

## Assignment # 1

### Fundamental of Programming

(CLO1 -> PLO1)

Deadline: 02 Dec 2020

1. Write a C++ program to prompt a length and width of square in meter find the area and display resultant value in centimeter.
2. Write a C++ program to calculate the distance between the two points.  
Note:  $x_1, y_1, x_2, y_2$  are all double values.

$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

3. Write a C++ program, take an integer value from user and check whether the value is multiple of 2. Print 1 if yes and print 0 if no. Use appropriate datatype for output.
4. Write a C++ program, take three input values from user and perform the following equations using bitwise technique.

$$F = A'C + A'B + AB'C + BC$$

5. Write a C++ program, take an integer value from user and check if it's greater than 10 and less than equal to 20. Print 1 if yes and print 0 if no. Use appropriate datatype for output.
6. Write a C++ program, take two string, first name and last name as input from user, concatenate them and print full name using single variable.
7. Write a C++ program, take two string as input from user and check if both strings are equal or not.
8. Write a C++ program to enter a string  $s_1$  and copy it to another string  $s_2$ .
9. Write a C++ program to convert temperature from Fahrenheit to Celsius using given formula.

$$c = \frac{5}{9}(f - 32)$$

10. Write a C++ program, take two fractions from user and perform addition, subtraction, multiplication and dividing on given fractions.

$$\text{AddingFractions} : \frac{a}{b} + \frac{c}{d} = \frac{ad + bc}{bd}$$

$$\text{SubtractingFractions} : \frac{a}{b} - \frac{c}{d} = \frac{ad - bc}{bd}$$

$$\text{MultiplyingFractions} : \frac{a}{b} \times \frac{c}{d} = \frac{ac}{bd}$$

$$\text{DividingFractions} : \frac{\frac{a}{b}}{\frac{c}{d}} = \frac{a}{b} \div \frac{c}{d} = \frac{a}{b} \times \frac{d}{c} = \frac{ad}{bc}$$

**Note:** Please make a report for this assignment containing statement of question, your solution and screen shots of output. Send pdf file of that report at [usmakarm@gmail.com](mailto:usmakarm@gmail.com). Rename file as yourname\_Assignment-1.pdf. Also use similar subject in email. Do see online resources for more help