#include<iostream>

using namespace std;

struct Product {

char\* name;

char\* description;

double price;

double discount;

};

struct ProductItem {

Product \*product;

int quantity = 0;

};

struct Store {

ProductItem\*\* items;

int count = 0;

};

void ShowProduct(const Product\* product) {

cout << "===========PRODUCT INFO=============" << endl;

cout << "Name : " << product->name << endl;

cout << "Description : " << product->description << endl;

cout << "Price : " << product->price << "$"<<endl;

cout << "Discount : " << product->discount <<"%" << endl;

}

void ShowProductItem(const ProductItem\* item) {

ShowProduct(item->product);

cout << "Quantity : " << item->quantity << endl;

}

ProductItem\* getNewObject() {

cin.ignore();

cin.clear();

cout << "===========ENTER PRODUCT INFO============" << endl;

cout << "Enter name : ";

char\* name = new char[100]{};

cin.getline(name, 100);

cout << "Enter description : ";

char\* desc = new char[100]{};

cin.getline(desc, 100);

cout << "Enter price : ";

double price = 0;

cin >> price;

cout << "Enter discount : ";

double discount = 0;

cin >> discount;

auto product = new Product{ name,desc,price,discount };

cout << "Enter Quantity : ";

int quantity=0;

cin >> quantity;

auto item = new ProductItem{ product,quantity };

return item;

}

void AddItemToStore(Store& store,ProductItem\*item) {

auto newItems = new ProductItem \* [store.count+1] {};

for (size\_t i = 0; i < store.count; i++)

{

newItems[i] = store.items[i];

}

newItems[store.count] = item;

store.items = newItems;

newItems = nullptr;

store.count++;

}

void ShowAllItem(const Store\* store) {

for (size\_t i = 0; i < store->count; i++)

{

cout << "NO : " << i + 1 << endl;

ShowProductItem(store->items[i]);

}

}

void BuyProduct(Store& store, int no, int quantity) {

if (no >= 1 && no <= store.count) {

auto item = store.items[no - 1];

if (quantity >= 0 && quantity <= item->quantity) {

item->quantity -= quantity;

cout << "You bought : " << item->product->name << " successfully" << endl;

}

else {

cout << "Please enter correct amount" << endl;

}

}

else {

cout << "Please enter correct product no" << endl;

}

}

void ShowMenu() {

cout << "\nShow All Products 1" << endl;

cout << "Add New product 2" << endl;

cout << "Buy product 3" << endl;

cout << "Delete product 4" << endl;

}

void main() {

Product\* p1 = new Product{

new char[] {"Samsung S21"},

new char[] {"Ela telefon"},

2150,

15

};

Product\* p2 = new Product{

new char[] {"IPhone 13 Pro Max"},

new char[] {"Mohteshem telefon"},

3500,

8

};

Product\* p3 = new Product{

new char[] {"Iphone 11 Pro"},

new char[] {"normal telefon"},

2200,

20

};

ProductItem\* item1 = new ProductItem{ p1,100 };

ProductItem\* item2 = new ProductItem{ p2,75 };

ProductItem\* item3 = new ProductItem{ p3,125 };

Store\* store = new Store{};

store->items = new ProductItem \* [] {item1, item2, item3};

store->count = 3;

while (true)

{

ShowMenu();

int select = 0;

cout << "Enter your select : "<<endl;

cin >> select;

system("cls");

if (select == 1) {

ShowAllItem(store);

}

else if (select == 2) {

auto item = getNewObject();

AddItemToStore(\*store, item);

cout << "Item added successfully" << endl;

}

else if (select == 3) {

ShowAllItem(store);

cout << "Enter Product no : " << endl;

int no = 0;

cin >> no;

cout << "Enter quantity : "<<endl;

int quantity = 0;

cin >> quantity;

BuyProduct(\*store, no, quantity);

}

}

}