B.M.S. College of Engineering

(Autonomous Institution affiliated to VTU, Belagavi)

Department of Computer Science and Engineering

Object Oriented Java – Lab Programs Report

(Batch 2023-2024)

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USN: 1BM22CS069

Semester: III

B.M.S. College of Engineering

Department of Computer Science and Engineering

Laboratory Certificate

This is to certify that **BHUPENDRA SINGH** has satisfactorily completed the course of Experiments in Practical OBJECT-ORIENTED JAVA PROGRAMMING prescribed by the Department during the odd semester 2023-24.

Name of the Candidate: --Bhupendra Singh

USN: --1BM22CS069

Semester: --3rd

Signature of the staff in-charge **Head of the Department**

Date:

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Lab Program 1

Develop a Java program that prints all real solutions to the quadratic equation ax 2 +bx+c = 0. Read in a, b, c and use the quadratic formula. If the discriminate b 2 -4ac is negative, display a message stating that there are no real solutions.

Code:

```
import java.util.Scanner;
class Quadratic
{
double a, b,c,d,r1,r2;
void calculate ()
{
d=b*b-4*a*c;
if(d>0)
{
System.out.println("the roots are real and distinct");
r1=(-b+Math.sqrt(d))/(2*a);
r2=(-b-Math.sqrt(d))/(2*a);
System.out.println("root1="+r1+"and root2="+r2);
}
else if(d==0)
{
System.out.println("the roots are real and equal");
r1=-b/(2*a);
```

```
System.out.println("root1=root2="+r1);
}
else
{
System.out.println("the roots are imaginary");
}
}
}
class main
{
public static void main(String args[])
{
System.out.println("Bhupendra Singh");
System.out.println("1BM22CS069");
Scanner s=new Scanner(System.in);
Quadratic obj=new Quadratic();
System.out.println("enter the value of a:");
obj.a=s.nextDouble();
System.out.println("enter the value of b:");
obj.b=s.nextDouble();
System.out.println("enter the value of c:");
obj.c=s.nextDouble();
obj.calculate();
}
```

```
}
```

Output:

```
PS E:\bhupendra.java> cd "e:\bhupendra.java\" ; if ($?) { javac main.java } ; if ($?) { java main }
Bhupendra Singh
1BM22CS069
enter the value of a:
1
enter the value of b:
4
enter the value of c:
4
the roots are real and equal
root1=root2=-2.0
PS E:\bhupendra.java>
```

Lab Program 2

Develop a Java program to create a class Student with members usn, name, an array credits and an array marks. Include methods to accept and display details and a method to calculate SGPA of a student.

Code:

```
import java.util.Scanner;

class Student {
    String USN;
    String name;
    int[] marks = new int[6];
    float percentage;

    void acceptDetails() {
        Scanner scanner = new Scanner(System.in);
        System.out.println("Enter USN:");
        USN = scanner.nextLine();
        System.out.println("Enter Name:");
        name = scanner.nextLine();
        System.out.println("Enter Marks for 6 Subjects:");
        for (int i = 0; i < 6; i++) {
            System.out.print("Subject " + (i + 1) + ": ");
            marks[i] = scanner.nextInt();
        }
    }


    void calculatePercentage() {
        int total = 0;
        for (int mark : marks) {
            total += mark;
        }
        percentage = (float) total / 6;
    }

    void displayDetails() {
        System.out.println("USN: " + USN);
        System.out.println("Name: " + name);
        System.out.println("Marks:");
        for (int i = 0; i < 6; i++) {
            System.out.println("Subject " + (i + 1) + ": " + marks[i]);
```

```
        }
        System.out.println("Percentage: " + percentage + "%");
    }
}

public class Main {
    public static void main(String[] args) {
        System.out.println("Bhupendra Singh");
        System.out.println("1BM22CS069");
        Scanner scanner = new Scanner(System.in);
        System.out.println("Enter the number of students:");
        int n = scanner.nextInt();

        Student[] students = new Student[n];


        for (int i = 0; i < n; i++) {
            students[i] = new Student();
            System.out.println("Enter details for student " + (i + 1) + ":");
            students[i].acceptDetails();
            students[i].calculatePercentage();
        }


        System.out.println("\nDetails of Students:");
        for (int i = 0; i < n; i++) {
            System.out.println("\nStudent " + (i + 1) + ":");
            students[i].displayDetails();
        }
    }
}
```

Output:

```
Windows PowerShell
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PS E:\report.java\CIE.java>  & 'C:\Program Files\Java\jdk-21\bin\java.exe' '--enable-preview' '-XX:+ShowCodeDetailsInExceptionMessages' '-cp' 'C:\Users\Dell\AppData\Roaming\Code\User\workspaceStorage\50ac304051584ac186e450e185e3b2aa\redhat.java\jdt_ws\CIE.java_a22bf55e\bin' 'Main'
Bhupendra Singh
1BM22CS069
Enter the number of students:
2
Enter details for student 1:
Enter USN:
1bm22cs01
Enter Name:
akaay kohli
Enter Marks for 6 Subjects:
Subject 1: 1
Subject 2: 90
Subject 3: 78
Subject 4: 67
Subject 5: 89
Subject 6: 67
Enter details for student 2:
Enter USN:
1bm22cs100
Enter Name:
virat kohli
Enter Marks for 6 Subjects:
```

```
Subject 1: 12
Subject 2: 23
Subject 3: 90
Subject 4: 96
Subject 5: 78
Subject 6: 90

Details of Students:

Student 1:
USN: 1bm22cs01
Name: akaay kohli
Marks:
Subject 1: 1
Subject 2: 90
Subject 3: 78
Subject 4: 67
Subject 5: 89
Subject 6: 67
Percentage: 65.333336%

Student 2:
USN: 1bm22cs100
Name: virat kohli
Marks:
Subject 1: 12
Subject 2: 23
Subject 3: 90
Subject 4: 96
Subject 5: 78
Subject 6: 90
Percentage: 64.833336%
PS E:\report.java\CIE.java>
```

Lab Program 3

Create a class Book which contains four members: name, author, price, num_pages. Include a constructor to set the values for the members. Include methods to set and get the details of the objects. Include a toString( ) method that could display the complete details of the book. Develop a Java program to create n book objects.

Code:

```
import java.util.Scanner;

class books {
    String name;
    String author;
    int price;
    int numPages;

    books(String name, String author, int price, int numPages) {
        this.name = name;
        this.author = author;
        this.price = price;
        this.numPages = numPages;
    }

    public String toString() {
        return "Book Name: " + this.name + "\n" +
                "Author Name: " + this.author + "\n" +
                "Book Price: " + this.price + "\n" +
                "Number of pages: " + this.numPages + "\n";
    }
}

class main2 {
    public static void main(String[] args) {
        System.out.println("Bhupendra Singh");
        System.out.println("1BM22CS069");
        Scanner s = new Scanner(System.in);
        int n;
        String name;
        String author;
        int price;
        int numPages;

        System.out.println("Enter the number of books:");
```

```
        n = s.nextInt();
        s.nextLine();
        books[] b;
        b = new books[n];
        for (int i = 0; i < n; i++) {
            System.out.println("Book " + (i + 1) + ":");
            System.out.println("Enter the book name");
            name = s.nextLine();
            System.out.println("Enter the author");
            author = s.nextLine();
            System.out.println("Enter the price");
            price = s.nextInt();
            s.nextLine();
            System.out.println("Enter the number of pages");
            numPages = s.nextInt();
            s.nextLine();
            b[i] = new books(name, author, price, numPages);
        }
        for (int i = 0; i < n; i++) {
            System.out.println("Book " + (i + 1) + "\n" + b[i]);
        }
    }
}
```

Output: -

```
Bhupendra Singh
1BM22CS069
Enter the number of books:
2
Book 1:
Enter the book name
DS in c
Enter the author
Reema Thereja
Enter the price
200
Enter the number of pages
600
Book 2:
Enter the book name
Gulliver Travel
Enter the author
Jonathan Swift
Enter the price
300
Enter the number of pages
1000
Book 1
Book Name: DS in c
Author Name: Reema Thereja
Book Price: 200
Number of pages: 600

Book 2
Book Name: Gulliver Travel
Author Name: Jonathan Swift
Book Price: 300
Number of pages: 1000
```

Lab Program 4

Develop a Java program to create an abstract class named Shape that contains two integers and an empty method named printArea( ). Provide three classes named Rectangle, Triangle and Circle such that each one of the classes extends the class Shape. Each one of the classes contain only the method printArea( ) that prints the area of the given shape.

Code:

```
import java.util.*;
import java.lang.*;
abstract class shape
{
int x,y;
abstract void printarea(double x,double y);
}
class Rectangle extends shape
{
void printarea(double x,double y)
{
System.out.println("area of rectangle is:"+(x*y));
}
}
class Triangle extends shape
{
void printarea(double x,double y)
```

```
{
System.out.println("area of triangle is:"+(0.5*x*y));
}
}
class Circle extends shape
{
void printarea(double x,double y)
{
System.out.println("area of circle is:"+(3.14*x*x));
}
}
public class Main4
{
public static void main(String args[])
{
System.out.println("Bhupendra Singh");
System.out.println("1BM22CS069");
Scanner s=new Scanner(System.in);
int ch,x,y;
System.out.println("enter 1 for rectangle, 2 for triangle, 3 for circle");
System.out.println("enter your choice");
ch=s.nextInt();
System.out.println("enter the value of x:");
x=s.nextInt();
```

```
System.out.println("enter the value of y:");

y=s.nextInt();

Rectangle r=new Rectangle();

Triangle t=new Triangle();

Circle c=new Circle();

switch(ch)

{

case 1:

r.printarea(x,y);
break;

case 2:

t.printarea(x,y);

break;

case 3:

c.printarea(x,y);

break;

default:

System.out.println("wrong choice");

}

}

}
```

Output:-

```
Windows PowerShell
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PS E:\bhupendra.java>  & 'C:\Program Files\Java\jdk-21\bin\java.exe' '--enable-preview' '-XX:+ShowCodeDetailsInExceptionMessage
s' '-cp' 'C:\Users\Dell\AppData\Roaming\Code\User\workspaceStorage\86594b2b3a398d1f0c5728915ad4d929\redhat.java\jdt_ws\bhupendr
a.java_3d9b6e21\bin' 'Main4'
Bhupendra Singh
1BM22CS069
enter 1 for rectangle, 2 for triangle, 3 for circle
enter your choice
1
enter the value of x:
12
enter the value of y:
2
area of rectangle is:24.0
PS E:\bhupendra.java>
```

```
Windows PowerShell
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Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS E:\bhupendra.java>  & 'C:\Program Files\Java\jdk-21\bin\java.exe' '--enable-preview' '-XX:+ShowCodeDetailsInExceptionMessage
s' '-cp' 'C:\Users\Dell\AppData\Roaming\Code\User\workspaceStorage\86594b2b3a398d1f0c5728915ad4d929\redhat.java\jdt_ws\bhupendr
a.java_3d9b6e21\bin' 'Main4'
Bhupendra Singh
1BM22CS069
enter 1 for rectangle, 2 for triangle, 3 for circle
enter your choice
2
enter the value of x:
12
enter the value of y:
4
area of triangle is:24.0
PS E:\bhupendra.java>
```

```
Windows PowerShell
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Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS E:\bhupendra.java>  & 'C:\Program Files\Java\jdk-21\bin\java.exe' '--enable-preview' '-XX:+ShowCodeDetailsInExceptionMessage
s' '-cp' 'C:\Users\Dell\AppData\Roaming\Code\User\workspaceStorage\86594b2b3a398d1f0c5728915ad4d929\redhat.java\jdt_ws\bhupendr
a.java_3d9b6e21\bin' 'Main4'
Bhupendra Singh
1BM22CS069
enter 1 for rectangle, 2 for triangle, 3 for circle
enter your choice
3
enter the value of x:
3
enter the value of y:
3
area of circle is:28.259999999999998
PS E:\bhupendra.java>
```

Lab Program 5

Develop a Java program to create a class Bank that maintains two kinds of account for its customers, one called savings account and the other current account. The savings account provides compound interest and withdrawal facilities but no cheque book facility. The current account provides cheque book facility but no interest. Current account holders should also maintain a minimum balance and if the balance falls below this level, a service charge is imposed.

Create a class Account that stores customer name, account number and type of account. From this derive the classes Cur-acct and Sav-acct to make them more specific to their requirements. Include the necessary methods in order to achieve the following tasks:

a) Accept deposit from customer and update the balance.

b) Display the balance.

c) Compute and deposit interest

d) Permit withdrawal and update the balance

Check for the minimum balance, impose penalty if necessary and update the balance.

Code:

```
import java.util.*;

class Account {

    public static int min = 500;

    String name;
    int Account_num;
    public float o_Price;

    Scanner sc = new Scanner(System.in);

    public void get_info() {

        System.out.println("Enter Name:");
        name = sc.nextLine();
```

```
        System.out.println("Enter Account Number:");
        Account_num = sc.nextInt();

        System.out.println("Enter opening Ammount must be >500:");
        o_Price = sc.nextFloat();
    }

    public void show () {
        System.out.println("Name:" + name);
        System.out.println("Account_number:" + Account_num);
        System.out.println("Amount:" + o_Price);
    }
}

class Current extends Account {

    float deposit, withdraw;

    public void deposit() {

        System.out.println("Enter Amount to deposit");
        deposit = sc.nextFloat();

        show();

        o_Price = o_Price + deposit;

        System.out.println("Total Amount is :" + o_Price);
    }

    public void check_Bal() {

        if (o_Price < 500) {
            System.out.println("Amount should be >500");
            o_Price = o_Price - 150;
            System.out.println("You have debited amount 150 from your account
as penalty Account balance is:" + o_Price);
        }
    }

    public void withdraw_Bal() {

        System.out.println("Enter Amount to withdraw");
        withdraw = sc.nextFloat();
        show();

        if (o_Price < 500) {
```

```
            System.out.println("For withdrawal Balance must >500 Rupee");
        }

        if (withdraw < o_Price) {
            o_Price = o_Price - withdraw;
            System.out.println("After Withdrawal Balance " + o_Price);
        } else {
            System.out.println("Insufficient Balance cannot be less than
500");
        }

        check_Bal();
    }
}

class Saving extends Account {

    float deposit, withdraw, intr;

    public void deposit() {

        System.out.println("Enter Amount to deposit");
        deposit = sc.nextFloat();

        show();

        o_Price = o_Price + deposit;

        System.out.println("Total Amount is :" + o_Price);
    }

    public void check_interest() {

        intr = (o_Price * 2) / 100;

        o_Price = o_Price + intr;

        System.out.println("Total Amount with interest is :" + o_Price);
    }

    public void withdraw_Bal() {

        System.out.println("Enter Amount to withdraw:");
        withdraw = sc.nextFloat();
        show ();

        if (withdraw < o_Price) {
```

```
            o_Price = o_Price - withdraw;
            System.out.println("After Withdrawal Balance: " + o_Price);
        } else {
            System.out.println("Insufficient Balance!");
        }
    }
}

public class main5 {

    static String ch = "";

    public static void main(String[] args) {

        System.out.println("Bhupendra Singh");
        System.out.println("1BM22CS069");

        int count = 0;

        Scanner sc = new Scanner(System.in);
        Current cu = new Current();
        Saving sav = new Saving();

        System.out.println("Choose Account type:");
        System.out.println("Press c for Current Account:");
        System.out.println("Press s for Saving Account:");

        ch = sc.nextLine();

        if (ch.equalsIgnoreCase("c")) {

            cu.get_info();
            cu.check_Bal();

            while (count != 4) {

                System.out.println("1.Display\n2.Deposit\n3.Withdraw\n4.Exit")
;
                System.out.println("Enter Your Choice");

                int cho = sc.nextInt();

                switch (cho) {

                    case 1:
                        cu.show();
                        break;
```

```
                    case 2:
                        cu.deposit();
                        break;

                    case 3:
                        cu.withdraw_Bal();
                        break;

                    case 4:
                        System.exit(0);
                        break;

                    default:
                        System.out.println("Wrong Choice!");
                }
            }
        } else if (ch.equalsIgnoreCase("s")) {

            sav.get_info();

            while (count != 5) {

                System.out.println("1.Display\n2.Deposit\n3.Withdraw\n4.Intere
st\n5.Exit");
                System.out.println("Enter Your Choice");

                int cho = sc.nextInt();

                switch (cho) {

                    case 1:
                        sav.show();
                        break;

                    case 2:
                        sav.deposit();
                        break;

                    case 3:
                        sav.withdraw_Bal();
                        break;

                    case 4:
                        sav.check_interest();
                        break;

                    case 5:
                        System.exit(0);
```

```
                        break;

                    default:
                        System.out.println("Wrong Choice!");
                }
            }
        } else {
            System.out.println("Wrong choice!");
        }
    }
}
```

Output:

```
PS E:\bhupendra.java>  & 'C:\Program Files\Java\jdk-21\bin\java.exe' '--enable-preview' '-XX:+ShowCodeDetailsInExceptionMessage
s' '-cp' 'C:\Users\Dell\AppData\Roaming\Code\User\workspaceStorage\86594b2b3a398d1f0c5728915ad4d929\redhat.java\jdt_ws\bhupendr
a.java_3d9b6e21\bin' 'main5'
Bhupendra Singh
1BM22CS069
Choose Account type:
Press c for Current Account:
Press s for Saving Account:
c
Enter Name:
Bhupendra Singh
Enter Account Number:
12345645
Enter opening Ammount must be >500:
1000
1.Display
2.Deposit
3.Withdraw
4.Exit
Enter Your Choice
2
Enter Amount to deposit
1000
Name:Bhupendra Singh
Account_number:12345645
Amount:1000.0
Total Amount is :2000.0
1.Display
2.Deposit
```

```
PS E:\bhupendra.java>  & 'C:\Program Files\Java\jdk-21\bin\java.exe' '--enable-preview' '-XX:+ShowCodeDetailsInExceptionMessage
s' '-cp' 'C:\Users\Dell\AppData\Roaming\Code\User\workspaceStorage\86594b2b3a398d1f0c5728915ad4d929\redhat.java\jdt_ws\bhupendr
a.java_3d9b6e21\bin' 'main5'
Bhupendra Singh
1BM22CS069
Choose Account type:
Press c for Current Account:
Press s for Saving Account:
s
Enter Name:
Bhupendra Singh
Enter Account Number:
3456457
Enter opening Ammount must be >500:
800
1.Display
2.Deposit
3.Withdraw
4.Interest
5.Exit
Enter Your Choice
3
Enter Amount to withdraw:
56
Name:Bhupendra Singh
Account_number:3456457
Amount:800.0
After Withdrawal Balance: 744.0
```

Lab Program 6

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.

Code:

```
package CIE;
import java.util.*;
public class Internals extends Student
{
public int i;
public double imarks[]=new double[5];
public void internal_marks()
{
Scanner s=new Scanner(System.in);
System.out.println("enter student internal marks:");
for(i=0;i<5;i++)
{
imarks[i]=s.nextDouble();
}
}
}
package CIE;
import java.util.*;
public class Student
{
public int usn,sem;
public String name=new String();
public void student_details()
{
Scanner sc=new Scanner(System.in);
System.out.println("enter student details:");
System.out.println("enter student name:");
name=sc.nextLine();
System.out.println("enter student USN:");
usn=sc.nextInt();
```

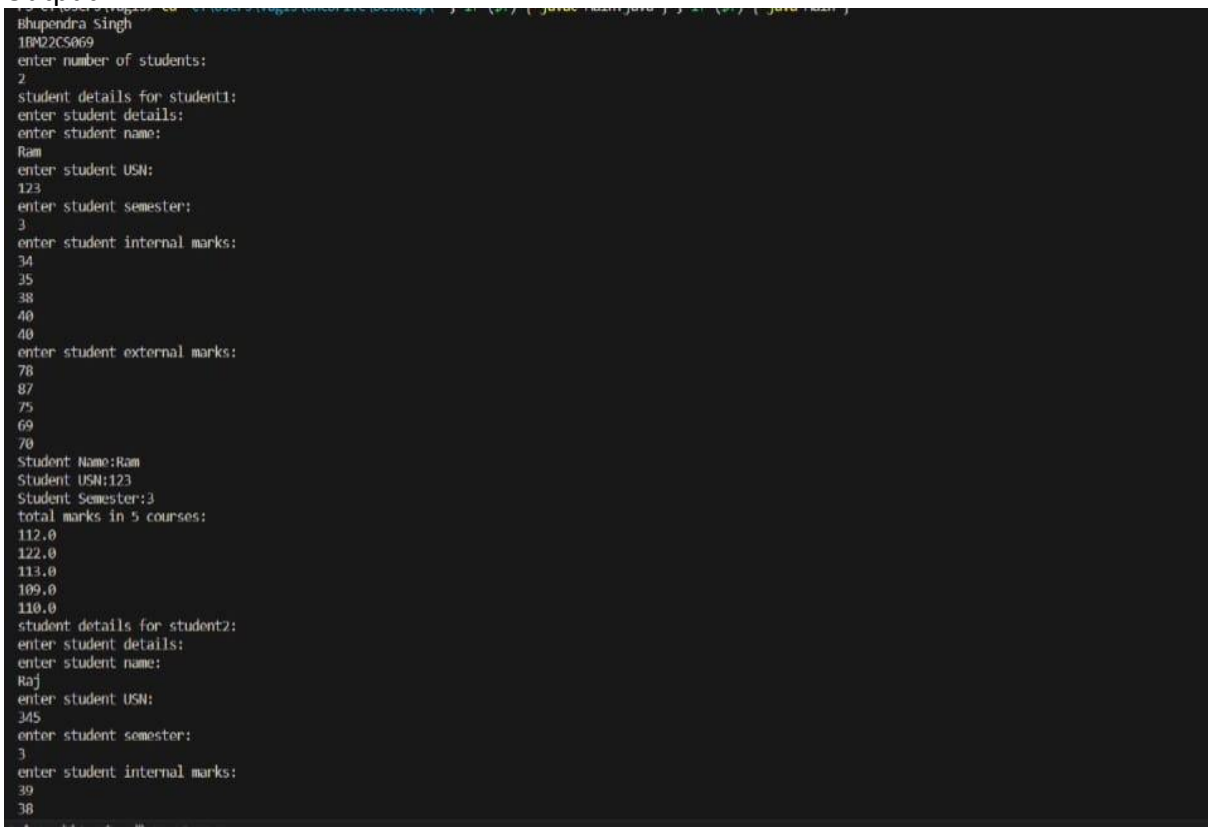
```
System.out.println("enter student semester:");
sem=sc.nextInt();
}
public void display()
{
System.out.println("Student Name:"+name);
System.out.println("Student USN:"+usn);
System.out.println("Student Semester:"+sem);
}
}
```

```
package SEE;
import java.util.*;
import CIE.Student;
public class Externals extends Student
{
public int i;
public double emarks[]=new double[5];
public void external_marks()
{
Scanner ss=new Scanner(System.in);
System.out.println("enter student external marks:");
for(i=0;i<5;i++)
{
emarks[i]=ss.nextDouble();
}
}
}
```

```
import java.util.*;
import CIE.*;
import SEE.*;
public class Main
{
public static void main(String args[])
{
    System.out.println("Bhupendra Singh");
    System.out.println("1BM22CS069");
int n,i,j;
double total[]=new double[5];
Scanner sss=new Scanner(System.in);
System.out.println("enter number of students:");
n=sss.nextInt();
Student s1[] =new Student[n];
```

```
Internals si[]=new Internals[n];
Externals se[]=new Externals[n];
for(i=0;i<n;i++)
{
System.out.println("student details for student"+(i+1)+":");
s1[i]=new Student();
s1[i].student_details();
si[i]=new Internals();
si[i].internal_marks();
se[i]=new Externals();
se[i].external_marks();
s1[i].display();
System.out.println("total marks in 5 courses:");
for(j=0;j<5;j++)
{
total[j]=si[i].imarks[j]+se[i].emarks[j];
}
for(j=0;j<5;j++)
{
System.out.println(total[j]);
}
}
}
}
```

Output:



```
enter student external marks:
78
87
75
69
70
Student Name:Ram
Student USN:123
Student Semester:3
total marks in 5 courses:
112.0
122.0
113.0
109.0
110.0
student details for student2:
enter student details:
enter student name:
Raj
enter student USN:
345
enter student semester:
3
enter student internal marks:
39
38
34
40
40
enter student external marks:
95
94
83
76
65
Student Name:Raj
Student USN:345
Student Semester:3
total marks in 5 courses:
134.0
132.0
117.0
116.0
105.0
```

Lab Program 7

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 WrongAge( ) 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.

Code:

```
import java.util.*;

class WrongAge extends Exception {
    public WrongAge() {
        super("invalid age provided");
    }
}

class Father {
    int fage;

    public Father(int fage) throws WrongAge {
        this.fage = fage;
        if (fage < 0) {
            throw new WrongAge();
        } else {
            System.out.println("The age of father is: " + fage);
        }
    }
}

class Son extends Father {
    int sage;

    public Son(int fage, int sage) throws WrongAge {
        super(fage);
        this.sage = sage;
        if (sage >= fage) {
            throw new WrongAge();
        } else {
            System.out.println("The age of son is: " + sage);
```

```
        }
    }
}

class Main7 {
    public static void main(String args[]) {
        System.out.println("Bhupendra Singh");
        System.out.println("1BM22CS069");

        Scanner s = new Scanner(System.in);
        int fatherage, sonage;

        System.out.println("Enter the age of father:");
        fatherage = s.nextInt();
        System.out.println("Enter the age of son:");
        sonage = s.nextInt();

        try {
            Father f = new Father(fatherage);
            Son so = new Son(fatherage, sonage);
        } catch (WrongAge ae) {
            System.out.println("Exception caught: " + ae.getMessage());
        }
    }
}
```

Output:

```
Windows PowerShell
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Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS E:\bhupendra.java>  & 'C:\Program Files\Java\jdk-21\bin\java.exe' '--enable-preview' '-XX:+ShowCodeDetailsI
nExceptionMessages' '-cp' 'C:\Users\Dell\AppData\Roaming\Code\User\workspaceStorage\86594b2b3a398d1f0c5728915a
d4d929\redhat.java\jdt_ws\bhupendra.java_3d9b6e21\bin' 'Main7'
Bhupendra Singh
1BM22CS069
Enter the age of father:
45
Enter the age of son:
20
The age of father is: 45
The age of father is: 45
The age of son is: 20
PS E:\bhupendra.java>
```

```
Windows PowerShell
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Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS E:\bhupendra.java>  & 'C:\Program Files\Java\jdk-21\bin\java.exe' '--enable-preview' '-XX:+ShowCodeDetailsI
nExceptionMessages' '-cp' 'C:\Users\Dell\AppData\Roaming\Code\User\workspaceStorage\86594b2b3a398d1f0c5728915a
d4d929\redhat.java\jdt_ws\bhupendra.java_3d9b6e21\bin' 'Main7'
Bhupendra Singh
1BM22CS069
Enter the age of father:
23
Enter the age of son:
34
The age of father is: 23
The age of father is: 23
Exception caught: invalid age provided
PS E:\bhupendra.java>
```

Lab Program 8

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.

Code:

```
class Display implements Runnable {
    String message;
    int interval;

    public Display(String message, int interval) {
        this.message = message;
        this.interval = interval;
    }

    @Override
    public void run() {
        try {
            while (true) {
                System.out.println(message);
                Thread.sleep(interval);
            }
        } catch (InterruptedException e) {
            System.out.println(e);
        }
    }
}

public class main8 {
    public static void main(String args[]) {
        System.out.println("Bhupendra Singh");
        System.out.println("1BM22CS069");

        Thread t1 = new Thread(new Display("BMS College of Engineering",
10000));
        t1.start();

        Thread t2 = new Thread(new Display("CSE", 2000));
        t2.start();
    }
}
```

Output:

```
d4d929\redhat.java\jdt_ws\bhupendra.java_3d9b6e21\bin' 'main8'
Bhupendra Singh
1BM22CS069
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
CSE
BMS College of Engineering
CSE
CSE
CSE
CSE
```

THANK YOU