```cpp
#include <iostream>
#include <fstream>
using namespace std;

class Product {
protected:
    string name;
    float price;
public:
    Product(string n = "", float p = 0.0) {
        name = n;
        price = p;
    }
    virtual void display() {
        cout << "Product: " << name << " | Price:
Rs." << price << endl;
    }
```

```cpp
    string getName() { return name; }
    float getPrice() { return price; }
};

class Cosmetic : public Product {
public:
    Cosmetic(string n, float p) : Product(n, p) {}
    void display() override {
        cout << "[Cosmetic] " << name << " | Price: Rs." << price << endl;
    }
};

class Skincare : public Product {
public:
    Skincare(string n, float p) : Product(n, p) {}
    void display() override {
```

```cpp
        cout << "[Skincare] " << name << " | Price: Rs." << price << endl;
    }
};

class Bill {
    float total;
public:
    Bill() { total = 0; }

    void addProduct(Product &p, int qty) {
        float cost = p.getPrice() * qty;
        total += cost;

        ofstream fout("bill.txt", ios::app);
        fout << p.getName() << " x" << qty << " = Rs." << cost << endl;
```

```cpp
        fout.close();


    cout << "Added " << qty << " x " <<
p.getName()
        << " to your cart. Subtotal: Rs." << cost
<< endl;
    }


    void generateTotal(string customerName) {
        ofstream fout("bill.txt", ios::app);
        fout << "--------------------\n";
        fout << "Total Bill: Rs." << total << endl;
        fout << "=======================\n";
        fout << "Thank you, " << customerName
<< "! We hope to see you again. \n";
        fout.close();
    }
```

```cpp
    void showBill() {
        ifstream fin("bill.txt");
        string line;
        while (getline(fin, line)) {
            cout << line << endl;
        }
        fin.close();

        cout << "\n>>> Final Total Amount = Rs."
<< total << " <<<" << endl;
    }
};

int main() {
    string customerName;
```

```cpp
cout << " Welcome to Nykaa Beauty Store \n";
cout << "Please enter your name: ";
getline(cin, customerName);

Cosmetic c1("Lipstick", 499);
Cosmetic c2("Foundation", 799);
Skincare s1("Moisturizer", 699);
Skincare s2("Sunscreen", 599);

cout << "\nHi " << customerName << "! Here's our product list:\n";
cout << "1. "; c1.display();
cout << "2. "; c2.display();
cout << "3. "; s1.display();
cout << "4. "; s2.display();
```

```cpp
Bill b;
int choice, qty;

ofstream clearFile("bill.txt");
clearFile << "======= Nykaa Bill
=======\n";
clearFile.close();

cout << "\n🛒 Start adding products to
your cart! (Enter 0 to finish)\n";

do {
    cout << "\nEnter product number (0 to
checkout): ";
    cin >> choice;
    if (choice == 0) break;
```

```cpp
        cout << "Enter quantity: ";
        cin >> qty;

        switch (choice) {
            case 1: b.addProduct(c1, qty); break;
            case 2: b.addProduct(c2, qty); break;
            case 3: b.addProduct(s1, qty); break;
            case 4: b.addProduct(s2, qty); break;
            default: cout << " Oops! Invalid choice.
Try again.\n";
        }

    } while (choice != 0);

    cout << "\n Generating your final bill...\n";
    b.generateTotal(customerName);
```

```cpp
    cout << "\n===== Final Bill =====\n";
    b.showBill();


    cout << "\n Thank you for shopping with us,
"
        << customerName << "! Have a beautiful
day! \n";


    return 0;
}
```

Output:

 Welcome to Nykaa Beauty Store

Please enter your name: Sharayu

Hi Sharayu! Here's our product list:

1. [Cosmetic] Lipstick | Price: Rs.499

2. [Cosmetic] Foundation | Price: Rs.799

3. [Skincare] Moisturizer | Price: Rs.699

4. [Skincare] Sunscreen | Price: Rs.599

 Start adding products to your cart! (Enter 0 to finish)

Enter product number (0 to checkout): 1

Enter quantity: 2

 Added 2 x Lipstick to your cart. Subtotal: Rs.998

Enter product number (0 to checkout): 3

Enter quantity: 1

 Added 1 x Moisturizer to your cart. Subtotal: Rs.699

Enter product number (0 to checkout): 0

Generating your final bill...

===== Final Bill =====

======= Nykaa Bill =======

Lipstick x2 = Rs.998

Moisturizer x1 = Rs.699

Total Bill: Rs.1697

=========================

Thank you, Sharayu! We hope to see you again.

>>> Final Total Amount = Rs.1697 <<<

Thank you for shopping with us, Sharayu! Have a beautiful day!