**Problem Statement 1: “Given a string, check if the string is palindrome or not.” A string is said to be palindrome if the reverse of the string is the same as the string**

import java.util.Scanner;

public class palindrome

{

public static void main(String[] args)

{

int count = 0;

Scanner sc = new Scanner(System.in);

System.out.print("enter the string: ");

String p = sc.nextLine();

char c[] = p.toCharArray();

for (int i=0,j=c.length-1; i<(c.length)/2; i++,j--)

{

if(c[i]!=c[j])

{

count++;

break;

}

}

if(count>0)

{

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

}

else

{

System.out.println("Palindrome");

}

}

}

**Problem Statement 2:Given a string, write a program to count the number of vowels, consonants, and spaces in that string**

import java.util.\*;

public class countvcs{

public static void main(String[] args){

int vowel=0, consonant=0, whitespace =0;

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

Scanner sc = new Scanner(System.in);

String s = sc.nextLine();

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

char c = s.charAt(i);

if (c == 'a'||c== 'e' || c== 'i' || c== 'o' || c== 'u' || c== 'A' || c== 'E' || c== 'I' || c== 'O' ||c == 'U'){

vowel++;

}

else if(c == ' '){

whitespace++;

}

else{

consonant++;

}

}

System.out.print("vowel="+vowel+"\n consonant:"+consonant+"\n whitespace:"+whitespace);

    }

}

**Problem Statement 3: Given a String, write a program to remove vowels from a given String.**

import java.util.\*;

public class removewhitespace{

public static void main(String[] args){

Scanner sc = new Scanner(System.in);

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

String s = sc.nextLine();

String result = "";

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

char c = s.charAt(i);

if(c != ' '){

result += c;

}

}

System.out.print(result);

}

}

**Problem Statement 4: Given a string, write a program to remove all the whitespaces from the string.**

import java.util.\*;

public class removevowel{

public static void main(String[] args){

Scanner sc = new Scanner(System.in);

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

String s = sc.nextLine();

String result = "";

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

char c = s.charAt(i);

if(!(c == 'a'||c== 'e' || c== 'i' || c== 'o' || c== 'u' || c== 'A' || c== 'E' || c== 'I' || c== 'O' ||c == 'U'))

{

result += c;

}

}

System.out.print(result);

}

}

**Problem Statement 5 : Write a program to remove all characters from a string except alphabets in a given string**

import java.util.\*;

public class removeeverythingexceptalpha

{

public static void main(String[] args)

{

Scanner sc = new Scanner(System.in);

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

String s = sc.nextLine();

String result ="";

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

{

char c = s.charAt(i);

if(c>=65 && c<=90 || c>=97 && c<=122)

{

result += c;

}

}

System.out.print(result);

}

}

**Problem Statement 6: Reverse a String. Write a program that reverses a given string. Problem: Given a string, calculate the sum of numbers in a string (multiple consecutive digits are considered one number)**

import java.util.\*;

public class sum {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

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

String s = sc.nextLine();

String num = "";

int sum1 = 0;

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

char c = s.charAt(i);

if (Character.isDigit(c)) {

num += c;

} else if (!num.isEmpty()) {

int num1 = Integer.parseInt(num);

sum1 += num1;

num = "";

}

}

if (!num.isEmpty()) {

int num1 = Integer.parseInt(num);

sum1 += num1;

}

System.out.println("Sum of numbers in the string: " + sum1);

    }

}

**Problem Statement 7: Given a string, write a program to Capitalize the first and last character of each word of that string.**

import java.util.\*;

public class capital{

public static void main(String[] args){

Scanner sc = new Scanner(System.in);

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

String s = sc.nextLine();

char c[] = s.toCharArray();

for(int i=0;i<s.length()-1;i++){

char c1 = c[i];

if(i==0 || c[i+1] == ' '){

c[i]=Character.toUpperCase(c1);

}

else if(c[i-1]== ' '){

c[i]=Character.toUpperCase(c1);

}

}

c[s.length()-1]=Character.toUpperCase(c[s.length()-1]);

s = new String(c);

System.out.print(s);

}

}

**Problem Statement 8: Given two strings, check if two strings are anagrams of each other or not.**

import java.util.\*;

public class anagram{

public static void main(String[] args){

Scanner sc = new Scanner(System.in);

System.out.print("Enter string 1: ");

String s1 = sc.nextLine();

System.out.print("Enter string 2: ");

String s2 = sc.nextLine();

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

char c1 []= s1.toCharArray();

char c2 []= s2.toCharArray();

Arrays.sort(c1);

Arrays.sort(c2);

s1 = new String(c1);

s2 = new String(c2);

if(s1.equals(s2)){

System.out.print("Anagram!");

}

else{

System.out.println("Not Anagram!");

}

}

else{

System.out.print("Not Anagram!");

        }

}

}

**Problem Statement 9: Given a String, find the largest word in the string.**

import java.util.\*;

public class largestword{

public static void main(String[] args){

Scanner sc = new Scanner(System.in);

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

String s = sc.nextLine();

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

int max =words[0].length();

String largestword = words[0];

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

if(max<words[i].length()){

largestword = words[i];

max = words[i].length();

}

}

System.out.println(largestword+" is the largest word in the string");

}

}