SBA-7

SWETHA ANDE

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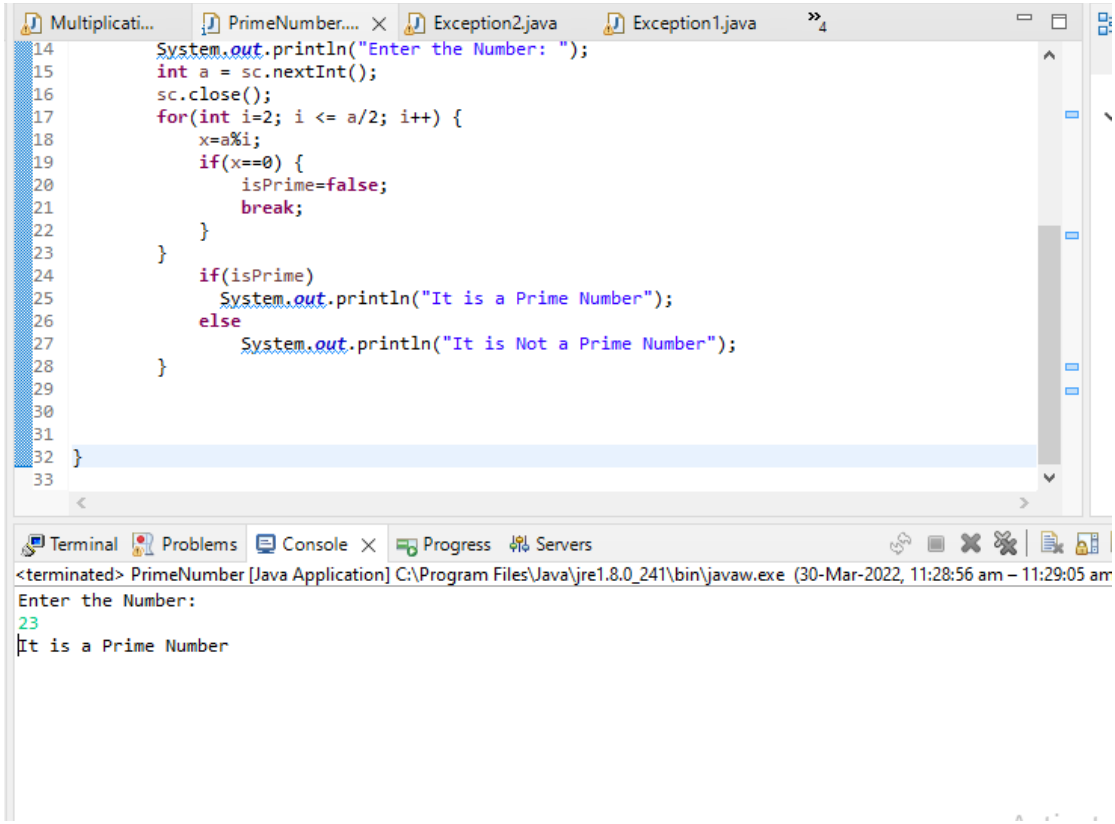
1.Write a program that prompts the user to input a positive integer.

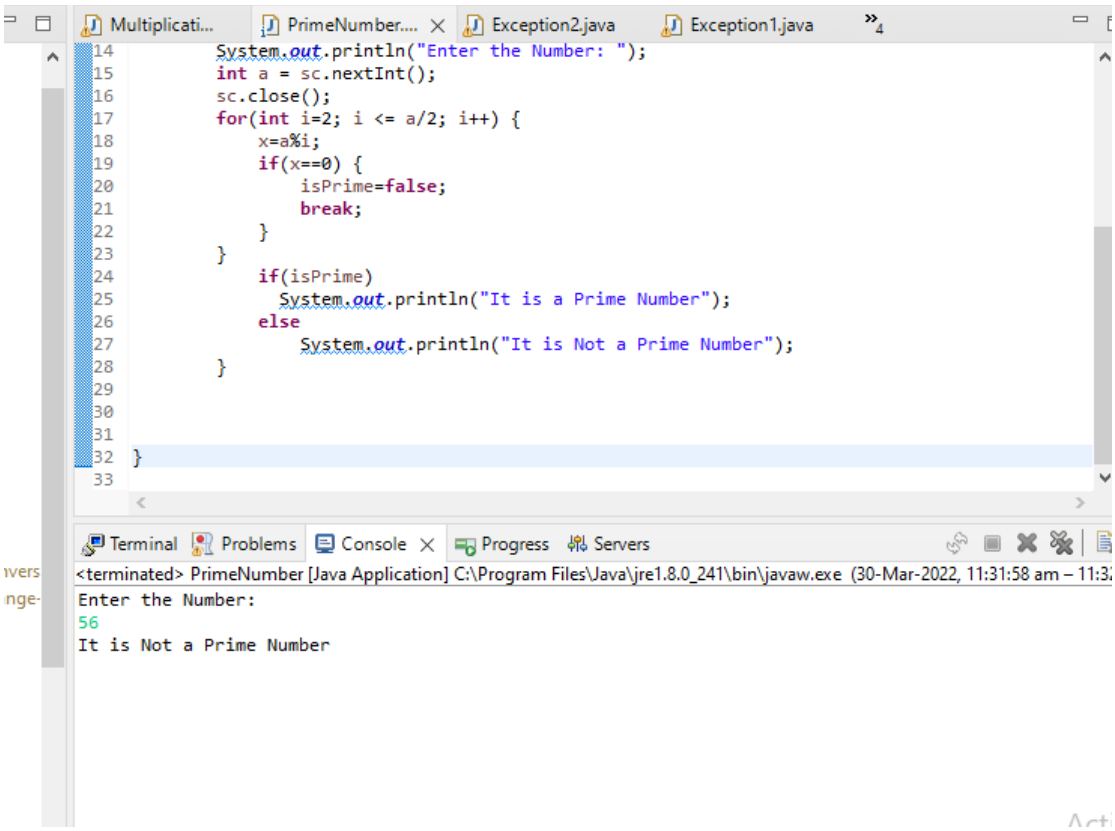
It should then output a message indicating whether the number is a prime number.

```
import java.util.Scanner;


public class PrimeNumber {
	public static void main(String[] args) {
		int x;
		boolean isPrime=true;
		Scanner sc = new Scanner(System.in);
		System.out.println("Enter the Number: ");
		int a = sc.nextInt();
		sc.close();
		for(int i=2; i <= a/2; i++) {
			x=a%i;
			if(x==0) {
				isPrime=false;
				break;
			}
		}
			if(isPrime)
		    System.out.println("It is a Prime Number");
			else
		   System.out.println("It is Not a Prime Number");
			}
```

```
}
```

OUTPUT:


Multiplicati...
PrimeNumber....
Exception2.java
Exception1.java
System.out.println("Enter the Number: ");
int a = sc.nextInt();
sc.close();
for(int i=2; i <= a/2; i++) {
x=a%i;
if(x==0) {
isPrime=false;
break;
}
}
if(isPrime)
System.out.println("It is a Prime Number");
else
System.out.println("It is Not a Prime Number");
}
}
Terminal
Problems
Console
Progress
Servers
<terminated> PrimeNumber [Java Application] C:\Program Files\Java\jre1.8.0_241\bin\javaw.exe (30-Mar-2022, 11:28:56 am – 11:29:05 am
Enter the Number:
23
It is a Prime Number

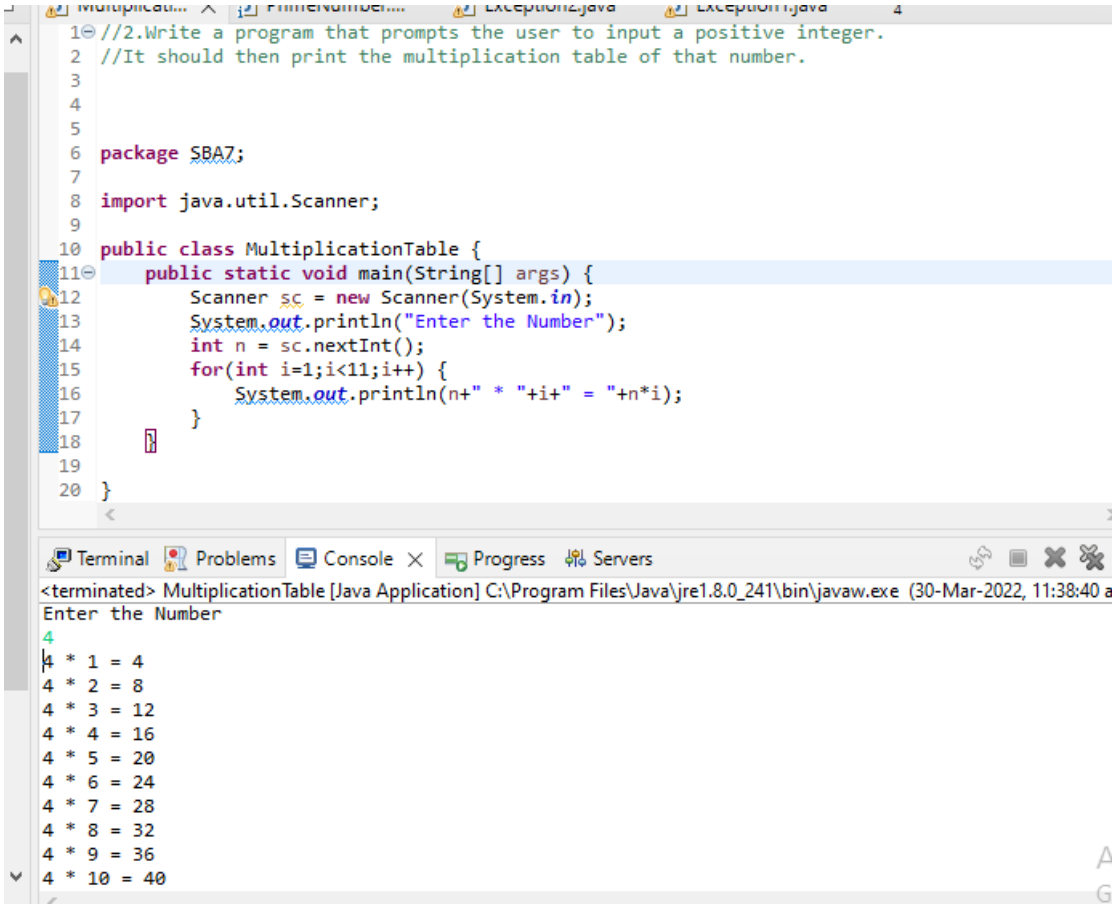


2.Write a program that prompts the user to input a positive integer.

It should then print the multiplication table of that number.

```
import java.util.Scanner;


public class MultiplicationTable {

	public static void main(String[] args) {

		Scanner sc = new Scanner(System.in);
System.out.println("Enter the Number");

		int n = sc.nextInt();

		for(int i=1;i<11;i++)
System.out.println(n+" * "+i+" = "+n*i);

		}

	}

}
```

OUTPUT:



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



package SBA7;

import java.util.Scanner;

public class MultiplicationTable {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the Number");
        int n = sc.nextInt();
        for(int i=1;i<11;i++) {
            System.out.println(n+" * "+i+" = "+n*i);
        }
    }

}
```

```
Terminal  Problems  Console  Progress  Servers
<terminated> MultiplicationTable [Java Application] C:\Program Files\Java\jre1.8.0_241\bin\javaw.exe (30-Mar-2022, 11:38:40 a
Enter the Number
4
4 * 1 = 4
4 * 2 = 8
4 * 3 = 12
4 * 4 = 16
4 * 5 = 20
4 * 6 = 24
4 * 7 = 28
4 * 8 = 32
4 * 9 = 36
4 * 10 = 40
```

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

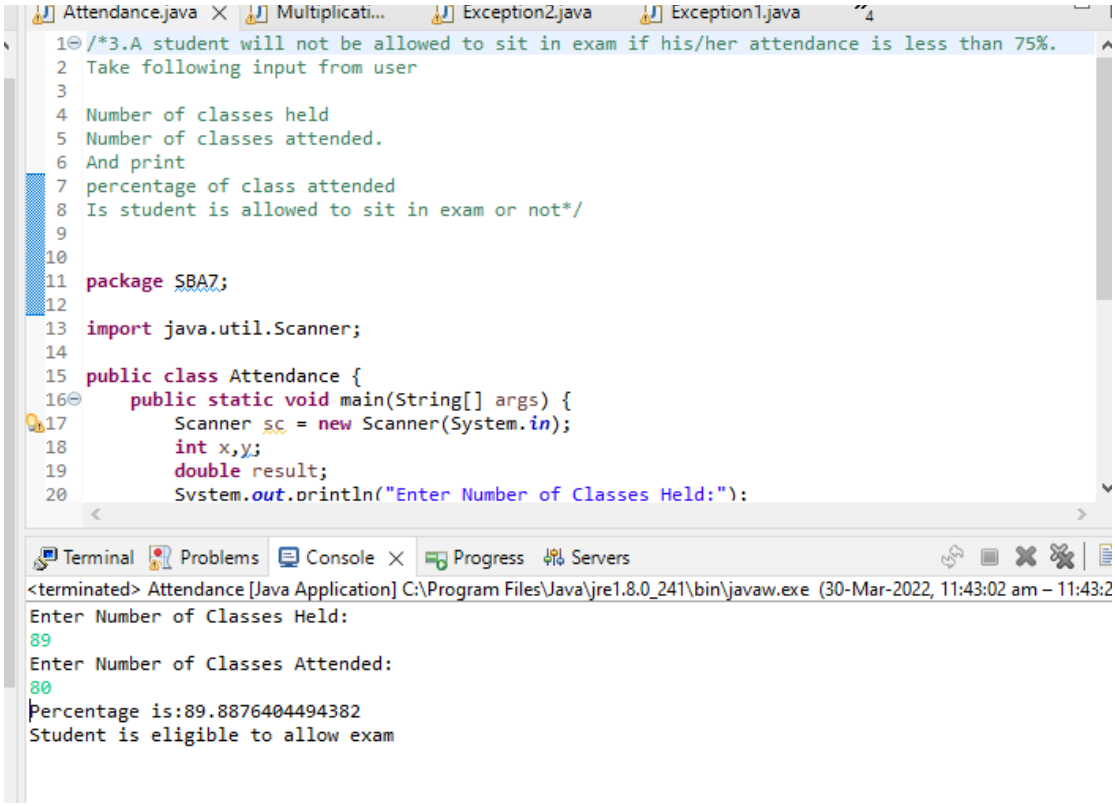
percentage of class attended

Is student is allowed to sit in exam or not

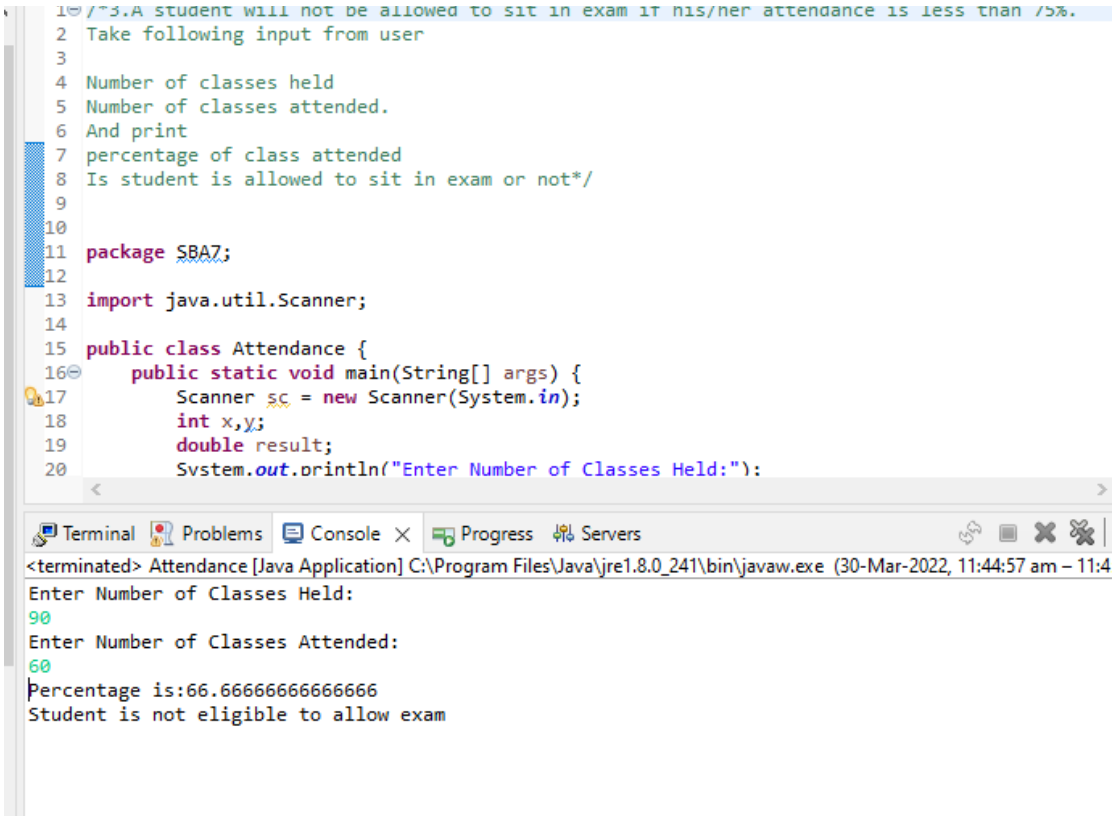
```
import java.util.Scanner;

public class Attendance {

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

```
                Scanner sc = new Scanner(System.in);
                int x,y;
                double result;
System.out.println("Enter Number of Classes Held:");
                x=sc.nextInt();
System.out.println("Enter Number of Classes Attended:");
                y=sc.nextInt();
                result = (double) y/x*100;
System.out.println("Percentage is:"+result);
                if(result>=75) {
Sytsem.out.println("Student is eligible to allow exam");
                }else {
System.out.println("Student is not eligible to allow exam");
                        }
     }
}
```

OUTPUT:



```
Attendance.java  Multiplicati...  Exception2.java  Exception1.java
1  /*3.A student will not be allowed to sit in exam if his/her attendance is less than 75%.
2  Take following input from user
3
4  Number of classes held
5  Number of classes attended.
6  And print
7  percentage of class attended
8  Is student is allowed to sit in exam or not*/
9
10
11 package SBA7;
12
13 import java.util.Scanner;
14
15 public class Attendance {
16     public static void main(String[] args) {
17         Scanner sc = new Scanner(System.in);
18         int x,y;
19         double result;
20         System.out.println("Enter Number of Classes Held:");

Terminal  Problems  Console  Progress  Servers
<terminated> Attendance [Java Application] C:\Program Files\Java\jre1.8.0_241\bin\javaw.exe  (30-Mar-2022, 11:43:02 am – 11:43:2
Enter Number of Classes Held:
89
Enter Number of Classes Attended:
80
Percentage is:89.8876404494382
Student is eligible to allow exam
```



```
1  /*3.A student will not be allowed to sit in exam if his/her attendance is less than 75%.
2  Take following input from user
3
4  Number of classes held
5  Number of classes attended.
6  And print
7  percentage of class attended
8  Is student is allowed to sit in exam or not*/
9
10
11 package SBA7;
12
13 import java.util.Scanner;
14
15 public class Attendance {
16     public static void main(String[] args) {
17         Scanner sc = new Scanner(System.in);
18         int x,y;
19         double result;
20         System.out.println("Enter Number of Classes Held:");

Terminal  Problems  Console  Progress  Servers
<terminated> Attendance [Java Application] C:\Program Files\Java\jre1.8.0_241\bin\javaw.exe  (30-Mar-2022, 11:44:57 am – 11:4
Enter Number of Classes Held:
90
Enter Number of Classes Attended:
60
Percentage is:66.66666666666666
Student is not eligible to allow exam
```

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

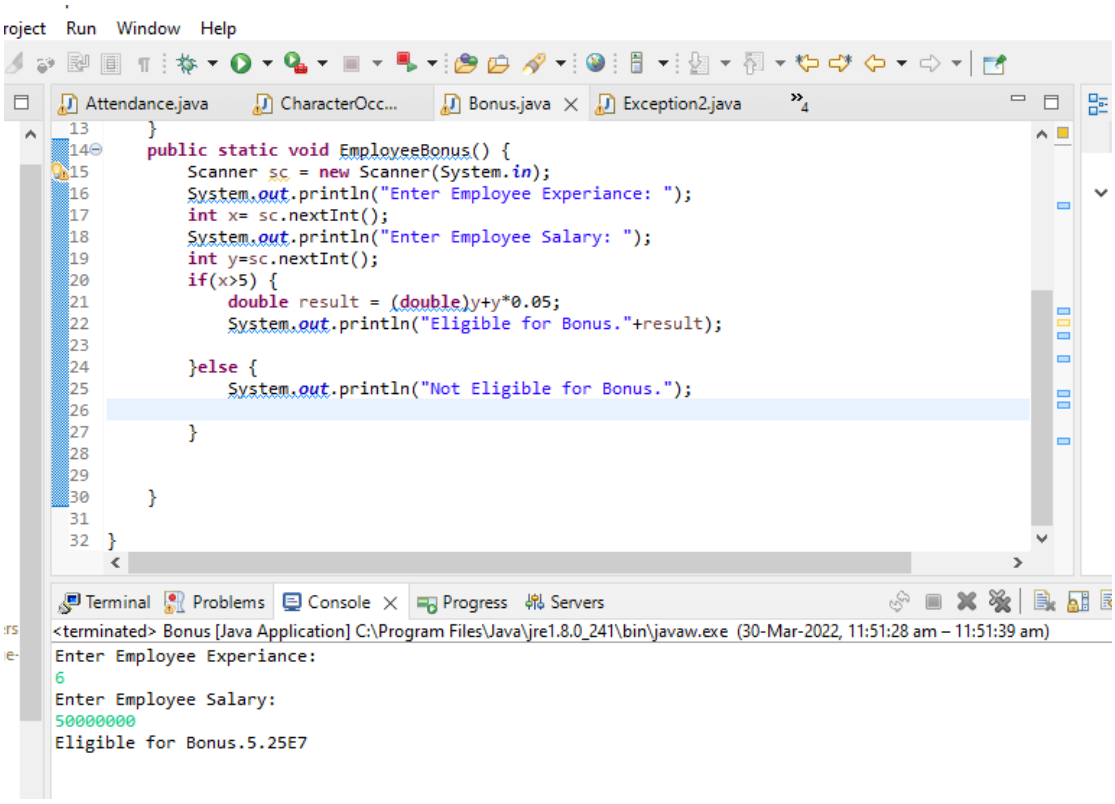
is more than 5 years.

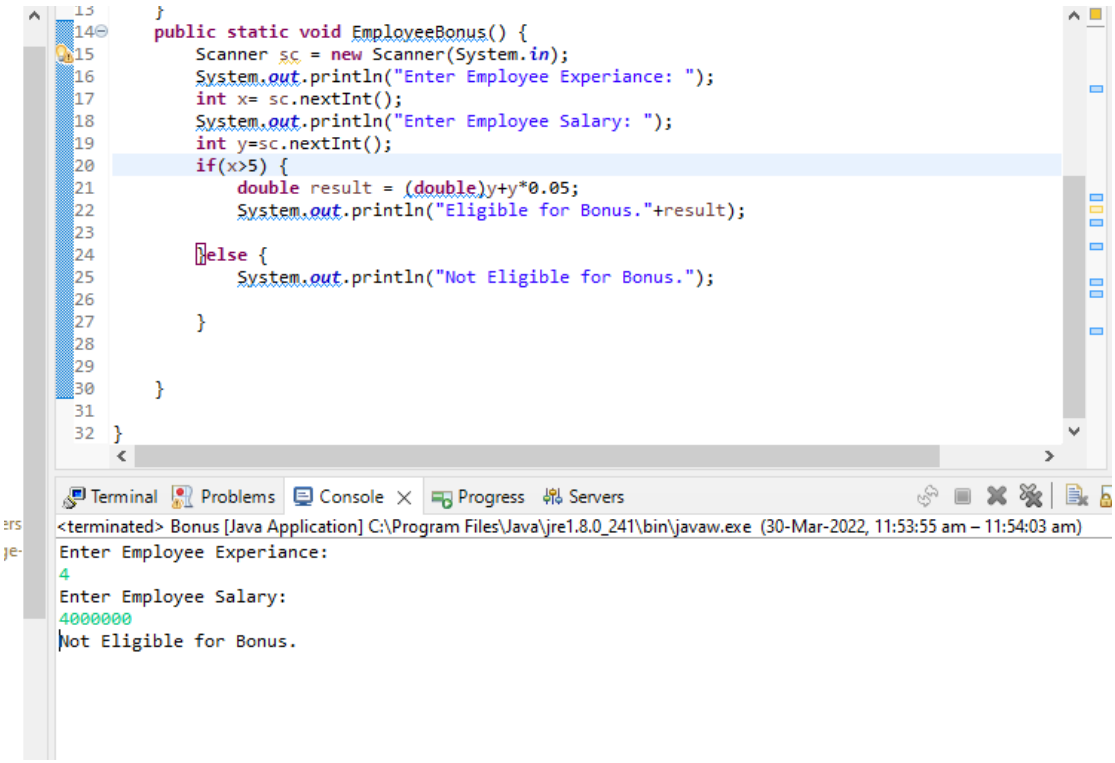
Ask user for their salary and year of service and print the net bonus amount.

Note- create a method Employee Bonus to calculate the bonus and return it.

```
import java.util.Scanner;
public class Bonus {
	public static void main(String[] args) {
		EmployeeBonus();
	}
	public static void EmployeeBonus() {
		Scanner sc = new Scanner(System.in);
	System.out.println("Enter Employee Experiance: ");
		int x= sc.nextInt();
	System.out.println("Enter Employee Salary: ");
		int y=sc.nextInt();
		if(x>5) {
			double result = (double)y+y*0.05;
	 System.out.println("Eligible for Bonus."+result);

		}else {
		System.out.println("Not Eligible for 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.

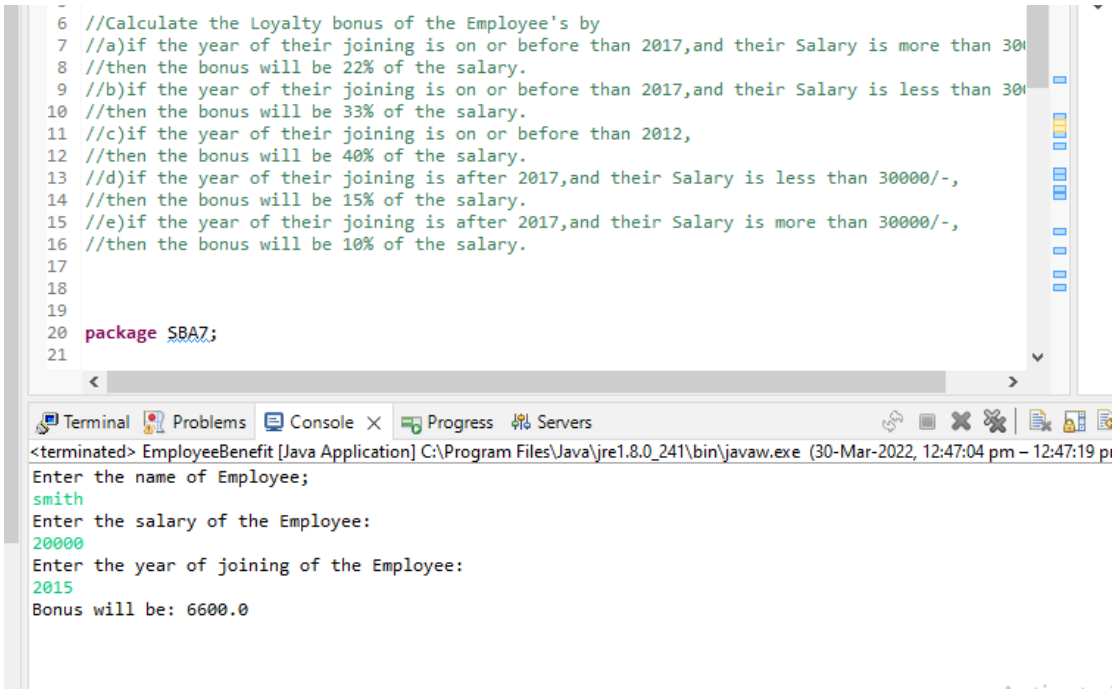
e)if the year of their joining is after 2017,and their Salary is more than 30000/-,

then the bonus will be 10% of the salary.

```
import java.util.Scanner;

public class EmployeeBenefit {

	public static void main(String[] args) {

	System.out.println("Enter the name of Employee; ");

		Scanner sc = new Scanner(System.in);

		String name=sc.next();

	System.out.println("Enter the salary of the Employee: ");

		int salary = sc.nextInt();

	System.out.println("Enter the year of joining of the Employee: ");

		int year=sc.nextInt();

		if((year<=2017) && (salary>30000)) {
```

```
                if(year<=2012) {
                        float bonus = ((40*salary/100));
                System.out.println("Bonus will be: "+bonus);
                }else {
                        float bonus = ((22*salary/100));
            System.out.println("Bonus will be: "+bonus);
                }
            }
            if((year<=2017) && (salary<30000)) {
                if(year<=2012) {
                        float bonus = (40*salary/100);
                System.out.println("Bonus will be: "+bonus);
                }else {
                        float bonus = (33*salary/100);
                System.out.println("Bonus will be: "+bonus);
                }
            }
            if((year>=2017) && (salary>30000)) {
                if(year<=2012) {
                        float bonus = (10*salary/100);
                System.out.println("Bonus will be: "+bonus);
                }
            }
        }
}
```

OUTPUT:



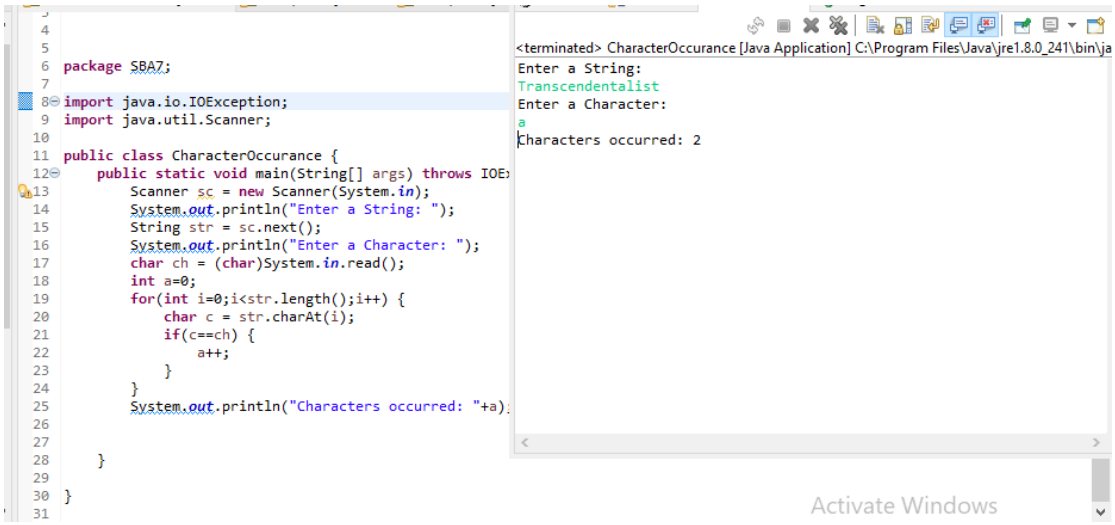
6. Write a program to check for the occurrence of a particular character in a string and display how many times it has occurred.

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

```
    import java.io.IOException;
import java.util.Scanner;


public class CharacterOccurance {
	public static void main(String[] args) throws IOException{
		Scanner sc = new Scanner(System.in);
	System.out.println("Enter a String: ");
		String str = sc.next();
	System.out.println("Enter a Character: ");
		char ch = (char)System.in.read();
		int a=0;
		for(int i=0;i<str.length();i++) {
```

```
                    char c = str.charAt(i);
                    if(c==ch) {
                        a++;
                    }
                }
        System.out.println("Characters occurred: "+a);
                }
}
```

OUTPUT:



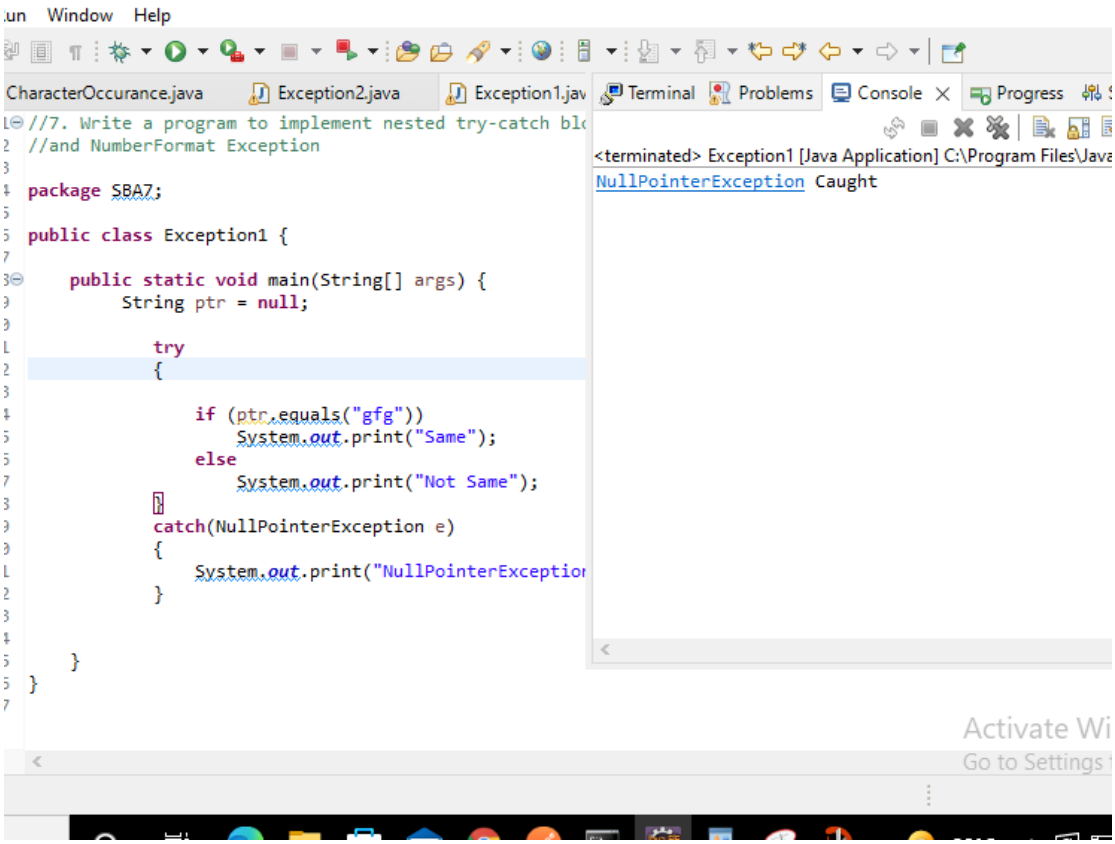
7. Write a program to implement nested try-catch block for NULL Pointer exception

and NumberFormat Exception

```
public class Exception1 {


        public static void main(String[] args) {
                String ptr = null
            try
                {
                    if(ptr.equals("gfg"))
```

```
                System.out.print("Same");
            else
                System.out.print("Not Same");
        }
        catch(NullPointerException e)
        {
           System.out.print("NullPointerException Caught");
        }
    }
}
```

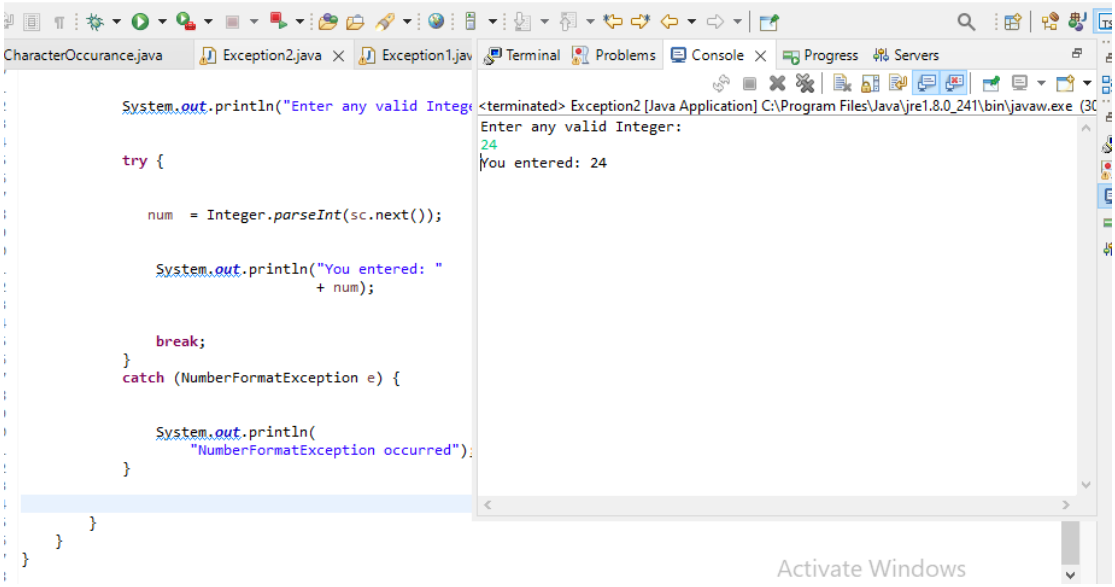
OUTPUT:

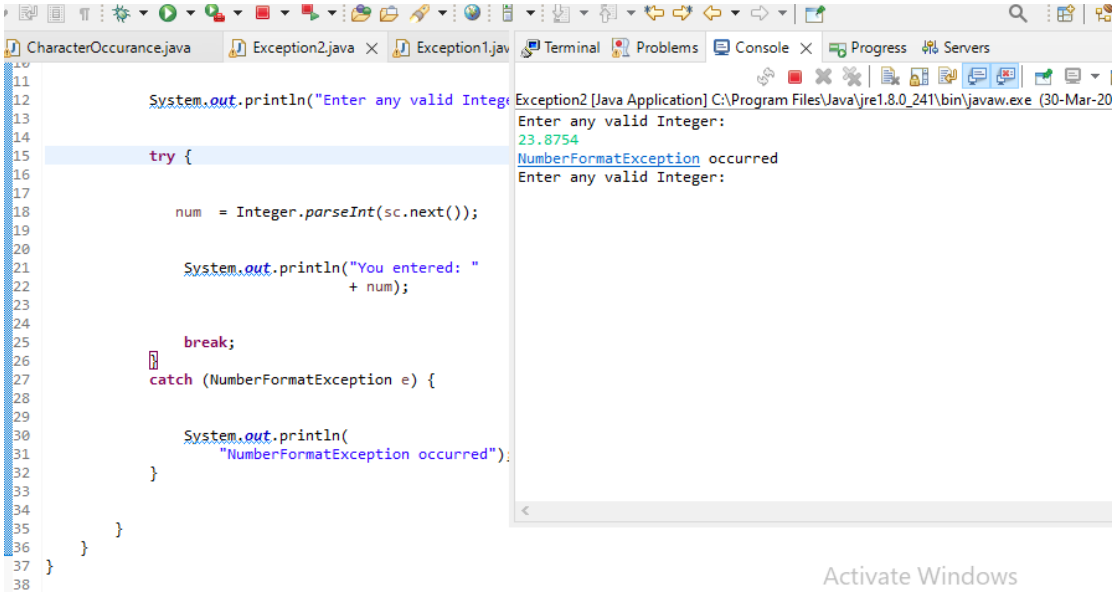



```
import java.util.Scanner;


public class Exception2 {
```

```
        public static void main(String[] args) {
               int num;
               Scanner sc = new Scanner(System.in);
               while (true) {
        System.out.println("Enter any valid Integer: ");
              try {
              num  = Integer.parseInt(sc.next());
   System.out.println("You entered: "
                                      + num);


                  break;
              }
              catch (NumberFormatException e) {


                 System.out.println(
                      "NumberFormatException occurred");
              }
            }
        }
}
```

OUTPUT:


CharacterOccurance.java
Exception2.java
Exception1.jav
Terminal
Problems
Console
Progress
Servers
<terminated> Exception2 [Java Application] C:\Program Files\Java\jre1.8.0_241\bin\javaw.exe
Enter any valid Integer:
24
You entered: 24
System.out.println("Enter any valid Integ
try {
num = Integer.parseInt(sc.next());
System.out.println("You entered: "
+ num);
break;
}
catch (NumberFormatException e) {
System.out.println(
"NumberFormatException occurred");
}
}
}
}
Activate Windows


CharacterOccurance.java
Exception2.java
Exception1.jav
Terminal
Problems
Console
Progress
Servers
Exception2 [Java Application] C:\Program Files\Java\jre1.8.0_241\bin\javaw.exe (30-Mar-20
Enter any valid Integer:
23.8754
NumberFormatException occurred
Enter any valid Integer:
System.out.println("Enter any valid Integ
try {
num = Integer.parseInt(sc.next());
System.out.println("You entered: "
+ num);
break;
}
catch (NumberFormatException e) {
System.out.println(
"NumberFormatException occurred");
}
}
}
}
Activate Windows