package Assignment20

import org.apache.groovy.util.Arrays;

// Vowels Words:

def name = "Groovy Programming";

name.trim();

def count = 0;

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

if(name.charAt(i) == 'a' || name.charAt(i) == 'e' || name.charAt(i) == 'i'||

name.charAt(i) == 'o' || name.charAt(i) == 'u')

count = count + 1;

}

println("Vowels count of given String :"+count);

// reverse the words :

def s = "knowledge";

println ("Reverse the Given String :"+s.reverse());

// palindrome

def str = "madam";

def i = 0;

def j = str.length() - 1;

while (i < j){

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

println("It is not palindrome :");

i++;

j--;

}

println "It is Palindrome :";

// anagrams :

def s1 = "listen"

def s2 = "silent"

int[] fre = new int[26]

// Early exit if lengths differ

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

println("It is not an Anagram")

return

}

// Count character frequency

for (int e = 0; e < s1.length(); e++) {

fre[s1.charAt(e) - 'a'.charAt(0)]++

}

for (int g = 0; g < s2.length(); g++) {

fre[s2.charAt(g) - 'a'.charAt(0)]--

}

// Check frequency array

for (int t : fre) {

if (t != 0) {

println("It is not an Anagram")

return

}

}

println("It is an Anagram")

// remove duplicates

def input =[1, 2, 2, 3, 4, 4, 5]

Set<Integer> ans = new HashSet<>();

for(int y = 0 ; y < input.size() ; y++){

ans.add(input.get(y));

}

println (ans.toString());

// Prime Number

def isPrime(int num) {

if (num <= 1) return false

if (num == 2) return true

if (num % 2 == 0) return false

for (int i = 3; i <= Math.sqrt(num); i += 2) {

if (num % i == 0)

return false

}

return true

}

def inp = 17

println(isPrime(inp)) // Output: true

// Interest list :

def list1 = [1, 2, 3, 4]

def list2 = [3, 4, 5, 6]

def common = list1.intersect(list2)

println("Common elements: $common")

// Fibonacci series up to N terms

def n = 10

def a = 0

def b = 1

print("$a $b ")

for (int h = 2; h < n; h++) {

def c = a + b

print("$c ")

a = b

b = c

}