Lab 6: Functions (Part 1 Basics)

Objectives:

To understand function programming, its types and function-call.

Tasks:

1. Write a program that takes marks and your name as input and then displays your grade using a function that calculates your grade based on your entered marks.
2. Write a function minmax () that takes four integers as input and display the minimum and maximum number.
3. Create a function named 'prime' which accepts an integer and return a Boolean (a true if the number is prime and false otherwise).
4. Write a program to find a factorial of number entered by the user. Use function to find factorial.
5. Write a program to find the roots of a quadratic equation of type $a.x^2+b.x+c$ where the value of a, b, c is to be entered by the user inside main(). Make sure value of a must be non-zero, if it is complete the program. There must be two function one called roots() (non-return type) the other called deter() (return type).

   Algorithm for function deter():

   a. Read the coefficients of a quadratic equation a, b, c
   b. Calculate determinant d = b*b – 4*a*c
   c. Return d value to main()

   Algorithm for function roots():

   d. roots() will receive value of d from main() and then calculate and display the following
   e. If d > 0 calculate two real roots r1 = (-b + sqrt(d)) / (2*a) and r2 = (-b - sqrt(d)) / (2*a)
   f. If d=0, then roots r1 and r2 are equal and display r1 = r2 = -b/(2*a)
   g. If d < 0 then roots are imaginary and display real root= -b/(2*a) and img root =sqrt(-d)/(2*a)