# COMPUTER SCIENCE PROJECT

## COSMETICS SHOP

## MANAGEMENT SYSTEM

# CERTIFICATE

This is to certify that the Computer Science Project titled "**COSMETICS SHOP MANAGEMENT SYSTEM**" has been successfully completed by **VANI GOYAL** and **MANVI GUPTA** of Class **XII-D** in partial fulfillment of curriculum of **CENTRAL BOARD OF SECONDARY EDUCATION (CBSE)** leading to the award of annual examination of the year **2022-2023**.

**INTERNAL EXAMINER** **TEACHER IN CHARGE**

# ACKNOWLEDGEMENT

We would like to express our sincere gratitude to our computer science teacher **MS. NEERU MITTAL, PGT COMPUTER SCIENCE** for her vital support, guidance and encouragement – without which this project would not have come forth. I would also like to express my gratitude to our school **SRDAV PUBLIC SCHOOL** for letting us use the school laboratory.

# INDEX

# BRIEF OVERVIEW

The cosmetics industry is a rapidly growing industry worldwide. Every year millions of people consume cosmetics products across the globe. This has led to the rise of many multibillion-dollar brands like Lakme, L'Oreal, Maybelline, etc. Amidst this rapid rise in the production and consumption of cosmetics, there is a big challenge that is faced by small retailers as well as big businesses. This is the problem of inventory management.

Our project aims to solve this problem by providing an easy-to-use computerized interface for cosmetic shop owners to manage the stock of products. Our interface enables shop owners to easily add/remove/view products and keep track of the details of their day-to-day customers. Using the interface, customers can easily view details of the products present in stock and calculate the total price of the products that they want to purchase.

All data is secured in a database. Login ids and passwords are provided to both owner and customers to prevent any malicious activities.

# NEED OF COMPUTERIZATION

Cosmetics shop management system is a Python based project and we have developed it using MySQL and Python. It has a **user-friendly interface**. The reason why we chose to work on this project is because we saw a need for computerisation of the records of a cosmetics shop. In today's world, lakhs of cosmetic products are launched every single day. Thus, the computerisation of the details of these products is imperative. The interface developed by us ensures that the **data is secured** and is visible only to the authorized person. It also provides **24x7 uptime** i.e. the customer can browse through the products at any time of the day. The facility of **online purchase** is also provided to the consumers. The organization of the data becomes a lot easier and less time consuming. The interface also ensures **accurate records** and minimizes the inevitable and costly errors with manual data entry. This shop management system helps both the owners and the customers to manage and gather the required information (prices of the products to be purchased, quantity of the product in stock etc.) in much less time.

# SOFTWARE REQUIREMENT

## Software:

- **PYTHON:** Python is an interpreted, object-oriented, high-level programming language with dynamic semantics. Python's simple, easy to learn syntax emphasizes readability and therefore reduces the cost of program maintenance. Python supports modules and packages, which encourages program modularity and code reuse. The Python interpreter and the extensive standard library are available in source or binary form without charge for all major platforms, and can be freely distributed.

- **MYSQL DATABASE:** A database is an organized collection of structured information, or data, typically stored electronically in a computer system. We have used MySQL as the database for our application. MySQL is a fast, easy-to-use RDBMS being used for many small and big businesses. It has following features:

    - MySQL is released under an open-source license. So you have nothing to pay to use it.
    - MySQL supports a lot of the functionality present in most expensive and powerful database packages.
    - MySQL works on many operating systems and with many languages including Python, C, C++, Java, etc.

# ADVANTAGES OF THE PROJECT

The cosmetics shop management system has several advantages:

- It helps in completely automating the management of cosmetics stock thereby saving a lot of time and effort.
- It allows shop owners to effectively add/view/remove products from the stock data.
- The system enables owners to keep track about details of the customers registered on the system.
- Only authenticated owners/customers can access this system. Valid login id and password need to be entered to access the system.
- The system provides allows owners and customers to view products based on various search criteria like product name, product id, etc.
- Customers can use the system to calculate the total price of the products that they want to purchase.

# LIMITATIONS OF THE PROJECT

This management system has certain demerits which need to be worked upon:

- Currently, customers can only view the details of the items, they cannot place orders through this system.
- This interface is designed such that it supports a single owner, not multiple owners.
- When the user is prompted to enter the password by the system, the entered password is visible on the screen instead of asterisk symbol. This can lead to password stealth.
- Categories for cosmetic products like facewash, powder, etc. have not been stored.
- Taxes and discounts haven’t been added while displaying the total cost of items to customer.

# SOURCE CODE OF THE PROJECT

```
import os
import platform

import mysql.connector

cosmetics_db = mysql.connector.connect(host="localhost", user="root",
                                       passwd="qwedsa",
                                       database="cosmetics", charset="utf8")
dbcursor = cosmetics_db.cursor()
ownerLoginId = 101
ownerPassword = "123"


def insertCosmetics():
    id = int(input("Enter the cosmetic ID number : "))
    name = input("Enter the Cosmetics Name: ")
    company = input("Enter company of Cosmetics : ")
    cost = int(input("Enter the Cost : "))
    quantity = int(input("Enter the Quantity : "))

    sql = "insert into product(id,name,company,cost,quantity) values
(%s,%s,%s,%s,%s)"
    parameters = (id, name, company, cost, quantity)

    dbcursor.execute(sql, parameters)
    cosmetics_db.commit()
    print("Product inserted successfully")


def viewCosmetics():
    print("Select the search criteria : ")
    print("1. Product Id")
    print("2. Product Name")
    print("3. All")
    ch = int(input("Enter the choice : "))

    if ch == 1:
        s = int(input("Enter Product ID : "))
        parameters = (s,)
```

```
        sql = "select * from product where id=%s"
        dbcursor.execute(sql, parameters)
        res = dbcursor.fetchall()
        for x in res:
            print(x)
    elif ch == 2:
        s = input("Enter Product Name : ")
        parameters = (s,)
        sql = "select * from product where name=%s"
        dbcursor.execute(sql, parameters)
        res = dbcursor.fetchall()
        for x in res:
            print(x)
    elif ch == 3:
        sql = "select * from product"
        dbcursor.execute(sql)
        res = dbcursor.fetchall()
        dbcursor.execute(sql)
        res = dbcursor.fetchall()
        for x in res:
            print(x)
    else:
        print("Invalid choice entered!")


def purchaseCosmetics():
    print("Please enter the details to purchase cosmetics product :\n")

    sql = "select * from product"
    dbcursor.execute(sql)
    res = dbcursor.fetchall()
    print("The Cosmetics Stock details are as follows : ")
    print("(Cosmetics ID, Cosmetics Name, Cost, Quantity)")
    for x in res:
        print(x)

    ch = 'y'
    totalCost = 0
    while (ch in ['y', 'Y']):
        name = input("\nEnter the item name to be purchased : ")
        qty = int(input("Enter the item quantity: "))

        sql = "Select cost,quantity from product where name=%s"
        parameters = (name,)
        dbcursor.execute(sql, parameters)
        res = dbcursor.fetchall()
        item = res[0]
        if (qty > item[1]):
            print("Sorry, only " + str(item[1]) +
```

```
                    " " + name + " are available")
        else:
            price = float(item[0])
            totalCost += qty*price
        ch = input("Want to purchase more items: ")

    print("Total cost of items purchased is Rs.", totalCost)


def removeCosmetics():
    id = int(input("Enter the product id to be deleted : "))

    parameters = (id,)
    sql = "Delete from product where id=%s"

    dbcursor.execute(sql, parameters)
    cosmetics_db.commit()
    print("Cosmetic item deleted successfully")


def insertCustomer():
    id = input("Enter the Customer Id : ")
    name = input("Enter the Customer Name: ")
    pwd = input("Enter the Customer Password: ")
    age = input("Enter the Customer Age: ")
    phoneno = input("Enter Phone no. of Customer : ")
    address = input("Enter Address : ")
    gender = input("Enter gender of customer: ")

    sql = "insert into customer(id,name,age,password,phone_no,address,gender)
values (%s,%s,%s,%s,%s,%s,%s)"
    parameters = (id, name, age, pwd, phoneno, address, gender)

    dbcursor.execute(sql, parameters)
    cosmetics_db.commit()
    print("Customer details inserted successfully")


def viewCustomer():
    print("Select the search criteria : ")
    print("1. Customer ID")
    print("2. Customer Name")
    print("3. All")
    ch = int(input("Enter the choice : "))
    if ch == 1:
        s = int(input("Enter customer ID : "))
        parameters = (s,)
        sql = "select * from customer where id=%s"
        dbcursor.execute(sql, parameters)
```

```
        res = dbcursor.fetchall()
        for x in res:
            print(x)
    elif ch == 2:
        s = input("Enter Customer Name : ")
        parameters = (s,)
        sql = "select * from customer where name=%s"
        dbcursor.execute(sql, parameters)
        res = dbcursor.fetchall()
        for x in res:
            print(x)
    elif ch == 3:
        sql = "select * from customer"
        dbcursor.execute(sql)
        res = dbcursor.fetchall()
        print("The Customer details are as follows : ")
        print("(Customer ID, Name, Password, Age, Phone No, Address, Gender)")
        for x in res:
            print(x)


def removeCustomer():
    id = int(input("Enter the customer id to be deleted : "))

    parameters = (id,)
    sql = "Delete from customer where id=%s"

    dbcursor.execute(sql, parameters)
    cosmetics_db.commit()
    print("Customer deleted successfully")


def menuOptions(isOwnerLogin):  # Function for the Cosmetics Menu
    allOptions = {
        1: "To view cosmetics product",
        2: "To add cosmetics product",
        3: "To purchase cosmetics",
        4: "To remove any cosmetics product",
        5: "To add customer details",
        6: "To view customer details",
        7: "To remove customer details",
        8: "To exit the online store"
    }
    options = list(range(1, 9))

    if isOwnerLogin:
        options = [1, 2, 4, 5, 6, 7, 8]
    else:
        options = [1, 3, 8]
```

```
    choice = 0
    while choice != 8:
        print("\n\nWhat would you like to do ?")
        for i in options:
            print("Enter " + str(i) + " : " + allOptions[i])

        try:
            choice = int(input("\nPlease Select An Above Option: "))
        except ValueError:
            print("Invalid choice entered! Please try again")
        else:
            print("\n")
            if choice not in options:
                print("Invalid choice entered! Please try again")
                continue
            elif (choice == 1):
                viewCosmetics()
            elif (choice == 2):
                insertCosmetics()
            elif (choice == 3):
                purchaseCosmetics()
            elif (choice == 4):
                removeCosmetics()
            elif (choice == 5):
                insertCustomer()
            elif (choice == 6):
                viewCustomer()
            elif (choice == 7):
                removeCustomer()


def ownerLogin():
    id = int(input("\nPlease enter your owner login id: "))
    password = input("Please enter your password: ")
    if id == ownerLoginId and password == ownerPassword:
        clearScreen()
        print("Login successful...")
        print("Hi owner !\n")
        return True
    else:
        print("Invalid id or password ! Please try again")
        return False


def customerLogin():
    id = int(input("\nPlease enter your customer id: "))
    password = input("Please enter your password: ")
    sql = "select * from customer where id=%s and password=%s"
```

```
    parameters = (id, password)
    dbcursor.execute(sql, parameters)
    user = dbcursor.fetchall()
    if (len(user) != 0):
        clearScreen()
        print("Login successful...")
        print("Hi "+user[0][1]+" !\n")
        return True
    else:
        print("Invalid id or password ! Please try again")
        return False


def clearScreen():
    if (platform.system() == "Windows"):
        os.system("cls")
    else:
        os.system("clear")


def login():
    success = False
    loginType = 1
    while success == False:
        print("\n")
        print("Enter 1: For owner login")
        print("Enter 2: For customer login")
        print("Enter 3: Exit Online Store")
        loginType = int(input("Enter your choice: "))
        if loginType == 1:
            success = ownerLogin()
        elif loginType == 2:
            success = customerLogin()
        elif loginType == 3:
            success = True
        else:
            print("\nInvalid choice entered ! Please try again\n")
    return loginType


def loginOptions():
    exit = False
    while not exit:
        loginType = login()
        if loginType == 3:
            exit = True
        else:
            isOwnerLogin = True
            if loginType == 2:
```

```
                isOwnerLogin = False
            menuOptions(isOwnerLogin)


def main():
    clearScreen()
    print("**********************************")
    print("Welcome to Cosmetics Online Store")
    print("**********************************\n")
    loginOptions()


main()
```

# OUTPUT SCREENING

## DATABASE:

```
mysql> desc product;
+----------+--------------+------+-----+---------+-------+
| Field    | Type         | Null | Key | Default | Extra |
+----------+--------------+------+-----+---------+-------+
| id       | int          | NO   | PRI | NULL    |       |
| name     | varchar(100) | NO   |     | NULL    |       |
| company  | varchar(50)  | YES  |     | NULL    |       |
| cost     | int          | NO   |     | NULL    |       |
| quantity | int          | NO   |     | 1       |       |
+----------+--------------+------+-----+---------+-------+
5 rows in set (0.00 sec)
```

```
mysql> desc customer;
+----------+--------------+------+-----+---------+-------+
| Field    | Type         | Null | Key | Default | Extra |
+----------+--------------+------+-----+---------+-------+
| id       | int          | NO   | PRI | NULL    |       |
| name     | varchar(60)  | NO   |     | NULL    |       |
| password | varchar(20)  | NO   |     | NULL    |       |
| age      | int          | YES  |     | NULL    |       |
| phone_no | varchar(12)  | YES  |     | NULL    |       |
| address  | varchar(200) | NO   |     | NULL    |       |
| gender   | varchar(10)  | YES  |     | NULL    |       |
+----------+--------------+------+-----+---------+-------+
7 rows in set (0.00 sec)
```

# PROGRAM:

## Login screen

```
**************************************
Welcome to Cosmetics Online Store
**************************************


Enter 1: For owner login
Enter 2: For customer login
Enter 3: Exit Online Store
Enter your choice:
```

## Owner Login

```
**************************************
Welcome to Cosmetics Online Store
**************************************


Enter 1: For owner login
Enter 2: For customer login
Enter 3: Exit Online Store
Enter your choice: 1

Please enter your owner login id: 101
Please enter your password: 123
```

# View cosmetic products

```
Login successful...
Hi owner !



What would you like to do ?
Enter 1 : To view cosmetics product
Enter 2 : To add cosmetics product
Enter 4 : To remove any cosmetics product
Enter 5 : To add customer details
Enter 6 : To view customer details
Enter 7 : To remove customer details
Enter 8 : To exit the online store

Please Select An Above Option: 1


Select the search criteria :
1. Product Id
2. Product Name
3. All
Enter the choice : 3
(1, 'Himalaya Herbals Kajal', 'Himalaya', 95, 5)
(2, 'MyGlamm Powder Matte Lipstick-Pink', 'MyGlamm', 599, 2)
(3, 'NIVEA Soft Light Moisturizer for Face', 'Nivea', 217, 7)


What would you like to do ?
Enter 1 : To view cosmetics product
Enter 2 : To add cosmetics product
Enter 4 : To remove any cosmetics product
Enter 5 : To add customer details
Enter 6 : To view customer details
Enter 7 : To remove customer details
Enter 8 : To exit the online store

Please Select An Above Option: 
```

## Add cosmetic products

```
What would you like to do ?
Enter 1 : To view cosmetics product
Enter 2 : To add cosmetics product
Enter 4 : To remove any cosmetics product
Enter 5 : To add customer details
Enter 6 : To view customer details
Enter 7 : To remove customer details
Enter 8 : To exit the online store

Please Select An Above Option: 2


Enter the cosmetic ID number : 4
Enter the Cosmetics Name: Maybelline New York Eyeliner
Enter company of Cosmetics : Maybelline
Enter the Cost : 136
Enter the Quantity : 10
Product inserted successfully
```

## Remove cosmetic products

```
What would you like to do ?
Enter 1 : To view cosmetics product
Enter 2 : To add cosmetics product
Enter 4 : To remove any cosmetics product
Enter 5 : To add customer details
Enter 6 : To view customer details
Enter 7 : To remove customer details
Enter 8 : To exit the online store

Please Select An Above Option: 4


Enter the product id to be deleted : 3
Cosmetic item deleted successfully
```

# Add customer details

```
What would you like to do ?
Enter 1 : To view cosmetics product
Enter 2 : To add cosmetics product
Enter 4 : To remove any cosmetics product
Enter 5 : To add customer details
Enter 6 : To view customer details
Enter 7 : To remove customer details
Enter 8 : To exit the online store

Please Select An Above Option: 5


Enter the Customer Id : 9
Enter the Customer Name: Vani
Enter the Customer Password: 902
Enter the Customer Age: 17
Enter Phone no. of Customer : 99999999999
Enter Address : B-32 Dhruva Apartments, Dilshad Garden, Delhi
Enter gender of customer: Female
Customer details inserted successfully
```

# View customer details

```
What would you like to do ?
Enter 1 : To view cosmetics product
Enter 2 : To add cosmetics product
Enter 4 : To remove any cosmetics product
Enter 5 : To add customer details
Enter 6 : To view customer details
Enter 7 : To remove customer details
Enter 8 : To exit the online store

Please Select An Above Option: 6


Select the search criteria :
1. Customer ID
2. Customer Name
3. All
Enter the choice : 2
Enter Customer Name : Nikita Sharma
(1, 'Nikita Sharma', 'Niki123', 24, '9679236723', 'Flat no. 81, Ankur Apartment, Mayur Vihar, Delhi', 'female')
```

## Remove customer details

```
What would you like to do ?
Enter 1 : To view cosmetics product
Enter 2 : To add cosmetics product
Enter 4 : To remove any cosmetics product
Enter 5 : To add customer details
Enter 6 : To view customer details
Enter 7 : To remove customer details
Enter 8 : To exit the online store

Please Select An Above Option: 7


Enter the customer id to be deleted : 1
Customer deleted successfully
```

## Customer Login

```
**********************************
Welcome to Cosmetics Online Store
**********************************



Enter 1: For owner login
Enter 2: For customer login
Enter 3: Exit Online Store
Enter your choice: 2

Please enter your customer id: 1
Please enter your password: Niki123
```

# Purchase cosmetic products

```
Login successful...
Hi Nikita Sharma !



What would you like to do ?
Enter 1 : To view cosmetics product
Enter 3 : To purchase cosmetics
Enter 8 : To exit the online store

Please Select An Above Option: 3


Please enter the details to purchase cosmetics product :

The Cosmetics Stock details are as follows :
(Cosmetics ID, Cosmetics Name, Cost, Quantity)
(1, 'Himalaya Herbals Kajal', 'Himalaya', 95, 5)
(2, 'MyGlamm Powder Matte Lipstick-Pink', 'MyGlamm', 599, 2)
(4, 'Maybelline New York Eyeliner', 'Maybelline', 136, 10)

Enter the item name to be purchased : MyGlamm Powder Matte Lipstick-Pink
Enter the item quantity: 1
Want to purchase more items: y

Enter the item name to be purchased : Maybelline New York Eyeliner
Enter the item quantity: 4
Want to purchase more items: n
Total cost of items purchased is Rs. 1143.0
```

# Exit Store

```
What would you like to do ?
Enter 1 : To view cosmetics product
Enter 3 : To purchase cosmetics
Enter 8 : To exit the online store

Please Select An Above Option: 8



Enter 1: For owner login
Enter 2: For customer login
Enter 3: Exit Online Store
Enter your choice:
```

# BIBLIOGRAPHY

The following were referred for developing this project:


- https://www.python4me.com/
- Computer Science with Python by Sumita Arora
- https://www.w3schools.com/