

Merge Strings Alternatively

str1 = "GEEK" ;

i
↓

0 1 2 3

str2 = "STER" ;

0 1 2 3

↓ ↗ ↘ ↓

ans = "GSETEEKR" ;

ans = "" ;

ans = "GS" ;

ans = "GSET" ;

ans = "GSETEE" ;

ans = "GSETEEKR" ;

exp.

ans = ans + str1.charAt(i) + str2.charAt(i) ;

Ex:-

str1 = "Vishnu";
0 1 2 3 4 5

ans = "VMiasnhinsuh";

str2 = "Manish";
0 1 2 3 4 5

code

T.C = $O(\text{str1.length} + \text{str2.length})$ or $O(\text{ans.length})$

```
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    String str1 = scn.nextLine();
    String str2 = scn.nextLine();

    System.out.println(merge2Strings(str1, str2));
}

public static String merge2Strings(String str1, String str2) {
    String ans = "";
    for (int i = 0; i < str1.length(); i++) {
        ans = ans + str1.charAt(i) + str2.charAt(i);
    }
    return ans;
}
```

Long Pressed Name

(gmp)

str = "alex";
0 1 2 3

typed = "aaleex";
0 1 2 3 4 5

true

str = "alex";

typed = "aaleex";

false

Observation:-

- ↳ each char in str should be present in typed
- ↳ and also should be in same order

Ex1

str = "alex"

typed = "aaleeexabc"

false

Ex2

str = ""

typed = "a"

false

Ex3

str = "kunal";

typed = "uunaaad"

false

pseudo code

1) $i = 0, j = 0;$

2) loop until $j < \text{typed}.len$

2.1) $\text{str of } i \text{ char} == \text{typed of } j \text{ char}$

$i++$

2.2) else if ($\text{type of } j \neq \text{typed of } (j-1)$)

return false

2.3) $j++;$

if ($i == \text{str}.len$) { return true;

} else {
return false.

str = "abcd"

typed = "aabbcc";

i
↓ ↓

↑
 j

Code

T.C = $O(\text{str.length} + \text{typed.length})$

```
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    String str = scn.nextLine();
    String typed = scn.nextLine();
    System.out.println(longPressed(str, typed));
}

public static boolean longPressed(String str, String typed) {
    int i = 0;
    int j = 0;
    while ( j < typed.length() ) {
        if ( i < str.length() && str.charAt(i) == typed.charAt(j) ) {
            i++;
        } else if ( j == 0 || typed.charAt(j) != typed.charAt(j - 1) ) {
            return false;
        }
        → j++;
    }
    if ( i == str.length() ) {
        return true;
    } else {
        return false;
    }
}
```

Ex

i
↓

str = "a"

typed = "aaaaa"
 NNNN

true

↑
j

i
↓

"abcdef"
0 1 2 3 4 5

↖ ↗

"aaabcc"

str.len = 6

↑
j