JAVA
CHALLENGE PROGRAM

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1. Your organization uses the concept of anagram to encrypt their confidential short messages. An a**nagram** is a word which is formed by rearranging or shuffling of letters in another word. The most important property in Anagram is that all the letters have to be used only once. You work as a cryptographer, you are asked to verify whether a given anagram matches with the original message. Write a Java program to perform this matching process. Example: message:->"listen" , Anagram->"silent" then you have to say it matches...

Program:

```java
import java.util.Scanner;
import java.util.Arrays;
public class Anagram{
    static boolean check(Character[] c1, Character[] c2, int n){
        for(int i = 0; i < n; i++){
            if(c1[i] != c2[i]){
                return false;
            }
        }
        return true;
    }
    public static void main(String... args){
        Scanner sc = new Scanner(System.in);
        System.out.print("Message: ");
        String s1 = sc.next();
        System.out.print("Anagram: ");
        String s2 = sc.next();
        if(s1.length() != s2.length()){
            System.out.println("Cannot be compared...");
            System.exit(0);
        }
        Character temp1[] = new Character[s1.length()];
        for (int i = 0; i < s1.length(); i++) {
            temp1[i] = s1.charAt(i);
        }
        Character temp2[] = new Character[s2.length()];
        for (int i = 0; i < s2.length(); i++) {
            temp2[i] = s2.charAt(i);
        }
        Arrays.sort(temp1);
        Arrays.sort(temp2);
        if(check(temp1,temp2,s1.length())){
            System.out.println("It matches");
        }
        else{
            System.out.println("It doesn't matches");
        }
    }
```

}

Output:

```
C:\Users\Tamilvanan\Videos>javac Anagram.java

C:\Users\Tamilvanan\Videos>java Anagram
Message: listen
Anagram: silent
It matches

C:\Users\Tamilvanan\Videos>java Anagram
Message: hello
Anagram: hola
Cannot be compared...

C:\Users\Tamilvanan\Videos>java Anagram
Message: care
Anagram: race
It matches

C:\Users\Tamilvanan\Videos>java Anagram
Message: leet
Anagram: tell
It doesn't matches

C:\Users\Tamilvanan\Videos>_
```