EAST WEST UNIVERSITY

Course Title: CSE110

Section: 06

Semester: Summer 22

LAB-08

SUBMITTED TO

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A)

```
package lab8;
import java.util.Scanner;
class MyException extends Exception
{
public MyException(String e)
{
super(e);
}
}

class Calculator
{
private int a;
private int b;

public Calculator(){}

public Calculator(int a, int b)
{
this.a = a;
this.b = b;
}

public int getA()
{
return a;

}

public void setA(int a)
```

```
{
this.a = a;
}

public int getB()
{
return b;
}

public void setB(int b)
{
this.b = b;
}

void Add()
{
if(this.a&lt;0 || this.b&lt;0)
{
try
{
throw new MyException(&quot;ArithmeticException&quot;);
}
catch(MyException e)
{

System.out.println(&quot;Error: Integer can&#39;t be negetive. &quot;);
}
}
else
{
int result = this.a+this.b;
System.out.println(&quot;The result of the addition: &quot;+result);
System.out.println(&quot;&quot;);
```

```
}
}

void Subtract()
{
if(this.a&lt;0 || this.b&lt;0)
{
try
{
throw new MyException(&quot;ArithmeticException&quot;);
}
catch(MyException e)
{
System.out.println(&quot;Error: Integer can&#39;t be negetive.&quot;);
}
}
else
{
int result = this.a-this.b;

System.out.println(&quot;The result of the subtraction: &quot;+result);
System.out.println(&quot;&quot;);
}
}

void Multiply()
{
if(this.a==0 || this.b==0)
{
try
{
throw new ArithmeticException(&quot;ArithmeticException&quot;);
}
```

```
catch(ArithmeticException e)
{
System.out.println(&quot;Error: Integer can&#39;t be zero.&quot;);
}
}
else
{
int result = this.a*this.b;
System.out.println(&quot;The result of the multiplication: &quot;+result);
System.out.println(&quot;&quot;);
}
}

void Division()
{
if(this.a==0 || this.b==0)
{
try
{
throw new ArithmeticException(&quot;ArithmeticException&quot;);
}
catch(ArithmeticException e)
{
System.out.println(&quot;Error: Integer can&#39;t be zero.&quot;);
}
}
else
{
int result = this.a/this.b;
System.out.println(&quot;The result of the division: &quot;+result);
System.out.println(&quot;&quot;);
}
}
```

```
}

public class Q1
{
public static void main(String[] args)

{
Scanner in= new Scanner (System.in);
try
{
System.out.println(&quot;Enter integers for addition: &quot;);
System.out.println(&quot;Enter the 1st integer number: &quot;);
int a = Integer.parseInt(in.next());
System.out.println(&quot;Enter the 2nd integer: &quot;);
int b = Integer.parseInt(in.next());

Calculator A = new Calculator (a,b);
A.Add();
}
catch (NumberFormatException e)
{
System.out.println(&quot;You have entered non-integer number.&quot;);
System.out.println(&quot;Error &quot; +e.getMessage());
}
System.out.println(&quot;&quot;);
try
{
System.out.println(&quot;Enter integers for subtraction: &quot;);
System.out.println(&quot;Enter the 1st integer number: &quot;);
int c = Integer.parseInt(in.next());
System.out.println(&quot;Enter the 2nd integer: &quot;);
int d = Integer.parseInt(in.next());
Calculator B = new Calculator (c,d);
```

```
B.Subtract();
}
catch (NumberFormatException e)
{
System.out.println(&amp;quot;You have entered non-integer number.&amp;quot;);
System.out.println(&amp;quot;Error &amp;quot; +e.getMessage());
}
System.out.println(&amp;quot;&amp;quot;);

try
{
System.out.println(&amp;quot;Enter integers for multiplication: &amp;quot;);
System.out.println(&amp;quot;Enter the 1st integer number: &amp;quot;);
int e = Integer.parseInt(in.next());
System.out.println(&amp;quot;Enter the 2nd integer: &amp;quot;);
int f = Integer.parseInt(in.next());
Calculator C = new Calculator (e,f);
C.Multiply();
}
catch (NumberFormatException e)
{
System.out.println(&amp;quot;You have entered non-integer number.&amp;quot;);
System.out.println(&amp;quot;Error &amp;quot; +e.getMessage());
}
System.out.println(&amp;quot;&amp;quot;);

try
{
System.out.println(&amp;quot;Enter integers for division: &amp;quot;);
System.out.println(&amp;quot;Enter the 1st integer number: &amp;quot;);
int g = Integer.parseInt(in.next());
System.out.println(&amp;quot;Enter the 2nd integer: &amp;quot;);
```

```
int h = Integer.parseInt(in.next());
Calculator D = new Calculator (g,h);
D.Division();
}
catch (NumberFormatException e)
{
System.out.println(&amp;quot;You have entered non-integer number.&amp;quot;);
System.out.println(&amp;quot;Error &amp;quot; +e.getMessage());
}
}
}
```

B)

```
import java.util.Scanner;
class MyException extends Exception
{
public MyException(String e)
{
super(e);
}
}

public class Product
{
void ProductCheck(int weight)
{
if(weight&amp;lt;100)
{
try
{
```

```
throw new MyException(&amp;quot;Product is invalid.&amp;quot;);
}
catch(MyException e)
{
System.out.println(e.getMessage());
}
}
else
{
System.out.println(&amp;quot;The weight is: &amp;quot;+weight);
}
}

public static void main(String[] args)
{

Scanner in= new Scanner(System.in);
Product A= new Product();
A.ProductCheck(50);
}
}
```

C)

```
public class MultipleCatchBlock1 {

    public static void main(String[] args) {
        try{
            int a[]=new int[5];
            a[5]=30/0;
        }
        catch(ArithmeticException e)
```

```
        {
           System.out.println("Arithmetic Exception occurs");
        }
        catch(ArrayIndexOutOfBoundsException e)
        {
           System.out.println("ArrayIndexOutOfBounds Exception occurs");
        }
        catch(Exception e)
        {
           System.out.println("Parent Exception occurs");
        }
        System.out.println("rest of the code");
    }
}

        try{
        int a[]=new int[5];
        System.out.println(a[10]);
        }

        try{
        int a[]=new int[5];
        a[5]=30/0;
        System.out.println(a[10]); }

        try{
        String s=null;
        System.out.println(s.length());
        }

class MultipleCatchBlock5
```

```
{
   public static void main(String args[])
   {
      try{
         int a[]=new int[5];
         a[5]=30/0;
      }
      catch(Exception e){System.out.println("common task completed");}
      catch(ArithmeticException e){System.out.println("task1 is completed");}
      catch(ArrayIndexOutOfBoundsException e){System.out.println("task 2 completed");}
      System.out.println("rest of the code...");
   } }
```

```
      catch (NoSuchPaddingException | NoSuchAlgorithmException| InvalidKeyException |
BadPaddingException| IllegalBlockSizeException | IOException ex)
            {
      System.err.println(ex);
      }
```

D)

```
class Excep6{
public static void main(String args[]){
try{
try{
System.out.println("going to divide");
int b =39/0;
}
catch(ArithmeticException e)
```

```
{System.out.println(e);}


try{
int a[]=new int[5];
a[5]=4;
}
catch(ArrayIndexOutOfBoundsException e)
{System.out.println(e);}
System.out.println("other statement);


}
catch(Exception e)
{System.out.println("handeled");}
System.out.println("normal flow.");
}
}
```