

**Course Title:** CSE110

**Section:** 06

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**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(&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 multiplication: &quot;);

System.out.println(&quot;Enter the 1st integer number: &quot;);

int e = Integer.parseInt(in.next());

System.out.println(&quot;Enter the 2nd integer: &quot;);

int f = Integer.parseInt(in.next());

Calculator C = new Calculator (e,f);

C.Multiply();

}

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 division: &quot;);

System.out.println(&quot;Enter the 1st integer number: &quot;);

int g = Integer.parseInt(in.next());

System.out.println(&quot;Enter the 2nd integer: &quot;);

int h = Integer.parseInt(in.next());

Calculator D = new Calculator (g,h);

D.Division();

}

catch (NumberFormatException e)

{

System.out.println(&quot;You have entered non-integer number.&quot;);

System.out.println(&quot;Error &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&lt;100)

{

try

{

throw new MyException(&quot;Product is invalid.&quot;);

}

catch(MyException e)

{

System.out.println(e.getMessage());

}

}

else

{

System.out.println(&quot;The weight is: &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.");

}

}