1991**. Its design philosophy emphasizes code readability with its use of significant indentation. It is an Object-oriented programming language with a clear and logical code approach for small and large-scale projects.

MySQL is an open-source relational database management system (RDBMS). A relational database organizes data into one or more data tables in which data types 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.

This project is the **Supermarket Management System** created using Python programming language as Front end and MySQL & CSV files as the Back end. This program can be used to keep track of all management and billing activities in a supermarket. It keeps a record of all the customers, employees, and products. It can be used to add, see details of the multiple entries, delete and update customers, employees, and products. It can also be used for creating, updating, viewing, and checking out the cart by a customer with a bill containing complete customer details about the customer, date, time, and payment method for the purchase.

Objective & Project Description

This project gives the solution to the problem of unregistered customers and employees in grocery stores and supermarkets. It also simplifies the process of the customer, employee, product registration, updating, deletion, or reviewing at any supermarket.

It also aims to minimize difficulty to use by the customer and has an interactive User Interface and has been designed keeping in mind the users with minimal knowledge of computers. The system is beneficial for internal data registration and management of customers, employees, and products and also for billing purposes.

This program has been created with the scope of further development.

Minimum Software and Hardware requirements

PROCESSOR: Intel Atom processor or Intel Core i3

RAM: 4 GB

DISK SPACE: 1 GB

OPERATING SYSTEM: {x64 bit} Windows 7 or later, Mac O/S

PYTHON VERSION: 3.5 or later

MySQL version: 5.7 or later

Project Front-End and Back-End

Python 3.8.8 (Front End)



MySQL & CSV (Back End)





```
31     self._init_(request)
32     self.file = None
33
34     def __init__(self, request):
35         self.request = request
36
37         if path:
38             self.file = open(os.path.join(path),
39                             'a')
40             self.file.seek(0)
41             self.fingerprints = set()
42
43     @classmethod
44     def from_settings(cls, settings):
45         debug = settings.getbool('SUPERVISED')
46         return cls(job_dir(settings), debug)
47
48     def request_seen(self, request):
49         fp = self.request_fingerprint(request)
50         if fp in self.fingerprints:
51             return True
52         self.fingerprints.add(fp)
53         if self.file:
54             self.file.write(fp + os.linesep)
55
56     def request_fingerprint(self, request):
57         return request_fingerprint(request)
```

```
#import tkinter
import csv
import datetime
import mysql.connector as msc
co=msc.connect(host="localhost",user="root",password="Debug@12",database="supermarket")
if co.is_connected():
    #print("Connected")
    print("\n")
else:
    print("Not connected")

c=co.cursor()

# SQL table creation - important

c.execute("create table emp(id int, ename varchar(30), address varchar(60));")
print("Employee table created.")

c.execute("create table customer(cid int,cname varchar(30), cphone int);")
print("Customer table created.")

c.execute("create table prd(pid int, pname varchar(20), qty int, price int);")
print("Product table created.")

print("\t\t\tWelcome to the Supermarket management system!")
print("~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-")
print("\nSo, lets get started by getting you Logged-In\n")

#GUI
"heading = tkinter.Label(window,text = "Welcome to the Supermarket!",font = ("RockWell",20))
window.geometry('350x500')
heading.grid(column=0,row=0)

username = tkinter.Label(window,text = "Enter username")
username.grid(column=0,row=1)
txtusername = tkinter.Entry(window, width = 10)
txtusername.grid(column=0,row = 2)

pswd = tkinter.Label(window,text = "Enter Password")
pswd.grid(column=0,row=3)
txtpswd = tkinter.Entry(window, width = 10)
txtpswd.grid(column=0,row=4)"
```

```
login_id=input("Enter username: ")
psswd=input("Enter password: ")

def sp():
    print("-----")

loginlist=["Employee", "Manager", "Tech Support", "Customer"]
pswdlist=["working", "Scott", "tech guy", "123"]

#logging in

while True:
    if (login_id=="Employee" and psswd=="working"):
        print("\nWelcome",login_id,"!")
        break

    elif (login_id=="Manager" and psswd=="Scott"):
        print("\nWelcome",login_id,"!")
        break

    elif (login_id=="Tech Support" and psswd=="tech guy"):
        print("\nWelcome",login_id,"!")
        break

    elif(login_id=="Customer" and psswd=="123"):
        print("\nWelcome",login_id,"!")
        break

    else:
        print("Wrong ID or password")
        exit()
```

```

#function for employee
def customerdata():
    print("\n\t\tMenu of functions")
    sp()
    print("[1] Add customer ")
    print("[2] Remove customer")
    print("[3] View customer database")
    print("[4] Update customer details")
    print("[5] Exit")

ec=int(input("Enter option choice:"))

if (ec==1):                                     #Add
    custid=int(input("Enter Customer ID:"))
    custnm=input("Enter Customer name:")
    custph=int(input("Enter 8 digit mobile number:"))
    c.execute("insert into customer (cid,cname,cphone) values ({},{},{})".format(custid,custnm,custph))
    co.commit()
    print("Customer data inserted")

elif (ec==2):                                    #Remove
    dnm=int(input("Enter customer id of customer whose details are to be deleted:"))
    c.execute("delete from customer where cid="+str(dnm)+";")
    co.commit()
    print("Customer record deleted")

elif(ec == 3):                                   #View All
    c.execute("select * from customer")
    rs = c.fetchall()
    norec = c.rowcount
    sp()
    print("\nTotal records found are ",norec,"\n")
    for row in rs:
        print(row)
    co.commit()

elif (ec==4):                                     #Update
    eid = int(input("Enter customer ID:"))
    name = input("Enter the name")
    phno = input("Enter new phone no.")
    c.execute("delete from customer where cid="+str(eid)+";")
    c.execute("insert into customer (cid,cname,cphone) values ({},{},{})".format(eid,name,phno))

elif(ec == 5):
    exit()
else:
    print("Select valid option")

```

```

#function for manager
def productdata():
    print("\t\tMenu of functions")
    sp()
    print("[1] Add product")
    print("[2] Remove product")
    print("[3] View product database")
    print("[4] Update product")
    print("[5] Exit")

ec=int(input("Enter option choice:"))

if (ec==1):                                     #Add
    pid=int(input("Enter product ID:"))
    pname=input("Enter product name:")
    qty=int(input("Enter Quantity:"))
    price = int(input("Enter Price:"))
    c.execute("Insert into prd(pid,pname,qty,price) values ({},{},{},{}).format(pid,pname,qty,price)")
    co.commit()
    print("Product added!")

elif (ec==2):                                    #Remove
    dnm=int(input("Enter product id of the product to be deleted:"))
    c.execute("delete from prd where pid="+str(dnm)+";")
    co.commit()
    print("Product deleted!")

elif(ec == 3):                                   #View All
    c.execute("select * from prd")
    rs = c.fetchall()
    norec = c.rowcount
    sp()
    print("\nTotal records found are ",norec,"\\n")
    for row in rs:
        print(row)
    co.commit()

elif (ec==4):                                     #Update
    eid = int(input("Enter product id"))
    name = input("Enter product name")
    qty = int(input("Enter new qty"))
    price = input("Enter new price")
    c.execute("delete from prd where pid="+str(eid)+";")
    c.execute("insert into prd (pid,pname,qty,price) values ({},{},{},{}).format(eid,name,qty,price)")

elif(ec == 5):
    exit()

else:
    print("Select valid option")

```

```
#function for tech support
def employeedata():
    print("\t\tMenu of functions")
    sp()
    print("[1] Add employee ")
    print("[2] Remove employee")
    print("[3] View employee database")
    print("[4] Update employee record")
    print("[5] Exit")

    ec=int(input("Enter option choice:"))

    if (ec==1):                                     #Add
        eid=int(input("Enter employee ID:"))
        name=input("Enter name:")
        add=input("Enter address:")
        c.execute("insert into emp (id,ename,address) values ({},{},{})".format(eid,name,add))
        co.commit()
        print("Employee data inserted")

    elif (ec==2):                                    #Remove
        dnm=int(input("Enter employee id of customer whose details are to be deleted:"))
        c.execute("delete from emp where id="+str(dnm)+";")
        co.commit()
        print("Employee record deleted")

    elif(ec == 3):                                  #View All
        c.execute("select * from emp")
        rs = c.fetchall()
        norec = c.rowcount
        print("Total records found are ",norec,"\n")
        for row in rs:
            print(row)
        co.commit()

    elif (ec==4):                                     #update
        eid = int(input("Enter id of the employee: "))
        name = input("Enter the name: ")
        addr = input("Enter new address: ")
        c.execute("delete from emp where id="+str(eid)+";")
        c.execute("insert into emp (id,ename,address) values ({},{},{})".format(eid,name,addr))
        print("Data Updated")
        co.commit()

    elif (ec==5):
        exit()

    else:
        print("Select valid option")
```



```
l = [pid,np,qty,pp,(pp*qty)]
cart.append(l)
ch = input("Do you want to input more records? [Y/N]")
if(ch == 'N' or ch == 'n'):
    break

cw.writerows(cart)
f.close()

elif(ec == 2):
    reader()

elif (ec==3):
    cnm = input("\nEnter customer name:")
    paymth=input("Enter payment method[Cash / Debit Card / Credit Card / Digital Payment (UPI)]: ")
    print("\n\t\t\tSUPERMARKET\n")
    sp()
    print("Customer Name:\t"+cnm)
    print("Payment Method:\t"+paymth)
    td=datetime.date.today()                                # Date, Day, Time
    z=td.strftime("%A")
    print("\nDate:\t",td)
    print("Day:\t",z)
    tmn=datetime.datetime.now()
    tm=tmn.strftime("%H:%M:%S")
    print("Time:\t",tm)
    print("")

    reader()

elif(ec == 4):
    exit()

else:
    print("Enter a valid option")
```

#MAIN

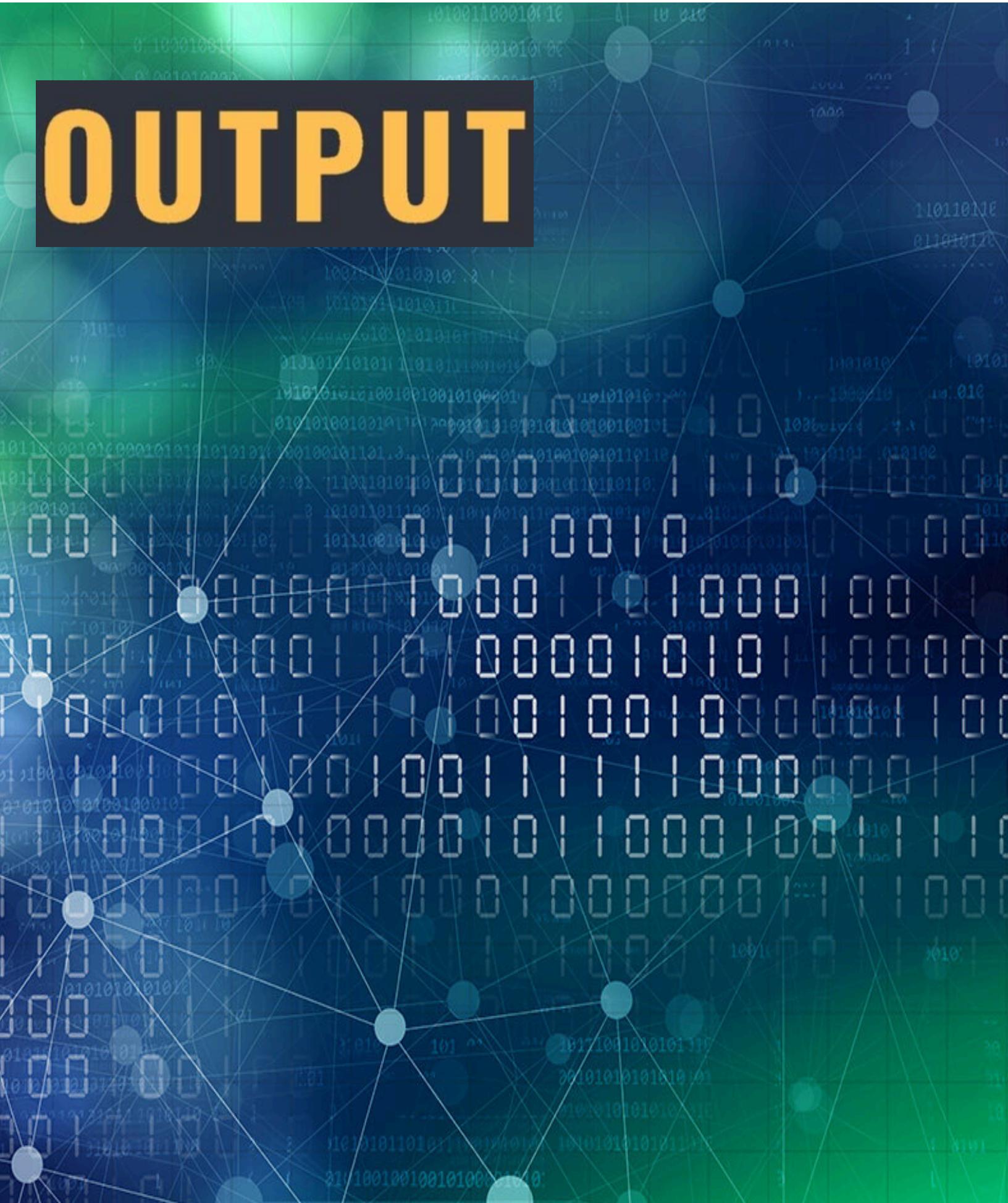
```
while True:                                #function call
    if(login_id == "Employee"):
        print("\nManage customer data - Add, Delete, View")
        customerdata()

    elif (login_id == "Manager"):
        print("\nManage product data - Add, Delete, View")
        productdata()

    elif (login_id=="Tech Support"):
        print("\nAdd, Delete, View, Update employee details")
        employeedata()

    elif (login_id=="Customer"):
        print("\n\tHappy Shopping!\n")
        neworder()
```

OUTPUT



Python Output:

Welcome to the Supermarket management system!

So, lets get started by getting you Logged-In

Enter username: Tech Support

Enter password: tech guy

Welcome Tech Support !

Add, Delete, View, Update employee details

Menu of functions

[1] Add employee

[2] Remove employee

[3] View employee database

[4] Update employee record

[5] Exit

Enter option choice:1

Enter employee ID:1

Enter name:Alexa

Enter address:Amazon

Employee data inserted

Add, Delete, View, Update employee details

Menu of functions

[1] Add employee

[2] Remove employee

[3] View employee database

[4] Update employee record

[5] Exit

Enter option choice:1

Enter employee ID:2

Enter name:Google Assitant

Enter address:Google

Employee data inserted

Add, Delete, View, Update employee details
Menu of functions

- [1] Add employee
- [2] Remove employee
- [3] View employee database
- [4] Update employee record
- [5] Exit

Enter option choice:3

Total records found are 2

(1, ' Alexa', 'Amazon')
(2, ' Google Assitant', 'Google')

Add, Delete, View, Update employee details
Menu of functions

- [1] Add employee
- [2] Remove employee
- [3] View employee database
- [4] Update employee record
- [5] Exit

Enter option choice:4

Enter id of the employee: 2

Enter the name: Google Assitant

Enter new address: Aplhabet

Data Updated

Add, Delete, View, Update employee details
Menu of functions

- [1] Add employee
- [2] Remove employee
- [3] View employee database
- [4] Update employee record
- [5] Exit

Enter option choice:3

Total records found are 4

(1, ' Alexa', 'Amazon')
(2, ' Google Assitant', 'Aplhabet')
(3, ' DK Sharma', 'Delhi')
(4, ' Udit Kumar', 'Noida')

Add, Delete, View, Update employee details
Menu of functions

- [1] Add employee
- [2] Remove employee
- [3] View employee database
- [4] Update employee record
- [5] Exit

Enter option choice:2

Enter employee id of customer whose details are to be deleted:4

Employee record deleted

Add, Delete, View, Update employee details
Menu of functions

- [1] Add employee
- [2] Remove employee
- [3] View employee database
- [4] Update employee record
- [5] Exit

Enter option choice:3

Total records found are 3

(1, ' Alexa', 'Amazon')
(2, ' Google Assitant', 'Aplhabet')
(3, ' DK Sharma', 'Delhi')

Add, Delete, View, Update employee details
Menu of functions

- [1] Add employee
- [2] Remove employee
- [3] View employee database
- [4] Update employee record
- [5] Exit

Enter option choice:5

>>>|

Welcome to the Supermarket management system!

So, lets get started by getting you Logged-In

Enter username: Employee

Enter password: working

Welcome Employee !

Manage customer data - Add, Delete, View

Menu of functions

[1] Add customer

[2] Remove customer

[3] View customer database

[4] Update customer details

[5] Exit

Enter option choice:1

Enter Customer ID:1

Enter Customer name:Jayant Kumar

Enter 8 digit mobile number:99887365

Customer data inserted

Manage customer data - Add, Delete, View

Menu of functions

[1] Add customer

[2] Remove customer

[3] View customer database

[4] Update customer details

[5] Exit

Enter option choice:1

Enter Customer ID:2

Enter Customer name:Lalit Pandey

Enter 8 digit mobile number:98781243

Customer data inserted

Manage customer data - Add, Delete, View

Menu of functions

- [1] Add customer
- [2] Remove customer
- [3] View customer database
- [4] Update customer details
- [5] Exit

Enter option choice:1

Enter Customer ID:3

Enter Customer name:Abhay Sharma

Enter 8 digit mobile number:88156772

Customer data inserted

Manage customer data - Add, Delete, View

Menu of functions

- [1] Add customer
- [2] Remove customer
- [3] View customer database
- [4] Update customer details
- [5] Exit

Enter option choice:3

Total records found are 3

(1, 'Jayant Kumar', 99887365)
(2, 'Lalit Pandey', 98781243)
(3, 'Abhay Sharma', 88156772)

Manage customer data - Add, Delete, View

Menu of functions

- [1] Add customer
- [2] Remove customer
- [3] View customer database
- [4] Update customer details
- [5] Exit

Enter option choice:2

Enter customer id of customer whose details are to be deleted:3

Customer record deleted

Manage customer data - Add, Delete, View

Menu of functions

- [1] Add customer
- [2] Remove customer
- [3] View customer database
- [4] Update customer details
- [5] Exit

Enter option choice:3

Total records found are 2

(1, 'Jayant Kumar', 99887365)
(2, 'Lalit Pandey', 98781243)

Manage customer data - Add, Delete, View

Menu of functions

- [1] Add customer
- [2] Remove customer
- [3] View customer database
- [4] Update customer details
- [5] Exit

Enter option choice:4

Enter customer ID:1

Enter the nameJayant Kumar

Enter new phone no.76903314

Manage customer data - Add, Delete, View

Menu of functions

- [1] Add customer
- [2] Remove customer
- [3] View customer database
- [4] Update customer details
- [5] Exit

Enter option choice:3

Total records found are 2

(2, ' Lalit Pandey', 98781243)

(1, ' Jayant Kumar', 76903314)

Manage customer data - Add, Delete, View

Menu of functions

- [1] Add customer
- [2] Remove customer
- [3] View customer database
- [4] Update customer details
- [5] Exit

Enter option choice:5

>>>|

Welcome to the Supermarket management system!

So, lets get started by getting you Logged-In

Enter username: Manager

Enter password: Scott

Welcome Manager !

Manage product data - Add, Delete, View

Menu of functions

[1] Add product

[2] Remove product

[3] View product database

[4] Update product

[5] Exit

Enter option choice:1

Enter product ID:1

Enter product name:Apple

Enter Quantity:200

Enter Price:70

Product added!

Manage product data - Add, Delete, View

Menu of functions

[1] Add product

[2] Remove product

[3] View product database

[4] Update product

[5] Exit

Enter option choice:1

Enter product ID:2

Enter product name:Banana

Enter Quantity:400

Enter Price:20

Product added!

Manage product data - Add, Delete, View
Menu of functions

- [1] Add product
- [2] Remove product
- [3] View product database
- [4] Update product
- [5] Exit

Enter option choice:1

Enter product ID:3

Enter product name:Milk

Enter Quantity:150

Enter Price:35

Product added!

Manage product data - Add, Delete, View
Menu of functions

- [1] Add product
- [2] Remove product
- [3] View product database
- [4] Update product
- [5] Exit

Enter option choice:1

Enter product ID:4

Enter product name:Spring Onion

Enter Quantity:60

Enter Price:45

Product added!

Manage product data - Add, Delete, View
Menu of functions

- [1] Add product
- [2] Remove product
- [3] View product database
- [4] Update product
- [5] Exit

Enter option choice:3

Total records found are 4

```
(1, 'Apple', 200, 70)
(2, 'Banana', 400, 20)
(3, 'Milk', 150, 35)
(4, 'Spring Onion', 60, 45)
```

Manage product data - Add, Delete, View
Menu of functions

```
[1] Add product
[2] Remove product
[3] View product database
[4] Update product
[5] Exit
```

Enter option choice:4

Enter product id4

Enter product nameSpring Onion

Enter new qty250

Enter new price47

Manage product data - Add, Delete, View
Menu of functions

```
[1] Add product
[2] Remove product
[3] View product database
[4] Update product
[5] Exit
```

Enter option choice:3

Total records found are 4

```
(1, 'Apple', 200, 70)
(2, 'Banana', 400, 20)
(3, 'Milk', 150, 35)
(4, 'Spring Onion', 250, 47)
```

Manage product data - Add, Delete, View
Menu of functions

- [1] Add product
- [2] Remove product
- [3] View product database
- [4] Update product
- [5] Exit

Enter option choice:2

Enter product id of the product to be deleted:2

Product deleted!

Manage product data - Add, Delete, View
Menu of functions

- [1] Add product
- [2] Remove product
- [3] View product database
- [4] Update product
- [5] Exit

Enter option choice:3

Total records found are 3

(1, 'Apple', 200, 70)
(3, 'Milk', 150, 35)
(4, 'Spring Onion', 250, 47)

Manage product data - Add, Delete, View
Menu of functions

- [1] Add product
- [2] Remove product
- [3] View product database
- [4] Update product
- [5] Exit

Enter option choice:5

>>>

Welcome to the Supermarket management system!

So, lets get started by getting you Logged-In

Enter username: Customer

Enter password: 123

Welcome Customer !

Happy Shopping!

Menu of functions

[1] Add items

[2] View cart

[3] Checkout

[4] Exit

Enter option choice:1

Enter product ID:1

Enter product name:Apple

Enter product quantity:10

Enter product price:70

Do you want to input more records? [Y/N]Y

Enter product ID:2

Enter product name:Banana

Enter product quantity:15

Enter product price:20

Do you want to input more records? [Y/N]Y

Enter product ID:3

Enter product name:Milk

Enter product quantity:2

Enter product price:35

Do you want to input more records? [Y/N]N

Happy Shopping!

Menu of functions

- [1] Add items
- [2] View cart
- [3] Checkout
- [4] Exit

Enter option choice:2

CART

1	Apple	10	70	700
2	Banana	15	20	300
3	Milk	2	35	70

Grand Total: 1070

Happy Shopping!

Menu of functions

- [1] Add items
- [2] View cart
- [3] Checkout
- [4] Exit

Enter option choice:3

Enter customer name:Shubham Jain

Enter payment method[Cash / Debit Card / Credit Card / Digital Payment (UPI)]: Cash

SUPERMARKET

Customer Name: Shubham Jain

Payment Method: Cash

Date: 2022-02-13

Day: Sunday

Time: 16:01:59

CART

1	Apple	10	70	700
2	Banana	15	20	300
3	Milk	2	35	70

Grand Total: 1070

Happy Shopping!

Menu of functions

- [1] Add items
- [2] View cart
- [3] Checkout
- [4] Exit

Enter option choice:4

>>>|

MySQL Output:

1. Customer Table

```
mysql> select * from customer;
+-----+-----+
| cid  | cname           | cphone   |
+-----+-----+
| 1    | Jayant Kumar     | 76903314  |
| 2    | Lalit Pandey    | 98781243  |
+-----+
2 rows in set (0.00 sec)
```

2. Employee Table

```
mysql> select * from emp;
+-----+-----+
| id  | ename           | address   |
+-----+-----+
| 1   | Alexa            | Amazon    |
| 2   | Google Assitant | Aplhabet  |
| 3   | DK Sharma        | Delhi     |
+-----+
3 rows in set (0.00 sec)
```

3. Product Table

```
mysql> select * from prd;
+----+-----+-----+-----+
| pid | pname          | qty   | price  |
+----+-----+-----+-----+
| 1   | Apple          | 200   | 70     |
| 3   | Milk           | 150   | 35     |
| 4   | Spring Onion  | 250   | 47     |
+----+-----+-----+-----+
3 rows in set (0.00 sec)
```

CSV Output (Spreadsheet):

	A	B	C	D	E	F
1	P_ID	P_Name	Qty	Price	Total Price	
2		1 Apple	10	70	700	
3		2 Banana	15	20	300	
4		3 Milk	2	35	70	
5						

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