

Lab Task # 2

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Project: BSAI

Q1. Write a program that takes temperature in Fahrenheit from the user and converts it into Celsius using the formula: $c = \frac{5}{9} (F - 32)$.

Ans.

The screenshot shows the Microsoft Visual Studio Code interface. The left sidebar (Explorer) lists files in the workspace, including 'Lab Task 3 . Q1.cpp' which is currently selected. The main area (Editor) contains the following C++ code:

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

int main() {
    float fahrenheit, celsius;
    cout << "Enter temperature in Fahrenheit: ";
    cin >> fahrenheit;

    celsius = (fahrenheit - 32) * 5.0 / 9.0;

    cout << "Temperature in Celsius: " << celsius << endl;
    return 0;
}
```

The right sidebar (Terminal) shows the output of running the program:

```
PS C:\Programming Fundamental C++> cd 'C:\Programming Fundamental C++\output'
PS C:\Programming Fundamental C++\output> & .\Lab Task 3 . Q1.exe
Enter temperature in Fahrenheit: 98.6
Temperature in Celsius: 37
PS C:\Programming Fundamental C++\output>
```

Below the terminal, there are several status icons and tabs for the current workspace.

Q2: Write a program that calculates the volume of a cube by taking its measurements (length, width, and height) from the user. Formula : $V = \text{length} * \text{width} * \text{height}$.

Ans.

```

int main() {
    cout << " 72387,Shan,LabTask2 ";
    float length, width, height, volume;
    cout << "Enter length of the cube: ";
    cin >> length;
    cout << "Enter width of the cube: ";
    cin >> width;
    cout << "Enter height of the cube: ";
    cin >> height;
    volume = length * width * height;
    cout << "Volume of the cube: " << volume << endl;
    return 0;
}

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```

PS C:\Programming Fundamental C++\output> cd 'c:\Programming Fundamental C++\output'
PS C:\Programming Fundamental C++\output> & .\Lab Task 3 . Q1.exe
Enter temperature in Fahrenheit: 98.6
Temperature in Celsius: 37
PS C:\Programming Fundamental C++\output> cd 'c:\Programming Fundamental C++\output'

PS C:\VProgramming Fundamental C++\output> & .\Lab Task2 Q2.exe
72387,Shan,LabTask2 Enter length of the cube: 4
Enter width of the cube: 4
Enter height of the cube: 4
Volume of the cube: 64
PS C:\Programming Fundamental C++\output>

```

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Q3: Write a program that takes marks obtained by a student in five subjects and calculates the total marks and percentage.

Ans.

```

#include <iostream>
using namespace std;

int main() {
    cout << "72387,Shan,Task2";
    float sub1, sub2, sub3, sub4, sub5, total, percentage;
    cout << "Enter marks of 5 subjects: ";
    cin >> sub1 >> sub2 >> sub3 >> sub4 >> sub5;
    total = sub1 + sub2 + sub3 + sub4 + sub5;
    percentage = (total / 500) * 100;
    cout << "Total Marks: " << total << endl;
    cout << "Percentage: " << percentage << "%" << endl;
    return 0;
}

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```

PS C:\Programming Fundamental C++\output> & .\Lab Task2 Q2.exe
72387,Shan,LabTask2 Enter length of the cube: 4
Enter width of the cube: 4
Enter height of the cube: 4
Volume of the cube: 64
PS C:\Programming Fundamental C++\output> cd 'c:\Programming Fundamental C++\output'

PS C:\VProgramming Fundamental C++\output> & .\Lab Task 2.Q3.exe
72387,Shan,Task2Enter marks of 5 subjects: 75 80 70 90 65
Total Marks: 380
Percentage: 76%
PS C:\Programming Fundamental C++\output>

```

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