BITS PILANI, DUBAI CAMPUS

DUBAI INTERNATIONAL ACADEMIC CITY, DUBAI

FIRST SEMESTER 2024 – 2025
COURSE: F213 (Object Oriented Programming)
COMPONENT: Lab 13   **DATE:** 27ᵗʰ November 2024

Exception Handling

1. a. WAJP to generate prime numbers between a given range of numbers.
   b. Modify the class Prime in Prime program to generate IllegalArgumentException if the argument passed to the constructor of the class Prime is negative.
   c. In the above define you own Exception class (Instead of IllegalArgumentException

2. WAJP to create an Employee class which has member variables, name, age, department, mobileno. Use exception handling to check if name is a valid name(consisting of only upper case and lower case letters. Age to be greater than 18 years, department to be only any one of the int values from 1-4 and mobileno to be 10 digits.

Multithreading

3. Develop a JAVA program to compute the sum of 'num' numbers using 'n' threads. The main thread reads the num and n from user and then creates n threads where each thread computes the sum of num/n nos and thn displays the final sum.
   eg, if num = 1000, and n = 4, the t1 computes sum of 1..250, t2 from 251 to 500, t3 from 501 to 750 and t4 from 751 to 1000. The main thread displays the final sum. (after ensuring that each thread has finished its work).

4. Write a Java program that creates two threads to find and print even and odd numbersfrom 1 to 20.