```
//practical 1A  factrial
import java.util.*;
import java.lang.*;
public class practical1A{
	public static void main(String[] args) {
		System.out.println("Welcome to Online IDE!! Happy Coding :");
		Scanner in=new Scanner(System.in);
		System.out.print("Enter the no :");
		int n=in.nextInt();
		long fact=1;
		for(int i=1;i<=n;i++){
			fact=fact*i;

		}
		System.out.println("factorial of" + n + " is " + fact);
	}
}

//practical 1B  50 prime numbers
import java.util.*;
import java.lang.*;
public class practical1B{
	public static void main(String args[]){
		int i,m=0,flag=0;
		Scanner num = new Scanner(System.in);
		System.out.print("Enter no:");
		int R =num.nextint();
		int m=R/2;
		if(R==0||R==1){
			System.out.println(R+" is not prime number");
		}
```

```
            else{
                for(i=2;i<=m;i++){
                    if(R%i==0){
                        System.out.println(R+" is not prime number");
                        flag=1;
                        break;
                    }
                }
                if(flag==0){
                    System.out.println(R+" is prime number");
                    }
                }
        }
}
public class primeNumber {
    public static void main(String[] args) {
        int primeCount = 0;
        int current Number 2;
        int totalPrimes ToFind 50;
System.out.println("First" + totalPrimesToFind+" Prime Numbers:");
while (primeCount < totalPrimes ToFind) {
    int divisorCount = 0;
    for (int divisor = 1; divisor <= currentNumber; divisor++) {
        if (current Number divisor 0)
        {
         divisorCount++;
}
        }
    }

//practical 1C avearage number
```

```
import java.util.*;
public class practical1C {
	public static void main(String[] args) {
		System.out.println("Welcome to Online IDE!! Happy Coding :)");
		Scanner in = new Scanner(System.in);
		double no,sum =0, avg;
		int n;
		System.out.print("How many numbers you want to enter:");
		n = in.nextInt();
		for( int i = 1; i<= n; i++) {
			System.out.print("Enter the No: ");
			no = in.nextDouble();
			sum += no;
		}
		avg = sum/n;
		System.out.println("Avg of  " + n + "number is "+ avg);
	}
}

//practical 3 3Rectangle class with data field width, length, area
import java.util.*;
public class practical3 {
	double length,width,area;
	String color;
	Scanner s=new Scanner(System.in);
	void get_length() {
		System.out.println("Enter length");
		length=s.nextDouble();
	}
	void get_width(){
		System.out.println("Enter width");
```

```
        width=s.nextDouble();
    }
    double find_area(){
        area=length*width;
        return(area);
    }
    String get_colour(){
        System.out.println("Enter color");
        color=s.next();
        return(color);
    }
public static void main(String[]args){
    practical3 R1=new practical3();
    practical3 R2=new practical3();
    System.out.println("Enter the details for 1st rectangle");
    R1.get_length();
    R1.get_width();
    String str1=R1.get_colour();
    System.out.println("Enter the details for 2nd rectangle");
    R2.get_length();
    R2.get_width();
    String str2=R2.get_colour();
    if(R1.find_area()==R2.find_area()&&(str1.equals(str2))){

        System.out.println("Matching Rectangle");
    }
    else{
        System.out.println("Not matching Rectangles");}
    }
}
```

```
//practical 4 method & constructor overloading
import java.util.*;
import java.lang.*;
class Addition{
	double num1, num2, num3;
	Addition(double a, double b, double c)
	{
		num1 = a;
		num2 = b;
		num3 = c;
	}
	Addition(double a, double b){
		num1 = a;
		num2 = b;
	}
	Addition(){
		num1=num2=num3 = 0;
	}
	Addition(double value){
		num1=num2=num3= value;
	}
	double add(){
		return num1+num2+num3;
	}
	double add(double num1,double num2){
		return num1+num2;
	}
public static void main(String args[]){
	Addition sum1 = new Addition(10,20,50);
	Addition sum2  = new Addition();
	Addition sum3 = new Addition(7);
```

```
        Addition sum4 = new Addition(7,101);
        double total;
        total = sum1.add();
        System.out.println("Addition is :" + total);
        total = sum2.add();
        System.out.println("Addition is : " + total);
        total = sum3.add();
        System.out.println("Addition is : " + total);
        total = sum4.add();
        System.out.println(" Addition is : " + total);
        }
}

//practical 5 sort list of integer & name
package javaAssignments;

import java.util.Scanner;

//import java.util.Arrays;

class Sort {

   void sortInterger(int a[]) {

       for (int i = 0; i < a.length; i++) {
          for (int j = i + 1; j < a.length; j++) {
             if (a[i] > a[j]) {
                int temp = a[i];
                a[i] = a[j];
                a[j] = temp;
             }
```

```
        }
      }

   }

   void sortString(String str[]) {

      String temp;
      for (int i = 0; i < str.length; i++) {
         for (int j = i + 1; j < str.length; j++) {
            if (str[i].compareTo(str[j]) > 0) {
               temp = str[i];
               str[i] = str[j];
               str[j] = temp;
            }

         }
      }

   }

}

public class EighthAssignment {

   public static void main(String[] args) {

      Sort obj = new Sort();
      Scanner in = new Scanner(System.in);
      int choice;
      do {
```

```
System.out.println(" 1.Sort Integer\n 2.Sort String");
System.out.println("Enter the choice");
int ch = in.nextInt();

switch (ch) {
case 1:
   System.out.println("Enter the size of Array ");
   int n = in.nextInt();

   System.out.println("Enter the Numbers :");
   int arr[] = new int[n];
   for (int i = 0; i < n; i++)
      arr[i] = in.nextInt();
   obj.sortInterger(arr);
   // Arrays.sort(arr);
   System.out.println("Sorted Numbers :");

   for (int i = 0; i < n; i++)
      System.out.print(arr[i] + " ");
   break;

case 2:
   String names[] = { "ram", "shyam", "seeta", "geeta", "reeta" };
   obj.sortString(names);
   for (int i = 0; i < names.length; i++)
      System.out.print(names[i] + " ");
   break;

}
System.out.println("\nDo U want to continue 1 or 0?");
choice = in.nextInt();
```

```
        } while (choice == 1);
    }

}

//practical 6 Addition of two matrices
package javaAssignments;

import java.util.Scanner;

#public class NinethAssignment {

public class MatrixAddition {
    public static void main(String[] args) {
        // TODO Auto-generated method stub
        Scanner s = new Scanner(System.in);
        System.out.print("Enter number of rows: ");
        int rows = s.nextInt();
        System.out.print("Enter number of columns: ");
        int columns = s.nextInt();

        int[][] a = new int[rows][columns];//first matrix array declaration
        int[][] b = new int[rows][columns];// second matrix array declaration

        // Enter first matrix
        System.out.println("Enter the first matrix");
        for (int i = 0; i < rows; i++) {//i=rows
            for (int j = 0; j < columns; j++) {//j=columns
                a[i][j] = s.nextInt();
            }
        }
```

```
        // Enter Second matrix
        System.out.println("Enter the second matrix");
        for (int i = 0; i < rows; i++) {
            for (int j = 0; j < columns; j++) {
                b[i][j] = s.nextInt();
            }
        }

        int[][] c = new int[rows][columns];// C= addition of two matrices

        //Addition of two matrices operation
        for (int i = 0; i < rows; i++) {
            for (int j = 0; j < columns; j++) {
                c[i][j] = a[i][j] + b[i][j];
            }
        }

        // To print addition results
        System.out.println("The sum of the two matrices is");
        for (int i = 0; i < rows; i++) {
            for (int j = 0; j < columns; j++) {
                System.out.print(c[i][j] + " ");
            }
            System.out.println();
        }
    }

}

//practical 7 player class inherit cricketplayer, football player
```

```
package inheritance;
import java.util.Scanner;
class Player{
String name;
int age;
String gameName;
int noOfGamesPlayed;
String address;
String type;
Scanner in=new Scanner(System.in);
void getDetails(){
System.out.println(&amp;quot;Enter the details Name ,
Age, Address, Name of Game ,No of Games Played and
Type &amp;quot;);

name=in.nextLine();
age=in.nextInt();
address=in.nextLine();
gameName=in.nextLine();
noOfGamesPlayed=in.nextInt();
type=in.nextLine();
}
void display(){
System.out.println(&amp;quot;Name : &amp;quot;+ name+&amp;quot; Age: &amp;quot; +

age+&amp;quot; Game Name: &amp;quot;+ gameName +

&amp;quot; Total Matches: &amp;quot;
+noOfGamesPlayed +&amp;quot; Address: &amp;quot;+ address+

&amp;quot; International or National : &amp;quot;
```

```
+type );
}
}

class Cricket_Player extends Player{
int totalRuns;
int totalWickets;
void getDetails(){
super.getDetails();
System.out.println(&amp;quot;Enter the Total Runs and

Wickets: &amp;quot;);

totalRuns=in.nextInt();
totalWickets=in.nextInt();
}
void display(){
super.display();
System.out.println(&amp;quot;Total Runs: &amp;quot; +totalRuns

+&amp;quot; Total Wickets :&amp;quot;+totalWickets);
}
}
class FootBall_Player extends Player
{
int noOfGoals;
void getDetails(){
super.getDetails();
System.out.println(&amp;quot;Enter the total no of
```

```
Goals&amp;quot;);

noOfGoals=in.nextInt();
}
void display(){
super.display();

System.out.println(&amp;quot;Total Goals: &amp;quot; +noOfGoals

);
}
}
class Hockey_Player extends Player
{
int noOfGoals;
void getDetails(){
super.getDetails();
System.out.println(&amp;quot;Enter the total no of

Goals&amp;quot;);

noOfGoals=in.nextInt();
}
void display(){
super.display();
System.out.println(&amp;quot;Total Goals: &amp;quot; +noOfGoals

);
}
}
public class inheritanceclass {
```

```
public static void main(String[] args) {
// TODO Auto-generated method stub
Cricket_Player cp=new Cricket_Player();
cp.getDetails();
cp.display();
FootBall_Player fp=new FootBall_Player();
fp.getDetails();
fp.display();

Hockey_Player hp=new Hockey_Player();
hp.getDetails();
hp.display();
}
}
```

// practical 8 mports user define packege & use members of classes

Program 1 for package

```
package packageproject;
public/private class packageclass {
public int x,y;
public/private void display(){
System.out.println(&amp;quot;Welcome to package project-
packageclass&amp;quot;);
}
public/private int add(int x, int y){return(x+y);}
}
```

Program 2 for package

```
package mypackage;
```

```
import packageproject.*;
public class mypackageclass {
public static void main(String args[]){
packageclass p1=new packageclass();
p1.display();
System.out.println(&amp;quot;Addition is =&amp;quot;+p1.add(10,20));
}
}

//practical9 .implement interface
//A Java program to implement interface
interface area{
final static float pi=3.14f;
float compute(float x, float y);
}
public class interfaceclass implements area {
public float compute(float x, float y) {
return(pi*x*y);}
public static void main(String []args){
interfaceclass p1=new interfaceclass();
System.out.println(&amp;quot;Area=&amp;quot;+p1.compute(20.00f,20
.0f));
}
}

//practical 10 Try catch for exception handling
# A program to handle divide by zero exception
class Main {
  public static void main (String args[]) {
    int num1 = 15, num2 = 0, result = 0;
    try{
```

```
        result = num1/num2;
        System.out.println("The result is" +result);
      }
      catch (ArithmeticException e) {
        System.out.println ("Can't be divided by Zero " + e);
      }
    }
}

//practical 11 draw oval, rectangle, line, text
import java.applet.Applet;
import java.awt.Color;
import java.awt.Graphics;
public class Appletclass extends Applet{
public void paint(Graphics g)
{
//g.setColor(Color.black);
g.drawString(&amp;quot;Hello APPLETS&amp;quot;,10, 50);
//g.setColor(Color.blue);
// g.fillOval(170,200,30,30);
//g.drawArc(90,150,30,30,30,270);
//g.fillArc(270,150,30,30,0,180);
//g.drawLine(21,31,20,300);
//g.drawRect(70,100,30,30);
//g.fillRect(170,100,30,30);
//g.drawOval(70,200,30,30);
}
}
```