OOP Lab Assignment – 03

Question 01:

Write a java program to illustrate 4 different possible NullPointerExeptions cases possible.

Question 02:

You have been assigned to create a student database (Just information) of our institute. For a class named **StudentInfo,** create several objects for this class, each object representing one student (means array of objects). **StudentInfo** class is different and main class is different.

The number of students should be taken from the user console. Student details should be like id, name, department name, college name. College name should be common to all of them (means this should be class variable). Now student id of each student should be unique, if any of the student id is repeating then handle with an user-defined exception. Name and dept name should not be empty, if they are empty then handle with user-defined exception. After all store the student's data inside a file using stream classes not by using file classes. And number of students should be minimum of 10.

Question 03:

Write a java program to throw a custom exception when you are trying to read characters from a file, if number of characters in the file are more than specified number (K) , Note K should be >=100.

Question 04:

Write a java program called factorial.java that computes the factorials and catches the result in a long variable. The long type of variable has its own range. For example 20! Is as high as the range of long type. So check 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. If x is more than specific range then throw a custom exception saying "Result will overflow". Here x is a value for which we want to find factorial (it should be user-defined).

Question 05:

Write a java program to detect a loop in the linked list.

Question 06:

Write a java program to write name and phone numbers of 15 people inside a file each line contains name and phone number. Now enter user defined variable called phone number, you need to match (compare) this phone number against all the phone numbers in the file, if matches then print corresponding name on to the screen, if not present then throw a custom exception.