Name of the Course : Complete Java SE8 Developer Bootcamp

Level : Easy

Tool Stack : Java8 and Junit5

Problem Statement : Provide a code solution to check whether two Strings form Anagram.

Description : An anagram is a word or phrase formed by rearranging the letters of another word or phrase, using all the original letters exactly once. For example, 1.***Silent*** and ***Listen*** 2. ***Schoolmaster*** and ***The classroom*** 3.**Conversation = Voices rant on**.

Create class Anagram with two String attributes string1 and string2. It has one default constructor and one parameterized constructor. The class has one method public boolean checkAnagram().

2. Create class Main with pubic static void main method, for accepting two Strings from keyboard, creates an object of class Anagram then calls the checkAnagram method to test it.

Code:

**import** java.util.Arrays;

**public** **class** Anagram {

**private** String string1;

**private** String string2;

**public** Anagram() {

**super**();

}

**public** Anagram(String string1, String string2) {

**super**();

**this**.string1 = string1;

**this**.string2 = string2;

}

**public** **boolean** checkAnagram()

{

string1=string1.toLowerCase();

string2=string2.toLowerCase();

String str1="";

String str2="";

**for**(**int** i=0;i<string1.length();i++)

{

**char** ch=string1.charAt(i);

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

str1=str1+ch;

}

**for**(**int** i=0;i<string2.length();i++)

{

**char** ch=string2.charAt(i);

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

str2=str2+ch;

}

**char** []arr1=str1.toCharArray();

**char** []arr2=str2.toCharArray();

Arrays.*sort*(arr1);

Arrays.*sort*(arr2);

str1=String.*valueOf*(arr1);

str2=String.*valueOf*(arr2);

**if**(str1.equalsIgnoreCase(str2))

**return** **true**;

**else**

**return** **false**;

}

}

**import** java.util.Scanner;

**public** **class** Main {

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

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

System.***out***.println("Enter first string:");

String first=scanner.nextLine();

System.***out***.println("Enter second string:");

String second=scanner.nextLine();

Anagram anagram=**new** Anagram(first,second);

**if**(anagram.checkAnagram())

System.***out***.println("They are anagrams");

**else**

System.***out***.println("They are not anagram");

}}

Junit Testing

**import** **static** org.junit.Assert.\*;

**import** org.junit.Test;

**public** **class** AnagramTest {

@Test

**public** **void** testCheckAnagram() {

Anagram anagram1=**new** Anagram("Conversation","Voices rant on");

*assertEquals*(**true**, anagram1.checkAnagram());

Anagram anagram2=**new** Anagram("School Master","The classrooms");

*assertEquals*(**false**, anagram2.checkAnagram());

}

}

Test Data1

Enter first string:

Conversation

Enter second string:

Voices rant on

They are anagrams

Test Data2

Enter first string:

School Master

Enter second string:

The classrooms

They are not anagram

Learning outcome: Participant could able to learn how to use the java array sorting, String functions like toCharArray, Wrapper class Character function isLetter().