**Problem Statement:** Check if given substring is in given string and If yes print” True”

Otherwise “False”.

In this problem, we will check two strings and if one string is a substring of the other string then print True otherwise print False

**Example:** s1=” hello” and s2 =” he”. As he is there in hello then he is a substring of hello, it will print True

|  |  |
| --- | --- |
| Expected Input | Expected Output |
| hello he  Msit it  IIITH ms  abcd ef  msitiiith it | True  True  False  False  True |

**Pseudo Code**

1. Enter a string “s”
2. Calculate length of the string and store in len1
3. Enter another string “ss”
4. Calculate length of the string and store in len2
5. If len1>len2
6. Set flag=0
7. Set i=0 and If i<=len1
8. Set a=0
9. Set j=1 and if j<=len2
10. If i+j<=len1
11. If s[i+j] == ss[j]
12. Increment a
13. Increment j
14. If a==len2 then set flag=1
15. Increment i
16. If flag==1 then Print True else print False

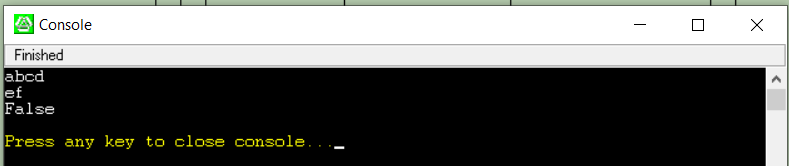
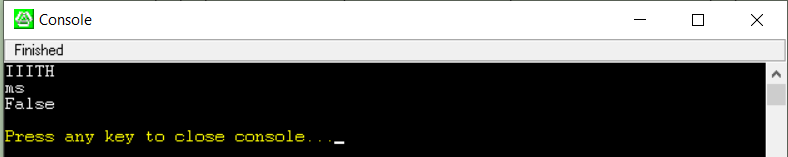
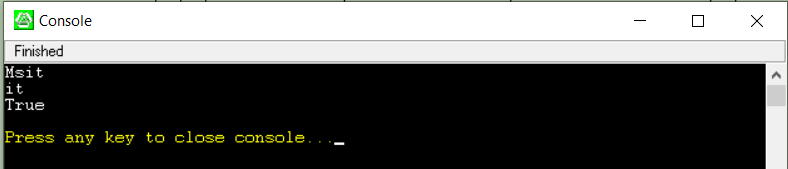
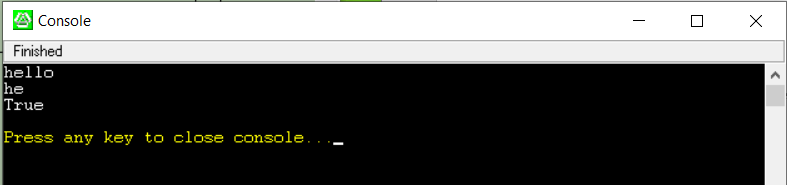
**Trace Table**

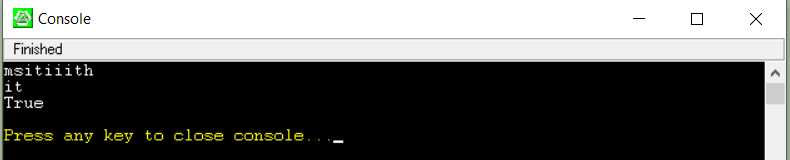
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| s | len1 | ss | len2 | len1>len2 | flag=0 | i=0 | i<len1 | a=0 | j=0 | j<=len2 | i+j<=len1 | s[i+j]==ss[j] | a++ | j++ | a==len2 | flag=1 | i++ | flag==1 | Output |
| hello | 5 | he | 2 | TRUE | 0 | 0 | TRUE | 0 | 0 | TRUE | TRUE | TRUE | 1 | 1 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  | TRUE | TRUE | TRUE | 2 | 2 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  | TRUE | TRUE | FALSE |  | 3 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  | FALSE |  |  |  |  | TRUE | 1 | 1 |  |  |
|  |  |  |  |  |  |  | TRUE | 0 | 0 | TRUE | TRUE | TRUE | 1 | 1 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  | TRUE | TRUE | TRUE | 2 | 2 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  | TRUE | TRUE | FALSE |  | 3 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  | FALSE |  |  |  |  | TRUE | 1 | 2 |  |  |
|  |  |  |  |  |  |  | TRUE | 0 | 0 | TRUE | TRUE | TRUE | 1 | 1 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  | TRUE | TRUE | TRUE | 2 | 2 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  | TRUE | TRUE | FALSE |  | 3 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  | FALSE |  |  |  |  | TRUE | 1 | 3 |  |  |
|  |  |  |  |  |  |  | TRUE | 0 | 0 | TRUE | TRUE | TRUE | 1 | 1 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  | TRUE | TRUE | TRUE | 2 | 2 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  | TRUE | TRUE | FALSE |  | 3 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  | FALSE |  |  |  |  | TRUE | 1 | 4 |  |  |
|  |  |  |  |  |  |  | TRUE | 0 | 0 | TRUE | TRUE | TRUE | 1 | 1 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  | TRUE | TRUE | TRUE | 2 | 2 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  | TRUE | TRUE | FALSE |  | 3 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  | FALSE |  |  |  |  | TRUE | 1 | 5 |  |  |
|  |  |  |  |  |  |  | FALSE |  |  |  |  |  |  |  |  |  |  | TRUE | TRUE |
| abcd | 4 | ef | 2 | TRUE | 0 | 0 | TRUE | 0 | 0 | TRUE | TRUE | FALSE |  | 1 | FALSE |  | 1 |  |  |
|  |  |  |  |  |  |  | TRUE | 0 | 0 | TRUE | TRUE | FALSE |  | 1 | FALSE |  | 2 |  |  |
|  |  |  |  |  |  |  | TRUE | 0 | 0 | TRUE | TRUE | FALSE |  | 1 | FALSE |  | 3 |  |  |
|  |  |  |  |  |  |  | TRUE | 0 | 0 | TRUE | TRUE | FALSE |  | 1 | FALSE |  | 4 |  |  |
|  |  |  |  |  |  |  | FALSE |  |  |  |  |  |  |  |  |  |  | FALSE | FALSE |

|  |  |  |  |
| --- | --- | --- | --- |
| Expected Input | Expected Output | Actual Output | Test Result |
| hello he  Msit it  IIITH ms  abcd ef  msitiiith it | True  True  False  False  True | True  True  False  False  True |  |

**Final Result**

**Expected Inputs and outputs**

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