Practical # 01

Qno:1

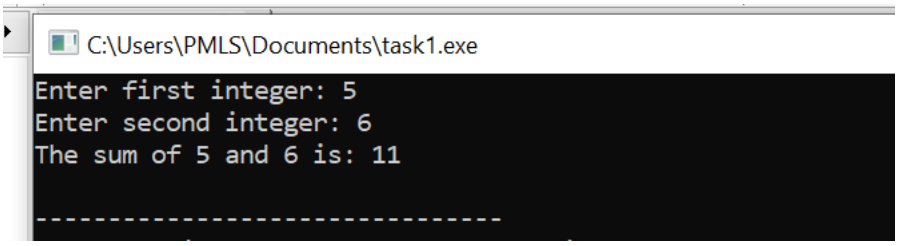
task1.cpp

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

int main() {
    int num1, num2, sum;
    cout << "Enter first integer: ";
    cin >> num1;
    cout << "Enter second integer: ";
    cin >> num2;
    sum = num1 + num2;
    cout << "The sum of " << num1 << " and " << num2 << " is: " << sum << endl;

    return 0;
}
```

Output



Qno2

task1.cpp | task 2.cpp

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

int main() {
    float centigrade, fahrenheit;
    cout << "Enter temperature in Centigrade: ";
    cin >> centigrade;
    fahrenheit = (centigrade * 9 / 5) + 32;
    cout << "The temperature in Fahrenheit is: " << fahrenheit << "°F" << endl;
    return 0;
}
```

Output

Qno 4

task1.cpp | task 2.cpp | task 3.cpp | [*] Untitled6

```cpp
int main() {
    char operation;
    float num1, num2, result;
    cout << "Enter an operator (+, -, *, /): ";
    cin >> operation;
    cout << "Enter two numbers: ";
    cin >> num1 >> num2;
    switch(operation) {
        case '+':
            result = num1 + num2;
            cout << "The result is: " << result << endl;
            break;
        case '-':
            result = num1 - num2;
            cout << "The result is: " << result << endl;
            break;
        case '*':
            result = num1 * num2;
            cout << "The result is: " << result << endl;
            break;
        case '/':
            if (num2 != 0)
                result = num1 / num2;
            else
                cout << "Error! Division by zero." << endl;
            break;
        default:
            cout << "Invalid operator!" << endl;
    }

    return 0;
}

```

Output

```
C:\Users\PMLS\Documents\task 3.exe
Enter an operator (+, -, *, /): +
Enter two numbers: 7
9
The result is: 16

--------------------------------
```

Qno4

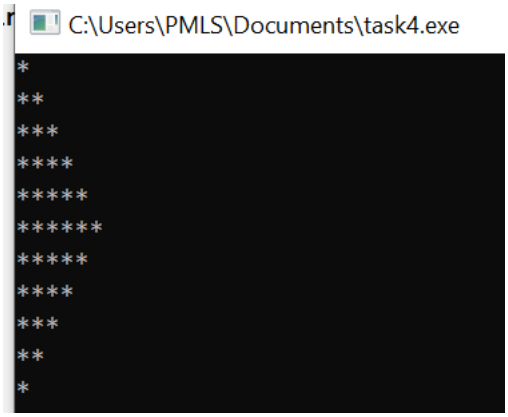
task1.cpp | task 2.cpp | task 3.cpp | task4.c

```cpp
#include <iostream>
using namespace std;
int main() {
    for (int i = 1; i <= 6; i++) {
        for (int j = 1; j <= i; j++) {
            cout << "*";
        }
        cout << endl;
    }
    for (int i = 5; i >= 1; i--) {
        for (int j = 1; j <= i; j++) {
            cout << "*";
        }
        cout << endl;
    }

    return 0;
}

```

Output



Qno5

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

class Average {
public:
    void calculateAverage(float num1, float num2, float num3) {
        float avg = (num1 + num2 + num3) / 3;
        cout << "The average of the three numbers is: " << avg << end
    }
};

int main() {
    float n1, n2, n3;
    cout << "Enter first number: ";
    cin >> n1;
    cout << "Enter second number: ";
    cin >> n2;
    cout << "Enter third number: ";
    cin >> n3;
    Average avg;
    avg.calculateAverage(n1, n2, n3);
    return 0;
}
```

Output

```
Enter first number: 7
Enter second number: 9
Enter third number: 6
The average of the three numbers is: 7.33333
```

Qno6

[*] task last.cpp

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

class Complex {
private:
    float real;
    float imag;

public:
    void setValues(float r, float i) {
        real = r;
        imag = i;
    }
    Complex add(Complex c) {
        Complex result;
        result.real = real + c.real;
        result.imag = imag + c.imag;
        return result;
    }
    Complex subtract(Complex c) {
        Complex result;
        result.real = real - c.real;
        result.imag = imag - c.imag;
        return result;
    }
    Complex multiply(Complex c) {
        Complex result;
        result.real = (real * c.real) - (imag * c.ima
        result.imag = (real * c.imag) + (imag * c.rea
        return result;
    }
    void display() {
        if (imag >= 0)
```

```
34              cout << real << " + " << imag << "i" << endl;
35          else
36              cout << real << " - " << -imag << "i" << endl;
37      }
38  };
39
40  int main() {
41      Complex c1, c2, result;
42      float real1, imag1, real2, imag2;
43      cout <<
44      cin >> real1 >> imag1;
45      c1.setValues(real1, imag1);
46      cout <<
47      cin >> real2 >> imag2;
48      c2.setValues(real2, imag2);rs
49      result = c1.add(c2);
50      cout << "Sum: ";
51      result.display();
52      result = c1.subtract(c2);
53      cout << "Difference: ";
54      result.display();
55      result = c1.multiply(c2);
56      cout << "Product: ";
57      result.display();
58      return 0;
59  }
```

Output

```
Enter real and imaginary parts of the first complex number: 5 2i
Enter real and imaginary parts of the second complex number: Sum: 5 + 2i
Difference: 5 + 2i
Product: -1.17701e-38 + 2.94253e-38i

--------------------------------
Process exited after 5.265 seconds with return value 0
Press any key to continue . . .
```

Roll no (23BSAI-13)