**Java Programs: [Arunachalam Vaidhyanathan\_759121]**

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a)🡪To Print an Integer:

**Algorithm:**

**Steps:**

1. The user enters an integer value when asked.
2. This value is taken from the user with the help of nextInt() method of Scanner Class. The nextInt() method, in Java, reads the next integer value from the console into the specified variable.

This entered value is now stored in the variableOfIntType.

1. Now to print this value, System.out.println() or System.out.print() method is used. The System.out.println() method, in Java, prints the value passed as the parameter to it, on the console screen and the changes the cursor to the next line on the console. Whereas System.out.print() method, in Java, prints the value passed as the parameter to it, on the console screen and the cursor remains on the next character of the last printed character on the console.
2. Hence, the integer value is successfully read and printed.

**Program:**

import java.io.\*;

import java.util.Scanner;

public class Main {

    public static void main(String[] args)

    {

        int n;

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

        Scanner s = new Scanner(System.in);

        n = s.nextInt();

        System.out.println("Entered integer is: "

                           + n);

    }

}

b)🡪 Addition/ Subtraction /Multiplication /Division of two numbers:

import java.util.Scanner;

public class Main{

public static void main(String[] args)

{

int a,b,add,sub,multi;

float div;

Scanner sc=new Scanner(System.in);

System.out.print(“Enter 2 numbers:”);

a = sc.nextInt();

b= sc.nextInt();

add= a+b;

sub=a-b;

multi=a\*b;

div=(float)a/b;

System.out.println(“Sum is :“+add);

System.out.println(“Difference is :“+sub);

System.out.println(“Product is :“+multi);

System.out.println(“Division is :“+div);

}

}

c)🡪Check the given number is palindrome or not?:

import java.util.Scanner;

class Palindrome{

public static void main(String[] args)

{

String a,b;

StringBuffer sb;

Scanner sc=new Scanner(System.in);

System.out.println(“Enter the String to check whether is palindrome : ”);

a=sc.nextline();

sb=new StringBuffer(a);

b=sb.reverse().tosrting();

if(a.equals(b))

{

System.out.println(“Entered String is an palindrome!”);

}

else

{

System.out.println(“Entered String is not an palindrome!”);

}

}

}

d)🡪Palindrome:

**Algorithm:**

Get the number to check for palindrome

Hold the number in temporary variable

Reverse the number

Compare the temporary number with reversed number

If both numbers are same, print "palindrome number"

Else print "not palindrome number"

**Program:**

import java.util.\*;

class PalindromeExample2

{

   public static void main(String args[])

   {

      String original, reverse = "";

      Scanner in = new Scanner(System.in);

      System.out.println("Enter a string/number to check if it is a palindrome");

      original = in.nextLine();

      int length = original.length();

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

         reverse = reverse + original.charAt(i);

      if (original.equals(reverse))

         System.out.println("Entered string/number is a palindrome.");

      else

         System.out.println("Entered string/number isn't a palindrome.");

   }

}

e)🡪Factorial of the given number:

public class FactorialExample{

 public static void main(String args[]){

  int i,fact=1;

  int number=5;

  for(i=1;i<=number;i++){

      fact=fact\*i;

  }

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

 }

}

o/p: Factorial of 5 is: 120

f)🡪Reverse the String:

import java.util.Scanner;

public class ReverseString

{

    public static void main(String[] args)

    {

        System.out.println("Enter string to reverse:");

        Scanner read = new Scanner(System.in);

        String str = read.nextLine();

        String reverse = "";

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

        {

            reverse = reverse + str.charAt(i);

        }

        System.out.println("Reversed string is:");

        System.out.println(reverse);

    }

}

g)🡪Fibonacci Series:

class Fibonacci1{

public static void main(String args[])

{

 int n1=0,n2=1,n3,i,count=10;

 System.out.print(n1+" "+n2);

 for(i=2;i<count;++i)

 {

  n3=n1+n2;

  System.out.print(" "+n3);

  n1=n2;

  n2=n3;

 }

  }

}

h)🡪Leap Year:

import java.util.Scanner;

public class Check\_Leap\_Year

{

public static void main(String args[])

{

Scanner s = new Scanner(System.in);

System.out.print("Enter any year:");

int year = s.nextInt();

boolean flag = false;

if(year % 400 == 0)

{

flag = true;

}

else if (year % 100 == 0)

{

flag = false;

}

else if(year % 4 == 0)

{

flag = true;

}

else

{

flag = false;

}

if(flag)

{

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

}

else

{

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

}

}

}

i)🡪Swapping of 2 numbers:

import java.util.Scanner;

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);

 }

}

j)🡪Sorting of 2 Numbers:

import java.io.\*;

import java .util.\*;

class Sorting

{

    public static void main (String[] args)

    {

        int a[] = {10, 12};

        Arrays.sort(a);

        for (int i = 0; i < 2; i++)

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

    }

}