

Java.

CSA-0985

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Date : 10/07/2024

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Sum of Natural Number upto n.

Public class SumofNaturalNumbers {  
 Public static void main (String [] args) {  
 int n = 10;  
 int sum = (n \* (n + 1)) / 2;  
 System.out.println ("sum");  
 Output: 55
}

Check if the Number is Prime.

Public class Main {  
 Public static void main (String [] args) {  
 int n = 10;  
 int count = 0;  
 for (i = 0; i <= n; i++) {  
 if (n % i == 0);  
 count++;  
 if (count == 2)
 }

System.out.println("Prime");

else

System.out.println("Not prime");

Output : Not Prime

## Factorial of the Given Number.

Public class Main {

    Public static void Main (String [] args) {

        Int n=5;

        Int fact=1;

        For (Int i=1; i <=n; i++) {

            fact \*= i;

        System.out.println ("fact");

    Output: 120.

Reverse the Num.

Public class Main {

    Public static void Main (String [] args) {

        Int n = 12345;

        Int num = 0;

        Int rev = 0;

        While (n != 0) {

            num = n % 10;

            rev = rev \* 10 + num;

            n = n / 10;

    System.out.println (rev);

    Output 54321

## Armstrong Number:

Public class Armstrong Number {

    Public static void main(String [] args) {

        Int num=153;

        Int original Num, remainder, result = 0;

        Original Num = num;

        While (original Num != 0) {

            remainder = original Num % 10;

            result += Math. Pow (remainder, 3);

            original Num /= 10;

        if (result == num),

            System.out.println (num + " is an Armstrong number");

        else

            System.out.println (num + " is not a Armstrong number");

}

Output: 153 is an Armstrong Number.

## Happy Armstrong Number

```
Public class Main {
    Public static void main (String [] args) {
        int num = 12;
        int dig;
        while (num > 0) {
            dig = num % 10;
            sum += dig * dig;
            num /= 10;
        }
        if (sum == 1)
            System.out.println ("Happy number");
```

## Palindrome Number.

```
Public class Palindromenumber {
    Public static boolean ispalindrome (int number) {
        int reversedNumber = 0;
        int originalNumber = number;
        while (number != 0) {
            int digit = number % 10;
            reversedNumber = reversedNumber * 10 + digit;
            number /= 10;
        }
        return originalNumber == reversedNumber;
```

```
Public static void main (string [] args) {  
    int number = 12321;  
    if (isPalindrome (number)) {  
        System.out.println (number + " is Palindrome.");  
    } else {  
        System.out.println (number + " is not a Palindrome.");  
    }  
}  
Output: 12321 is Palindrome
```

## Sum of digits

```
Public class Main {
```

```
    Public static void main (string [] args) {  
        int number = 12345;  
        int sum = 0;
```

```
        while (number != 0) {
```

```
            sum += number % 10;  
            number /= 10;
```

```
        }  
        System.out.println ("sum of digits: " + sum);
```

```
Output: Sum of digits: 15.
```

Divisible by 5 and 7 upto n.

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Public class Main {

    Public static void Main (String [] args) {

        Int n = 100;

        For (Int i = 1; i <= n; i++) {

            If (i % 5 == 0 && i % 7 == 0) {

                System.out.println (i + " is divisible by 5 and 7");

    }

}

Output: 35, 70 is divisible by 5 and 7.

Calculate LCM and GCD.

Public class Main {

    Public static void main (String [] args) {

        Int num1 = 72, num2 = 120;

        Int gcd = findGCD (num1, num2);

        Int lcm = (num1 \* num2) / gcd;

        System.out.println ("GCD" + gcd);

        System.out.println ("LCM" + lcm);

    Public static int findGCD (int a, int b) {

        If (b == 0) {

            Return a;

        } Return findGCD (b, a % b);

Output: GCD 24

LCM 360

## Conversion of Celsius to Fahrenheit

Public class Celsius to Fahrenheit {

    Public static void main (String [] args) {

        double celsius = 28.0;

        double fahrenheit = (celsius \* 9 / 5) + 32;

        System.out.println (fahrenheit);

}

Output 82.40

## Fahrenheit to Celsius Conversion.

Public class Fahrenheit to Celsius {

    Public static void main (String [] args) {

        double fahrenheit = 98.6;

        double celsius = (fahrenheit - 32) \* 5 / 9;

    System.out.println (celsius);

}

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Output: 37.00

## ④ Conversion of Decimal to Binary:

```
import java.util.Scanner;  
public class DecimalToBinary {  
    public static void main (String [] args) {  
        Scanner input = new Scanner (System.in);  
        System.out.println ("Enter a decimal number!");  
        int decimal = input.nextInt();  
        String binary = Integer.toBinaryString (decimal);  
        System.out.println ("Binary representation: " + binary);  
        input.close();  
    }  
}
```

Output  
Enter a decimal number: 25  
Binary representation 11001

## Conversion of Binary to Decimal:

```
public class BinaryToDecimal {  
    public static void main (String [] args) {  
        String binary = "101010";  
        int decimal = Integer.parseInt (binary, 2);  
        System.out.println (decimal);  
    }  
}
```

Output: 42.

Checking voting Age Eligibility.

## Public class Voting Age (

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

Int age = 18;

if (age >= 18) {

```
System.out.println("You are eligible to vote : )\nelse
```

```
System.out.Println ("You are not eligible to vote")
```

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Output : You are eligible to vote.

## Sum of Square and Cube root of a Number.

Import java.lang.Math;

```
Public static void main (string [] arg
```

double num=64.0;

```
double sqrt = Math.Sqrt(num);
```

double cbrt = Math. cbrt (num);

$$\text{double sum} = \text{sqrt} + \text{cbrt};$$

```
System.out.Println("Square root and cube root of " + num + " is
```

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1       $\text{sum} = \text{sum} + \text{sum}^2$ ;  $\text{sum} = \text{sum} + \text{sum}^3$ ;

Output: Sum of sqrt and cuberoot of 64 is

Sum of odd and even upto n:

Public class SumOfOddAndEven {

    Public static void Main (String [] args) {

        Int n = 10;

        Int sumodd = 0;

        Int sumeven = 0;

        For (Int i = 1; i <= n; i++) {

            If (i % 2 == 0) {

                sum even += i;

            } Else {

                sum odd += i;

    }

        System.out.println ("odd sum", + sum odd);

        System.out.println ("even sum", + sum even);

Output

odd sum : 25

even sum : 30

Leap Year Program

Public class LeapYear {

    Public static void Main (String [] args) {

        Int year = 2004;

        If (year % 4 == 0 & & year % 100 != 0 || (year % 400 == 0))

            System.out.println ("Leap Year");

        Else

            System.out.println ("Not a leap year");