Lab Session 17/11/22-----


```java
package HandsOn_Lab;
class CountryNotValidException extends Exception{
    CountryNotValidException(String str) {
        super(str);
    }
}
class TaxNotEligibleException extends Exception{
    TaxNotEligibleException(String str){
        super(str);
    }
}
public class TaxCalculator {
    double taxAmount;
    double calculateTax (String ename,boolean isIndian,double empSal) throws CountryNotValidE
    if(isIndian==false)
        throw new CountryNotValidException("The employee should be an Indian citizen for
    else if(ename==null)
        throw new CountryNotValidException("The employee name cannot be empty");
    else if(empSal>100000&&isIndian==true)
        taxAmount =empSal *8/100 ;
    else if(empSal<100000&&empSal>50000&&isIndian==true)
        taxAmount =empSal *6/100 ;
    else if(empSal<50000&&empSal>30000&&isIndian==true)
```



```java
package HandsOn_Lab;
//Problem 1 of Lab 17th Nov
public class CalculatorSimulator {

    public static void main(String[] args) throws Cour
        // TODO Auto-generated method stub
        TaxCalculator obj=new TaxCalculator();
        //Test case -1
        System.out.println("Tax amount is:"+    obj.calculateTax("Ron", false, 34000));
        //Test case -2
        System.out.println("Tax amount is:"+obj.calculateTax("Tim", true, 1000));
        //Test case -3
        System.out.println("Tax amount is: "+obj.calculateTax("Jack", true, 55000));
        //Test case -4
        System.out.println("Tax amount is:"+obj.calculateTax(null, true, 30000));
    }
}
```

```java
 9 Output format
10 Print the product if both are positive else print the
11 java.lang.Exception: x and y should not be zero.
12
13 */
14 import java.util.Scanner;
15
16 public class Lab_17th22Problemcode2 {
17
18     public static void main(String[] args) throws Exception {
19         // TODO Auto-generated method stub
20 Scanner sc=new Scanner(System.in);
21 System.out.println("Enter two numbers=");
22 int x=sc.nextInt();
23 int y=sc.nextInt();
24 if(x<0||y<0)
25     throw new Exception("x and y should not be zero.");
26 else
27     System.out.println("Product of x and y: "+(x*y));
28     }
29
30 }
31
```

Console:
```
<terminated> Lab_17th22Problemcode2 [Java Application] F:\Java\bin\javaw.exe  (17-Nov-2022, 1:47:16 pm –
Enter two numbers=
-10
-20
Exception in thread "main" java.lang
        at HandsOn_Lab.Lab_17th22Pro
```

```java
11
12 */
13 public class Lab_17th22Problemcode3 {
14 int addTwoPositive (int a,int b) {
15     try {
16     if(a<0||b<0) {
17         throw new ArithmeticException("Non-Positive I
18     }
19     }catch(ArithmeticException ae){
20         System.out.println(ae.getMessage());
21         return 0;
22     }
23     finally {
24         System.out.println("I will always execute");
25     }
26     return (a+b);
27     }
28     public static void main(String[] args) {
29         Lab_17th22Problemcode3 obj=new Lab_17th22Problemcode3();
30         System.out.println("Sum of them: "+obj.addTwoPositive(-10, 20));
31 }
32 }
33
```

Console:
```
<terminated> Lab_17th22Problemcode3 [Java Application] F:\Java\bin\javaw.exe  (17-Nov-2022, 1:47:50 pm –
Non-Positive Integer sent
I will always execute
Sum of them: 0
```