

Week 9-Lab Program 6

Solve this program and write the procedure you have used to execute this in your observation

Create a package CIE which has two classes- Student and Internals. The class Personal has members like usn, name, sem. The class Internals has an array that stores the internal marks scored in five courses of the current semester of the student. Create another package SEE which has the class External which is a derived class of Student. This class has an array that stores the SEE marks scored in five courses of the current semester of the student. Import the two packages in a file that declares the final marks of n students in all five courses.

CIE

Internals

```

package CIE;
import java.util.Scanner;

public class Internals extends Students {
    double InternalsMarks[] = new double[5];
    Scanner sc = new Scanner(System.in);

    public void setMarks() {
        for (int i = 0; i < InternalsMarks.length; i++) {
            System.out.print("Enter Internal Marks(40) of
subjects " + (i + 1) + " : ");
            InternalsMarks[i] = sc.nextDouble();
        }
    }

    public void getMarks(double marks[]) {
        System.out.println("Internals Marks(40) of
subjects " + (i + 1) + " : ");
        InternalsMarks[i] = sc.nextDouble();
    }
}

```

```
public void getMarks (double quiz Marks[]),  
    System.out.println ("Internals marks  
of 50 : ");  
for (int i=0; i < internal Marks.length; i++)  
    System.out.print ("Subject " + (i+1) + " >> "  
        - (internal Marks [i] + quiz Marks [i])) ;
```

3
3
public double get Marks by Index(int index);

return InternalMarks [in lex];

三

PC CIE; QW12

package CIE;

```
import java.util.Scanner;
```

public class Quiz

public class Quiz {
 public double quizMarks [] + new double

Scanner screen scanner (by stem.in)

```
public void setMairles( ) {
```

```
System.out.println("Enter Quiz marks of  
-subjects (out of 100);
```

```
.for (int i=0; i < quizMarks.length; i++) {  
    quizMarks[i] = sc.nextDouble();  
}  
}  
}  
public double getMarksByIndex (int index){  
    return quizMarks[index];  
}  
}  
}  
}  
}
```

↳

```
package CIE;  
public class student {  
    public String usn, name;  
    public int sem;  
}
```

* SEE

```
package SEE;  
import CIE.student;  
import java.util.Scanner;  
public class ExternalStudent {  
    double [] externalMarks = new double [5];  
    Scanner sc = new Scanner (System.in);  
    public void setDetails () {  
        System.out.println ("Enter name : ");  
        name = sc.nextLine();  
        System.out.println ("Enter USN : ");  
        usn = sc.nextLine();  
        System.out.println ("Enter Sem : ");  
        sem = sc.nextInt();  
        System.out.println ("Enter marks : ");  
        for (int i=0; i < 5; i++) {  
            externalMarks[i] = sc.nextDouble();  
        }  
    }
```

```
System.out.println("Enter USN:");
usn = sc.nextLine();
System.out.println("Enter Sem");
sem = sc.nextInt();

}
public void setMarks() {
    for (int i = 0; i < externalMarks.length; i++) {
        System.out.println("Enter External Marks(100) of " +
- subject +(i + 1) + ":");
        externalMarks[i] = sc.nextDouble();
    }
}

}
public void getDetails() {
    System.out.println("Name :" + name + " USN :" +
- usn + " In Semester :" + sem);
}

}
public void getMarks() {
    System.out.println("External Marks out of 50 : ");
    for (int i = 0; i < externalMarks.length; i++) {
        System.out.println("Subject " +(i + 1) +
extMark[i]);
    }
}
```

```
{  
    }  
    public double getMarksByIndex(int index)  
    {  
        return externalMarks[index];  
    }  
}
```

Main function

```
import java.util.Scanner;  
import CIE.internals;  
import CIE.QuiZ;  
import SEE.Externals;
```

```
public class Main {
```

```
public static void main String[] args) {  
    int n;  
    Scanner sc = new Scanner (System.in);  
    System.out.println ("Enter the number of students:");  
    n = sc.nextInt();  
    Internals[] cie = new Internals [n];  
    Externals[] see = new External [n];  
    Quiz[] quiZ = new Quiz [n];  
    for (int i=0; i < see.length; )
```

TORS 5 UNSAVED

Windows PowerShell

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2 textbook pro...

Try the new cross-platform PowerShell http://go.microsoft.com/fwlink/?LinkID=135170

PS C:\Users\SAI KRISHNA\Desktop> cd "C:\Users\SAI KRISHNA\Desktop"

Enter the number of students:

1

Enter Details of Student 1:

Enter name:

quer

Enter USN:

1234

Enter Sem:

1

Enter Internal Marks of Student 1:

Enter Internal Marks(40) of Subject 1:

12

Enter Internal Marks(40) of Subject 2:

13

Enter Internal Marks(40) of Subject 3:

11

Enter Internal Marks(40) of Subject 4:

12

Enter Internal Marks(40) of Subject 5:

13

Enter Quiz Marks of Student 1:

Enter Quiz Marks of Subjects (out of 10)

1

1

1

1

1

Enter External Marks of Student 1:

Enter External Marks(100) of Subject 1:

88

DELL

5 UNSAVED

Enter Internal Marks(40) of Subject 4:

12

Enter Internal Marks(40) of Subject 5:

13

Enter Quiz Marks of Student 1:

Enter Quiz Marks of Subjects (out of 10)

1

1

1

1

1

1

Enter External Marks of Student 1:

Enter External Marks(100) of Subject 1:

88

Enter External Marks(100) of Subject 2:

89

Enter External Marks(100) of Subject 3:

99

Enter External Marks(100) of Subject 4:

88

Enter External Marks(100) of Subject 5: 1

13
class
class
ava 1
Main.class
.class
late.class
class
ate a class ElecBill ...
topini
lass
uevac
uevac
nload Accelerato...
oboxlink
otball PES 2020.url
otball PES 2021 SE...
eviva.txt
ployee
ployee.class
ployee.java 3
ployeeMain
ployeeMain.class
uation.class
Hub Dodder.java

Enter Quiz Marks of Student 1:
Enter Quiz Marks of Subjects (out of 10)
1
1
1
1
1
Enter External Marks of Student 1:
Enter External Marks(100) of Subject 1:
88
Enter External Marks(100) of Subject 2:
89
Enter External Marks(100) of Subject 3: I
99
Enter External Marks(100) of Subject 4:
88
Enter External Marks(100) of Subject 5:
77
Details of Student 1:
Name: quer
USN: 1234
Semester: 1
Internal Marks of Student 1:
Internals Marks out of 50:
Subject 1 >> 13.0
Subject 2 >> 14.0
Subject 3 >> 12.0
Subject 4 >> 13.0
Subject 5 >> 14.0
External Marks of Student 1:
External Marks out of 50:
Subject 1 >> 44.0
Subject 2 >> 44.5
Subject 3 >> 49.5
Subject 4 >> 44.0



o

class Enter External Marks(100) of Subject 2:
ss 89
class ElecBill ... Enter External Marks(100) of Subject 3: I
ni 99
ac Enter External Marks(100) of Subject 4:
e.exe 68
ed Accelerato... Enter External Marks(100) of Subject 5:
xlink 77
ll PES 2020.url Details of Student 1:
ll PES 2021 SE... Name: quer
a.txt USN: 1234
ee Semester: 1
vee.class Internal Marks of Student 1:
vee.java 3 Internals Marks out of 50:
veeMain Subject 1 >> 13.0
veeMain.class Subject 2 >> 14.0
on.class Subject 3 >> 12.0
b Desktop.lnk Subject 4 >> 13.0
action for exam p... Subject 5 >> 14.0
restrictedqueue.c External Marks of Student 1:
restrictedqueue.exe External Marks out of 50:
Subject 1 >> 44.0
Subject 2 >> 44.5
Subject 3 >> 49.5
Subject 4 >> 44.0
Subject 5 >> 38.5
Final Marks out of 100 of Student 1:
Subject 1 >> 57.0
Subject 2 >> 58.5
Subject 3 >> 61.5
Subject 4 >> 57.0
Subject 5 >> 52.5

PS C:\Users\SAI RAMAKRISHNA\Desktop\Week9> █

Week 10: Lab Programs-7 and 8:

- I 7. Write a program to demonstrate generics with multiple object parameters.

MODIFIED LAB PROGRAM 8:

Modify your Lab program 8 according to the program given below and then upload in your github link:

Write a program that demonstrates handling of exceptions in inheritance tree. Create a base class called “Father” and derived class called “Son” which extends the base class. In Father class, implement a constructor which takes the age and throws the exception Wrong Age() when the input age<0. In Son class, implement a constructor that cases both father and son’s age and throws an exception if son’s age is >=father’s age.

Week - 10 Lab 7

1. Class myname<A, B>

{ A obj 1;

B obj 2;

myname (A obj 1, B obj 2) {

this . obj 1 = obj 1

this . obj 2 = obj 2;

}

public void print()

System.out.println (this . obj 1);

System.out.println (this . obj 2);

{

{

public class Lab15 {

public static void main (String [] args) {

myname < String, Integer > myobj = new myname < String,

- Integer > ("az", 40);

myname < String, Double > myobj2 = new myname < String,

- Double > ("weight", 60.00);

myobj.print();

myobj2.print();

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- + ⚡ | ⚡ Read aloud |

3. LAB PROGRAM - 8

import java.util.Scanner;

class WrongAge extends Exception {

public WrongAge(String s) {

super(s);

}

class Father {

int fatherAge;

Father(int fAge, int sAge) throws WrongAge {

if(fAge <= sAge) {

throw new WrongAge("Father's Age is equal

to or less than Son's Age");

else {

this.fatherAge = fAge;

}

}

class Son extends Father {

int sonAge;

Son(int fAge, int sAge) throws WrongAge {

super(fAge, sAge);

```
this.sonAge = sonAge;
```

```
}
```

```
void print() {
```

```
System.out.println("Father's Age:" + fatherAge);
```

```
System.out.println("Son's Age: " + sonAge);
```

```
}
```

```
public class Lab17 {
```

```
public static void main(String[] args) {
```

```
int fAge, sAge;
```

```
Scanner sc = new Scanner(System.in);
```

```
System.out.println("Enter father's Age");
```

```
fAge = sc.nextInt();
```

```
System.out.println("Enter son's Age");
```

```
sAge = sc.nextInt();
```

```
try {
```

```
Son son = new Son(fAge, sAge);
```

```
son.print();
```

```
}
```

```
catch (WrongAgeError) {
```

```
System.out.println("Exception" + error);
```

```
}
```

PROBLEMS 127

Windows PowerShell

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Try the new cross-platform PowerShell <https://aka.ms/pscore6>

PS C:\Users\SAI RAMAKRISHNA\Desktop> cd "c:\Users\SAI RAMAKRIS

age

49

WEIGHT

60.0

PS C:\Users\SAI RAMAKRISHNA\Desktop\WEEK 10-LAB PROGRAMS>

Try the new cross-platform PowerShell <https://>

PS C:\Users\SAI RAMAKRISHNA\Desktop> cd "c:\use

Enter Father's age

55

Enter Sons's age

23

Father's Age: 55

Son's Age: 23

PS C:\Users\SAI RAMAKRISHNA\Desktop\WEEK 10-LAB

WEEK 11

LAB PROGRAM:

Write a program which creates two threads, one thread displaying “BMS College of Engineering” once every ten seconds and another displaying “CSE” once every two seconds.

week 19

1. Class one implements Runnable {

Thread t1;

String message;

long time;

one (String message, long time) {

this.message = message;

this.time = time;

t1 = new Thread(this, "Thread");

System.out.println("one starts" + t2);

t2.start();

}

public void run() {

try {

for (int i = 5; i > 0; i--)

{

System.out.println(message);

t2.sleep(this.time);

}

}

catch (InterruptedException e) {

System.out.println("one interrupted");

}

System.out.println("one Done");

public class thpro

public static void main (String [] args)

one o = new one ("BMS college of Engineering")

one t = new one ("CSE-2000")

}

}



n View Go Run Terminal Help

...

PROBLEMS

92

OUTPUT

DEBUG CONSOLE

TERMINAL

UNSAVED

use --help for a list of possible options

PS C:\Users\SAI RAMAKRISHNA\Desktop\ooj> cd "c:\Users\SAI RAMAKRISHNA\Desktop\ooj"

One starts Thread[Thread,5,main]

One starts Thread[Thread,5,main]

BMS College Of Engineering

CSE



CSE

CSE

CSE

CSE

CSE

BMS College Of Engineering

One Done

loads.lnk

Power...

dqueu...

dqueu...

Week 12 Programs:

Extra Programs:

Upload the ButtonList and TextFieldDemo Programs demonstrated in the lab session.

Lab Program:

Write a program that creates a user interface to perform integer divisions. The user enters two numbers in the text fields, Num1 and Num2. The division of Num1 and Num2 is displayed in the Result field when the Divide button is clicked. If Num1 or Num2 were not an integer, the program would throw a NumberFormatException. If Num2 were Zero, the program would throw an Arithmetic Exception Display the exception in a message dialog box.

(Submission by 17/12/2020 -Thursday Evening – 8 pm)

Week -12 Lab program

```
import java.awt.*;
import java.awt.event.*;

public class Prog1 extends frame implements ActionListener {
    // code
    Text Field Num1, Num2;
    Button divide = new Button("Divide");
    float res = 0;
    String error = " ";
    public Prog1() {
        setLayout(new flowlayout());
        Num1 = new Text Field(1);
        Num2 = new Text Field(1);
        Label Num1L = new Label("Num 1 : ", Label.RIGHT);
        Label Num2L = new Label("Num 2 : ", Label.RIGHT);
        add(Num1L);
        add(Num1);
        add(Num2L);
        add(Num2);
        add(divide);
        divide.addActionListener(this);
    }
}
```

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addWindowListener(new WinAdapter())

}

public void actionPerformed(ActionEvent event)

if (ae.getSource() == divide) {

try {

int n1 = Integer.parseInt(num1.getText());

int n2 = Integer.parseInt(num2.getText());

if (n2 == 0)

throw new ArithmeticException("Error");

res = (float) n2 / n2;

}

catch (NumberFormatException e) {

res = 0;

error = "Entered number is not an integer.";

catch (ArithmeticException e) {

res = 0;

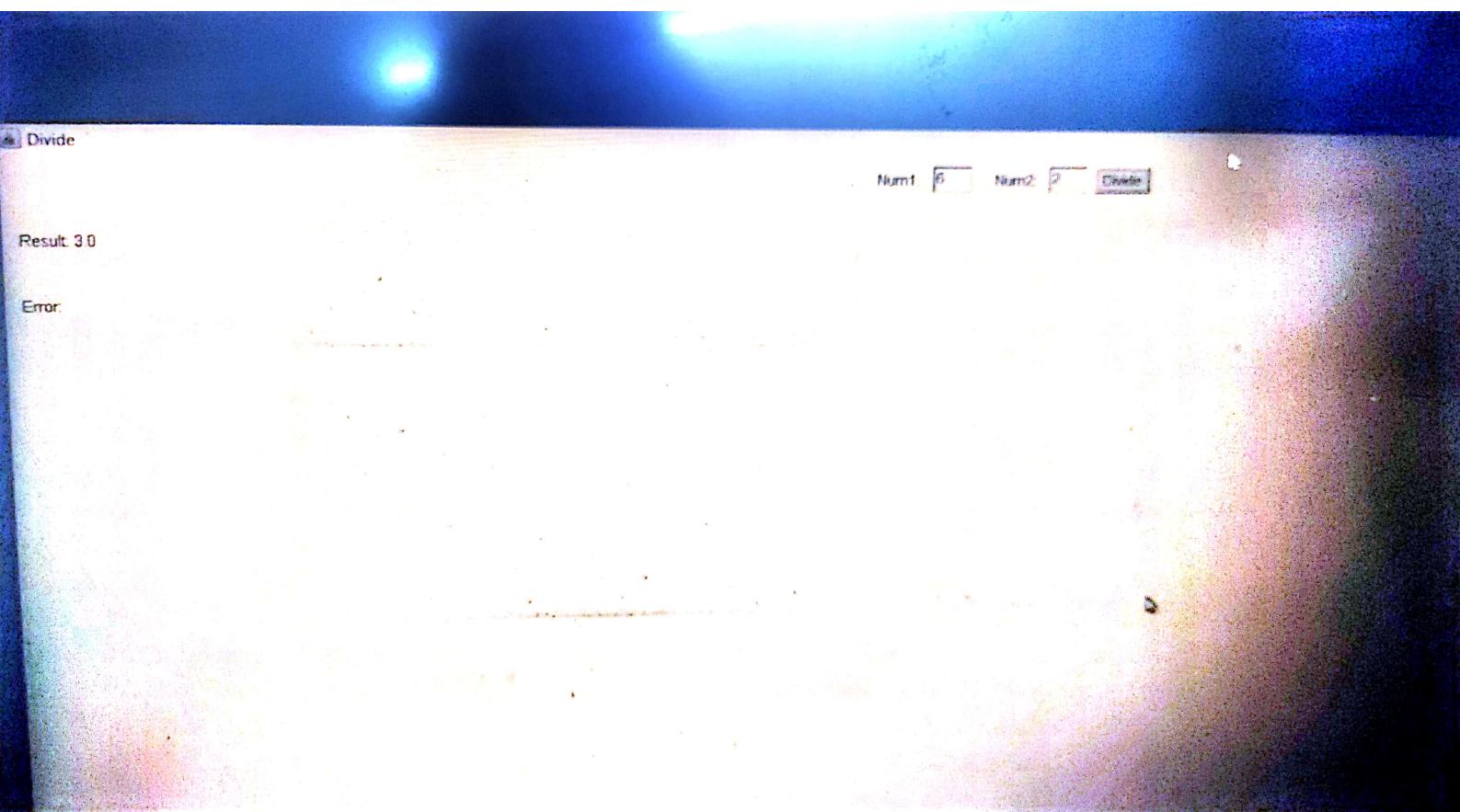
error = "you tried to divide by zero."

}

```
    repaint();  
}  
}  
  
public void paint(Graphics g) {  
    g.drawString("Result :" + String.valueOf(r4), 10, 100);  
    g.drawString("Error :" + error, 10, 150);  
}  
  
public static void main(String[] args) {  
    Proj1 p = new Proj1();  
    p.setSize(new Dimension(400, 250));  
    p.setTitle("Divide");  
    p.setVisible(true);  
}
```

Class WinAdapter extends Window Adapter {

```
    public void windowClosing(Window event we) {  
        System.exit(0);  
    }  
}
```



Lab Program:

Write a program that creates a user interface to perform integer divisions. The user enters two numbers in the text fields, Num1 and Num2. The division of Num1 and Num2 is displayed in the Result field when the Divide button is clicked. If Num1 or Num2 were not an integer, the program would throw a NumberFormatException. If Num2 were Zero, the program would throw an Arithmetic Exception Display the exception in a message dialog box.

Extra Programs:

1. Create a GUI based program with the following specification: put two text field components and one button. Label the button as "paste". When some text is typed in the first text field and paste button is pressed, then the text must gets copied into the second textfield.
2. Develop a Java program that displays 4(Four) text fields, two of which accepts integer inputs

Date (c-13) Lab Program

```
import java.awt.*;  
import java.awt.event.*;  
  
public class Prog1 extends Frame implements ActionListener,  
        {  
    Text Field Num1, Num2;  
    Button divide = new Button ("Divide");  
    float res = 0;  
    String error = " ";  
    public Prog1 () {  
        setLayout (new flowlayout ());  
        Num1 = new Text Field (1);  
        Num2 = new Text Field (1);  
  
        Label Num1L = new Label ("Num 1 : ", Label.RIGHT);  
        Label Num2L = new Label ("Num 2 : ", Label.RIGHT);  
  
        add (Num1L);  
        add (Num1);  
        add (Num2L);  
        add (Num2);  
        add (divide);  
        divide.addActionListener (this);
```

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```
addWindowListener(new WinAdapter());  
}
```

```
public void actionPerformed(ActionEvent event)  
{  
    if (ac.getSource() == divide) {  
        try {  
            int n1 = Integer.parseInt(Num1.getText());  
            int n2 = Integer.parseInt(Num2.getText());  
            if (n2 <= 0)  
                throw new ArithmeticException("Error");  
            res = (float) n1 / n2;  
        } catch (NumberFormatException e) {  
            error = "Entered number is not an  
            integer.";  
        } catch (ArithmeticException e) {  
            error = "You tried to divide by  
            zero!";  
        }  
    }
```

```
Catch (NumberFormat Exception / exception)  
res = 0;  
error = "Entered number is not an  
integer.";
```

```
catch (ArithmeticException exception)  
res = 0;  
error = "You tried to divide by  
zero!"  
}
```

addWindowListener(new WinAdapter());

}

public void actionPerformed(ActionEvent event)

if (ae.getSource() == divided) {

try {

int n1 = Integer.parseInt(Num1.getText());

int n2 = Integer.parseInt(Num2.getText());

if (n2 <= 0)

throw new ArithmeticException("Error")

res = (float) n1 / n2;

}

Catch (NumberFormatException exception) {

res = 0;

error = "Entered number is not an integer.";

}

Catch (ArithmeticException exception) {

res = 0;

error = "You tried to divide by zero.";

}

```
    repaint();  
}  
}  
public void paint(Graphics g) {  
    g.drawString("Result :" + String.valueOf(r4), 10, 100);  
    g.drawString("Error :" + error, 10, 150);  
}  
}  
public static void main(String[] args) {  
    Proj1 p = new Proj1();  
    p.setSize(new Dimension(400, 250));  
    p.setTitle("Divide");  
    p.setVisible(true);  
}
```

; class WinAdapter extends Window Adapter {

```
    public void windowClosing(WindowEvent we) {  
        System.exit(0);  
    }  
}
```

