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240

Project 3

**#1**

|  |
| --- |
| #include <iostream> |
|  | #include <iomanip> |
|  | using namespace std; |
|  |  |
|  | int drink,food,again,inches,total,tempFood1,tempFood2; |
|  | char typeOfdrink; |
|  | int asmMath(){ |
|  | \_\_asm{ |
|  | mov al,typeOfdrink; |
|  | cmp al,'s'; |
|  | jne checkW |
|  | s: |
|  | mov eax,2; |
|  | imul drink; |
|  | mov total,eax; |
|  | jmp nextItem; |
|  | checkW: |
|  | mov eax, 1; |
|  | imul drink; |
|  | mov total,eax; |
|  | jmp nextItem; |
|  | nextItem: |
|  | mov eax, inches; |
|  | cmp eax, 10; |
|  | jne twelveInches; |
|  | tenInches: |
|  | mov eax, 3; |
|  | imul food; |
|  | mov tempFood1,eax; |
|  | mov eax, total; |
|  | add eax,tempFood1; |
|  | mov total, eax; |
|  | jmp moveTotal; |
|  | twelveInches: |
|  | mov eax, 5; |
|  | imul food; |
|  | mov tempFood1,eax; |
|  | mov eax, total; |
|  | add eax,tempFood1; |
|  | mov total, eax; |
|  | jmp moveTotal; |
|  | moveTotal: |
|  | mov total,eax; |
|  | } |
|  | return total; |
|  | } |
|  | void getDrink(){ |
|  | cout<<"How many drinks?"; |
|  | cin>> drink; |
|  | cout<<"\tWhat kind of drink(s = soda, w = water)?"; |
|  | cin>> typeOfdrink; |
|  | } |
|  | void getFood(){ |
|  | cout<<"How many Sandwiches"; |
|  | cin>>food; |
|  | cout<<"\tWhat size of sandwich(10 or 12 inches)?"; |
|  | cin>>inches; |
|  | } |
|  | int main(){ |
|  | cout<<right<<setw(30)<<setfill('-')<<" 7-11 Convenient Store"<<left<<setw(10)<<setfill('-')<<" "<<endl; |
|  | cout<<"Drinks:\n"; |
|  | cout<<"\t Soda (s)"<<right<<setw(20)<<setfill ('.')<<"$2\n"; |
|  | cout<<"\t Water(w)"<<right<<setw(20)<<setfill('.')<<"$1\n"; |
|  | cout<<"Sandwiches\n"; |
|  | cout<<"\t 10 inches"<<right<<setw(19)<<setfill ('.')<<"$3\n"; |
|  | cout<<"\t 12 inches"<<right<<setw(19)<<setfill ('.')<<"$5\n"; |
|  | getDrink(); |
|  | getFood(); |
|  | total = asmMath(); |
|  | cout<<"Your total bill= "<<total<<endl; |
|  | getDrink(); |
|  | getFood(); |
|  | total= asmMath(); |
|  | cout<<"Your total bill= "<<total<<endl; |
|  | return 0; |
|  | }  -------- 7-11 Convenient Store ---------  Drinks:  Soda (s).................$2  Water(w).................$1  Sandwiches  10 inches................$3  12 inches................$5  How many drinks?2  What kind of drink(s = soda, w = water)?s  How many Sandwiches3  What size of sandwich(10 or 12 inches)?10  Your total bill= 13  How many drinks?3  What kind of drink(s = soda, w = water)?w  How many Sandwiches3  What size of sandwich(10 or 12 inches)?12  Your total bill= 18  Press any key to continue . . . |

**#2**

|  |
| --- |
| #include <iostream> |
|  | using namespace std; |
|  | int score,average,sum=0,counter=0,one=-1; |
|  |  |
|  | int getScore(){ |
|  | cout<<"Enter your score (-1) to stop:"; |
|  | cin>>score; |
|  | return score; |
|  | } |
|  | int (\*scorePointer)()=getScore; |
|  |  |
|  | int main(){ |
|  |  |
|  | cout<<"let's compute your score's average:\n"; |
|  | getScore(); |
|  | \_\_asm{ |
|  | startingPoint: |
|  | mov eax,score; |
|  | cmp eax,one; |
|  | jne keepAdding; |
|  | equalone: |
|  | mov eax, sum; |
|  | cdq |
|  | idiv counter; |
|  | jmp cont; |
|  | keepAdding: |
|  | mov eax,sum; |
|  | add eax,score; |
|  | mov sum,eax; |
|  | inc counter; |
|  | call scorePointer; |
|  | jmp startingPoint; |
|  | cont: |
|  | mov average,eax; |
|  | } |
|  | cout<<"Your average is : "<<average<<endl; |
|  | return 0; |
|  | }  let's compute your score's average:  Enter your score (-1) to stop:70  Enter your score (-1) to stop:88  Enter your score (-1) to stop:90  Enter your score (-1) to stop:77  Enter your score (-1) to stop:-1  Your average is : 81  Press any key to continue . . . |

**#3**

|  |
| --- |
| #include <iostream> |
|  | #include <string> |
|  | using namespace std; |
|  | string name; |
|  | int age; |
|  | char gender; |
|  | void getInfo(){ |
|  | cout<<"Enter your name:"; |
|  | cin>> name; |
|  | cout<<name<<", how old are you?"; |
|  | cin>>age; |
|  | cout<< name <<", what is your gender(m/f)?"; |
|  | cin >> gender; |
|  | } |
|  | void displayFemale(){ |
|  | cout<<"Hi "<<name<<", you are a female teenager\n"; |
|  | } |
|  | void displayNotFemale(){ |
|  | cout<<"Hi "<<name<<", you are not a female teenager\n"; |
|  | } |
|  | void (\*displayNotFemalePointer)()= displayNotFemale; |
|  | void (\*displayFemalePointer)()= displayFemale; |
|  | void (\*infoPointer)()=getInfo; |
|  | void asmProgram(){ |
|  | \_asm{ |
|  | call infoPointer; |
|  | mov eax, age; |
|  | cmp eax,13; |
|  | jg check19; |
|  | notTeen: |
|  | call displayNotFemalePointer; |
|  | jmp cont; |
|  | check19: |
|  | mov eax,age; |
|  | cmp eax,19; |
|  | jl checkFemale; |
|  | over19Teen: |
|  | jmp notTeen; |
|  | checkFemale: |
|  | mov al,gender; |
|  | cmp al,'f'; |
|  | jne checkUpperFemale; |
|  | iAmFemale: |
|  | call displayFemalePointer; |
|  | jmp cont; |
|  | checkUpperFemale: |
|  | mov al, gender; |
|  | cmp al, 'F'; |
|  | je iAmFemale; |
|  | notFemale: |
|  | jmp notTeen; |
|  |  |
|  | cont: |
|  | } |
|  | } |
|  | int main(){ |
|  | asmProgram(); |
|  | asmProgram(); |
|  |  |
|  | return 0; |
|  | }  Enter your name:Pamela  Pamela, how old are you?16  Pamela, what is your gender(m/f)?F  Hi Pamela, you are a female teenager  Enter your name:John  John, how old are you?16  John, what is your gender(m/f)?m  Hi John, you are not a female teenager  Press any key to continue . . . |

**#4**

#include<iostream>

using namespace std;

short a, b, c, d, e, f, x, y;

short temp1 = 0;

short top = 0;

short bottom = 0;

short findXASM() {

\_asm

{

mov ax, c;

imul e;

mov temp1, ax;

mov ax, b;

imul f;

sub temp1, ax;

mov ax, temp1;

mov top, ax;

mov ax, a;

imul ax, e;

mov temp1, ax;

mov ax, b;

imul ax, d;

sub temp1, ax;

mov ax, temp1;

mov bottom, ax;

mov ax, top;

cwd

idiv bottom;

mov x, ax;

}

return x;

}

short findYASM() {

\_asm

{

mov ax, a

imul ax, f

mov temp1, ax

mov ax, c

imul ax, d

sub temp1, ax

mov ax, temp1

mov top, ax

mov ax, a

imul ax, e

mov temp1, ax

mov ax, b

imul ax, d

sub temp1, ax

mov ax, temp1

mov bottom, ax

xor dx, dx //ALWAYS SET DX, TO TO ZERO

mov ax, top

idiv bottom

mov y, ax

}

return y;

}

int main()

{

cout << "This program sloves the system of" << endl;

cout << "aX+by=c" << endl;

cout << "dX + eY = f" << endl;

cout << "enter the values of a, b, and c: ";

cin >> a >> b >> c;

cout << "enter the values of d, e, and f: ";

cin >> d >> e >> f;

findXASM();

findYASM();

cout << "X = " << x << endl;

cout << "Y = " << y << endl;

system("PAUSE");

return 0;

}

**This program sloves the system of**

**aX+by=c**

**dX + eY = f**

**enter the values of a, b, and c: 3 1 1**

**enter the values of d, e, and f: 1 -2 5**

**X = 1**

**Y = -2**

**Press any key to continue . . .**