Technical Training in JAVA

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PROBLEM STATEMENT

FIND THE ONE DIGIT TO BE REMOVED TO FORM A PALINDROME

Assume that a given number **input1** can become a palindrome if only one of its digits are removed, i.e., only one digit in its number is out of place. Find the digit that needs to be removed from **input1** to convert **input1** into a palindrome

TEST CASES

SAMPLE INPUT	SAMPLE OUTPUT
12332	1
251532	3
10101	-1
981894	4

PROBLEM STATEMENT

USER ID GENERATION:

Joseph's team has been assigned the task of creating user-ids for all the participants of an online gaming competition. Joseph has designed a process for generating the user-id using the participant's First_Name, Last_Name, PIN code and a number N. The process defined by Joseph is as follows:

Step 1 : Compare the lengths of First_Name and Last_Name of the participant. The one that is shorter will be called "Smaller Name", and the one that is longer is called "Longer Name". If both First_Name and Last_Name are of equal length, then the name that appears earlier in alphabetical order will be called "Smaller Name " and the name that appears later in the alphabetical order is called "Longer Name".

Step 2: The user-id should be generated as below –
Last letter of the smaller name + entire word of the longer name + Digit at position N in the PIN when traversing the PIN from left to right + Digit at position N in the PIN when traversing from right to left.

Step 3: Toggle the alphabets of the user-id generated in step2 i.e., upper- case alphabets to lower-case and lower-case alphabets to upper-case.

TEST CASES

SAMPLE INPUT	SAMPLE OUTPUT
Rajiv Roy 560037 6	YrAJIV75
Kumud Kumar 561327 2	RkUMUD62

Identify Possible Words

Detective Sherlock Holmes while solving a case stumbled upon a letter which has many words whose one character was missing i.e., one character in the word was replaced by an underscore. For eg. "Fi_er". He also found a thin strips of paper which had a group of words separated by semicolons, for eg, "Fever;filer;Filter;Fixer;fiber;tailor;offer". He could figure out that the word whose one character was missing was one of the possible words from the thin strips of paper. Detective Holmes has approached you (a trustworthy friend and a computer programmer) asking help in identifying the possible words for each incomplete word.

You are expected to write a method to identify the set of possible words. The method **identifyPossibleWords** takes two strings as input. **Input1** contains the incomplete word and **input2** is the string containing a set of words separated by semicolons.

TEST CASES

SAMPLE INPUT	SAMPLE OUTPUT
Fi_er Fever;filer;Filter;Fixer;fiber;fibre;tailor;offer	FILER;FIXER;FIBER
Wo_d World;Wood;Word;Would	WOOD;WORD
Ti_er Talker;tapper;timber;toner	ERROR-009

"Nothing will work unless you do"

--Maya Angelou