**Basic Java Programs**

**1.Wrire a Java Program Sum of First N Even Numbers**

public class EvenNumbers {

public static void main(String[] args) {

int n, sum = 0;

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

Scanner s = new Scanner(System.in);

n = s.nextInt();

for(int i = 2; i <= n; i++)

if (i % 2 == 0) {

sum += i;

System.out.println("Sum of first even numbers between 1 to" + n + "is" + sum);

}

}

}

**2.Wrire a Java Program Factorial Number**

public class Factorial {

public static void main(String args[]) {

int fact = 1;

int number;

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

Scanner s = new Scanner(System.in);

number = s.nextInt();

// It is the number to calculate factorial

for (int i = 1; i <= number; i++) {

fact = fact \* i;

}

System.out.println("Factorial of " + number + " is: " + fact);

}

}

**3.Wrire a Java Program given Number is Polindrome or Not**

class PalindromeExample{

public static void main(String args[]){

int r,sum=0,temp;

int n=430;//It is the number variable to be checked for palindrome

temp=n;

while(n>0){

r=n%10; //getting remainder

sum=(sum\*10)+r;

n=n/10;

}

if(temp==sum)

System.out.println("palindrome number ");

else

System.out.println("not palindrome");

}

}

**4.Wrire a Java Program Sum of First ‘N’ Numbers**

class SumOfNum {

public static void main(String args[]) {

int sum = 0;

int n;

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

Scanner s = new Scanner(System.in);

n = s.nextInt();

for (int i = 1; i <= n; i++) {

sum += i;

}

System.out.println("The Sum Of " + n + " Numbers are:" + sum);

}

}

**5.Wrire a Java Program Sum of First ‘N’ Odd Numbers**

public class SumofOdd {

public static void main(String args[]) {

int n, sum = 0;

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

Scanner s = new Scanner(System.in);

n = s.nextInt();

for (int i = 1; i <= n; i++) {

if (i % 2 != 0) {

sum += i;

}

}

System.out.println("The Sum Of N Odd Numbers are:" + sum);

}

}

**6.Wrire a Java Program Swapping Programs With Temporary Variable**

class SwapNumbers

{

public static void main(String args[])

{

int x, y, temp;

System.out.println("Enter x and y");

Scanner in = new Scanner(System.in);

x = in.nextInt();

y = in.nextInt();

System.out.println("Before Swapping\nx = "+x+"\ny = "+y);

temp = x;

x = y;

y = temp;

System.out.println("After Swapping\nx = "+x+"\ny = "+y);

}

}

**7.Wrire a Java Program Swapping Programs With Out Temporary Variable**

public class SwapsTwo {

public static void main(String[] args) {

float first = 12.0f, second = 24.5f;

System.out.println("--Before swap--");

System.out.println("First number = " + first);

System.out.println("Second number = " + second);

first = first - second;

second = first + second;

first = second - first;

System.out.println("--After swap--");

System.out.println("First number = " + first);

System.out.println("Second number = " + second);

}

}

**8.Wrire a Java Program To Find Greatest Of Three Numbers**

public class ThreeNum {

public static void main(String[] args) {

int a,b,c, big = 0;

System.out.println("Enter Three Numbers");

Scanner s = new Scanner(System.in);

a = s.nextInt();

b = s.nextInt();

c = s.nextInt();

if(a>=b && a>=c){

big= a;

}

else if(b>=a && b>=c){

big = b;

} else{

big = c;

}

System.out.println("Greater Number Is" +big);

}

}

**9.Wrire a Java Program To Find Greatest Of Two Numbers**

public class TwoNum {

public static void main(String[] args) {

int a,b, big = 0;

System.out.println("Enter Two Numbers");

Scanner s = new Scanner(System.in);

a = s.nextInt();

b = s.nextInt();

if(a>b){

big= a;

}

else{

big =b;

}

System.out.println("Greater Number Is" +big);

}

}

**10.Wrire a Java Program To Print Multiplication Table for Any Given Number**

public class Multiplication\_Table

{

public static void main(String[] args)

{

Scanner s = new Scanner(System.in);

System.out.print("Enter number:");

int n=s.nextInt();

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

{

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

}

}

}

**11.Wrire a Java Program Given Number is Prime or Not**

class PrimeExample{

public static void main(String args[]){

int i,m=0,flag=0;

int n=17;//it is the number to be checked

m=n/2;

for(i=2;i<=m;i++){

if(n%i==0){

System.out.println("Number is not prime");

flag=1;

break;

}

}

if(flag==0)

System.out.println("Number is prime");

}

}

**12.Wrire a Java Program To Find ArmStrong Number**

class ArmstrongExample{

public static void main(String[] args) {

int c=0,a,temp;

int n=153;//It is the number to check armstrong

temp=n;

while(n>0)

{

a=n%10;

n=n/10;

c=c+(a\*a\*a);

}

if(temp==c)

System.out.println("armstrong number");

else

System.out.println("Not armstrong number");

}

}

**13.Write a Java Program To find N th Fibonacci Series**

class FibonacciExample1{

public static void main(String args[])

{

int n1=0,n2=1,n3,i,count=10;

System.out.print(n1+" "+n2);//printing 0 and 1

for(i=2;i<count;++i)//loop starts from 2 because 0 and 1 are already printed

{

n3=n1+n2;

System.out.print(" "+n3);

n1=n2;

n2=n3;

}

}}

**14.Write a Java Program on Reverse a Number**

class ReverseNumber

{

public static void main(String args[])

{

int n, reverse = 0;

System.out.println("Enter the number to reverse");

Scanner in = new Scanner(System.in);

n = in.nextInt();

while( n != 0 )

{

reverse = reverse \* 10;

reverse = reverse + n%10;

n = n/10;

}

System.out.println("Reverse of entered number is "+reverse);

}

}

**15.Write a Java Program Given Number Is Perfect OR Not**

public class PerfectNumberUsingFor {

private static Scanner sc;

public static void main(String[] args) {

int i, Number, Sum = 0 ;

sc = new Scanner(System.in);

System.out.println("\n Please Enter any Number: ");

Number = sc.nextInt();

for(i = 1 ; i < Number ; i++) {

if(Number % i == 0) {

Sum = Sum + i;

}

}

if (Sum == Number) {

System.out.format("\n% d is a Perfect Number", Number);

}

else {

System.out.format("\n% d is NOT a Perfect Number", Number);

}

}

}

**16.Write a Java Program To Print 1 to 10 Numbers With out Using Loop**

class PrintDemo{

public static void recursivefun(int n)

{

if(n <= 10) {

System.out.println(n);

recursivefun(n+1); }

}

public static void main(String args[])

{

recursivefun(1);

}

}

**17.Write a Java Program Reverse a String Without Using String Function**

public class ReverseString {

public static void main(String[] args) {

String str="Hello world";

String revstring="";

for(int i=str.length()-1;i>=0;--i){

revstring +=str.charAt(i);

}

System.out.println(revstring);

}

}

**18.Write a Java Program To Print Numbers In Below Pattern**

**1   
             2 3   
            4 5 6   
           7 8 9 10   
         11 12 13 14 15**

public class NumbersFormat {

public static void main(String[] args) {

int num=15;

int temp=1;

for (int i = 1; i <= num; i++)

{

for (int k = i; k <num; k++)

System.out.print(" ");

for (int j =1; j <= i; j++){

System.out.print("" +temp+ " ");

temp++;

if(temp>15){

break;

}

}

System.out.println();

if(temp>15){

break;

}

}

}

}

**19.Write a Java Program To Print Numbers In Below Pattern**

**1   
1 2   
1 2 3   
1 2 3 4   
1 2 3 4 5   
1 2 3 4 5 6   
1 2 3 4 5 6 7   
1 2 3 4 5 6 7 8   
1 2 3 4 5 6 7 8 9   
1 2 3 4 5 6 7 8 9 10**

public class NumbersFormat

{

public static void main(String[] args)

{

int r, c;

for (r = 1; r <= 10; r++)

{

for (c = 1; c <= r; c++)

{

System.out.print(c + " ");

}

System.out.println("");

}

}

}

**20.Write a Java Program To Print Numbers In Below Pattern**

**1 2 3 4 5 6 7 8 9   
1 2 3 4 5 6 7 8   
1 2 3 4 5 6 7   
1 2 3 4 5 6   
1 2 3 4 5   
1 2 3 4   
1 2 3   
1 2   
1**

public class NumbersFormat {

public static void main(String[] args) {

int r, c;

for (r = 1; r <= 10; r++) {

for (c = 1; c <= 10-r; c++) {

System.out.print(c + " ");

}

System.out.println("");

}

}

}

**21.Write a program to find the sum of the first 1000 prime numbers.**

public class Main {

    public static void main(String args[]){

        int number = 2;

        int count = 0;

        long sum = 0;

        while(count < 1000){

            if(isPrimeNumber(number)){

                sum += number;

                count++;

            }

            number++;

        }

        System.out.println(sum);

    }

    private static boolean isPrimeNumber(int number){

        for(int i=2; i<=number/2; i++){

            if(number % i == 0){

                return false;

            }

        }

        return true;

    }

}

**22.Write a program to Convert Binary to Decimal Numbers.**

public class BinaryToDecimal {

    public int getDecimalFromBinary(int binary){

        int decimal = 0;

        int power = 0;

        while(true){

            if(binary == 0){

                break;

            } else {

                int tmp = binary%10;

                decimal += tmp\*Math.pow(2, power);

                binary = binary/10;

                power++;

            }

        }

        return decimal;

    }

    public static void main(String a[]){

        BinaryToDecimal bd = new BinaryToDecimal();

        System.out.println("11 ===> "+bd.getDecimalFromBinary(11));

        System.out.println("110 ===> "+bd.getDecimalFromBinary(110));

        System.out.println("100110 ===> "+bd.getDecimalFromBinary(100110));

    }

}

#### 23.Java program to find missing number in an array

public class MissingNumberMain {

public static void main(String[] args) {

int[] arr1={7,5,6,1,4,2};

System.out.println("Missing number from array arr1: "+missingNumber(arr1));

int[] arr2={5,3,1,2};

System.out.println("Missing number from array arr2: "+missingNumber(arr2));

}

public static int missingNumber(int[] arr)

{

int n=arr.length+1;

int sum=n\*(n+1)/2;

int restSum=0;

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

restSum+=arr[i];

}

int missingNumber=sum-restSum;

return missingNumber;

}

}

### 24.Java Program to find second largest number in array

public class FindSecondLargestMain {

public static void main(String args[])

{

int[] arr1={7,5,6,1,4,2};

int secondHighest=findSecondLargestNumberInTheArray(arr1);

System.out.println("Second largest element in the array : "+ secondHighest);

}

public static int findSecondLargestNumberInTheArray(int array[])

{

// Initialize these to the smallest value possible

int highest = Integer.MIN\_VALUE;

int secondHighest = Integer.MIN\_VALUE;

// Loop over the array

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

// If current element is greater than highest

if (array[i] > highest) {

// assign second highest element to highest element

secondHighest = highest;

// highest element to current element

highest = array[i];

} else if (array[i] > secondHighest)

// Just replace the second highest

secondHighest = array[i];

}

// After exiting the loop, secondHighest now represents the second

// largest value in the array

return secondHighest;

}

}

**25.Find all substrings of a String in java**

class SubstringsOfStringMain

{

public static void main(String args[])

{

String str="abbc";

System.out.println("All substring of abbc are:");

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

for (int j = i+1; j <= str.length(); j++) {

System.out.println(str.substring(i,j));

}

}

}

}

## 26.How to check number is prime or not

public class PrimeNumberMain {

public static void main(String[] args) {

System.out.println("17 is prime number?: "+isPrime(17));

System.out.println("2 is prime number?: "+isPrime(2));

System.out.println("91 is prime number?: "+isPrime(91));

System.out.println("29 is prime number?: "+isPrime(29));

System.out.println("81 is prime number?: "+isPrime(81));

}

public static boolean isPrime(int number)

{

for (int i = 2; i <=Math.sqrt(number); i++) {

if(number%i==0)

return false;

}

return true;

}

}

## 27.Check If String is palindrome

public class StringFullLoopPalindrome {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter string: ");

String str = scanner.nextLine();

String reverseStr = "";

for(int i = str.length() - 1; i >= 0; i--){

reverseStr = reverseStr + str.charAt(i);

}

if(str.equals(reverseStr)){

System.out.println("String is palindrome");

} else {

System.out.println("String is not palindrome");

}

}

}

## 28.Java program to find number of words in String

class CountTheWords

{

public static void main(String[] args)

{

String str="My Name is John";

String[] words = str.trim().split(" ");

System.out.println("Number of words in the string = "+words.length);

System.out.println("Words are:");

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

System.out.println(words[i]);

}

}

}

**29.Java program to find square root of number**

public class SquareRoot{  
  
    public static void main(String args[]) {  
        
        //Used to get input number for which square root to find  
        Scanner scanner = new Scanner(System.in);  
        
        System.out.println("Enter number to find square root in Java : ");  
        
        //getting input number from user to calculate square root  
        double square = scanner.nextDouble();  
        
        
        //getting square root of a number in Java  
        double squareRoot = Math.sqrt(square);  
        
        //printing number and its square root in Java  
        System.out.printf("Square root of number: %f is : %f %n" , square, squareRoot);  
      
    }  
    
    
}

# [30.Find Second smallest number in java without sorting](http://www.instanceofjava.com/2016/02/java-program-to-find-second-smallest.html)

# class SecondSmallestNumber{

# int[] x ={10,11,12,13,14,6,3,-1};

int small=x[0];

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

{

if(x[i]<small)

{

small=x[i];

}

}

int sec\_Small=x[0];

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

{

if(x[i]<sec\_Small && x[i]!=small)

{

sec\_Small=x[i];

}

}

System.out.println("Second Smallest Number: "sec\_Small);

}

}

**31)Remove Duplicate Element in Array using Temporary Array**

public class RemoveDuplicateInArrayExample{

public static int removeDuplicateElements(int arr[], int n){

        if (n==0 || n==1){

            return n;

        }

        int[] temp = new int[n];

        int j = 0;

        for (int i=0; i<n-1; i++){

            if (arr[i] != arr[i+1]){

               temp[j++] = arr[i];

            }

         }

       temp[j++] = arr[n-1];

        // Changing original array

        for (int i=0; i<j; i++){

            arr[i] = temp[i];

        }

        return j;

    }

    public static void main (String[] args) {

        int arr[] = {10,20,20,30,30,40,50,50};

        int length = arr.length;

        length = removeDuplicateElements(arr, length);

        //printing array elements

        for (int i=0; i<length; i++)

           System.out.print(arr[i]+" ");

    }

}

**32) Java Program to add two matrices**

public class MatrixAdditionExample{

public static void main(String args[]){

//creating two matrices

int a[][]={{1,3,4},{2,4,3},{3,4,5}};

int b[][]={{1,3,4},{2,4,3},{1,2,4}};

//creating another matrix to store the sum of two matrices

int c[][]=new int[3][3];  //3 rows and 3 columns

//adding and printing addition of 2 matrices

for(int i=0;i<3;i++){

for(int j=0;j<3;j++){

c[i][j]=a[i][j]+b[i][j];    //use - for subtraction

System.out.print(c[i][j]+" ");

}

System.out.println();//new line

}

}}

## 33) Java Program to Check a Leap Year

public class LeapYear {

public static void main(String[] args) {

int year = 1900;

boolean leap = false;

if(year % 4 == 0)

{

if( year % 100 == 0)

{

// year is divisible by 400, hence the year is a leap year

if ( year % 400 == 0)

leap = true;

else

leap = false;

}

else

leap = true;

}

else

leap = false;

if(leap)

System.out.println(year + " is a leap year.");

else

System.out.println(year + " is not a leap year.");

}

}

## 34) Display Uppercased A to Z using for loop

public class Characters {

public static void main(String[] args) {

char c;

for(c = 'A'; c <= 'Z'; ++c)

System.out.print(c + " ");

}

}

## 35) java program for Join Two Lists

import java.util.ArrayList;

import java.util.List;

public class JoinLists {

public static void main(String[] args) {

List<String> list1 = new ArrayList<String>();

list1.add("a");

List<String> list2 = new ArrayList<String>();

list2.add("b");

List<String> joined = new ArrayList<String>();

joined.addAll(list1);

joined.addAll(list2);

System.out.println("list1: " + list1);

System.out.println("list2: " + list2);

System.out.println("joined: " + joined);

}

}

## 36) Program to check whether the given number is positive or negative

public class Demo

{

public static void main(String[] args)

{

int number=109;

if(number > 0)

{

System.out.println(number+" is a positive number");

}

else if(number < 0)

{

System.out.println(number+" is a negative number");

}

else

{

System.out.println(number+" is neither positive nor negative");

}

}

}

## 37) Program to reverse the array

import java.util.Scanner;

public class Example

{

public static void main(String args[])

{

int counter, i=0, j=0, temp;

int number[] = new int[100];

Scanner scanner = new Scanner(System.in);

System.out.print("How many elements you want to enter: ");

counter = scanner.nextInt();

for(i=0; i<counter; i++)

{

System.out.print("Enter Array Element"+(i+1)+": ");

number[i] = scanner.nextInt();

}

j = i - 1;

i = 0;

scanner.close();

while(i<j)

{

temp = number[i];

number[i] = number[j];

number[j] = temp;

i++;

j--;

}

System.out.print("Reversed array: ");

for(i=0; i<counter; i++)

{

System.out.print(number[i]+ " ");

}

}

}

## 38) How to open Notepad using Java program

import java.util.\*;

import java.io.\*;

class Notepad {

public static void main(String[] args) {

Runtime rs = Runtime.getRuntime();

try {

rs.exec("notepad");

}

catch (IOException e) {

System.out.println(e);

}

}

}

# 39) Java program to compare two strings

**import** java.util.Scanner;

**class** CompareStrings

{

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

{

String s1, s2;

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

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

s1 = in.nextLine();

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

s2 = in.nextLine();

**if** (s1.compareTo(s2) > 0)

System.out.println("The first string is greater than the second.");

**else** **if** (s1.compareTo(s2) < 0)

System.out.println("The first string is smaller than the second.");

**else**

System.out.println("Both the strings are equal.");

}

}

## 40) Java Programming Code to Convert Lowercase Character to Uppercase

import java.util.Scanner;

public class JavaProgram

{

public static void main(String[] input)

{

char ch;

int temp;

Scanner scan = new Scanner(System.in);

System.out.print("Enter a Character in Lowercase : ");

ch = scan.next().charAt(0);

temp = (int) ch;

temp = temp - 32;

ch = (char) temp;

System.out.print("Equivalent Character in Uppercase = " +ch);

}

}