Institute of Engineering & Management
Department of Computer Science & Engineering
Object Oriented Programming (IT) Lab for 3rd year 5th semester 2018
Code: CS594D

Date: 9/10/2018

WEEK-10

Assignment-1

Problem Statement: Write a java program to demonstrate "throw"

Source code:

```
public class usethrow
{
  public static void main(String []args)
  {
        int i=5,j=10,k=0;
        try{
              k=i+j;
              if(k>10)    {
                    throw new Exception();
              }
        }
        catch(Exception e){
              System.out.println("Cannot take k>10");
        }
  }
}
```

Screen-Shot:

```
C:\Users\Riya Ghosh\Desktop>javac usethrow.java

C:\Users\Riya Ghosh\Desktop>java usethrow
Cannot take k>10
```

Assignment-2

Problem Statement: Write a java program to explain "throws"

Source code:

```
import java.io.IOException;
class usethrows
{
  void m()throws IOException
  {
              throw new IOException("device error");
  }
  void n()throws IOException
  {
              m();
  }
  void p()
  {
              try{
```

```
                    n();
                }
            catch(Exception e){
                System.out.println("exception handled");
            }
    }

    public static void main(String args[])
    {
         usethrows obj=new usethrows();
         obj.p();
         System.out.println("normal flow...");
    }
}
```

Screen-Shot:

```
C:\Users\Riya Ghosh\Desktop>javac usethrows.java

C:\Users\Riya Ghosh\Desktop>java usethrows
exception handled
normal flow...
```

Assignment-3

Problem Statement: Consider a class that represents an account in a bank. Let the minimum balance for the account be Rs. 1000. Write a java program that throws an exception when a withdrawal result in the balance decrease to the value less than Rs. 1000.

Source code:

```
class LowBalance extends Exception
{
    String s;
    LowBalance (double d)
    {
        if(d<1000.0)
        {
            s="Low Balance!!!";
        }
    }
    public String toString()
    {
        return s;
    }
}

class Balance
{
    double d;
    Balance()
    {
        d=1000.0;
    }
    Balance(double x)
    {
        d=x;
    }
    void withdrawl(double y) throws LowBalance
```

```
    {
        if((d-y)>=1000.0)
        {
            d=d-y;
            System.out.println("Updated balance="+d);
        }
        else{
            throw new LowBalance(d-y);
        }
    }
}
class exce
{
    public static void main(String[]ar)
    {
        Balance b=new Balance(5000.0);
        try{
            b.withdrawl(4500.0);
        }
        catch(LowBalance E){
            System.out.println(E);
        }
    }
}
```

Screen-Shot:

```
C:\Users\Riya Ghosh\Desktop>javac exce.java

C:\Users\Riya Ghosh\Desktop>java exce
Low Balance!!!
```

Assignment-4

Problem Statement: Write a java program to find the factorial of any number and it can throw an exception 'NegativeNumber' if your entered number is a negative value.

Source code:

```
class Neg extends Exception //user defined exception
{
    String s;
    Neg (){
        s="NEGATIVE NUMBER!!!";
    }
    public String toString()
    {
        return s;
    }
}

class fac
{
    int d;
    fac(){
        d=0;
    }
    fac(int x){
```

```
            d=x;
      }
      void factorial() throws Neg
      {
            if(d<0)
            {
                  throw new Neg();
            }
            else
            {
                  int x=1;
                  for(int i=2;i<=d;i++)
                        x=x*i;
                  System.out.println(x);
            }
      }
}
class factorialexce
{
      public static void main(String[]ar)
      {
            fac b=new fac(-5); //we are trying to find factorial of -5
            try
            {
                  b.factorial();
            }
            catch(Neg E)
            {
                  System.out.println(E);
            }
      }
}
```

Screen-Shot: