JAVA PROGRAMMING.

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1. Write a Program to count all the Prime and composite numbers entered by the user.

```java
import java. util. Scanner:
Public class PrimeComposite number
{
    Public Static void main (String[] args)
    {
        int arr[]={ 4, 54, 9a, 71, 7, 5a, 98, 23}:
        int com=0, pri=0:
        for (int i=0; i< arr. length; i++)
        {
            int c=0:
            for (int j=1; j< arr[i]; j++)
            {
                if (arr[i] % j==0)
                    c++;
            }
            if (c>1)
                com++:
            else
                pri++:
        }
        System. Out. print(" composite number:"+com)
        System. Out. print ("\n Prime number:"+ pri):
    }
}
```

2. Find the Nth maximum number and Nth minimum number in an array and then find the sum of it and difference of it.

```java
import java.util.Scanner;
public class minmax
{
    public static void main (String[] args)
    int arr[] = {14, 16, 87, 36, 25, 89, 34};
    int len = arr.length;
    for (int i=0; i<len; i++)
    {
        for (int j=i+1; j<len; j++)
        {
            if (arr[i] > arr[j])
            {
                int temp = arr[i];
                arr[i] = arr[j];
                arr[j] = temp;
            }
        }
    }
    int m=1, n=3;
    int max = arr[len-m];
    int min = arr[n-1];
    System.out.print (m+" maximum number="
                        + max);
    System.out.print ("n"+n+" minimum number="
                        + min);
    int Sum = max + min;
    int Diff = max - min;
    System.out.print ("n sum = "+ Sum);
    System.out.print ("n Difference="+ Diff);
    }
}
```

3. Write a program to print the total amount available in the ATM machine with the conditions applied.

```java
import java.util.Scanner;
public class ATMmachine
{
    public static void main (String[] args)
    {
        int n1 = 500, d1 = 4, n2 = 100, d2 = 20, n3 = 200,
            d3 = 32, n4 = 2000, d4 = 1;
        int Total = (n1 * d1) + (n2 * d2) + (n3 * d3) +
                    (n4 * d4);
        System.out.print ("Total Available
                Balance in ATM:" + Total );
    }
}
```

4. Write a program using choice to check whether the given number is Palindrome or not.

```java
import java.util.Scanner;
public class Palindrome.
{
    public static void main (String[] args)
    {
        String S1 = "MADAM";
        String S2 = "";
        int len = S1.length ();
        for (int i = len-1; i >= 0; i--)
        {
            S2 = S2 + S1.charAt (i);
        }
    }
}
```

```
        if (s1. equals (s2))
            System.out. print ("Palindrome");
        else
            System.out. print (" Not  Palindrome");
    }
}
```

5. Write a program to convert Deciamal number equivalent to Binary number and octal numbers?

```
import java. utils. Scanner:
Public class convertdecimal toBinaryand octal
{
    Public static void main (String[]args)
    {
        int dec = 15:
        String bin = Integer. toBinaryString (dec):
        String oct = Integer. toOctal String (dec) :
        System. Out. print ln ("Binary number =" + bin):
        System. out. print (" Octal number =" + oct):
    }
}
```

6. Write a Program to entry the Salary and grade of the employee.

```java
import java.util.Scanner:
Public class company
{
    Public static void main (String[]args)
    {
        double bonus =0:
        System.Out.Print ("Enter the grade of
                            the employee:"):
        Char a1= input. next (). charAt(0):
        System.Out.print (" Enter the Salary of
                            employee:"):
        int b1 = input. next Int();
        if (a1 =='A')
        {
            bonus = b1 * (0.05):
            if (b1 <10000)
            {
                bonus= bonus +b1 * (0.02):
            }
            System.Out.println ("Salary="+b1):
            System.Out.println (" bonus="+bonus):
            System.Out.println ("total to be
                                paid = "+(b1+bonus)):
        }
        else if (a1=='B')
        {
            bonus= b1* (0.1):
            if (b1 < 10000)
```

```java
            }
                bonus = bonus + bi * (0.02);
        }
        System.out.println("Salary="+bi);
        System.out.println("bonus ="+bonus);
        System.out.println("total  to  be  paid="
                            (bi+ bonus));
    }
    else
    {
        System.Out.Print("Enter Valid grade");
    }
    }
}
```

7. Write a program to print the first
n perfect numbers.

```java
import java.util.Scanner;
Public class Perfectnumber
{
    Public static void main (String[] args)
    {
        Scanner input = new Scanner(System.in);
        int n = input.nextInt();
        int Sum=0, temp=0;
        for (int j=2; j<=1000; j++)
        {
            if (n>temp)
            Sum =1;
            for (int i=2; i<j; i++)
```

```
        {
            if (j% i==0)
                Sum = Sum+i;
        }
        if (sum == j)
        {
            System.out.print (j+" ");
            temp= temp+1;
        }
    }
}
}
```

8. Write a program to print the first n
Perfect numbers.

```
import java.util.Scanner;
Public class Perfectnumbers
{
    Public Static void main (String[]args)
    {
        Scanner input = new Scanner (System.in);
        int n= input.nextInt();
        int Sum=0, temp=0;
        for (int j=2; j <= 1000; j++)
        {
            if (n>temp)
                Sum=1;
            for (int i=2; i<j; i++)
            {
                if (j%i ==0)
                    Sum = Sum+i;
            }
```

```java
        if (sum==j)
        {
            System.out.print(j+" ");
            temp=temp+1;
        }
    }
}
```

9. Write a Program to enter the marks of a student in four subjects.

```java
import java.util.Scanner;
import java.util.Scanner;
Public class Student
{
    Public Static void main (String[]args)
    {
        int a1 = 90;
        int a2 = 91;
        int a3 = 92;
        int a4 = 93;
        int total = (a1 + a2 + a3 + a4);
        float agg = total/4f;
        System.out.println (total);
        System.out.println (agg);
        if (agg>75)
            System.out.println ("DISTINCTION");
        else if (agg >= 60 && agg < 75)
            System.out.println (" First
                                    Division");
```

```java
        else if (agg>=40 && agg < 50)
            System.out.println("Third Division");
        else
            System.out.println("Fail");
```

O. Write a program to calculate tax given number.

```java
import java.util.Scanner;
Public class CalculateTax
{
    Public static void main (String[]args)
    {
        Scanner input=new Scanner(system.in);
        int income = input.nextInt();
        float tax;
        if (income <= 150000)
            System.out.println("No tax");
        else if (income >= 150001 && income <= 300000)
            System.out.println("Tax = "+ income/10);
        else if (income >= 300001 && income <=
                                          500000)
            System.out.println("Tax = " + income/20);
        else
            System.out.println("Tax = "+ income/30);
    }
}
```