//ASSIGNMENT 4

//1.

package psr;

import java.util.\*;

public class homework{

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

String s = sc.nextLine();

String reversed = "";

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

reversed += s.charAt(i);

}

System.out.println(s);

System.out.println(reversed);

if( s.equals(reversed))

System.out.println( s + " is a pallindrom");

else

System.out.println( s + " is not a pallindrom");

}

}

//2

**package** psr;

**import** java.util.\*;

**public** **class** homework{

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

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

System.***out***.println("Enter the String");

String str = sc.nextLine();

*countcv*(str);

}

**public** **static** **void** countcv( String str) {

String vowels = "aeioyAEIOU";

**int** vcount=0;

**int** ccount=0;

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

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

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

**if**(vowels.indexOf(ch)!=-1) {

vcount++;

}

**else** {

ccount++;

}

}

}

System.***out***.println(" vowels : "+vcount +" consonants : " +ccount);

}

}

//3.

**package** psr;

**import** java.util.\*;

**public** **class** homework{

**public** **class** RemoveDuplicates {

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

String input = "programming";

String result = *removeDuplicates*(input);

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

}

**public** **static** String removeDuplicates(String str) {

StringBuilder result = **new** StringBuilder();

**boolean**[] seen = **new** **boolean**[26];

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

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

**if** (!seen[ch - 'a']) {

result.append(ch);

seen[ch - 'a'] = **true**;

}

}

**return** result.toString();

}

}

}

//4.

**package** psr;

**import** java.util.\*;

**import** java.util.Scanner;

**public** **class** homework

{

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

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

String s = sc.nextLine();

String reversed = **new** StringBuilder(s).reverse().toString();

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

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

}

//5.

**package** psr;

**import** java.util.\*;

**import** java.util.Scanner;

**public** **class** homework

{

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

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

String s1 = sc.nextLine();

String s2 = sc.nextLine();

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

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

}

**else** {

**char** a1[] = s1.toCharArray();

**char** a2[] = s1.toCharArray();

Arrays.*sort*(a1);

Arrays.*sort*(a2);

**if** (Arrays.*equals*(a1, a2)) {

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

} **else** {

System.***out***.println("Not Anagrams");

}

}

}

}

//6.

**package** psr;

**import** java.util.\*;

**import** java.util.Scanner;

**public** **class** homework

{

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

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

String s = sc.nextLine();

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

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

StringBuilder result = **new** StringBuilder();

**for** (String word : words) {

// Capitalize the first letter and add the rest of the word

**if** (!word.isEmpty()) {

result.append(Character.*toUpperCase*(word.charAt(0)))

.append(word.substring(1))

.append(" ");

}

}

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

}

}

//7.

**package** psr;

**import** java.util.Scanner;

**public** **class** homework {

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

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

String sentence = scanner.nextLine();

String wordToFind = scanner.nextLine();

**int** count = *countWordOccurrences*(sentence, wordToFind);

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

}

**public** **static** **int** countWordOccurrences(String sentence, String wordToFind) {

**int** count = 0;

String cleanedSentence = sentence.replaceAll("[^a-zA-Z0-9 ]", "");

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

**for** (String word : words) {

**if** (word.equals(wordToFind)) {

count++;

}

}

**return** count;

}

}

//8.

**package** psr;

**import** java.util.\*;

**public** **class** homework {

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

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

String s =sc.nextLine();

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

StringBuilder result = **new** StringBuilder();

**for**(**char** ch : s.toCharArray()){

**if** (Character.*isUpperCase*(ch))

{

result.append(Character.*toLowerCase*(ch));

}

**else**

{

result.append(Character.*toUpperCase*(ch));

}

}

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

}

}