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

int main()
{
    //Q1
    int drinks;
    int sandwiches;
    int drinksPrice = 2;
    int sandwichesPrice = 4;
    int bill, bill2, finalbill;


    cout << "--------------------MENU----------------- " << endl;
    cout << " Drinks.............................$" << drinksPrice << endl;
    cout << " Sandwiches.......................... $" << sandwichesPrice <<
      endl;
    cout << "          How many drinks: " << endl;
    cin >> drinks;
    cout << "          How many sandwiches: " << endl;
    cin >> sandwiches;
    _asm {
        // bill = drinks * drinkPrice + sandwiches * sandwichesPrice
        mov eax, sandwichesPrice;            // eax = sandwichesPrice
        imul sandwiches;                     // edx:eax = sandwiches *
          sandwichPrice
        mov bill, eax;                      // bill = sandwichesPrice
        mov eax, drinksPrice;              // eax = drinkPrice
        imul drinks;                       // edx:eax = drinks * drinkPrice
        mov bill2, eax;                   // bill2 = drinkPrice

        mov eax, bill;
        add eax, bill2;
        mov finalbill, eax;

    }
    cout << "       Your total bill $" << finalbill << endl;


    //Q2

    int a, b, c, h, length1, width, rPerimeter, tPerimeter, tArea, rArea;
    cout << "Enter the values of a,b,c, and h  for the triangle: " << endl;
    cin >> a >> b >> c >> h;
    cout << "Enter the length and the width of the rectangle: " << endl;
    cin >> length1 >> width;
    short two = 2;
    _asm {
        // Calculate tPerimeter
        mov eax, a;             // eax == a
        add eax, b;             // eax == a + b
        add eax, c;             // eax == a + b + c
```

```
51          mov tPerimeter, eax;    // tPerimeter == a + b + c
52
53          // Calculate rPerimeter
54          mov eax, length1;       // eax == length
55          add eax, width;         // eax == length + width
56          add eax, eax;           // eax == (2 * length) + ( 2 * width)
57          mov rPerimeter, eax;    // rPerimeter == (2 * length) + ( 2 * width)
58
59          // Calculate rArea
60          mov eax, length1;       // eax = length
61          imul eax, width;        // eax = length * width
62          mov rArea, eax;         // rArea = length * width
63
64          // Calculate tArea
65          mov eax, c;             // eax == c
66          mov ebx, h;             // ebx == h
67          imul ebx;               // eax == c * h
68          cdq;                    // edx:eax == c * h
69          idiv two;               // eax == quotient, edx == remainder
70          mov tArea, eax;         // tArea == quotient
71      }
72      cout << "Triangle" << endl;
73      cout << "    Area....................................." << tArea << endl;
74      cout << "    Perimeter................................" << tPerimeter <<
          endl;
75      cout << "Rectangle" << endl;
76      cout << "    Area....................................." << rArea << endl;
77      cout << "    Perimeter................................" << rPerimeter <<
          endl;
78
79
80
81      // Q3
82
83      short C, F, five, nine;
84      five = 5;
85      nine = 9;
86      cout << "Enter temperature in Fahrenheight: ";
87      cin >> F;
88      _asm {
89          mov ax, F;              // ax == F
90          sub ax, 32;             // ax == F - 32
91          imul five;              // ax == 5(F - 32)
92          cwd;                    // dx:ax == 5(F -32)
93          idiv nine;              // ax == quotient, dx == remainder
94          mov C, ax;              // ax == quotient
95      }
96      cout << F << "F is " << C << "C" << endl;
97
98
99
100     // Q4
```

```
101     short input;
102     short output;
103     cout << "Enter a 3 digit int number : "<< endl;
104     cin >> input;
105     short hundred = 100;
106     short ten = 10;
107     short d3, d2, d1;
108     _asm {
109         // digit 3
110         mov ax, input;          // ax = input
111         cwd;                        // dx:ax = input
112         idiv hundred;               // ax = quotient, dx = remainder
113         mov d3, ax;                 // d3 = quotient
114
115         // digit 2
116         mov ax, dx;                 // ax = previous remainder
117         cwd;                        // dx:ax = previous remainder
118         idiv ten;                   // ax = quotient, dx = remainder
119         mov d2, ax;                 // d2 = quotient
120
121         // digit 1
122         mov ax, dx;                 // ax = remainder
123         mov d1, ax;                 // d1 = remainder
124
125         //sum
126         add ax, d2;                 // ax = d1 + d2
127         add ax, d3;                 // ax = d1 + d2 + d3
128         mov output, ax;             // output = sum
129     }
130     cout << "The total of digits in " << input << " is " << output << endl;
131
132
133     return 0;
134 }
```