

Lab-6

/* ~~forget~~ Package CIE :

Internals.java file :

Code : */

package cie;

public class Internals extends student

{

 public double cie-marks[] = new double[5];

 public Internals(double cie[], String u, String
 n,
 int s)

{

 super(u, n, s);

 for(int i=0; i<5; i++)
 cie-marks[i] = cie[i];

}

}

/* Student.java file :

Code : */

package cie;

public class student

{

 String usn;

 String name;

 int sem;

```
public Student (String u, String n, int s)
{
    usn = u; name = n; xusn = s;
}
public Student () { }
```

In ~~see~~ Package:

In External.java file:
Code: *

```
package see;
public class External extends cie.Student
{
    public double see-marks [] = new double [5];
    public External (double see[])
    {
        super ();
        for (int i = 0; i < 5; i++)
            see-marks [i] = see [i];
    }
}
```

/* FinalMarks.java */

```
import see.*;
import cie.*;
import java.util.Scanner;
```

class FinalMarks

{ public static void main (String args[])

{ Scanner input = new Scanner (System.in);
int n; String usn; String name; int sem;
double ee_marks[] = new double [5];
double se_marks[] = new double [5];
System.out.print ("Enter the no. of students: ");
n = input.nextInt();
Internals ee[] = new Internals[n];
Externals ee[] = new External[n];

{ for (int i = 0; i < n; i++)

System.out.println ("Enter the details of student
" + (i+1));

System.out.print ("Name: ");

name = input.next();

System.out.print ("USN: ");

usn = input.next();

System.out.print ("SEMS: ");

sem = input.nextInt();

System.out.println ("Enter the ee marks of all
subjects: ");

{ for (int j = 0; j < 5; j++)

System.out.print ("Subject " + (j+1) + ": ");

ee_marks[j] = input.nextInt();

}

```
System.out.println("Enter the see marks of all  
subjects: ");
```

```
{ int j = 0; j < 5; j++ )
```

```
System.out.print(subject + (j+1) + ":" );  
see_marks[j] = input.nextInt();
```

```
}
```

```
see_marks[i] = new External(cie_marks, usn, name, sem);
```

```
see[i] = new External(see_marks);
```

```
} System.out.println("Student Details: ");
```

```
for (int i = 0; i < n; i++)
```

```
{ System.out.println("Student " + (i+1) + ":" );
```

```
for (int j = 0; j < 5; j++ )
```

```
System.out.print(subject + (j+1) + ":" + see[i].
```

```
+ " SEE: " + see[i].see_marks[j]);
```

```
}
```

```
}
```

```
}
```

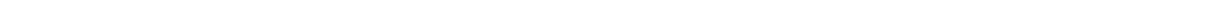
Activities Terminal Nov 25 22:00

```
mahantesh@mahantesh-Inspiron-15-3567:~/javaprograms/javablab/lab6$ javac FinalMarks.java
mahantesh@mahantesh-Inspiron-15-3567:~/javaprograms/javablab/lab6$ java FinalMarks
Enter the no. of students: 2
Enter the details of student 1
NAME: a
USN: q
SEM: 1
Enter the cie marks of all subjects:
Subject 1 :1
Subject 2 :1
Subject 3 :1
Subject 4 :1
Subject 5 :1
Enter the see marks of all subjects:
Subject 1 :2
Subject 2 :2
Subject 3 :2
Subject 4 :2
Subject 5 :2
Enter the details of student 2
NAME: b
USN: w
SEM: 1
Enter the cie marks of all subjects:
Subject 1 :1
Subject 2 :1
Subject 3 :1
Subject 4 :1
Subject 5 :1
Enter the see marks of all subjects:
Subject 1 :2
Subject 2 :2
Subject 3 :2
Subject 4 :2
Subject 5 :2
Student Details:
```



Activities Terminal Nov 25 22:01

```
Student Details:
Student 1 :
Subject 1 :
CIE: 1.0
SEE: 2.0
Subject 2 :
CIE: 1.0
SEE: 2.0
Subject 3 :
CIE: 1.0
SEE: 2.0
Subject 4 :
CIE: 1.0
SEE: 2.0
Subject 5 :
CIE: 1.0
SEE: 2.0
Student 2 :
Subject 1 :
CIE: 1.0
SEE: 2.0
Subject 2 :
CIE: 1.0
SEE: 2.0
Subject 3 :
CIE: 1.0
SEE: 2.0
Subject 4 :
CIE: 1.0
SEE: 2.0
Subject 5 :
CIE: 1.0
SEE: 2.0
mahantesh@mahantesh-Inspiron-15-3567:~/javaprograms/javablab/lab6$ cd ..
mahantesh@mahantesh-Inspiron-15-3567:~/javaprograms/javablab/lab6$ xdg -open
```



Lab-7 | Generics

```
import java.io.*;  
import java.lang.*;  
import java.util.*;  
class gen<T> {  
    T ob;  
    gen(T o){  
        ob=o;  
    }  
    T getOb(){  
        return ob;  
    }  
    void showType(){  
        System.out.println("Type of T is "+ob.getClass().get  
                           Name());  
    }  
}  
class seriesh  
public static void main(String[] args){  
    String n;  
    Scanner sc=new Scanner(System.in);  
    System.out.println("Enter the Integer Number to  
Be displayed using the generic style");  
    n=sc.next();  
    gen<Integer> ob1=new gen<Integer>(Integer.  
        .parseInt(n));  
    ob1.showType();  
    int val=ob1.getOb();  
    System.out.println(" value is : "+val);  
    System.out.println();  
    System.out.println(" Enter the string to be  
Displayed using the generic style");  
}
```

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

```
gen<String> ob2 = new gen<String>(m);
```

```
ob2.showtype();
```

```
String x = ob2.getob();
```

```
System.out.println("Value : "+x);
```

```
System.out.println();
```

```
System.out.println("Enter the Double Number to Be  
Displayed using the generic style");
```

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

```
gen<Double> ob3 = new gen<Double>(Double.parseDouble(m));
```

```
ob3.showtype();
```

```
double ans = ob3.getob();
```

```
System.out.println("Value : "+ans); } }
```

Expected output :-

Enter the Integer Number to be Displayed using the generic style :

12

Type of T is java.lang.Integer

value is: 12

Enter the String to Be Displayed using the generic style

hi

Type of T is java.lang.String

value : hi

Enter the Double Number to be Displayed using the generic style

12.9

Type of T is java.lang.Double

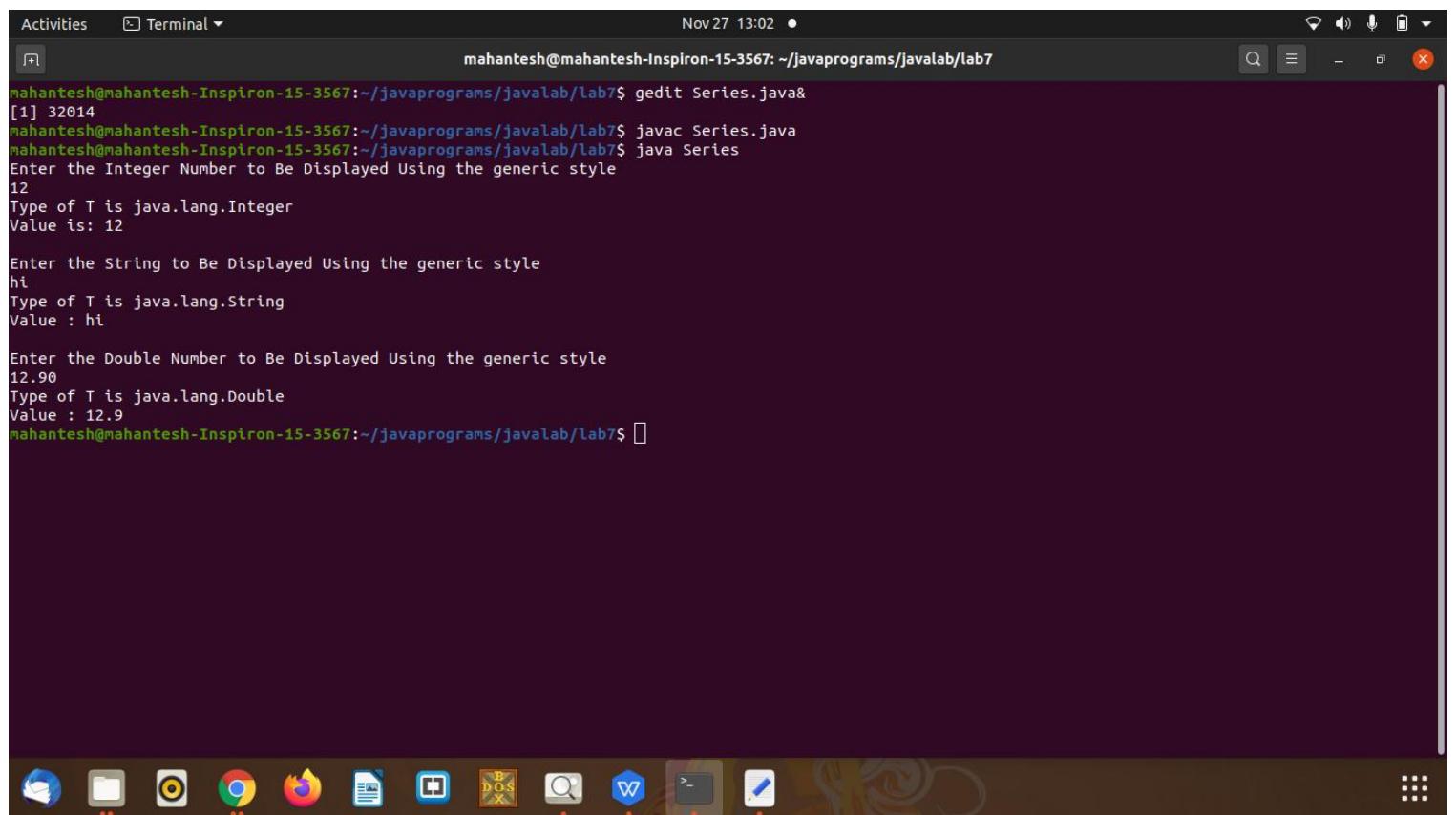
value : 12.9

Activities Terminal Nov 27 13:02

```
mahantesh@mahantesh-Inspiron-15-3567:~/javaprograms/javablab/lab7$ gedit Series.java&
[m] 32014
mahantesh@mahantesh-Inspiron-15-3567:~/javaprograms/javablab/lab7$ javac Series.java
mahantesh@mahantesh-Inspiron-15-3567:~/javaprograms/javablab/lab7$ java Series
Enter the Integer Number to Be Displayed Using the generic style
12
Type of T is java.lang.Integer
Value is: 12

Enter the String to Be Displayed Using the generic style
hi
Type of T is java.lang.String
Value : hi

Enter the Double Number to Be Displayed Using the generic style
12.90
Type of T is java.lang.Double
Value : 12.9
mahantesh@mahantesh-Inspiron-15-3567:~/javaprograms/javablab/lab7$ 
```



The image shows a screenshot of a Linux desktop environment, specifically Ubuntu, with a terminal window open. The terminal window has a dark background and displays a Java program's output. The program prompts the user for integer, string, and double values, then prints them back out. Below the terminal is a dock with various application icons, including a web browser, file manager, and system tools. The desktop has a classic look with a green and gold decorative border.

Lab-8, Exception Handlings

```
import java.util.*;  
class neg extends Exception{  
    int f, s;  
    neg(int fa, int sa){  
        f = fa;  
        s = sa;  
    }  
}
```

```
public String toString(){  
    return "Father's age (" + f + ") can't be <= to  
    son's age (" + s + ");";  
}
```

```
class neg extends Exception{  
    int a;  
    neg(int fa){  
        a = fa;  
    }  
}
```

```
public String toString(){  
    return "Age (" + a + ") can't be negative";  
}
```

```
class Father{  
    int age;  
    String name;
```

```
Scanner in = new Scanner(System.in);  
Father() throws neg{  
    System.out.print("Enter father's name: ");
```

```
name = in.next();
System.out.print("Enter father's age: ");
age = in.nextInt();
if (age < 0) {
    throw new NegAge();
}
```

}

```
} class Son extends Father {
```

```
int sage;
String name;
Scanner in = new Scanner(System.in);
don() throws Neg, Neg {
    super();
}
```

```
System.out.print("Enter son's name: ");
name = in.next();
```

```
System.out.print("Enter son's age: ");
age = in.nextInt();
```

```
if (sage < 0) {
```

```
} throw new Neg(sage);
```

```
if (sage >= age) {
```

```
} throw new Neg(age, sage);
```

and System.out.println("Father's age is "+age)
Son age is "+sage); } }
exithand

```
class Don {
```

```
public static void main(String args[]) {
    try {
        Son s = new Son();
    } catch (Don d) {
```

catch (msg w) {

 System.out.println ("Exception caught : "+w);

catch (weg w) {

 System.out.println ("Exception caught : "+w);

}

Expected output :-

Enter father's name : a

Enter father's age : 30

Enter son's name : b

Enter son's age : 10

Father's age is 30 and Son's age is 10

Enter father's name : a

Enter father's age : -32

Exception caught : age(-32) can't be negative

Enter father's name : a

Enter father's age : 32

Enter son's name : b

Enter son's age : 50

Exception caught : Father's age(32) can't be <= to Son's age(50) ...

Activities Terminal ▾ mahantesh@mahantesh-Inspiron-15-3567: ~/javaprograms/javablab/lab8 Jan 8 15:43 ●

```
mahantesh@mahantesh-Inspiron-15-3567:~/javaprograms/javablab/lab8$ javac ExecptHandling.java
mahantesh@mahantesh-Inspiron-15-3567:~/javaprograms/javablab/lab8$ java ExecptHandling
Enter father's name:
a
Enter father's age: 1
Enter son's name: b
Enter son's age: 0
Father's age is 1 and Son's age is 0
mahantesh@mahantesh-Inspiron-15-3567:~/javaprograms/javablab/lab8$ java ExecptHandling
Enter father's name:
a
Enter father's age: 1
Enter son's name: b
Enter son's age: 2
Exception caught: wrg
mahantesh@mahantesh-Inspiron-15-3567:~/javaprograms/javablab/lab8$ java ExecptHandling
Enter father's name:
a
Enter father's age: -1
Exception caught: Age (-1)can't be negative
mahantesh@mahantesh-Inspiron-15-3567:~/javaprograms/javablab/lab8$
```

Lab 9: Threads

```
class BMSThread
```

```
{
```

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

```
        Thread1 a = new Thread1("BMS COLLEGE OF  
ENGINEERING");
```

```
        Thread2 b = new Thread2("CSE");
```

```
        try
```

```
{
```

```
            a.t.join();
```

```
            b.t.join();
```

```
        } catch(InterruptedException e)
```

```
{
```

```
            System.out.println("Main thread interrupted");
```

```
}
```

```
}
```

```
{
```

```
    String name;
```

```
    Thread t;
```

```
    Thread1(String threadname)
```

```
{
```

```
        name = threadname;
```

```
        t = new Thread(this, name);
```

```
        t.start();
```

```
}
```

```
public void run()
{
    try
    {
        while(true)
        {
            System.out.println(name);
            Thread.sleep(1000);
        }
    }
    catch(InterruptedException e)
    {
        System.out.println("Interrupted in BMS");
    }
}
```

class Thread2 implements Runnable

```
{
    String name;
    Thread t;
    Thread2(String threadname)
    {
        name = threadname;
        t = new Thread(this, name);
        t.start();
    }
}
```

```
public void run()
{
    try
    {
        while(true)
        {
            System.out.println(name);
            Thread.sleep(2000);
        }
    }
    catch(InterruptedException e)
    {
        System.out.println("Interrupted in CSE");
    }
}
```

Expected output

BMS COLLEGE OF ENGINEERING

CSE

CSE

CSE

CSE

CSE

BMS COLLEGE OF ENGINEERING

~~BMS COLLEGE OF ENGINEERING~~

CSE

CSE

CSE

CSE

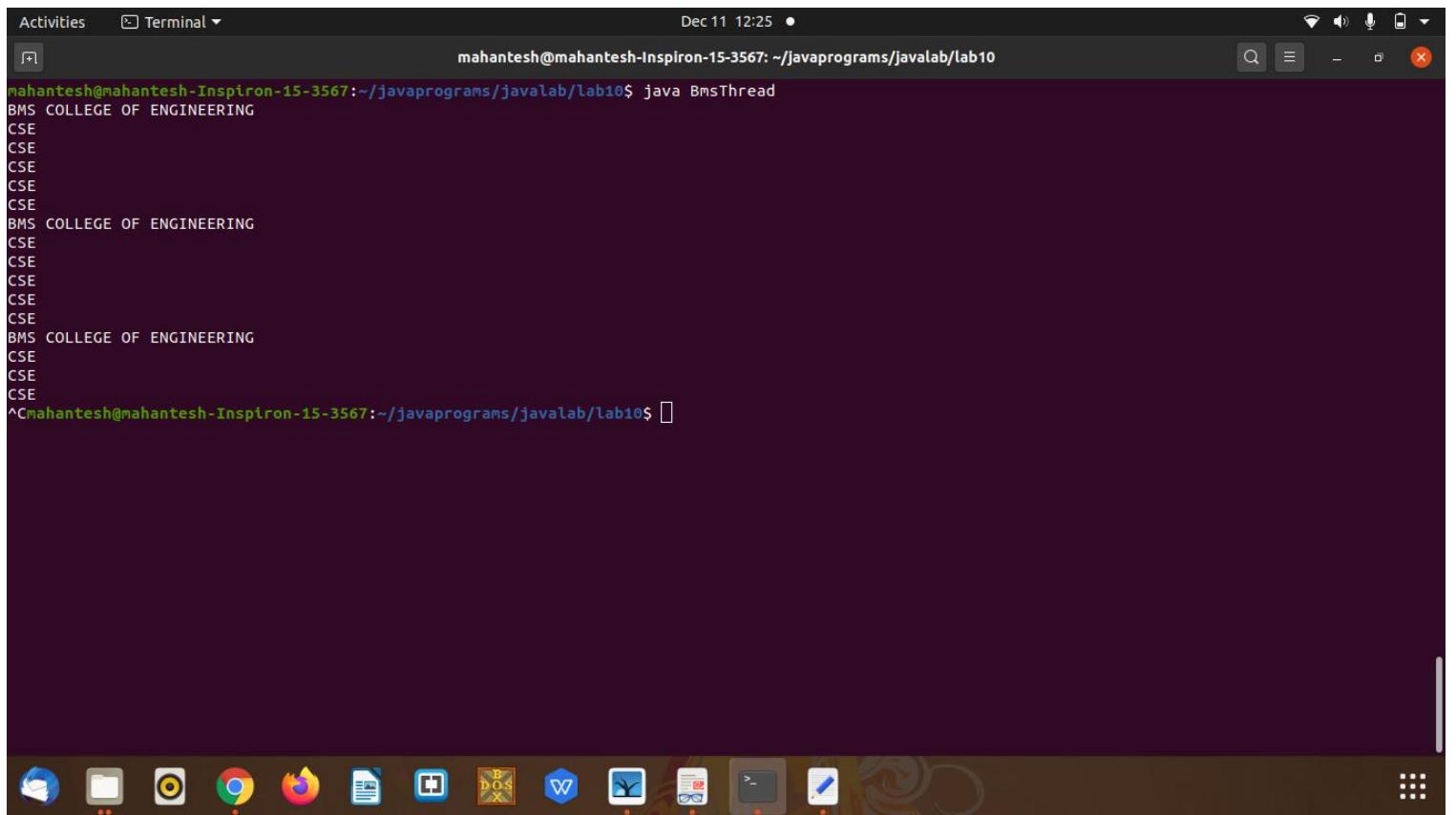
CSE

BMS COLLEGE OF ENGINEERING

AC

Activities Terminal ▾ Dec 11 12:25 ●

```
mahantesh@mahantesh-Inspiron-15-3567:~/javaprograms/javablab/lab10$ java BmsThread
BMS COLLEGE OF ENGINEERING
CSE
CSE
CSE
CSE
CSE
BMS COLLEGE OF ENGINEERING
CSE
CSE
CSE
CSE
CSE
BMS COLLEGE OF ENGINEERING
CSE
CSE
CSE
CSE
^Cmahantesh@mahantesh-Inspiron-15-3567:~/javaprograms/javablab/lab10$
```



Lab - 10.

```
class Table
```

```
{
```

```
    int n;
```

```
    synchronized void printable(int n)
```

```
{
```

```
        for (int i = 1; i <= 10; i++)
```

```
            System.out.println(n + "x" + i + "=" + (n * i));
```

```
        try
```

```
{
```

```
            Thread.sleep(400);
```

```
}
```

```
    catch (Exception e)
```

```
{
```

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

```
}
```

```
}  
}
```

```
class Five extends Thread
```

```
{
```

```
    Table m;
```

```
    Five(Table m)
```

```
{
```

```
    this.m = m;
```

```
}
```

```
public void run()
```

```
{
```

```
    m.printable(5);
```

```
}
```

class Hundred extends Thread

{

Table m;

Hundred(Table m)

{

 this.m = m;

} public void run()

 m.printable(100);

class MultiplicationTable

{ public static void main(String args[])

 Table m = new Table();

 Five f = new Five();

 Hundred h = new Hundred(m);

 f.start();

 h.start();

}

Expected output:

$$5 \times 1 = 5$$

$$5 \times 2 = 10$$

$$5 \times 3 = 15$$

$$5 \times 4 = 20$$

$$5 \times 5 = 25$$

$$5 \times 6 = 30$$

$$5 \times 7 = 35$$

$$5 \times 8 = 40$$

$$5 \times 9 = 45$$

$$5 \times 10 = 50$$

$$100 \times 1 = 100$$

$$100 \times 2 = 200$$

$$100 \times 3 = 300$$

$$100 \times 4 = 400$$

$$100 \times 5 = 500$$

$$100 \times 6 = 600$$

$$100 \times 7 = 700$$

$$100 \times 8 = 800$$

$$100 \times 9 = 900$$

$$100 \times 10 = 1000$$

Activities Terminal ▾ Dec 18 12:59 •

```
mahantesh@mahantesh-Inspiron-15-3567: ~/javaprograms/javablab/lab10/Multiplication Table
100 x 5 = 500
5 x 5 = 25
100 x 6 = 600
5 x 6 = 30
100 x 7 = 700
5 x 7 = 35
100 x 8 = 800
5 x 8 = 40
100 x 9 = 900
5 x 9 = 45
100 x 10 = 1000
5 x 10 = 50
mahantesh@mahantesh-Inspiron-15-3567:~/javaprograms/javablab/lab10/Multiplication Table$ javac MultiplicationTable.java
mahantesh@mahantesh-Inspiron-15-3567:~/javaprograms/javablab/lab10/Multiplication Table$ java MultiplicationTable
5 x 1 = 5
5 x 2 = 10
5 x 3 = 15
5 x 4 = 20
5 x 5 = 25
5 x 6 = 30
5 x 7 = 35
5 x 8 = 40
5 x 9 = 45
5 x 10 = 50
100 x 1 = 100
100 x 2 = 200
100 x 3 = 300
100 x 4 = 400
100 x 5 = 500
100 x 6 = 600
100 x 7 = 700
100 x 8 = 800
100 x 9 = 900
100 x 10 = 1000
mahantesh@mahantesh-Inspiron-15-3567:~/javaprograms/javablab/lab10/Multiplication Table$
```

UNIT 12: Registering Java Applications

Say sorry for trying different combinations to obtain the simplest solution.