**Exception Handling**

1. Write a program called “Factorial.java” that computes factorials and catches the result in an array of type long for reuse. The long type of variables has its own range. For example 20! Is as high as the range of long type. So checks the argument passed and throw an exception if it is too big or too small.

If x is less than 0, throw an “IllegalArgumentException” with a message “value of x must be positive”. If x is above the length of the array, throw an “IllegalArgumentException” with a message “result will overflow.” Here x is the value for which we want to find the factorial.

2. Write a Java program to demonstrate ArrayIndexOutOfBoundsException, ArithmeticException, NullPointerException exceptions.

3. Create two user defined exceptions viz. TooHot and TooCold. Write a Java program and throw TooHot if the temperature exceeds 40 degrees and throw TooCold if the temperature be less than 20 degrees.