1.Write a program that prompts the user to input a positive integer. It should then output a message indicating whether the number is a prime number.

Program:

**import** java.util.Scanner;

**public** **class** Prime {

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

{

**int** temp;

**boolean** isPrime=**true**;

Scanner scan= **new** Scanner(System.***in***);

System.***out***.println("Enter any positive number:");

**int** num=scan.nextInt();

**for**(**int** i=2;i<=num/2;i++)

{

temp=num%i;

**if**(temp==0)

{

isPrime=**false**;

**break**;

}

}

**if**(isPrime)

System.***out***.println(num + " is a Prime Number");

**else**

System.***out***.println(num + " is not a Prime Number");

}

}

Output:

Enter any positive number:

5

5 is a Prime Number

2.Write a program that prompts the user to input a positive integer. It should then print the multiplication table of that number.

Program:

**import** java.util.\*;

**public** **class** MulTable {

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

{

System.***out***.println("Enter a Number");

Scanner s=**new** Scanner(System.***in***);

**int** a=s.nextInt();

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

{

**int** p=a\*i;

System.***out***.println(a+"\*"+i+"="+p);

}

}

}

Output:

Enter a Number

5

5\*1=5

5\*2=10

5\*3=15

5\*4=20

5\*5=25

5\*6=30

5\*7=35

5\*8=40

5\*9=45

5\*10=50

3.A student will not be allowed to sit in exam if his/her attendance is less than 75%.

Take following input from user

Number of classes held

Number of classes attended.

And print

percentage of class attended

Is student is allowed to sit in exam or not.

Program:

import java.util.\*;

 class Attendence

    {

        public static void main(String[] args)

            {

                double per;

                Scanner s=new Scanner(System.in);

                System.out.println("Enter the Number of classes held:");

                double clshld=s.nextInt();

                System.out.println("Enter the number of classes attended");

                int clsatd=s.nextInt();

                per=(clsatd/clshld)\*100;

                System.out.println("Persentage of class Attended="+per);

                if(per>75)

                {

                    System.out.println("Student is permitted to appear for the exam");

                }

                else

                {

                    System.out.println("Student is not permitted to appear for the exam");

                }

            }

    }

Output:

Enter the Number of classes held:

100

Enter the number of classes attended

80

Percentage of class Attended=80.0

Student is permitted to appear for the exam

4.A company decided to give bonus of 5% to employee if his/her year of service is more than 5 years.

Ask user for their salary and year of service and print the net bonus amount. Note- create a method Employee Bonus to calculate the bonus and return it.

Program:

import java.util.\*;

class SalaryBonus

    {

        static double empbonus(double salary,int exp)

            {

                double netbonus;

                if(exp>5)

                    {

                        netbonus=salary\*0.05;

                    }

                else

                    {

                        netbonus=0.0;

                    }

                return netbonus;

            }

        public static void main(String[] args)

            {

                Scanner s=new Scanner(System.in);

                System.out.println("Enter your current salary");

                double salary=s.nextDouble();

                System.out.println("Number of years of Experience");

                int exp=s.nextInt();

                double bonus=empbonus(salary,exp);

                System.out.println("The net bonus="+bonus);

                System.out.println("The net Salary="+ (salary+bonus));

            }

    }

Output:

5. Write a program to input the following details:

i)Employee Name

ii)Employee Salary

iii)Employee Year of joining

Calculate the Loyalty bonus of the Employee's by

a)if the year of their joining is on or before than 2017,and their Salary is more than 30000/-,

then the bonus will be 22% of the salary.

b)if the year of their joining is on or before than 2017,and their Salary is less than 30000/-,

then the bonus will be 33% of the salary.

c)if the year of their joining is on or before than 2012,

then the bonus will be 40% of the salary.

d)if the year of their joining is after 2017,and their Salary is less than 30000/-,

then the bonus will be 15% of the salary.

e)if the year of their joining is after 2017,and their Salary is more than 30000/-,

then the bonus will be 10% of the salary.

Program:

import java.util.\*;

class Employee

    {

                public static void main(String[] args)

                    {

                        System.out.println("Enter the Number of Employes");

                        Scanner sc=new Scanner(System.in);

                        int n=sc.nextInt();

                        //System.out.println("Enter the Name, Salary and Year of Joinig of the Employee");

                        String[] name=new String[n];

                        int[] salary=new int[n];

                        int[] year=new int[n];

                        double[] netbonus=new double[n];

                        double[] netsalary=new double[n];

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

                            {

                                System.out.println("Enter the Name:");

                                name[i]=sc.next();

                                System.out.println("Enter Your Current Salary:");

                                salary[i]=sc.nextInt();

                                System.out.println("Enter Your Year of Joining");

                                year[i]=sc.nextInt();

                                System.out.println("");

                            }

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

                            {

                                if(year[i]<=2012)

                                    {

                                        netbonus[i]=salary[i]\*0.40;

                                        netsalary[i]=salary[i]+netbonus[i];

                                    }

                                else if(year[i]<=2017 || salary[i]>30000)

                                    {

                                        netbonus[i]=salary[i]\*0.22;

                                        netsalary[i]=salary[i]+netbonus[i];

                                    }

                                else if(year[i]<=2017 || salary[i]<30000)

                                    {

                                        netbonus[i]=salary[i]\*0.33;

                                        netsalary[i]=salary[i]+netbonus[i];

                                    }

                                else if(year[i]>=2017 || salary[i]<30000)

                                    {

                                        netbonus[i]=salary[i]\*0.15;

                                        netsalary[i]=salary[i]+netbonus[i];

                                    }

                                else if(year[i]>=2017 || salary[i]>30000)

                                    {

                                        netbonus[i]=salary[i]\*0.10;

                                        netsalary[i]=salary[i]+netbonus[i];

                                    }

                            }

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

                            {

                                System.out.println("Name: "+name[i]);

                                System.out.println("Current Sallary: "+salary[i]);

                                System.out.println("Year of Joining: "+year[i]);

                                System.out.println("Loyalaty Bonus: "+netbonus[i]);

                                System.out.println("New Salary: "+netsalary[i]);

                                System.out.println("");

                            }

                    }

    }

Output:

Enter the Number of Employes

3

Enter the Name:

Nithin

Enter Your Current Salary:

20000

Enter Your Year of Joining

2015

Enter the Name:

Abin

Enter Your Current Salary:

31000

Enter Your Year of Joining

2017

Enter the Name:

Jis

Enter Your Current Salary:

29000

Enter Your Year of Joining

2016

Name: Nithin

Current Sallary: 20000

Year of Joining: 2015

Loyalaty Bonus: 4400.0

New Salary: 24400.0

Name: Abin

Current Sallary: 31000

Year of Joining: 2017

Loyalaty Bonus: 6820.0

New Salary: 37820.0

Name: Jis

Current Sallary: 29000

Year of Joining: 2016

Loyalaty Bonus: 6380.0

New Salary: 35380.0

6. Write a program to check for the occurrence of a particular character in a string and display how many times it has occurred.

note: take the String and the character to be checked as a input from the user.

Program:

import java.util.Scanner;

public class Occurance

{

    public static void main(String[] args) {

        int count=0;

        Scanner sc = new Scanner(System.in);

        System.out.println("Enter the string: ");

        String s1 = sc.nextLine();

        System.out.println("Enter the character");

        char c = sc.next().charAt(0);

        for(int i=0;i<s1.length();i++)

        {

            if(s1.charAt(i)==c)

            {

                count++;

            }

        }

        if(count==0)

        {

            System.out.println(c+" is not present in given string ");

        }

        else

        {

            System.out.println(c+" is present in given string , "+count+" times");

        }

    }

}

Output:

Enter the string:

nithin

Enter the character

i

i is present in given string , 2 times

7. Write a program to implement nested try-catch block for NULL Pointer exception

and NumberFormat Exception

Program:

class NestedTry

    {

        public static void main(String[] args)

            {

                String str=null;

                try

                    {

                        try

                        {

                            if(str.equals("Nithin"))

                                    {

                                        System.out.print("Same");

                                    }

                            else

                                    {

                                        System.out.print("Not same");

                                    }

                        }

                        catch (NullPointerException e)

                        {

                            System.out.println("NullPointerException Caught");

                        }

                        int a =Integer.parseInt(str);

                    }

                catch (NumberFormatException e)

                    {

                        System.out.println("NumberFormatException caught");

                    }

      }

    }

Output:

NullPointerException Caught

NumberFormatException caught