

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

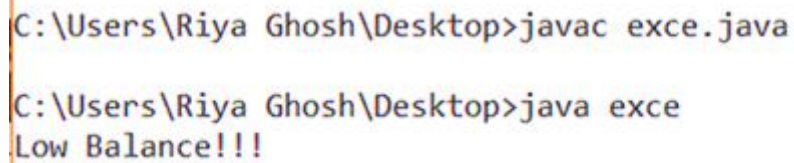
```

```

    {
        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:

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

```
C:\Users\Riya Ghosh\Desktop>java factorialexce
NEGATIVE NUMBER!!!
```