

Activity No. 1.1

Basic C++ Programming

Course Code: CPE010

Program: Computer Engineering

Course Title: Data Structures and Algorithms

Date Performed: 7/29/25

Section: CPE21S4

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6. Output

```
C:\Users\TIPQC\Documents\C> C:\Users\TIPQC\Documents\CP>
The sum is 14
a is less than b
the result of OR is: 1
the result of AND is: 1
-----
Process exited after 0.01862 seconds with return value 0
Press any key to continue . . .

#CPE010_HOA1p1_Pulgado.cpp
```

```
1 #include <iostream>
2 void add(int a, int b);
3 void compare(int a, int b);
4 bool number(bool a, bool b);
5
6 int main() {
7     add(6,8);
8     compare(3,5);
9     number(1,2);
10 }
11 void add(int a, int b){
12     std::cout<<"The sum is " << a + b<<std::endl;
13 }
14 void compare(int a, int b){
15     if(a>b){
16         std::cout<<"a is greater than b"<<std::endl;
17     }
18     else if (a<b){
19         std::cout<<"a is less than b"<<std::endl;
20     }
21     else{
22         std::cout<<"a is equal to b"<<std::endl;
23     }
24 }
25
26 bool number(bool a, bool b){
27     bool orResult = a || b;
28     bool andResult = a && b;
29     std::cout<<"the result of OR is: "<< orResult<<std::endl;
30     std::cout<<"the result of AND is: "<< andResult<<std::endl;
31
32     return true;
33 }
```

```
#include <iostream>

class Triangle{
private:
    double totalAngle, angleA, angleB, angleC;
public:
    Triangle(double A, double B, double C);
    void setAngles(double A, double B, double C);
    const bool validateTriangle();
};

Triangle::Triangle(double A, double B, double C) {
    angleA = A;
    angleB = B;
    angleC = C;
    totalAngle = A+B+C;
}

void Triangle::setAngles(double A, double B, double C) {
    angleA = A;
    angleB = B;
    angleC = C;
    totalAngle = A+B+C;
}

const bool Triangle::validateTriangle() {
    return (totalAngle <= 180);
}

int main() {
    Triangle set1(40, 30, 110);
    if(set1.validateTriangle()){
        std::cout << "The shape is a valid triangle.\n";
    }
    else {
        std::cout << "The shape is NOT a valid triangle.\n";
    }
    return 0;
}
```

ILO C:

```
#include <iostream>

int main() {
    int a = 5;
    int b = 10;

    std::cout << "a = " << a << ", b = " << b << std::endl;
    int swap = a;
    a = b;
    b = swap;

    std::cout << "a = " << a << ", b = " << b << std::endl;

    a = a + b;
    b = a - b;
    a = a - b;

    std::cout << "a = " << a << ", b = " << b << std::endl;

    return 0;
}
```

STDIN

Input for the program

Output:

a = 5, b = 10
a = 10, b = 5
a = 5, b = 10

```
#include <iostream>

double KToF(double kelvin) {
    return (kelvin - 273.15) * 9.0 / 5.0 + 32;
}

int main() {
    double kelvin = 500.0;
    double fahrenheit = KToF(kelvin);
    std::cout << kelvin << " K is equal to "
          << fahrenheit << " °F" << std::endl;
    return 0;
}
```

STDIN

Input for the program (Optional)

Output:

500 K is equal to 440.33 °F

7. Supplementary Activity

8. Conclusion

9. Assessment Rubric