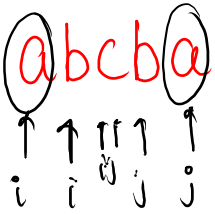
Is Palindrome

str = "abcba"



psudo code

- declare i = 0 and j = str.length()-1
- iterate until i < j
  - check if char at i != char at j (Syso(False))
  - i++, j--
- Syso(True)

Code

```java
public static void checkPal(String str) {
    int i = 0;
    int j = str.length() - 1;
    while ( i < j ) {
        char ch1 = str.charAt(i);
        char ch2 = str.charAt(j);
        if ( ch1 != ch2 ) {
            System.out.println("Not a Palindrome");
            return;
        }
        i++;
        j--;
    }
    System.out.println("Palindrome");
}
```

code for leetcode 125

```java
class Solution {
    public boolean isPalindrome(String s) {
        String str = "";
        for (int i = 0; i < s.length(); i++) {
            char c = s.charAt(i);
            if ( (c >= 'a' && c <= 'z') || (c >= 'A' && c <= 'Z') || (c >= '0' && c <= '9') ) {
                str += c;
            }
        }
        str = str.toLowerCase();
        return checkPal(str);
    }

    public boolean checkPal(String str) {
        int i = 0;
        int j = str.length() - 1;
        while ( i < j ) {
            char ch1 = str.charAt(i);
            char ch2 = str.charAt(j);
            if ( ch1 != ch2 ) {
                return false;
            }
            i++;
            j--;
        }
        return true;
    }
}
```

Locate the Target String

0 1 2 3 4 5 6 7

str = "geekster"

target = "st"

ans = 4

0 1 2 3 4 5 6 7 8 9 10 11

str = "programingra"

target = "ra"

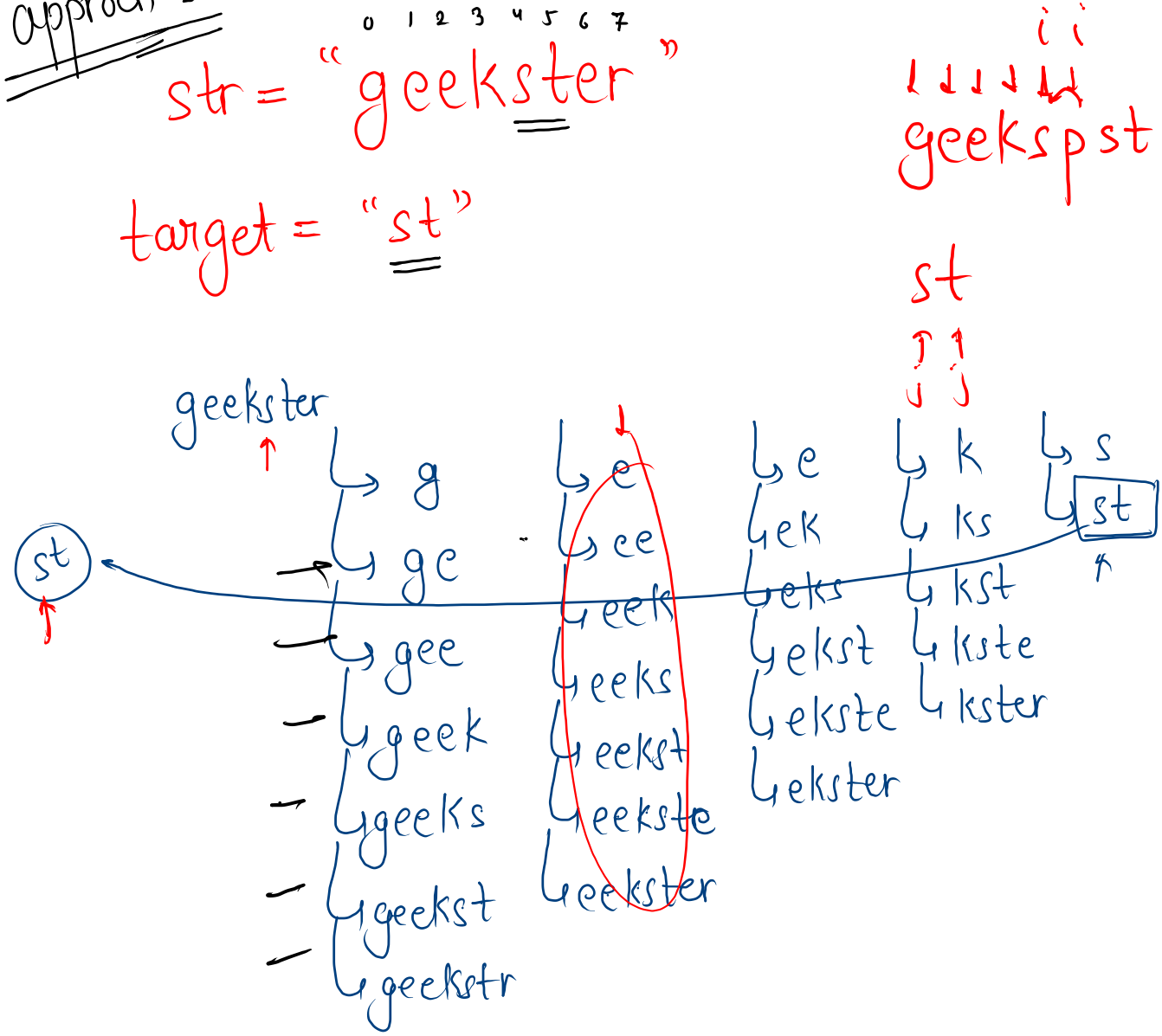
ans = 4

approch 1

0 1 2 3 4 5 6 7

str = "geekster"

target = "st"



approch 2

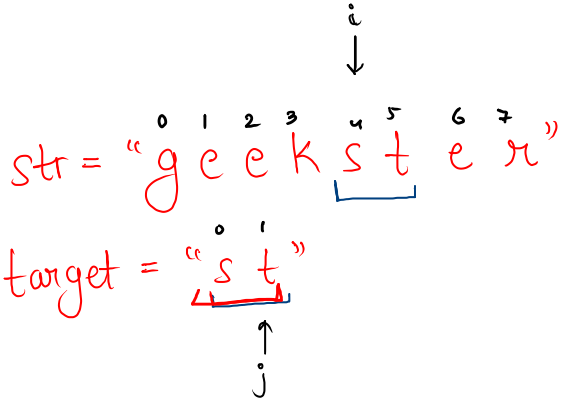
```java
public static int locateTarget(String str, String tar) {
    for (int i = 0; i <= str.length() - tar.length() ; i++) {
        for (int j = 0; j < tar.length(); j++) {
            if ( tar.charAt(j) != str.charAt(i + j) ) {
                break;
            }

            if ( j == tar.length() - 1 ) {
                return i;
            }
        }
    }
    return -1;
}
```

Confirmation

i=0, j=0, (s != g) break
i=1, j=0, (s != e) break
i=2, j=0, (s != e) break
i=3, j=0, (s != K) break
i=4, j=0, (s != s)
j=1, (t != t)

return 4



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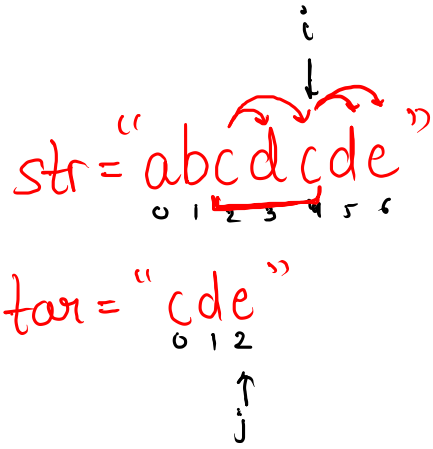
            if ( tar.charAt(j) != str.charAt(i + j) ) {
                break;
            }

            if ( j == tar.length() - 1 ) {
                return i;
            }
        }
    }
    return -1;
}
```



i=0, j=0 (c != a) break

i=1, j=0 (c != b) break

i=2, j=0 (c != c)

j=1 (d != d)

j=2 (e != c) break

i=3, j=0 (c != d) break

i=4, j=0 (c != c)

j=1 (d != d)

j=2 (e != e)

ans = 4

T.C = O(str.length() * tar.length())

S.C = O(1)