Given two strings ransomNote and magazine, return true if ransomNote can be constructed by using the letters from magazine and false otherwise. Each letter in magazine can only be used once in ransomNote.

CODE:

import java.util.HashMap;

import java.util.Map;

import java.util.Scanner;

public class RansomNote {

public static boolean canConstruct(String ransomNote, String magazine) {

Map<Character, Integer> charCount = new HashMap<>();

// Count characters in magazine

for (char c : magazine.toCharArray()) {

charCount.put(c, charCount.getOrDefault(c, 0) + 1);

}

// Check if characters in ransomNote can be constructed from magazine

for (char c : ransomNote.toCharArray()) {

if (!charCount.containsKey(c) || charCount.get(c) <= 0) {

return false;

}

charCount.put(c, charCount.get(c) - 1);

}

return true;

}

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter the ransom note: ");

String ransomNote = scanner.nextLine();

System.out.print("Enter the magazine: ");

String magazine = scanner.nextLine();

boolean result = canConstruct(ransomNote, magazine);

System.out.println("Output: " + result);

}

}

OUTPUT:

C:\javap>javac RansomNote.java

C:\javap>java RansomNote

Enter the ransom note: good

Enter the magazine: better

Output: false

