**1.FIBONACCI SERIES IN JAVA**

**class** FibonacciEx{

**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;

 }

}}

**2.PRIME NUMBER PROGRAM IN JAVA**

**public** **class** PrimeNumber{

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

**int** i,m=0,flag=0;

**int** n=3;

  m=n/2;

**if**(n==0||n==1){

   System.out.println(n+" is not prime number");

  }**else**{

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

**if**(n%i==0){

  System.out.println(n+" is not prime number");

     flag=1;

**break**;

    }

   }

**if**(flag==0)  { System.out.println(n+" is prime number"); }

  }

}

}

**3.PALINDROME PROGRAM IN JAVA**

**class** Palindrome{

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

**int** r,sum=0,temp;

**int** n=454;

  temp=n;

**while**(n>0){

   r=n%10;

   sum=(sum\*10)+r;

   n=n/10;

  }

**if**(temp==sum)

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

**else**

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

}

}

**4.FACTORIAL PROGRAM IN JAVA**

public class Factorial {

public static void main(String[] args) {

int num = 10;

long factorial = 1;

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

{

factorial \*= i;

}

System.out.printf("Factorial of %d = %d", num, factorial);

}

}

**5.ARMSTRONG NUMBER IN JAVA**

public class Armstrong {

public static void main(String[] args) {

int number = 371, originalNumber, remainder, result = 0;

originalNumber = number;

while (originalNumber != 0)

{

remainder = originalNumber % 10;

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

originalNumber /= 10;

}

if(result == number)

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

else

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

}

}

**6.HOW TO GENERATE RANDOM NUMBER IN JAVA**

import java.util.Random;

public class generateRandom{

public static void main(String args[])

{

Random rand = new Random();

int rand\_int1 = rand.nextInt(1000);

int rand\_int2 = rand.nextInt(1000);

System.out.println("Random Integers: "+rand\_int1);

System.out.println("Random Integers: "+rand\_int2);

double rand\_dub1 = rand.nextDouble();

double rand\_dub2 = rand.nextDouble();

System.out.println("Random Doubles: "+rand\_dub1);

System.out.println("Random Doubles: "+rand\_dub2);

}

}

**7.PRINT PATTERN IN JAVA**

import java.util.\*;

public class Pattern {

     public static void printPattern(int n)

    {

        int i, j;

        for (i = 1; i <= n; i++) {

            for (j = 1; j <= n - i; j++) {

                System.out.print(" ");

            }

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

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

            }

            System.out.println();

        }

    }

    public static void main(String args[])

    {

        int n = 6;

        printPattern(n);

    }

}

import java.util.\*;

public class GeeksForGeeks {

    public static void printPattern(int n)

    {

        int i, j;

        for (i = n; i >= 1; i--) {

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

                System.out.print(" ");

            }

              for (j = 0; j <= n - i; j++) {

                System.out.print("\*");

            }

            System.out.println();

        }

    }

    public static void main(String args[])

    {

        int n = 6;

        printPattern(n);

    }

}

**8.COMPARE TWO OBJECTS IN JAVA**

import java.io.\*;

class Pet {

    String name;

    int age;

    String breed;

    Pet(String name, int age, String breed)

    {

        this.name = name;

        this.age = age;

        this.breed = breed;

    }

}

public class GFG {

    public static void main(String args[])

    {

        Pet dog1 = new Pet("Snow", 3, "German Shepherd");

        Pet cat = new Pet("Jack", 2, "Tabby");

        System.out.println(dog1.equals(dog2));

    }

}

**9.CREATE OBJECTS IN JAVA**

**public** **class** CreateObject

{

**void** show()

{

System.out.println("Welcome to java");

}

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

{

CreateObject obj = **new** CreateObject();

obj.show();

}

}

**10.STRING PALINDROME**

class Palindrome {

 static boolean isPalindrome(String str)

    {

        int i = 0, j = str.length() - 1;

        while (i < j) {

            if (str.charAt(i) != str.charAt(j))

                return false;

             j--;

        }

        return true;

    }

    public static void main(String[] args)

    {

        String str = "geeks";

        String str2 = "RACEcar";

        str = str.toLowerCase();

        str2 = str2.toLowerCase();

        System.out.print("String 1 :");

  if (isPalindrome(str))

            System.out.print("It is a palindrome");

        else

            System.out.print("It is not a palindrome");

 System.out.println();

        System.out.print("String 2 :");

        if (isPalindrome(str2))

            System.out.print("It is a palindrome");

        else

            System.out.print("It is not a palindrome");

    }

}

**11.PRINT ASCII VALUE**

public class ASCII {

    public static void main(String[] args)

    {

        char ch = '}';

  int ascii = ch;

        System.out.println("The ASCII value of " + ch

                           + " is: " + ascii);

    }

}

**12.REVERSE A NUMBER IN JAVA**

import java.io.\*;

class Reversenumber {

    static int reverse(int n)

    {

        int rev = 0;

        int rem;

        while (n > 0) {

            rem = n % 10;

            rev = (rev \* 10) + rem;

            n = n / 10;

        }

        return rev;

    }

    public static void main(String[] args)

    {

        int n = 4526;

        System.out.print("Reversed Number is "

                         + reverse(n));

 }

}

**13.FIND SQUAREROOT OF A NUMBER WITHOUT SQRT METHOD**

#include <stdio.h>

#include <stdlib.h>

#include <math.h>

 double findSqrt(double x)

{

    if (x < 2)

        return x;

    double y = x;

    double z = (y + (x / y)) / 2;

    while (fabs(y - z) >= 0.00001) {

        y = z;

        z = (y + (x / y)) / 2;

    }

    return z;

}

int main()

{

    double n = 3;

    double ans = findSqrt(n);

    printf("%.5f is the square root of 3\n", ans);

    return 0;

}

**14.DISPLAY ODD NUMBER FROM 1 TO 100**

**public** **class** DisplayOddNumbersExample1

{

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

{

**int** number=100;

System.out.print("List of odd numbers from 1 to "+number+": ");

**for** (**int** i=1; i<=number; i++)

{

**if** (i%2!=0)

{

System.out.print(i + " ");

}

}

}

}

**15.DISPLAY EVEN NUMBERS FROM 1 TO 100**

**public** **class** DisplayEvenNumbersExample1

{

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

{

**int** number=100;

System.out.print("List of even numbers from 1 to "+number+": ");

**for** (**int** i=1; i<=number; i++)

{

**if** (i%2==0)

{

System.out.print(i + " ");

}

}

}

}

**16.FIND LARGEST OF THREE NUMBERS**

public class Largest {

public static void main(String[] args) {

double n1 = -4.5, n2 = 3.9, n3 = 2.5;

if( n1 >= n2 && n1 >= n3)

System.out.println(n1 + " is the largest number.");

else if (n2 >= n1 && n2 >= n3)

System.out.println(n2 + " is the largest number.");

else

System.out.println(n3 + " is the largest number.");

}

}

**17.FIND SMALLEST OF THREE NUMBERS USING TERNARY OPERARTOR**

import java.util.Scanner;

public class JavaExample

{

public static void main(String[] args)

{

int num1, num2, num3, result, temp;

Scanner scanner = new Scanner(System.in);

System.out.println("Enter First Number:");

num1 = scanner.nextInt();

System.out.println("Enter Second Number:");

num2 = scanner.nextInt();

System.out.println("Enter Third Number:");

num3 = scanner.nextInt();

scanner.close();

temp = num1 < num2 ? num1:num2;

result = num3 < temp ? num3:temp;

System.out.println("Smallest Number is:"+result);

}

}

**18.PRINT THE ELEMENTS OF AN ARRAY IN JAVA**

public class Elements {

    public static void main(String[] args)

    {

        int[] arr = { -7, -5, 5, 10, 0, 3, 20, 25, 12 };

        System.out.print("Elements of given array are: ");

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

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

        }

    }

}

**19.PRINT THE DUPLICATE ELEMENTS OF AN ARRAY IN JAVA**

public class JavaExample {

public static void main(String[] args) {

//Initializing an int array

int [] numbers = new int [] {2, 4, 6, 8, 4, 6, 10, 10};

System.out.println("Duplicate elements in given array are: ");

//Comparing each element of the array with all other elements

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

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

if(numbers[i] == numbers[j]) {

//printing duplicate elements

System.out.println(numbers[j]);

}

}

}

}

}

**20.REMOVE DUPLICATE ELEMENT IN AN ARRAY IN JAVA**

public class Main {

    public static int removeduplicates(int a[], 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 (a[i] != a[i + 1]) {

                temp[j++] = a[i];

            }

        }

        temp[j++] = a[n - 1];

        for (int i = 0; i < j; i++) {

            a[i] = temp[i];

        }

        return j;

    }

    public static void main(String[] args)

    {

        int a[] = { 1, 1, 2, 2, 2 };

        int n = a.length;

        n = removeduplicates(a, n);

        for (int i = 0; i < n; i++)

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

    }

}

**21.PRINT THE SUM OF ALL THE ITEMS OF THE ARRAY**

class Test {

    static int arr[] = { 12, 3, 4, 15 };

    static int sum()

    {

        int sum = 0;

        int i;

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

            sum += arr[i];

        return sum;

    }

    public static void main(String[] args)

    {

        System.out.println("Sum of given array is "

                           + sum());

    }

}

**22.SORT AN ARRAY IN JAVA**

import java.util.Arrays;

class GFG {

    public static void main(String args[])

    {

        int[] arr = { 5, -2, 23, 7, 87, -42, 509 };

        System.out.println("The original array is: ");

        for (int num : arr) {

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

        }

        Arrays.sort(arr);

        System.out.println("\nThe sorted array is: ");

        for (int num : arr) {

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

        }

    }

}

**23.PRINT THE ELEMENTS OF AN ARRAY IN REVERSE ORDER IN JAVA**

public class reverseArray {

    static void reverse(int a[], int n)

    {

        int[] b = new int[n];

        int j = n;

        for (int i = 0; i < n; i++) {

            b[j - 1] = a[i];

            j = j - 1;

        }

        System.out.println("Reversed array is: \n");

        for (int k = 0; k < n; k++) {

            System.out.println(b[k]);

        }

    }

    public static void main(String[] args)

    {

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

        reverse(arr, arr.length);

    }

}

**24.LINEAR SEARCH IN JAVA**

**public** **class** LinearSearchExample{

**public** **static** **int** linearSearch(**int**[] arr, **int** key){

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

**if**(arr[i] == key){

**return** i;

            }

        }

**return** -1;

    }

**public** **static** **void** main(String a[]){

**int**[] a1= {10,20,30,50,70,90};

**int** key = 50;

   System.out.println(key+" is found at index: "+linearSearch(a1, key));

   }

}

**25.BINARY SEARCH IN JAVA**

class BinarySearch {

    int binarySearch(int arr[], int l, int r, int x)

    {

        while (l <= r) {

            int mid = (l + r) / 2;

            if (arr[mid] == x) {

                return mid;

            } else if (arr[mid] > x) {

                r = mid - 1;

            } else {

              l = mid + 1;

            }

        }

        return -1;

    }

    public static void main(String args[])

    {

        BinarySearch ob = new BinarySearch();

        int arr[] = { 2, 3, 4, 10, 40 };

        int n = arr.length;

        int x = 10;

        int result = ob.binarySearch(arr, 0, n - 1, x);

        if (result == -1)

            System.out.println("Element not present");

        else

            System.out.println("Element found at index "

                               + result);

    }

}

**26.TO FIND REVERSE OF THE STRING IN JAVA**

**public** **class** Reverse

{

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

       String string = "Dream big";

        String reversedStr = "";

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

           reversedStr = reversedStr + string.charAt(i);

        }

        System.out.println("Original string: " + string);

        System.out.println("Reverse of given string: " + reversedStr);

    }

}