

## BIT 2104: Programming Exercise 1

1. Rewrite the following mathematical expressions using C expressions and functions and write a simple program to implement each.

a)  $\sqrt{(u+v)+xw^2}$                       b)  $\sqrt{(x-y)^3}$

c)  $|xy - w/z|$

2. Write a complete C program that prompts the user for the Cartesian coordinates of two points  $(x_1, y_1)$  and  $(x_2, y_2)$  and displays the distance between them using formula.

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

3. Write a C program that prompts for a, b and x and calculates.

$$\text{Side} = \sqrt{a^2 + b^2 - 2ab \cos x}$$

4.

Write a program that takes radius of a circle from the user and calculates the diameter, circumference and area of the circle and display the result.

5.

Write a program that takes the days as input and outputs the months and days ( Hint months = days/30, days = days%30).

**6.**

Write a program that takes a four digits integer from user and shows the digits on the screen separately i.e. if user enters 7531, it displays 7,5,3,1 separately.