1. **Swapping with out using Third variable.**

**public** **class** SwapWithOutUsingThirdVariable {

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

**int** x = 10;

**int** y = 15;

System.***out***.println("before swapping numbers: "+x +" "+ y);

x = x + y;

y = x - y;

x = x - y;

System.***out***.println("After swapping: "+x +" " + y);

}

}

1. **Swapping with Third Variable**

**public** **class** SwapWithThirdVariable {

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

**int** x = 10;

**int** y = 15;

**int** t;

System.***out***.println("before swapping numbers: "+x +" "+ y);

t = x;

x = y;

y = t;

System.***out***.println("After swapping: "+x +" " + y);

System.***out***.println( );

}

}

1. **Find the largest number in given three number without using array ?**

**public** **class** LargestOfThreeNumbers {

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

{

**int** a=40, b=78, c=19;

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

System.***out***.println(a+" is the largest Number");

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

System.***out***.println(b+" is the largest Number");

**else**

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

}

}

1. **Number Palindrome ?**

**public** **class** PalindromeInNumber {

**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");

}

}

1. **String Palindrome without using Reverse method ?**

public class PalindromeInStringWithOutReverse {

public static void main(String[] args) {

// TODO Auto-generated method stub

String str = "madam";

String rev = "";

boolean ans = false;

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

rev = rev + str.charAt(i);

}

if (str.equals(rev)) {

ans = true;

}

if(ans) {

System.*out*.println("given string is palindrome");

}else {

System.*out*.println("given string not a palindrome");

}

}

}

1. **String palindrome with using reverse method ?**

**public** **class** PalindromeStringInReverse {

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

String str="madam";

StringBuilder sb=**new** StringBuilder(str);

sb.reverse();

String rev=sb.toString();

**if**(str.equals(rev)){

System.***out***.println("given string is palindrome");

}**else**{

System.***out***.println("given string is not a palindrome");

}

}

}

1. **String reverse with out using reverse method ?**

**public** **class** StringReverse {

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

String s;

s="hello";

System.***out***.println("the string is : " +s);

System.***out***.print("After reverse string is: ");

**for**(**int** i=s.length();i>0;--i)

{

System.***out***.print(s.charAt(i-1));

}

}

}

1. **String sorting using array**

**import** java.util.Arrays;

**public** **class** StringSorting {

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

String[] countries = {"Zimbabwe", "South-Africa", "India", "America", "Yugoslavia", " Australia", "Denmark", "France", "Netherlands", "Italy", "Germany"};

**int** size = countries.length;

**for**(**int** i = 0; i<size-1; i++)

{

**for** (**int** j = i+1; j<countries.length; j++)

{

**if**(countries[i].compareTo(countries[j])>0)

{

String temp = countries[i];

countries[i] = countries[j];

countries[j] = temp;

}

}

}

System.***out***.println(Arrays.*toString*(countries));

}

}

1. **Armstrong Number**

**import** java.util.Scanner;

**import** java.lang.Math;

**public** **class** ArmstrongNumber

{

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

{

**int** num=407;

**int** temp, digits=0, last=0, sum=0;

temp=num;

**while**(temp>0)

{

temp = temp/10;

digits++;

}

temp = num;

**while**(temp>0)

{

last = temp % 10;

sum += (Math.*pow*(last, digits));

temp = temp/10;

}

**if**(num==sum) {

System.***out***.println("armstrong");}

**else**

System.***out***.println("not a armstrong");

}

}

**10. Sum of digit program**

**import** java.util.Scanner;

**public** **class** SumOfDigits

{

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

{

**int** number, digit, sum = 0;

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

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

number = sc.nextInt();

**while**(number > 0)

{

digit = number % 10;

sum = sum + digit;

number = number / 10;

}

System.***out***.println("Sum of Digits: "+sum);

}

}

**11. Fibonacci series**

**class** FibonacciSeries{

**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;

}

}

}

**12. Display the count of vowels present in your name .**

**import** java.util.Scanner;

**public** **class** CountOfVowels{

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

String s = "prepinsta";

**char**[] c = s.toCharArray();

**int** vowel=0;

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

**if**(s.charAt(i)=='a' || s.charAt(i)=='e' || s.charAt(i)=='i' || s.charAt(i)=='o' || s.charAt(i)=='u')

vowel++;

}

System.***out***.println("Vowels: " + vowel);

}

}

**13. Display the vowels present in your name**

import java.util.Scanner;

class PrintVowels {

public static void main(String[] args) {

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

System.*out*.print("In:");

String word = inp.nextLine();

for(int whatsat = 0; whatsat < word.length(); whatsat++){

char c = Character.*toLowerCase*(word.charAt(whatsat));

if (c == 'a' || c == 'e'|| c == 'i' || c == 'o' || c == 'u'){

System.*out*.print(word.charAt(whatsat));

}

}

}

}

**14. Display the sum of digits in your Email ID**

import java.util.Scanner;

public class SumOfDigitsInEmail {

public static void main(String[] args) {

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

System.*out*.print("Enter your email ID: ");

String email = scanner.nextLine();

int sum = 0;

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

char ch = email.charAt(i);

if (Character.*isDigit*(ch)) {

sum += Character.*getNumericValue*(ch);

}

}

System.*out*.println("Sum of digits in the email ID: " + sum);

}

**}**

**15. Display the count of capital letter, small letter, numbers, special character in your email ID**

**class** CountLetters

{

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

{

String str = "#GeeKs01fOr@gmail.com";

**int** upper = 0, lower = 0, number = 0, special = 0;

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

{

**char** ch = str.charAt(i);

**if** (ch >= 'A' && ch <= 'Z')

upper++;

**else** **if** (ch >= 'a' && ch <= 'z')

lower++;

**else** **if** (ch >= '0' && ch <= '9')

number++;

**else**

special++;

}

System.***out***.println("Lower case letters : " + lower);

System.***out***.println("Upper case letters : " + upper);

System.***out***.println("Number : " + number);

System.***out***.println("Special characters : " + special);

}

}

**16. Write a program to assign @ simple in the vowels present in your Name**

public class SimpleReplaceVowels {

public static void main(String[] args) {

String name = "Balaji";

String modifiedName = "";

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

char ch = name.charAt(i);

if (ch == 'a' || ch == 'e' || ch == 'i' || ch == 'o' || ch == 'u') {

modifiedName += "@";

} else {

modifiedName += ch;

}

}

System.*out*.println("Original Name: " + name);

System.*out*.println("Modified Name: " + modifiedName);

}

}

**17. Array Number Sorting**

import java.util.Arrays;

public class ArrayNumberSorting

{

public static void main(String[] args)

{

int [] array = {90, 23, 5, 109, 12, 22, 67, 34};

Arrays.*sort*(array);

System.*out*.println("Elements of array sorted in ascending order: ");

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

{

System.*out*.println(array[i]);

}

}

}

**18. Array Number Soring with out using sort method**

public class ArrayNumberSortingWithOutSort

{

public static void main(String[] args)

{

int[] arr ={5,4,1,2,3};

System.*out*.println("Array elements after sorting:");

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

{

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

{

int tmp = 0;

if (arr[i] > arr[j])

{

tmp = arr[i];

arr[i] = arr[j];

arr[j] = tmp;

}

}

System.*out*.println(arr[i]);

}

}

}

**19. Find the duplicate element in an array ?**

**public** **class** FindDuplicateInArray {

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

**int**[] nums = {1,2, 3, 4, 2, 5,2};

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

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

**if** (nums[i] == nums[j]) {

System.***out***.println("Duplicate element found: " + nums[i]);

}

}

}

System.***out***.println("No duplicate element found.");

}

}

**20) Given no. is prime or not ?**

import java.util.Scanner;

public class PrimeCheck {

public static void main(String[] args) {

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

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

int number = scanner.nextInt();

scanner.close();

boolean isPrime = true;

if (number <= 1) {

isPrime = false;

} else {

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

if (number % i == 0) {

isPrime = false;

break;

}

}

}

if (isPrime) {

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

} else {

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

}

}

}

**21) Display prime number 1 to 100 and sum it**

public class Prime1To100 {

public static void main(String[] args) {

int sum = 0;

System.*out*.println("Prime numbers between 1 and 100:");

for (int i = 2; i <= 100; i++) {

boolean isPrime = true;

for (int j = 2; j < i; j++) {

if (i % j == 0) {

I sPrime = false;

break;

}

}

if (isPrime) {

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

sum += i;

}

}

System.*out*.println("\n\nSum of prime numbers between 1 and 100: " + sum);

}

}

**22) Display Armstrong number from 100 to 1000**

public class Armstrong1to100 {

public static void main(String[] args) {

System.*out*.println("Armstrong numbers between 100 and 1000 are:");

for (int num = 100; num < 1000; num++) {

int hundreds = num / 100;

int tens = (num / 10) % 10;

int ones = num % 10;

int sum = (hundreds \* hundreds \* hundreds) +

(tens \* tens \* tens) +

(ones \* ones \* ones);

if (sum == num) {

System.*out*.println(num);

}

}

}

}

**23) Reverse the sentence using the word , input -> how are you, output ->you are how**

public class ReverseSentence {

public static void main(String[] args) {

String sentence = "how are you";

System.*out*.println("Original sentence: " + sentence);

String[] words = sentence.split(" ");

String reversed = "";

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

reversed += words[i] + " ";

}

System.*out*.println("Reversed sentence: " + reversed.trim());

}

}

**24) Display the count of words present in a paragraph or string**

public class WordCount {

public static void main(String[] args) {

String sentence = "how are you doing today";

System.*out*.println("Original sentence: " + sentence);

String[] words = sentence.split(" ");

int wordCount = words.length;

System.*out*.println("Number of words: " + wordCount);

}

}

**25) Program for left array Rotation**

import java.util.Arrays;

public class SimpleLeftRotation {

// Function to rotate the array to the left by d positions

public static void leftRotate(int[] arr, int d) {

int n = arr.length;

d = d % n;

// Temporary array to store the first d elements

int[] temp = new int[d];

// Copy the first d elements into temp

for (int i = 0; i < d; i++) {

temp[i] = arr[i];

}

// Shift the remaining elements to the left

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

arr[i] = arr[i + d];

}

// Copy the elements from temp to the end of arr

for (int i = 0; i < d; i++) {

arr[n - d + i] = temp[i];

}

}

public static void main(String[] args) {

int[] arr = {1, 2, 3, 4, 5, 6, 7};

int d = 2; // Number of left rotations

System.*out*.println("Original Array: " + Arrays.*toString*(arr));

*leftRotate*(arr, d);

System.*out*.println("Array after " + d + " left rotations: " + Arrays.*toString*(arr));

}

}

**26) Program for right array rotation**

import java.util.Arrays;

public class RightRotation {

// Function to rotate the array to the right by d positions

public static void rightRotate(int[] arr, int d) {

int n = arr.length;

d = d % n;

// Temporary array to store the last d elements

int[] temp = new int[d];

// Copy the last d elements into temp

for (int i = 0; i < d; i++) {

temp[i] = arr[n - d + i];

}

// Shift the remaining elements to the right

for (int i = n - 1; i >= d; i--) {

arr[i] = arr[i - d];

}

// Copy the elements from temp to the beginning of arr

for (int i = 0; i < d; i++) {

arr[i] = temp[i];

}

}

public static void main(String[] args) {

int[] arr = {1, 2, 3, 4, 5, 6, 7};

int d = 2; // Number of right rotations

System.*out*.println("Original Array: " + Arrays.*toString*(arr));

*rightRotate*(arr, d);

System.*out*.println("Array after " + d + " right rotations: " + Arrays.*toString*(arr));

}

}

**27) Reverse the String without changing the position of special character.**

**Input : b!ueb@ll**

public class ReverseStringWithOutChangingSpecial {

public static void main(String[] args) {

String str = "b!ueb@ll";

char[] chars = str.toCharArray();

for (int left = 0, right = str.length() - 1; left < right;) {

if (!Character.*isLetter*(chars[left]))

left++;

else if (!Character.*isLetter*(chars[right]))

right--;

else {

char temp = chars[left];

chars[left++] = chars[right];

chars[right--] = temp;

}

}

System.*out*.println("Reversed string: " + new String(chars));

}

}

**28) Program for remove consecutive duplicates and display the string**

**Input : aacbbbccdee**

public class RemoveConsecutiveDuplicates {

public static void main(String[] args) {

String str = "aaabbccddeeff";

String result = "" + str.charAt(0); // Start with the first character

// Loop through the string starting from the second character

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

// Add the character to the result if it's different from the previous one

if (str.charAt(i) != str.charAt(i - 1)) {

result += str.charAt(i);

}

}

// Print the final result

System.*out*.println("String after removing consecutive duplicates: " + result);

}

}

**29) Program for even or odd .**

**30) Factorial**

**31) Check whether perfect square or not and sum it ?**

public class PerfectSquare {

public static void main(String[] args) {

int start = 1;

int end = 100; // Ending range

int sum = 0; // To hold the sum of perfect squares

// Loop through the given range

for (int i = start; i <= end; i++) {

// Check if the number is a perfect square

int sqrt = (int) Math.*sqrt*(i);

if (sqrt \* sqrt == i) {

System.*out*.println(i + " is a perfect square.");

sum += i; // Add perfect square to the sum

}

}

// Print the total sum of perfect squares

System.*out*.println("Sum of perfect squares: " + sum);

}

}

**32) Display the count of repeating occurrence from the given string .**

public class RepeatingOccurrences {

public static void main(String[] args) {

String str = "java programming";

Map<Character, Integer> countMap = new HashMap<>();

// Count the frequency of each character

for (char c : str.toCharArray()) {

if (c != ' ') { // Skip spaces

if (countMap.containsKey(c)) {

countMap.put(c, countMap.get(c) + 1);

} else {

countMap.put(c, 1);

}

}

}

// Print characters that repeat

System.*out*.println("Repeating characters:");

for (Map.Entry<Character, Integer> entry : countMap.entrySet()) {

if (entry.getValue() > 1) {

System.*out*.println(entry.getKey() + ": " + entry.getValue());

}

}

}

}