Practice assignments on Functions

1. Design and develop a C function isprime (num) that accepts an integer argument and returns 1 if the argument is prime, a 0 otherwise. Write a C program that invokes this function to generate prime numbers between the given range.
2. Write a program to check character entered is alphabet, digit or special character using library functions
3. Write a program which display a number between 10 to 100 randomly
4. Write a program which accept a letter and display it in uppercase letter
5. Write a function to calculate the factorial value of any integer as an argument. Call this function from main( ) and print the results in main( )
6. Write a menu driven C++ program with following option
   a. Accept elements of an array
   b. Display elements of an array
   c. Sort the array using insertion sort method
   d. Sort the array using selection sort method
   e. Sort the array using bubble sort method
   Write C++ functions for all options. The functions should have two parameters name of the array and number of elements in the array.
7. Write a menu driven C++ program to do following operation on two-dimensional array A of size m x n. You should use user-defined functions which accept 2-D array A, and its size m and n as arguments. The options are:
   - To input elements into matrix of size m x n
   - To display elements of matrix of size m x n
   - Sum of all elements of matrix of size m x n
   - To display row-wise sum of matrix of size m x n
   - To display column-wise sum of matrix of size m x n
   - To create transpose of matrix B of size n x m
8. Write a user defined function named Upper-half() which takes a two dimensional array A, with size N rows and N columns as argument and prints the upper half of the array.

   e.g.,
   2 3 1 5 0
   7 1 5 3 1
   2 5 7 8 1

0 1 5 0 1
3 4 9 1 5

The output will be

2 3 1 5 0
1 5 3 1
7 8 1
0 1
5