

Practice Programs

Exception Handling and Wrapper classes

1. Write a java program that uses exception handling technique to count and display the number of Valid numbers and Invalid numbers from the input which are passed as command line arguments as given below:

```
C:\Users\admin\Desktop>java CommandLineInput 1 3 t 6 7 8 u 8
Valid number at 0 1
Valid number at 1 3
Invalid number at 2 t
Valid number at 3 6
Valid number at 4 7
Valid number at 5 8
Invalid number at 6 u
Valid number at 7 8
Invalid entries: 2
Valid entries: 6
```

2. Given below a code snippet:

```
int i = args.length;
String myString[] = new String[i];
if(myString[0].equals("Java"));
    System.out.println("First word is Java !");
System.out.println( " Number of arguments = " + i );|
int x = 18/ i;
int y[ ] = {555, 999};
y[ i ] = x;
```

Identify the possible types of exceptions in the given code and write an appropriate java code that employs multiple catch blocks to handle those identified exceptions.

3. Write a java code to raise an exception which is handled by the below given catch block. Also analysis the output.

```
catch(ArrayIndexOutOfBoundsException e){
    System.out.println("filIn: " + e.fillInStackTrace());
    System.out.println("cause: " + e.getCause());
    System.out.println("local: " + e.getLocalizedMessage());
    System.out.println("messa: " + e.getMessage());
    System.out.println("trace: " + e.getStackTrace());
    System.out.print("trace: "); e.printStackTrace();
    System.out.print("string: ");e.toString();
    throw (Exception) new Exception().initCause(e);
}
```

4. Find out the types of exceptions if the blow given code is used in a program. Write an appropriate exception handling code that handles all such exception and also analyse the output of e.getMessage() where 'e' is an exception object.

```
BufferedReader in = new BufferedReader(new InputStreamReader(System.in));
a = Integer.parseInt(in.readLine());
b = Integer.parseInt(in.readLine());
```

5. Write a java program with the following statements:
- Statement that converts 1E6 to a Double object.
 - Statement that converts 1_000_000 to an Integer object.
 - Statement that converts true to a Boolean object.
 - Statement that converts 'A' to a Characterobject.

Execute the following programs and check the output

```

class WrapperIest
{
    public static void main (String args[])
    {
        Integer Obj1 = new Integer (44);
        Integer Obj2 = new Integer ("44");
        Integer Obj3 = new Integer (55);
        System.out.println("Using compareTo() Obj1 and Obj2: " + Obj1.compareTo(Obj2));
        System.out.println("Using compareTo() Obj1 and Obj3: " + Obj1.compareTo(Obj3));
        System.out.println("Using equals() Obj1 and Obj2: " + Obj1.equals(Obj2));
        System.out.println("Using equals() Obj1 and Obj3: " + Obj1.equals(Obj3));
        Float f1 = new Float("10.25f");
        Float f2 = new Float("12.63f");
        Float f3 = new Float(10.25f);
        System.out.println("Using compare() f1 and f2: " +Float.compare(f1,f2));
        System.out.println("Using compare() f1 and f3: " +Float.compare(f1,f3));
        Float f = Obj1.floatValue() + f1;
        System.out.println("Addition of intObj1 and f1: "+ Obj1 +"+" +f1+"=" +f );
        Integer int1 = Integer.valueOf("12345");
        //Converting from binary to decimal
        Integer int2 = Integer.valueOf("101011", 2);
        //Converting from hexadecimal to decimal
        Integer int3 = Integer.valueOf("D", 16);
        System.out.println("Value of int1 Object: "+ int1);
        System.out.println("Value of int2 Object: "+ int2);
        System.out.println("Value of int3 Object: "+ int3);
        System.out.println("Hex value of int1: " + Integer.toHexString(int1));
        System.out.println("Binary Value of int2: "+ Integer.toBinaryString(int2));
    }
}

```