DAY – 6 JAVA TRAINING

1) import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

String s = sc.next();

while(s.length()>0) {

char ch = s.charAt(0);

int len = s.length();

s = s.replace(String.valueOf(ch),"");

int len1 = s.length();

int freq = len - len1;

System.out.println(ch+" "+freq);

}

/\* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class should be named Solution. \*/

}

}

2)

import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

String str = sc.nextLine();

int vowels = 0, consonants = 0, digits = 0, special = 0;

str = str.toLowerCase();

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

char ch = str.charAt(i);

if (ch >= 'a' && ch <= 'z') {

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

vowels++;

else

consonants++;

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

digits++;

} else {

special++;

}

}

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

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

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

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

}

}

3)

import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

String str = sc.nextLine();

boolean onlyDigits = true;

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

if (!Character.isDigit(str.charAt(i))) {

onlyDigits = false;

break;

}

}

if (onlyDigits && str.length() > 0) {

System.out.println("only digits");

} else {

System.out.println("no");

}

}

}

4)

import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

String str1 = sc.nextLine();

String str2 = sc.nextLine();

if (isAnagram(str1, str2)) {

System.out.println("The given strings are an anagram");

} else {

System.out.println("The given strings are not an anagram");

}

}

private static boolean isAnagram(String s1, String s2) {

if (s1.length() != s2.length()) {

return false;

}

char[] arr1 = s1.toCharArray();

char[] arr2 = s2.toCharArray();

Arrays.sort(arr1);

Arrays.sort(arr2);

return Arrays.equals(arr1, arr2);

}

}

5)

import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

String s = sc.nextLine();

Set<Character> set = new HashSet<>();

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

set.add(c);

}

if (set.size() != 2) {

System.out.println("No");

return;

}

boolean isAlternating = true;

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

if (s.charAt(i) == s.charAt(i - 1)) {

isAlternating = false;

break;

}

}

if (isAlternating) {

System.out.println("Yes");

} else {

System.out.println("No");

}

}

}

6)

import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int n = sc.nextInt();

if (n < 1 || n > 50) {

System.out.println("Enter a Valid Input!!!!!!!!!!!!!!!!!!!!!!!!");

} else {

System.out.println("The first " + n + " Natural Numbers are:");

printNumbers(1, n);

}

}

public static void printNumbers(int current, int n) {

if (current > n) {

return;

}

System.out.print(current);

if (current < n) {

System.out.print(" ");

}

printNumbers(current + 1, n);

}

}

7)

import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int n = sc.nextInt();

if (n < 1 || n > 50) {

System.out.println("Enter a Valid Input!!!!!!!!!!!!!!!!!!");

} else {

int sum = calculateSum(n);

System.out.println("The sum of numbers from 1 to " + n + " : " + String.format("%04d", sum));

}

}

public static int calculateSum(int n) {

if (n == 1) {

return 1;

}

return n + calculateSum(n - 1);

}

}

8)

import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int n = sc.nextInt();

if (n >= 1000) {

System.out.println("Enter a Valid Input!!!!!!!");

} else {

int sum = sumOfDigits(n);

System.out.println("Sum of Digit:" + String.format("%04d", sum));

}

}

public static int sumOfDigits(int n) {

if (n == 0) {

return 0;

}

return (n % 10) + sumOfDigits(n / 10);

}

}

9)

import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int n = sc.nextInt();

if (n >= 1000) {

System.out.println("Enter a Valid Input!!!!!!!");

} else {

int sum = sumOfDigits(n);

System.out.println("Sum of Digit:" + String.format("%04d", sum));

}

}

public static int sumOfDigits(int n) {

if (n == 0) {

return 0;

}

return (n % 10) + sumOfDigits(n / 10);

}

}

10)

import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int n = sc.nextInt();

n = Math.abs(n);

int count = countDigits(n);

System.out.println("The Count the digits: " + count);

}

public static int countDigits(int n) {

if (n < 10) {

return 1;

}

return 1 + countDigits(n / 10);

}

}

11)

import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int n = sc.nextInt();

if (n <= 0 || n >= 100000) {

System.out.println("Invalid Input");

} else {

if (isArmstrong(n)) {

System.out.println("yes");

} else {

System.out.println("no");

}

}

}

public static boolean isArmstrong(int num) {

int sum = 0;

int temp = num;

int digits = String.valueOf(num).length();

while (temp > 0) {

int digit = temp % 10;

sum += Math.pow(digit, digits);

temp /= 10;

}

return sum == num;

}

}