Lab Program 1:

Writeup:

```
        WEEK  1

import java.util.Scanner;
import java.lang.Math;
class RealSolution{
        private int a,b,c;
        void accept(){
            System.out.println("A Quadratic eqn. is of the form
                                    a*x^2 + b*x + c = 0");
            System.out.println("Enter the values of a, b, c to find
                                    out the roots of the equation");
            Scanner sc = new Scanner(System.in);

            System.out.print("Enter the value of a:");
            this.a = sc.nextInt();
            System.out.print("Enter value of b:");
            this.b = sc.nextInt();
            System.out.print("Enter value of c:");
            this.c = sc.nextInt();
        }
        double calculateD(){
            double D = (b*b) - 4*(a*c);
            if (D < 0)
                return -999;
            else
                return D;
        }
        void DisplayResult(double D){
            double r1, r2;
            if (D == -999)
                System.out.print("Roots are complex");
            else
            { r1 = (-b + Math.sqrt(D)) /2a;
              r2 = (-b - Math.sqrt(D)) /2a;
            } System.out.println("Roots are:" + "r1" + "," + "r2");
        }
    public static void main(String args[]){
        RealSolution rs = new RealSolution();
        rs.accept();
        double Discriminate = rs.calculateD();
        rs.displayResult(Discriminate);
    }
}
```

Expected o/p :-

A quadratic equation is of the form $ax^2 + bx + c = 0$

Enter values of a, b, c in order to find Roots of eqn.

Enter value of a : 1

Enter value of b : 0

Enter value of c : -1

Roots are : -1.0, 1.0

Code:

Program Code:

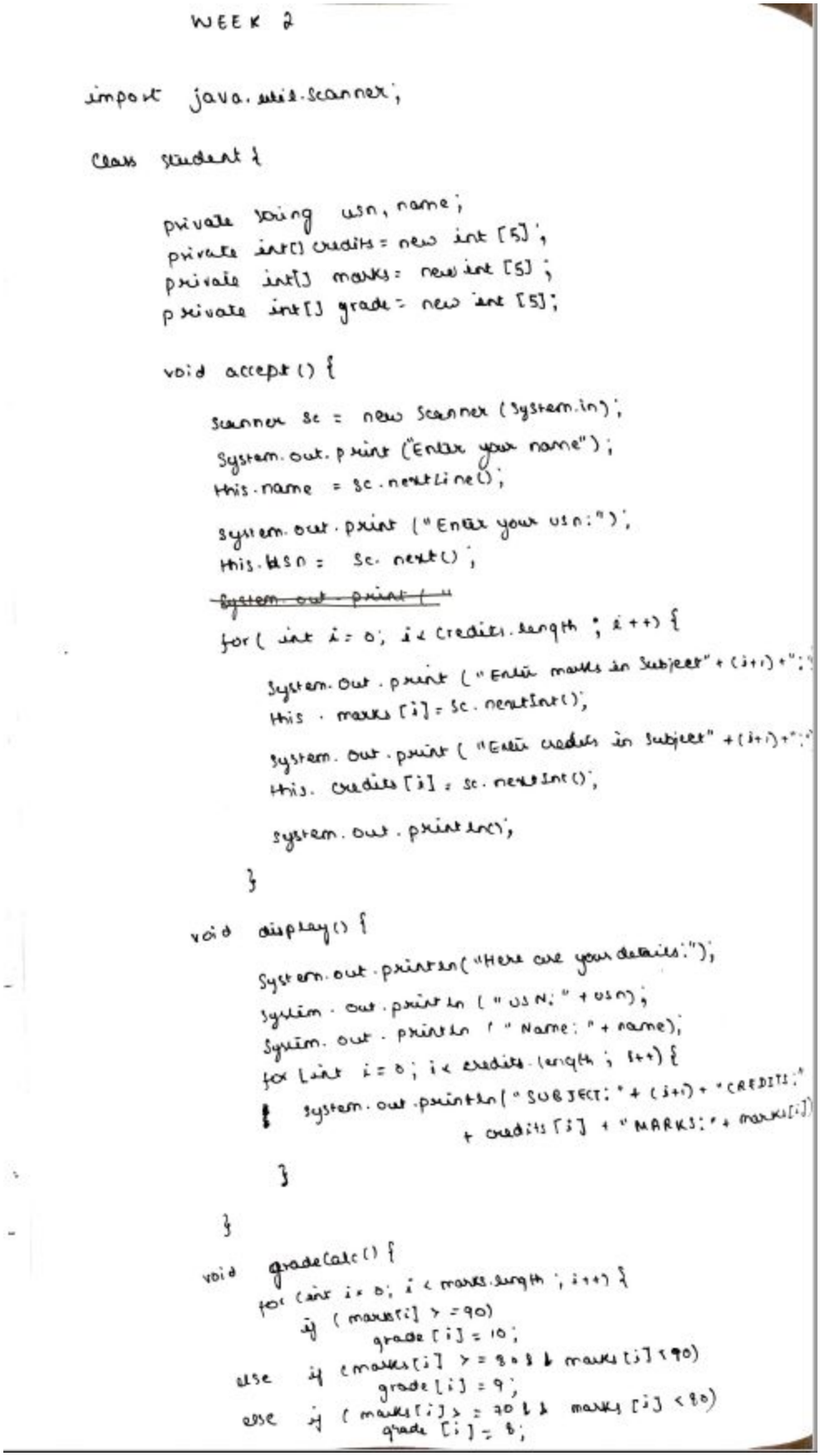
```
import java.util.Scanner;
import java.lang.Math;
class RealSolution
{
    private int a,b,c;

    void accept()
    {
        System.out.println("A Quadratic Equation is of the form ax^2 + bx + c = 0");
        System.out.println("Enter values of a,b,c in order to find out the roots of the eqn");
        Scanner sc = new Scanner(System.in);

        System.out.print("Enter the value of a: ");
        this.a = sc.nextInt();

        System.out.print("Enter the value of b: ");
        this.b = sc.nextInt();

        System.out.print("Enter the value of c: ");
        this.c = sc.nextInt();
    }

    double calculateD()
    {
        double D = (b*b)- (4*a*c);
        if(D<0)
            return -999;
        else
            return D;
    }
    void displayResult(double D)
    {
        double r1,r2;
        if(D == -999)
            System.out.print("Roots are complex");
        else
        {
            r1 = (-b + Math.sqrt(D))/(2*a);
            r2 = (-b - Math.sqrt(D))/(2*a);
            System.out.println("Roots are:"+ r1 + " " + r2);
        }
    }
    public static void main(String args[])
    {
        RealSolution rs = new RealSolution();
        rs.accept();
        double Discriminate = rs.calculateD();
        rs.displayResult(Discriminate);
    }
}
```

Output:

```
"C:\Java\bin\java" -classpath "C:\Users\Madhusudhan\Desktop\JavaProgs" RealSolution
Process started (PID=3804) >>>
A Quadratic Equation is of the form ax^2 + bx + c = 0
Enter values of a,b,c in order to find out the roots of the eqn
Enter the value of a: 1
Enter the value of b: 2
Enter the value of c: 1
Roots are:-1.0 -1.0
<<< Process finished (PID=3804). (Exit code 0)
================ READY ================
```

Lab Program 2:

Writeup:



```
WEEK 2

import java.util.Scanner;

Class student {

    private string usn, name;
    private int[] credits = new int [5];
    private int[] marks = new int [5];
    private int[] grade = new int [5];

    void accept() {

        Scanner sc = new Scanner (System.in);
        System.out.print ("Enter your name");
        this.name = sc.nextLine();

        system.out.print ("Enter your usn:");
        this.USN = sc.next();
        System.out.print (
        for( int i = 0; i < credits.length ; i++) {

            System.out.print ("Enter marks in subject" + (i+1) + ":");
            this . marks [i] = sc.nextInt();

            system.out.print ("Enter credits in subject" + (i+1) + ":");
            this. credits [i] = sc.nextInt();

            system.out.println();

        }

    void display() {

        System.out.println("Here are your details:");
        System.out.println ("USN:" + usn);
        System.out.println ("Name:" + name);
        for (int i = 0; i < credits.length ; i++) {
        {   system.out.println("SUBJECT:" + (i+1) + "CREDITS:"
                                + credits[i] + "MARKS:" + marks[i])

        }

    }

    void gradeCalc() {
        for (int i = 0; i < marks.length ; i++) {
            if (marks[i] >=90)
                grade[i] = 10;
        else if (marks[i] >=80 && marks[i] <90)
                grade[i] = 9;
        else if (marks[i] >= 70 && marks[i] <80)
                grade[i] = 8;
```

```
else if ( marks[i] >= 60 && marks[i] < 70)
    grade[i] = 7;
else if ( marks[i] >= 50 && marks[i] < 60)
    grade[i] = 6;
else if ( marks[i] >= 40 && marks[i] < 50)
    grade[i] = 4;
else
    grade[i] = 0;
  }
}
double sgpa(){
    double sum = 0, totalCred = 0;
    gradeCalc();
    for(int i = 0; i < credits.length; i++){
        sum += grade[i] * credits[i];
        totalCred += credits[i];
    }
    return sum/totalCred;
}
public static void main(String args[])
{
    Student std = new Student();
    std.accept();
    std.display();
    double gradePt = std.sgpa();
    System.out.println("Your sgpa is: " + gradePt);
  }
}
```

Expected o/p :- (for 2 subject input)

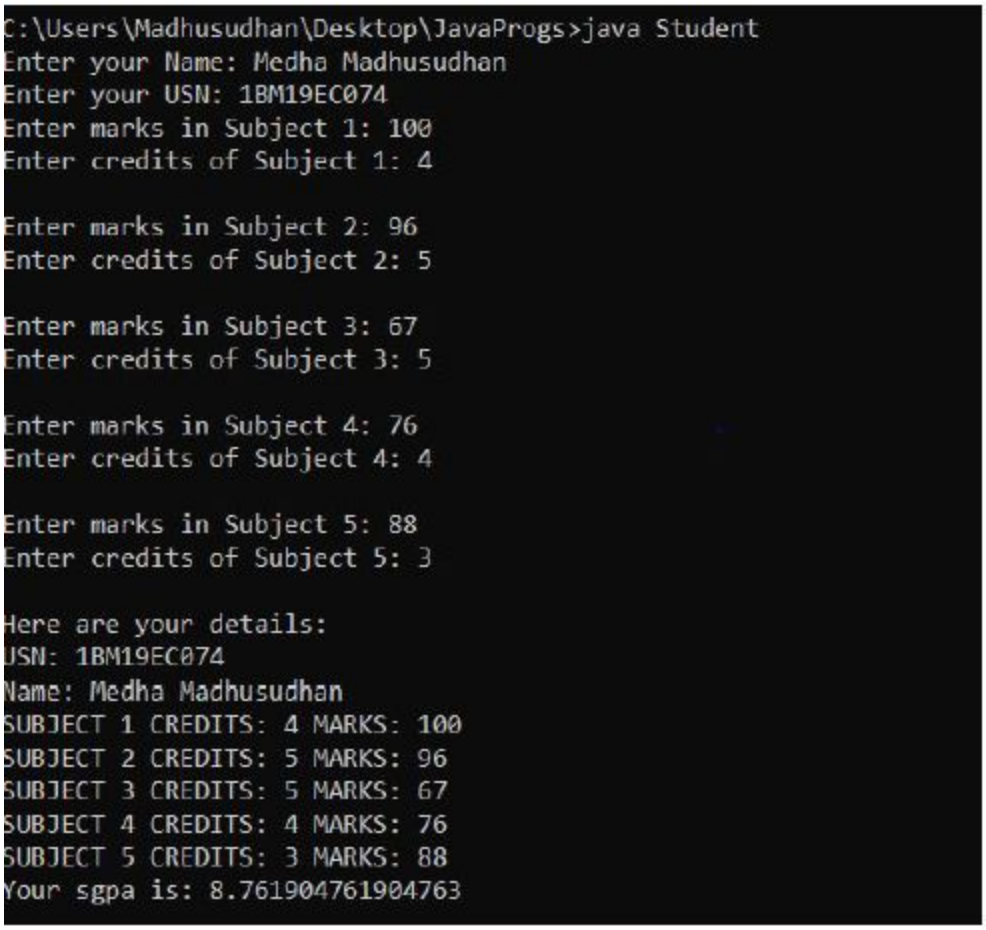
```
Enter your Name : Medha Madhusudhan
Enter your USN : 1BM19EC074
Enter marks in subject 1 : 100
Enter credits of subject 1 : 4
Enter marks in subject 2 : 75
Enter credits of subject 2 : 3
Here are your details :-
USN :- 1BM19EC074
Name : Medha Madhusudhan
Subject 1 credits : 4 marks : 100
Subject 2 credits : 3 marks : 75
Your SGPA is : 9.1428
```

Code:

```java
import java.util.Scanner;

class Student
{
    private String usn,name;
    private int[] credits = new int[5];
    private int[] marks = new int[5];
    private int[] grade = new int[5];

    //Accepts information from the user
    void accept()
    {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter your Name: ");
        this.name = sc.nextLine();

        System.out.print("Enter your USN: ");
        this.usn = sc.next();

        for(int i=0;i<credits.length;i++)
        {
            System.out.print("Enter marks in Subject " + (i+1) + ": ");
            this.marks[i] = sc.nextInt();

            System.out.print("Enter credits of Subject " + (i+1) + ": ");
            this.credits[i] = sc.nextInt();

            System.out.println();
        }
    }

    //displays information entered by the user
    void display()
    {
        System.out.println("Here are your details:");
        System.out.println("USN: "+ usn);
        System.out.println("Name: "+name);
        for(int i=0;i<credits.length;i++)
        {
            System.out.println("SUBJECT " + (i+1) + " CREDITS: " + credits[i] + " MARKS: " + marks[i]);
        }


    }

    //To calculate grade point of each of the marks entered by user
    void gradeCalc()
    {
        for(int i=0;i<marks.length;i++)
        {
            if(marks[i] >= 90)
                grade[i] = 10;
            else if(marks[i] >= 80 && marks[i] < 90)
                grade[i] = 9;
            else if(marks[i] >= 70 && marks[i] < 80)
                grade[i] = 8;
            else if(marks[i] >= 60 && marks[i] < 70)
                grade[i] = 7;
```

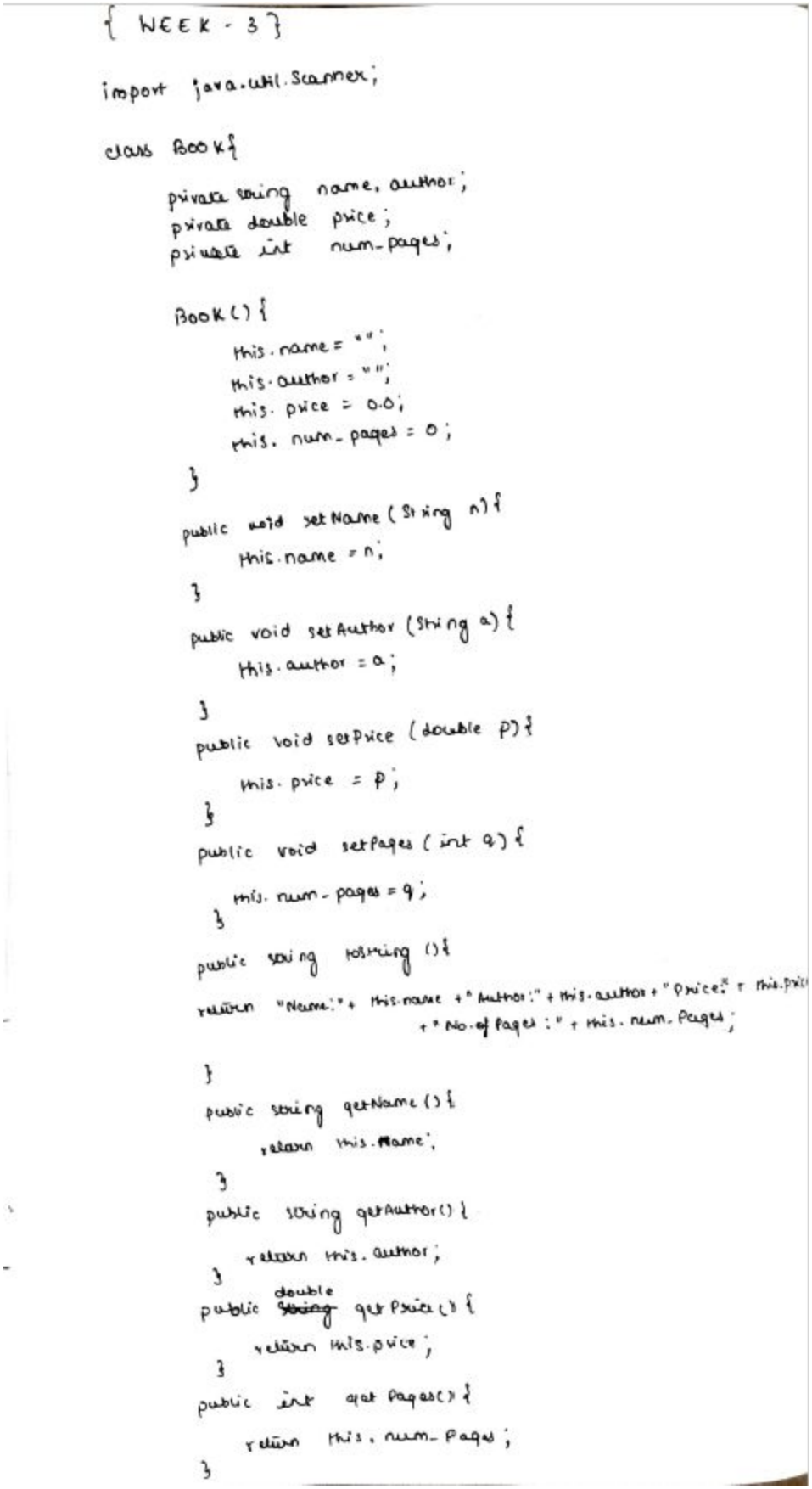
```
            else if(marks[i] >= 50 && marks[i] < 60)
                grade[i] = 6;
            else if(marks[i] >= 40 && marks[i] < 50)
                grade[i] = 4;
            else
                grade[i] = 0;

        }
    }

    //To calculate sgpa,returns a double value
    double sgpa()
    {
        double sum = 0,totalCred = 0;
        gradeCalc();

        for(int i=0;i<credits.length;i++)
        {
            sum+= grade[i]*credits[i];
            totalCred+= credits[i];
        }

        return sum/totalCred;

    }

    //main function
    public static void main(String args[])
    {
        Student std = new Student();
        std.accept();
        std.display();
        double gradePt = std.sgpa();
        System.out.println("Your sgpa is: " + gradePt);
    }
}
```

Output:


C:\Users\Madhusudhan\Desktop\JavaProgs>java Student
Enter your Name: Medha Madhusudhan
Enter your USN: 1BM19EC074
Enter marks in Subject 1: 100
Enter credits of Subject 1: 4
Enter marks in Subject 2: 96
Enter credits of Subject 2: 5
Enter marks in Subject 3: 67
Enter credits of Subject 3: 5
Enter marks in Subject 4: 76
Enter credits of Subject 4: 4
Enter marks in Subject 5: 88
Enter credits of Subject 5: 3
Here are your details:
USN: 1BM19EC074
Name: Medha Madhusudhan
SUBJECT 1 CREDITS: 4 MARKS: 100
SUBJECT 2 CREDITS: 5 MARKS: 96
SUBJECT 3 CREDITS: 5 MARKS: 67
SUBJECT 4 CREDITS: 4 MARKS: 76
SUBJECT 5 CREDITS: 3 MARKS: 88
Your sgpa is: 8.761904761904763

Lab Program 3:

Writeup:



```
{ WEEK - 3 }

import java.util.Scanner;

class BOOK{

    private string name, author;
    private double price;
    private int num_pages;

    BOOK() {
        this.name = "";
        this.author = "";
        this. price = 0.0;
        this. num_pages = 0;
    }

    public void setName (String n) {
        this.name = n;
    }
    public void setAuthor (String a) {
        this.author = a;
    }
    public void setPrice (double p) {
        this. price = p;
    }
    public void setPages ( int q) {
        this. num_pages = q;
    }
    public string toString () {
    return "Name:" + this.name + "Author:" + this.author + "Price:" + this.pric
                        + "No.of Pages :" + this. num_Pages;
    }
    public string getName () {
        return this.name;
    }
    public string getAuthor() {
        return this. author;
    }
    public double getPrice () {
        return this.price;
    }
    public int getPages() {
        return this. num_pages;
    }
```

```
public static void main (String[] args) {
    int n;
    Scanner sc = new Scanner(System.in);
    System.out.print("How many Book Details do you want to enter? ");
    n = sc.nextInt();
    Book[] b = new Book[n];

    for(int i=0; i<n; i++) {
        b[i] = new Book();
        System.out.println("Enter details for book"+(i+1));

        System.out.print("Enter name: ");
        b[i].setName(sc.next());

        System.out.print("Enter author: ");
        b[i].setAuthor(sc.next());

        System.out.print("Enter price: ");
        b[i].setPrice(sc.nextDouble());
        System.out.print("Enter no. of pages:");
        b[i].setPages(sc.nextInt());
    }
    for (int i=0; i<n; i++) {
        System.out.println("Book "+(i+1));
        String st = b[i].toString();
        System.out.println(st);
    }

}
}
```

Expected o/p:-

```
How many books do you want to enter: 1
Enter details for book 1
Enter name: b1
Enter author: a1
Enter price: 25
Enter no. of pages:- 99
Book 1
Name: b1 Author a1 Price 25.0 no. of pages: 99
```

Code:

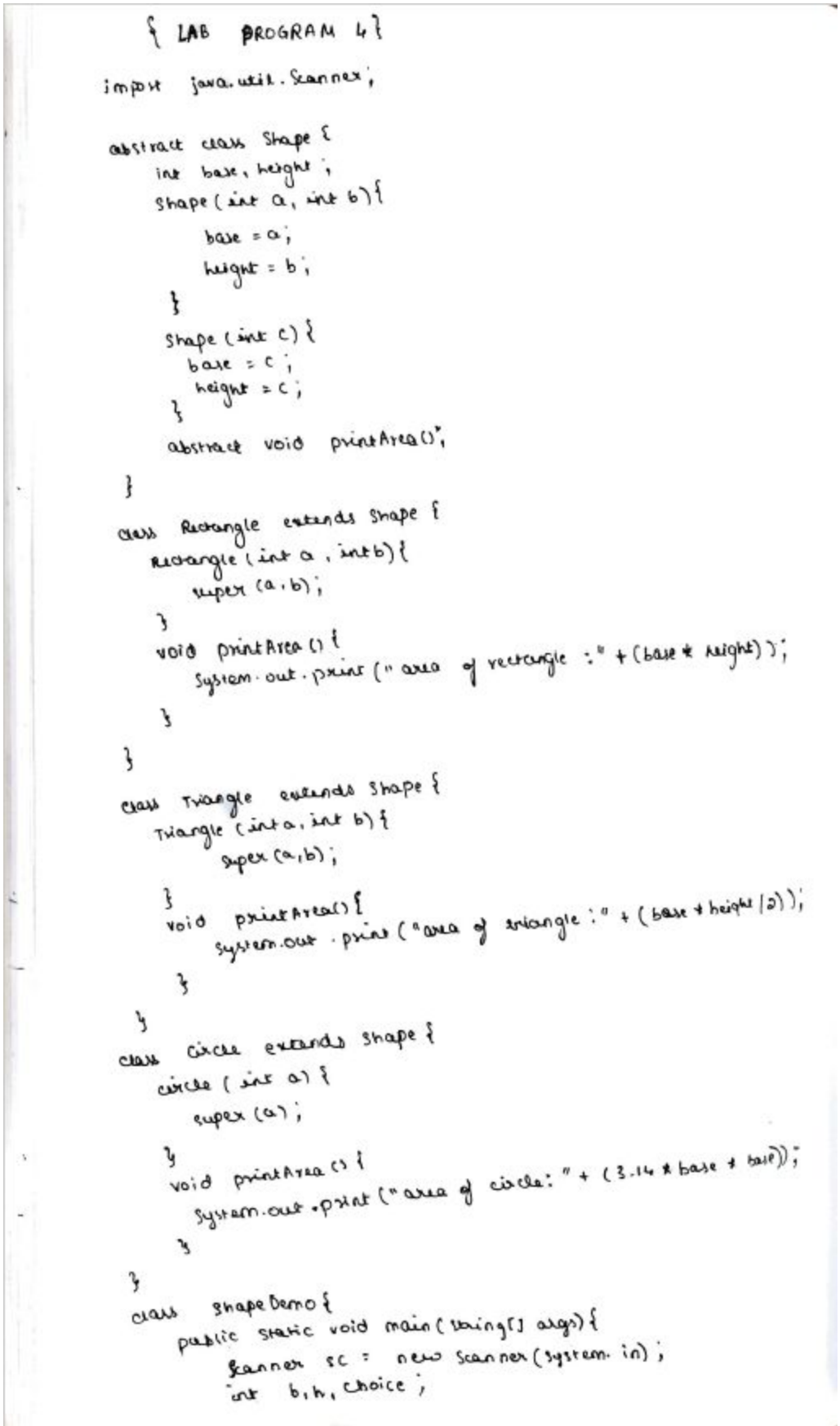
```
import java.util.Scanner;

class Book{
    private String name,author;
    private double price;
    private int num_pages;

    Book(){
        this.name = "";
        this.author = "";
        this.price = 0.0;
        this.num_pages = 0;
    }

    public void setName(String n){
        this.name = n;
    }
    public void setAuthor(String a){
        this.author = a;
    }
    public void setPrice(double p){
        this.price = p;
    }
    public void setPages(int q){
        this.num_pages = q;
    }

    public String toString(){

        return "Name: " + this.name + " Author:" + this.author + " Price:" + this.price + " No. of Pages:" + this.num_pages;

    }

    public String getName(){
        return this.name;
    }

    public String getAuthor(){
        return this.author;
    }

    public double getPrice(){
        return this.price;
    }

    public int getPages(){
        return this.num_pages;
    }

    public static void main(String args[]){
        int n;
        Scanner sc = new Scanner(System.in);
        System.out.print("How may book details do you want to enter: ");
        n = sc.nextInt();
        Book[] b = new Book[n];

        for(int i=0;i<n;i++){
            b[i] = new Book();
            System.out.println("Enter Details for Book  "+(i+1));

            System.out.print("Enter Name: ");
            b[i].setName(sc.next());

            System.out.print("Enter Author: ");
            b[i].setAuthor(sc.next());

            System.out.print("Enter Price: ");
            b[i].setPrice(sc.nextDouble());

            System.out.print("Enter no. of pages: ");
            b[i].setPages(sc.nextInt());
        }

        for(int i=0;i<n;i++){
            System.out.println("Book "+(i+1));
            String st = b[i].toString();
            System.out.println(st);
        }

    }

}
```

Output:

```
"C:\java\bin\java" -classpath "C:\Users\Madhusudhan\Desktop\JavaProgs" Book
Process started (PID=19536) >>>
How may book details do you want to enter: 2
Enter Details for Book  1
Enter Name: b1
Enter Author: a1
Enter Price: 45
Enter no. of pages: 56
Enter Details for Book  2
Enter Name: b2
Enter Author: a2
Enter Price: 67
Enter no. of pages: 78
Book 1
Name: b1 Author:a1 Price:45.0 No. of Pages:56
Book 2
Name: b2 Author:a2 Price:67.0 No. of Pages:78
<<< Process finished (PID=19536). (Exit code 0)
================ READY ================
```

Lab Program 4:

Writeup:



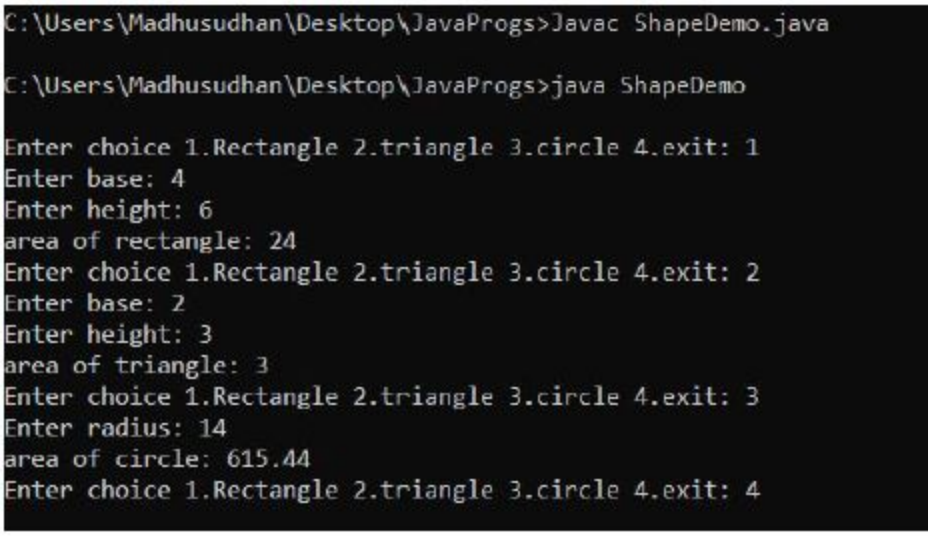
```
{ LAB PROGRAM 4 }

import java.util.Scanner;

abstract class Shape {
    int base, height;
    Shape(int a, int b){
        base = a;
        height = b;
    }
    Shape(int c) {
      base = c;
      height = c;
    }
    abstract void printArea();
}

class Rectangle extends Shape {
   Rectangle(int a, int b){
      super(a,b);
    }
    void printArea() {
      System.out.print("area of rectangle :" + (base * height));
    }
}

class Triangle extends Shape {
   Triangle(int a, int b) {
        super(a,b);
    }
    void printArea() {
      System.out.print("area of triangle :" + (base * height/2));
    }
}

class Circle extends Shape {
   Circle(int a) {
      super(a);
    }
    void printArea() {
      System.out.print("area of circle: " + (3.14 * base * base));
    }
}

class ShapeDemo {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int b,h, choice;
```

```
while (
    System.out.print("\nEnter choice 1.Rectangle 2.Triangle 3.circle
                                        4.exit: ");
    choice = sc.nextInt();

    switch(choice){
        case 1: System.out.print("Enter base: ");
                b= sc.nextInt();
                System.out.print("Enter height:");
                h = sc.nextInt();
                Rectangle r = new Rectangle(b,h);
                r.printArea();
                break;
        case 2: System.out.print("Enter base: ");
                b = sc.nextInt();
                System.out.print("Enter height:");
                h = sc.nextInt();
                Triangle t = new Triangle(b,h);
                t.printArea();
                break;
        case 3: System.out.print("Enter radius:");
                b= sc.nextInt();
                circle ci = new circle(b);
                ci.printArea();
                break;
        case 4: System.exit(0);

        }
    }
}
}
```

Code:

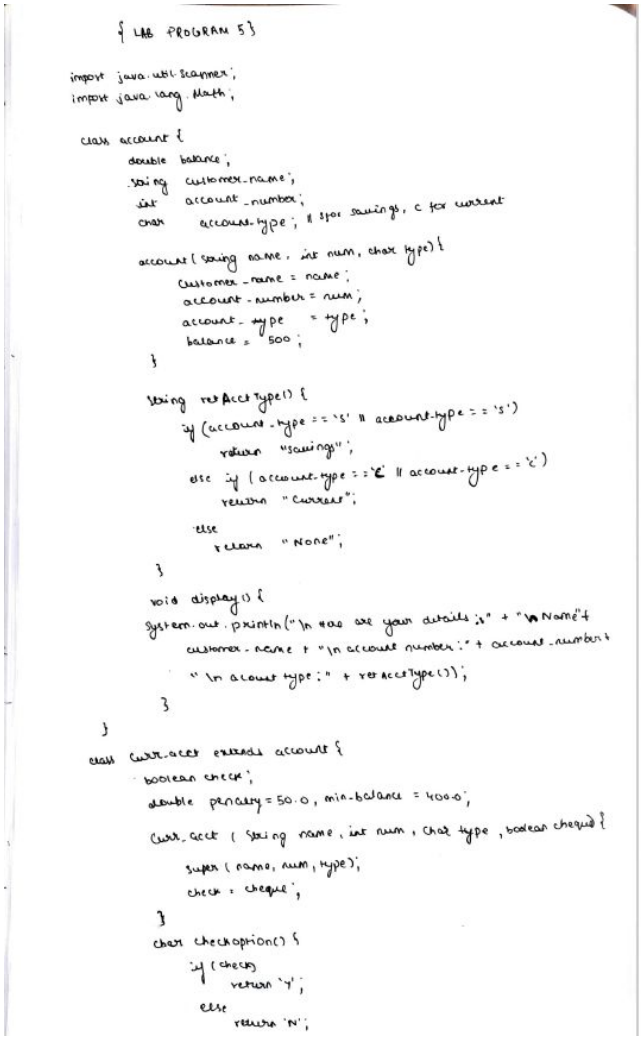
```
import java.util.Scanner;

abstract class Shape{
    int base,height;
    Shape(int a,int b){
        base = a;
        height = b;
    }
    Shape(int c){
        base = c;
        height = c;
    }
    abstract void printArea();
}

class Rectangle extends Shape{
    Rectangle(int a,int b){
        super(a,b);
    }
    void printArea(){
        System.out.print("area of rectangle: " + (base*height));
    }
}
class Triangle extends Shape{
    Triangle(int a,int b){
        super(a,b);
    }
    void printArea(){
        System.out.print("area of triangle: " + (base*height/2));
    }
}
class circle extends Shape{
    circle(int a){
        super(a);
    }
    void printArea(){
        System.out.print("area of circle: " + (3.14*base*base));
    }
}

class ShapeDemo{
    public static void main(String args[]){
        Scanner sc = new Scanner(System.in);
        int b,h,choice;
        while(true){
            System.out.print("\nEnter choice 1.Rectangle 2.triangle 3.circle 4.exit: ");
            choice = sc.nextInt();

            switch(choice){
                case 1:System.out.print("Enter base: ");
                    b = sc.nextInt();
                    System.out.print("Enter height: ");
                    h = sc.nextInt();
                    Rectangle r = new Rectangle(b,h);
                    r.printArea();
                    break;

                case 2:System.out.print("Enter base: ");
                    b = sc.nextInt();
                    System.out.print("Enter height: ");
                    h = sc.nextInt();
                    Triangle t = new Triangle(b,h);
                    t.printArea();
                    break;

                case 3:System.out.print("Enter radius: ");
                    b = sc.nextInt();
                    circle ci = new circle(b);
                    ci.printArea();
                    break;

                case 4:System.exit(0);
            }
        }
    }
}
```

Output:


C:\Users\Madhusudhan\Desktop\JavaProgs>Javac ShapeDemo.java
C:\Users\Madhusudhan\Desktop\JavaProgs>java ShapeDemo
Enter choice 1.Rectangle 2.triangle 3.circle 4.exit: 1
Enter base: 4
Enter height: 6
area of rectangle: 24
Enter choice 1.Rectangle 2.triangle 3.circle 4.exit: 2
Enter base: 2
Enter height: 3
area of triangle: 3
Enter choice 1.Rectangle 2.triangle 3.circle 4.exit: 3
Enter radius: 14
area of circle: 615.44
Enter choice 1.Rectangle 2.triangle 3.circle 4.exit: 4

Lab Program 5:

Writeup:



```
{ LAB PROGRAM 5}

import java.util.Scanner;
import java.lang.Math;

class account {
    double balance;
    String customer_name;
    int account_number;
    char account_type; // s for savings, c for current

    account(String name, int num, char type){
        customer_name = name;
        account_number = num;
        account_type = type;
        balance = 500;
    }

    String retAccType() {
        if (account_type == 's' || account_type == 'S')
            return "saving";
        else if (account_type == 'c' || account_type == 'C')
            return "current";
        else
            return "None";
    }
    void display() {
    System.out.println("\n Here are your details :" + "\n Name" +
        customer_name + "\n account number :" + account_number +
        "\n account type :" + retAccType());
    }
}
class Curr_acct extends account {
    boolean check;
    double penalty = 50.0, min_balance = 400.0;
    Curr_acct (String name, int num, char type, boolean cheque) {
        super(name, num, type);
        check = cheque;
    }
    char checkoption() {
        if (check)
            return 'Y';
        else
            return 'N';
    }
    double AddPenalty() {
        if (balance <= 400)
            balance = balance - penalty;
        return balance;
    }
    double updateBalance(double n) {
        balance = AddPenalty();
        balance = balance + n;
        return balance;
    }
    void displayBalance() {
        balance = AddPenalty();
        System.out.println("Your balance :" + balance);
    }
    void displaymin() {
        System.out.println("minBalance" + min_balance + "Penalty :" +
                           penalty);
    }
}
class Sav_acct extends account {
    int interest_rate;
    Sav_acct(String name, int num, char type) {
        super(name, num, type);
        interest_rate = 5;
    }
    double calcInterest(int n, int t) {
        double val;
        val = Math.pow(1+(double) interest_rate/(n*100), n*t);
        return balance;
    }
}
class BankDemo {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int choice, n;
        String a;
        char c, bool;
        boolean d;
        System.out.print("Enter your name :");
```

```
a = sc.next();
System.out.print("Enter your account number: ");
b= sc.nextInt();
System.out.print("Enter acct type (S for savings, C for current)");
c= sc.next().charAt(0);

if (c=='C' || c=='c') {
    System.out.print(" Do you want check option (Y|N) ?");
    bool = sc.next().charAt(0);
    if (bool=='Y' || bool=='y')
        d = true;
    else
        d = false;
    Current_acct a1 = new Curr_acct(a,b,c,d);
    a1.display();
    while (true) {
        double x;
        System.out.println("Enter your choice:\n1.deposit\n
          2.display balance (after penalty,if applicable) \n3.
          withdraw \n4. check min balance and penalty \n5.
          exit");
        choice = sc.nextInt();
        switch(choice) {
          case 1: System.out.print("How much do you want to
                                    deposit ? ");
                  x = sc.nextDouble;
                  System.out.print(" Balance has been update
                    to:" + obj.updateBalance(x));
                  break;
          case 2: a1.displayBalance();
                  break;
          Case 3: System.out.print(" How much do you want
                  to withdraw ?");
                  x = sc.nextDouble();
                  System.out.print(" Balance has been update
                    to Rs." + a1.updateBalance(-x));
                  break;
          Case 4: a1.displayMinBal();
                  break;
          Case 5: System.exit(0);
        }
    }
}
```

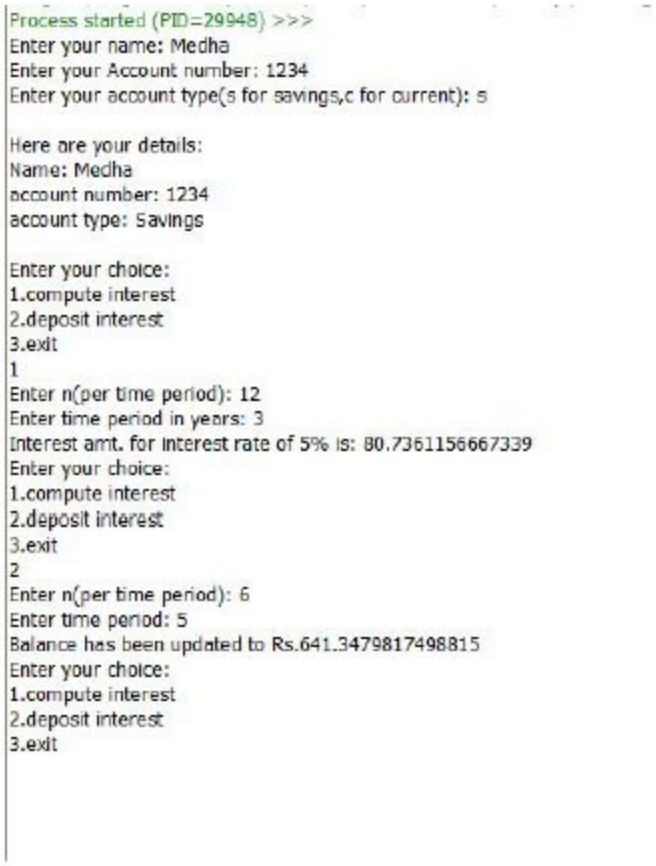
```
else
    if (c=='S' || c=='s') {
    Sav_acct a2 = new Sav_acct(a,b,c);
    a2.display();
    while (true) {
        int p,q;
        System.out.println("\nEnter choice:\n1. compute interest \n2.
                deposit interest \n3. exit");
        choice = sc.nextInt();
      switch(choice){
        int p,q;
        case 1: System.out.print("Enter n(per time period):");
                p = sc.nextInt();
                System.out.print("Enter time period in years:");
                q = sc.nextInt();
                System.out.print("Interest amt. for interest
                  rate of 5% is :" + a2.calcInterest(p,q));
                break;
        case 2: System.out.print("Enter n(per time period):");
                p= sc.nextInt();
                System.out.print("Enter time period:");
                q = sc.nextInt();
                System.out.print("Balance has been updated
                  to Rs." + a2.depositInterest(p,q));
                break;
        case 3: System.exit(0);
      }
    }
}
else
    System.exit(0);
}
```

Code:

```
        if(balance <= 400)
            balance = balance - penalty;
        return balance;
    }

    double updateBalance(double n){
        balance = Addpenalty();
        balance = balance + n;
        return balance;
    }
    void displayBalance(){
        balance = Addpenalty();
        System.out.println("your balance: " + balance);
    }
    void dixplayMin(){
        System.out.println("minimum balance: " + min_balance +" Penalty: "+ penalty);
    }

}
class Sav_acct extends account{
    int interest_rate;

    Sav_acct(String name,int num,char type){
        super(name,num,type);
        interest_rate = 5;
    }
    double calcInterest(int n,int t){
        double val;
        val = Math.pow(1 + (double)interest_rate/(n*100),n*t);
        return balance*(val - 1);
    }
    double depositInterest(int n,int t){
        balance = balance*Math.pow(1 + (double)interest_rate/(n*100),n*t);
        return balance;
    }
}

class BankDemo{
    public static void main(String[] args){
        Scanner sc = new Scanner(System.in);
        int choice,b;
        String a;
        char c,bool;
        boolean d;
```

```
        System.out.print("Enter your name: ");
        a = sc.next();
        System.out.print("Enter your account number: ");
        b = sc.nextInt();
        System.out.print("Enter your account type(c for savings,s for current): ");
        c = sc.next().charAt(0);

        if( cc == 'c' || c == 'C'){
            System.out.print("Do you want simple option(y/n)");
            ccc1 = sc.next().charAt(0);
            if(ccc1 == 'Y' || ccc1 == 'y')
                d = true;
            else
                d = false;

            Curr_acct a1 = new Curr_acct(a,b,c,d);
            a1.display();

            while(true){
                double x;
                System.out.println("\nEnter your choice:\n1.deposit\n2.display balance\nNote penalty,if applicable!\n3.withdraw\n4.check min. balance and penalty\n5.exit ");
                choice = sc.nextInt();
                switch(choice){
                    case 1:System.out.print("How much do you want to deposit");
                           x = sc.nextDouble();
                           System.out.print("Balance has been updated to Rs." + a1.updateBalance(x));
                           break;
                    case 2:a1.displayBalance();
                           break;
                    case 3:System.out.print("How much do you want to withdraw");
                           x = sc.nextDouble();
                           System.out.print("Balance has been updated to Rs." + a1.updateBalance(-x));
                           break;
                    case 4:a1.displayMin();
                           break;
                    case 5:System.exit(0);
                }
            }
        }
        else if( cc == 's' || c == 'S'){
            Sav_acct a2 = new Sav_acct(a,b,c,d);
            a2.display();

            while(true){
                int p,q;
                System.out.println("\nEnter your choice:\n1.compute interest\n2.deposit interest\n3.exit");
                choice = sc.nextInt() ;
                switch(choice){
                    case 1:System.out.print("Enter n(per time period): ");
                           p = sc.nextInt();
                           System.out.print("Enter time period in years: ");
                           q = sc.nextInt();
                           System.out.print("Interest amt. for interest rate of 5% is: " + a2.calcInterest(p,q));
                           break;
                    case 2:System.out.print("Enter n(per time period): ");
                           p = sc.nextInt();
                           System.out.print("Enter time period: ");
                           q = sc.nextInt();
                           System.out.print("Balance has been updated to Rs." + a2.depositInterest(p,q));
                           break;
                    case 3:System.exit(0);
                }
            }
        }
        else
            System.exit(0);
    }
}
```

Output:


Process started (PID=29948) >>>
Enter your name: Medha
Enter your Account number: 1234
Enter your account type(s for savings,c for current): s
Here are your details:
Name: Medha
account number: 1234
account type: Savings
Enter your choice:
1.compute interest
2.deposit interest
3.exit
1
Enter n(per time period): 12
Enter time period in years: 3
Interest amt. for interest rate of 5% is: 80.7361156667339
Enter your choice:
1.compute interest
2.deposit interest
3.exit
2
Enter n(per time period): 6
Enter time period: 5
Balance has been updated to Rs.641.3479817498815
Enter your choice:
1.compute interest
2.deposit interest
3.exit