Task 1:

#include "stdafx.h"

#include <iostream>

#include <string>

using namespace std;

struct Item {

string code;

string description;

double price;

};

int main() {

Item cases[] = {{"A1", "Compact", 75.00}, {"A2", "Tower", 150.00}};

Item ram[] = {{"B1", "8 GB", 79.99}, {"B2", "16 GB", 149.99}, {"B3", "32 GB", 299.99}};

Item hdd[] = {{"C1", "1 TB HDD", 49.99}, {"C2", "2 TB HDD", 89.99}, {"C3", "4 TB HDD", 129.99}};

cout<<" \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl;

cout<<" \*Main Menu - Choose the Components for Your Computer\*"<<endl;

cout<<" \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl;

cout<<endl;

cout<<" ------------------"<<endl;

cout <<" ~Available Cases~" << endl;

cout<<" ------------------"<<endl;

cout<<endl;

for (int i = 0; i < sizeof(cases) / sizeof(cases[0]); i++) {

cout << cases[i].code << " - " << cases[i].description << " - $" << cases[i].price << endl;

}

cout<<" ----------------"<<endl;

cout <<" ~Available RAM~" << endl;

cout<<" ----------------"<<endl;

cout<<endl;

for (int i = 0; i < sizeof(ram) / sizeof(ram[0]); i++) {

cout << ram[i].code << " - " << ram[i].description << " - $" << ram[i].price << endl;

}

cout<<" ----------------------------------"<<endl;

cout <<" ~Available Main Hard Disk Drives~" << endl;

cout<<" ----------------------------------"<<endl;

cout<<endl;

for (int i = 0; i < sizeof(hdd) / sizeof(hdd[0]); i++) {

cout << hdd[i].code << " - " << hdd[i].description << " - $" << hdd[i].price << endl;

}

string selectedCase, selectedRAM, selectedHDD;

cout << "\nEnter the code for the selected Case (A1/A2): ";

cin >> selectedCase;

cout << "Enter the code for the selected RAM (B1/B2/B3): ";

cin >> selectedRAM;

cout << "Enter the code for the selected HDD (C1/C2/C3): ";

cin >> selectedHDD;

double casePrice = 0.0, ramPrice = 0.0, hddPrice = 0.0;

for (int i = 0; i < sizeof(cases) / sizeof(cases[0]); i++) {

if (cases[i].code == selectedCase) {

casePrice = cases[i].price;

break;

}

}

for (int i = 0; i < sizeof(ram) / sizeof(ram[0]); i++) {

if (ram[i].code == selectedRAM) {

ramPrice = ram[i].price;

break;

}

}

for (int i = 0; i < sizeof(hdd) / sizeof(hdd[0]); i++) {

if (hdd[i].code == selectedHDD) {

hddPrice = hdd[i].price;

break;

}

}

double basicSetPrice = 200.00;

double totalComputerPrice = basicSetPrice + casePrice + ramPrice + hddPrice;

cout << "\nSelected Case: " << selectedCase << " - Price: $" << casePrice << endl;

cout << "Selected RAM: " << selectedRAM << " - Price: $" << ramPrice << endl;

cout << "Selected HDD: " << selectedHDD << " - Price: $" << hddPrice << endl;

cout << "Total Computer Price: $" << totalComputerPrice << endl;

system("pause");

return 0;

}

TASK 2:

// maryamtask2.cpp : Defines the entry point for the console application.

//

#include "stdafx.h"

#include <iostream>

#include <string>

using namespace std;

struct Item {

string code;

string description;

double price;

};

int main() {

Item cases[] = {{"A1", "Compact", 75.00}, {"A2", "Tower", 150.00}};

Item ram[] = {{"B1", "8 GB", 79.99}, {"B2", "16 GB", 149.99}, {"B3", "32 GB", 299.99}};

Item hdd[] = {{"C1", "1 TB HDD", 49.99}, {"C2", "2 TB HDD", 89.99}, {"C3", "4 TB HDD", 129.99}};

cout<<" \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl;

cout<<" \*Main Menu - Choose the Components for Your Computer\*"<<endl;

cout<<" \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl;

cout<<endl;

cout<<" ------------------"<<endl;

cout <<" ~Available Cases~" << endl;

cout<<" ------------------"<<endl;

cout<<endl;

for (int i = 0; i < sizeof(cases) / sizeof(cases[0]); i++) {

cout << cases[i].code << " - " << cases[i].description << " - $" << cases[i].price << endl;

}

cout<<" ----------------"<<endl;

cout <<" ~Available RAM~" << endl;

cout<<" ----------------"<<endl;

cout<<endl;

for (int i = 0; i < sizeof(ram) / sizeof(ram[0]); i++) {

cout << ram[i].code << " - " << ram[i].description << " - $" << ram[i].price << endl;

}

cout<<" ----------------------------------"<<endl;

cout <<" ~Available Main Hard Disk Drives~" << endl;

cout<<" ----------------------------------"<<endl;

cout<<endl;

for (int i = 0; i < sizeof(hdd) / sizeof(hdd[0]); i++) {

cout << hdd[i].code << " - " << hdd[i].description << " - $" << hdd[i].price << endl;

}

Item ssd[] = {{"D1", "240 GB SSD", 59.99}, {"D2", "480 GB SSD", 119.99}};

Item secondHdd[] = {{"E1", "1 TB HDD", 49.99}, {"E2", "2 TB HDD", 89.99}, {"E3", "4 TB HDD", 129.99}};

Item opticalDrive[] = {{"F1", "DVD/Blu-Ray Player", 50.00}, {"F2", "DVD/Blu-Ray Re-writer", 100.00}};

Item operatingSystem[] = {{"G1", "Standard Version", 100.00}, {"G2", "Professional Version", 175.00}};

double casePrice = 0.0, ramPrice = 0.0, hddPrice = 0.0;

string selectedCase, selectedRAM, selectedHDD;

cout << "\nEnter the code for the selected Case (A1/A2): ";

cin >> selectedCase;

cout << "Enter the code for the selected RAM (B1/B2/B3): ";

cin >> selectedRAM;

cout << "Enter the code for the selected HDD (C1/C2/C3): ";

cin >> selectedHDD;

string selectedSSD, selectedSecondHDD, selectedOpticalDrive, selectedOperatingSystem;

double ssdPrice = 0.0, secondHddPrice = 0.0, opticalDrivePrice = 0.0, osPrice = 0.0;

cout << "Would you like to purchase additional items? (Y/N): ";

char choice;

cin >> choice;

if (choice == 'Y' || choice == 'y') {

cout << "Enter the code for the selected SSD (D1/D2): ";

cin >> selectedSSD;

for (int i = 0; i < sizeof(ssd) / sizeof(ssd[0]); i++) {

if (ssd[i].code == selectedSSD) {

ssdPrice = ssd[i].price;

break;

}

}

cout << "Enter the code for the selected Second HDD (E1/E2/E3): ";

cin >> selectedSecondHDD;

for (int i = 0; i < sizeof(secondHdd) / sizeof(secondHdd[0]); i++) {

if (secondHdd[i].code == selectedSecondHDD) {

secondHddPrice = secondHdd[i].price;

break;

}

}

cout << "Enter the code for the selected Optical Drive (F1/F2): ";

cin >> selectedOpticalDrive;

for (int i = 0; i < sizeof(opticalDrive) / sizeof(opticalDrive[0]); i++) {

if (opticalDrive[i].code == selectedOpticalDrive) {

opticalDrivePrice = opticalDrive[i].price;

break;

}

}

cout << "Enter the code for the selected Operating System (G1/G2): ";

cin >> selectedOperatingSystem;

for (int i = 0; i < sizeof(operatingSystem) / sizeof(operatingSystem[0]); i++) {

if (operatingSystem[i].code == selectedOperatingSystem) {

osPrice = operatingSystem[i].price;

break;

}

}

}

double basicSetPrice = 200.00;

double totalComputerPrice = basicSetPrice + casePrice + ramPrice + hddPrice + ssdPrice + secondHddPrice + opticalDrivePrice + osPrice;

cout << "\nSelected SSD: " << selectedSSD << " - Price: $" << ssdPrice << endl;

cout << "Selected Second HDD: " << selectedSecondHDD << " - Price: $" << secondHddPrice << endl;

cout << "Selected Optical Drive: " << selectedOpticalDrive << " - Price: $" << opticalDrivePrice << endl;

cout << "Selected Operating System: " << selectedOperatingSystem << " - Price: $" << osPrice << endl;

cout << "New Total Computer Price: $" << totalComputerPrice << endl;

system("pause");

return 0;

}

TASK 3:

// maryamtask3.cpp : Defines the entry point for the console application.

//

#include "stdafx.h"

#include <iostream>

#include <string>

using namespace std;

struct Item

{

string code;

string description;

double price;

};

int main()

{

Item cases[] = {{"A1", "Compact", 75.00}, {"A2", "Tower", 150.00}};

Item ram[] = {{"B1", "8 GB", 79.99}, {"B2", "16 GB", 149.99}, {"B3", "32 GB", 299.99}};

Item hdd[] = {{"C1", "1 TB HDD", 49.99}, {"C2", "2 TB HDD", 89.99}, {"C3", "4 TB HDD", 129.99}};

cout << " \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*" << endl;

cout << " \*Main Menu - Choose the Components for Your Computer\*" << endl;

cout << " \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*" << endl;

cout << endl;

cout << " ------------------" << endl;

cout << " ~Available Cases~" << endl;

cout << " ------------------" << endl;

cout << endl;

for (int i = 0; i < sizeof(cases) / sizeof(cases[0]); i++)

{

cout << cases[i].code << " - " << cases[i].description << " - $" << cases[i].price << endl;

}

cout << " ----------------" << endl;

cout << " ~Available RAM~" << endl;

cout << " ----------------" << endl;

cout << endl;

for (int i = 0; i < sizeof(ram) / sizeof(ram[0]); i++)

{

cout << ram[i].code << " - " << ram[i].description << " - $" << ram[i].price << endl;

}

cout << " ----------------------------------" << endl;

cout << " ~Available Main Hard Disk Drives~" << endl;

cout << " ----------------------------------" << endl;

cout << endl;

for (int i = 0; i < sizeof(hdd) / sizeof(hdd[0]); i++) {

cout << hdd[i].code << " - " << hdd[i].description << " - $" << hdd[i].price << endl;

}

Item ssd[] = {{"D1", "240 GB SSD", 59.99}, {"D2", "480 GB SSD", 119.99}};

Item secondHdd[] = {{"E1", "1 TB HDD", 49.99}, {"E2", "2 TB HDD", 89.99}, {"E3", "4 TB HDD", 129.99}};

Item opticalDrive[] = {{"F1", "DVD/Blu-Ray Player", 50.00}, {"F2", "DVD/Blu-Ray Re-writer", 100.00}};

Item operatingSystem[] = {{"G1", "Standard Version", 100.00}, {"G2", "Professional Version", 175.00}};

double casePrice = 0.0, ramPrice = 0.0, hddPrice = 0.0;

string selectedCase, selectedRAM, selectedHDD;

cout << "\nEnter the code for the selected Case (A1/A2): ";

cin >> selectedCase;

cout << "Enter the code for the selected RAM (B1/B2/B3): ";

cin >> selectedRAM;

cout << "Enter the code for the selected HDD (C1/C2/C3): ";

cin >> selectedHDD;

string selectedSSD, selectedSecondHDD, selectedOpticalDrive, selectedOperatingSystem;

double ssdPrice = 0.0, secondHddPrice = 0.0, opticalDrivePrice = 0.0, osPrice = 0.0;

cout << "Would you like to purchase additional items? (Y/N): ";

char choice;

cin >> choice;

if (choice == 'Y' || choice == 'y') {

cout << "Enter the code for the selected SSD (D1/D2): ";

cin >> selectedSSD;

for (int i = 0; i < sizeof(ssd) / sizeof(ssd[0]); i++) {

if (ssd[i].code == selectedSSD) {

ssdPrice = ssd[i].price;

break;

}

}

cout << "Enter the code for the selected Second HDD (E1/E2/E3): ";

cin >> selectedSecondHDD;

for (int i = 0; i < sizeof(secondHdd) / sizeof(secondHdd[0]); i++) {

if (secondHdd[i].code == selectedSecondHDD) {

secondHddPrice = secondHdd[i].price;

break;

}

}

cout << "Enter the code for the selected Optical Drive (F1/F2): ";

cin >> selectedOpticalDrive;

for (int i = 0; i < sizeof(opticalDrive) / sizeof(opticalDrive[0]); i++) {

if (opticalDrive[i].code == selectedOpticalDrive) {

opticalDrivePrice = opticalDrive[i].price;

break;

}

}

cout << "Enter the code for the selected Operating System (G1/G2): ";

cin >> selectedOperatingSystem;

for (int i = 0; i < sizeof(operatingSystem) / sizeof(operatingSystem[0]); i++) {

if (operatingSystem[i].code == selectedOperatingSystem) {

osPrice = operatingSystem[i].price;

break;

}

}

}

int numAdditionalItems = 0;

if (ssdPrice > 0) numAdditionalItems++;

if (secondHddPrice > 0) numAdditionalItems++;

if (opticalDrivePrice > 0) numAdditionalItems++;

if (osPrice > 0) numAdditionalItems++;

double basicSetPrice = 200.00;

double totalComputerPrice = basicSetPrice + casePrice + ramPrice + hddPrice + ssdPrice + secondHddPrice + opticalDrivePrice + osPrice;

double discount = 0.0;

if (numAdditionalItems == 1) {

discount = totalComputerPrice \* 0.05;

} else if (numAdditionalItems >= 2) {

discount = totalComputerPrice \* 0.10;

}

double discountedPrice = totalComputerPrice - discount;

cout << "\nSelected SSD: " << selectedSSD << " - Price: $" << ssdPrice << endl;

cout << "Selected Second HDD: " << selectedSecondHDD << " - Price: $" << secondHddPrice << endl;

cout << "Selected Optical Drive: " << selectedOpticalDrive << " - Price: $" << opticalDrivePrice << endl;

cout << "Selected Operating System: " << selectedOperatingSystem << " - Price: $" << osPrice << endl;

cout << "Basic Set Price: $" << basicSetPrice << endl;

cout << "Total Computer Price before discount: $" << totalComputerPrice << endl;

if (discount > 0) {

cout << "Discount Applied: $" << discount << endl;

cout << "New Total Computer Price after discount: $" << discountedPrice << endl;

}

else {

cout << "No discount applied. Total Computer Price remains: $" << totalComputerPrice << endl;

}

system("pause");

return 0;

}