#include <iostream>

#include <iomanip>

#include <vector>

#include <string>

using namespace std;

// Class representing an item class Item { private:

string name; int quantity;

double price;

public: // Constructor

Item(string n, int q, double p) : name(n), quantity(q), price(p) {}

// Getter methods string getName()

const {

return name;

}

int getQuantity()

const {

return quantity;

}

double getPrice()

const {

return price; }

};

// Class representing a supermarket billing system

class SupermarketBilling {

private:

vector<Item> items;

public:

// Function to add an item

void addItem(const Item& item) {

items.push\_back(item);

cout << "Item added to the cart." << endl;

}

// Function to remove an item

void removeItem(const string& itemName) {

for (auto it = items.begin(); it != items.end(); ++it) {

if (it->getName() == itemName) {

items.erase(it);

cout << "Item removed from the cart." << endl;

return;

}

}

cout << "Item not found in the cart." << endl;

}

// Function to calculate the total bill amount

double calculateTotal()

const {

double total = 0.0;

for (const auto& item : items) {

total += item.getPrice() \* item.getQuantity();

}

return total;

}

// Function to display the bill

void displayBill() const {

cout << "==============================\n";

cout << " BILL\n";

cout << "==============================\n";

cout << setw(20) << left << "Item Name" << setw(10) << "Quantity" << setw(10) << "Price" << endl;

cout << "------------------------------\n";

for (const auto& item : items) {

cout << setw(20) << left << item.getName() << setw(10) << item.getQuantity() << setw(10) << item.getPrice() << endl;

}

cout << "------------------------------\n"; cout << "Total: ₹" << calculateTotal() << endl; cout << "==============================\n";

}

};

int main() {

SupermarketBilling billingSystem;

char choice;

do {

cout << "MENU:\n";

cout << "1. Add item\n"; cout << "2. Remove item\n"; cout << "3. Display bill\n"; cout << "4. Checkout\n"; cout << "5. Exit\n"; cout << "Enter your choice: "; cin >> choice;

switch (choice) { case '1': { string name; int quantity;

double price;

cout << "Enter item name: "; cin >> name;

cout << "Enter quantity: "; cin >> quantity;

cout << "Enter price per unit: ";

cin >> price;

Item newItem(name, quantity, price);

billingSystem.addItem(newItem);

break;

}

case '2': {

string name;

cout << "Enter item name to remove: ";

cin >> name;

billingSystem.removeItem(name);

break;

}

case '3':

billingSystem.displayBill();

break;

case '4':

cout << "Thank you for shopping with us. Have a nice day!" << endl;

return 0;

case '5':

break;

default:

cout << "Invalid choice! Please try again." << endl;

}

} while (choice != '5');

return 0;

}