**PSG COLLEGE OF TECHNOLOGY, COIMBATORE – 641 004**

**DEPARTMENT OF APPLIED MATHEMATICS AND COMPUTATIONAL SCIENCES**

**I M.Sc SS(27.6.19) / TCS(25.06.19) - C Programming Lab**

1. A binary number is written as combination of 1's and 0's. Write a program which accepts a number (Assume it contains 4 digits) and prints whether it is binary or not.

For Ex:

1) if user inputs 1040  
then it should print "Not Binary".

2) if user inputs 1000  
then it should print "Binary".

2. Write a program to calculate Wind chill. Accept temperature (in Fahrenheit) and the wind speed as input and calculate wind chill using given formula.

wind\_chill = 35.74 + 0.6215\*temp + (0.4275\*temp - 35.75) \* (wind\_speed)0.16

For ex :

1) Suppose temp 20 and wind speed is 7.

wind\_chill = 35.74 + 0.6215\*20 + (0.4275\*20 - 35.75) \* 70.16

so wind\_chill = 11.034900625509998

2) Suppose temp 70 and wind speed is 15.

wind\_chill = 35.74 + 0.6215\*70 + (0.4275\*70 - 35.75) \* 150.16

so wind\_chill = 70.26098370128452

3. Write a program to print the roots of a quadratic equation.

4. Write a program which accepts Cartesian coordinates x and y, and prints its polar coordinates form i.e. r and theta (degrees only).

For ex :  
1) if user input x=3 and y=5 then it should print r and theta as  
5.8309  
59.0362

2) if user input x = 20 and y = 34 then it should print r and theta as  
39.4462  
59.5345