University of Sri Jayewardenepura, Sri Lanka

Bachelor of Information and Communication Technology Semester 1
ITC 1063 – Fundamentals of Programming
Laboratory Exercise 7

---

1. Write a C program to get **a positive integer** as user input and **calculate the sum of the numbers in the range** from 0 to that number.

   Example:

   ```
   Enter a positive integer: 10
   The Sum of the range 0 - 10 is: 55
   ```

2. Write a C program to get **a positive integer** as user input and **calculate the factorial** of the number. You should check the user input is **whether negative or not**. If it's negative, print a message "Factorial of a negative number doesn't exist."

   Example:

   ```
   Enter a positive integer: 10
   The factorial of 10 is: 3628800
   ```

   Note:

   - The factorial(!) of a number is the product of all the integers from 1 to that number.
   - For example, the factorial of 6 (6!) is 1*2*3*4*5*6 = 720 .
   - Factorial is not defined for negative numbers, and the factorial of zero is one (0! = 1)

3. Write a C program to get **a positive integer** as user input and check **whether it is a prime number**.

   Example:

```
Enter a positive integer: 19
It is a prime number!
```

   Note:

   - A prime number is a number that can only be divided by itself without remainder.
   - An example of a prime number is 13. That is because its only divisors are 1 and 13.
   - The first few prime numbers are 2, 3, 5, 7, 11, 13, 17, 19, 23 and 29.
   - Numbers that have more than two factors are called composite numbers.
   - The number 1 is neither prime nor composite.

How to Submit:

Create a zipped file with all the source files (.c files). Rename the zipped file with your index number and the lab exercise number as follows.

ict23801_lab7.zip

Follow the naming conventions as it is. All letters **are lowercase**; between the index number and lab exercise number, use **underscore** (_).