Is Equal? (check if 2 strings are equal)

- length of both strings should be equal
- each character at a particular index should be same

str1 = "abcd" ⟶ 4

str2 = "bacd" ⟶ 4

str1 = "Kunal"

str2 = "Kunaa"

psudo code

str1 , str2

1) check if both strings are of same len.

1.1) loop

1.1.1) str1.charAt(i) != str2.charAt(i)

return false;

1.2) return true

2) return false

Code

T.C = O(str1.length())

```java
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    String str1 = scn.nextLine();
    String str2 = scn.nextLine();
    boolean ans = isEqual(str1, str2);
    System.out.println(ans);
}
public static boolean isEqual(String str1, String str2) {
    if ( str1.length() == str2.length() ) {
        for (int i = 0; i < str1.length(); i++) {
            if ( str1.charAt(i) != str2.charAt(i) ) {
                return false;
            }
        }
        return true;
    } else {
        return false;
    }
}
```

Code

```
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    String str1 = scn.nextLine();
    String str2 = scn.nextLine();
    boolean ans = str1.equals(str2);
    System.out.println(ans);
}
```

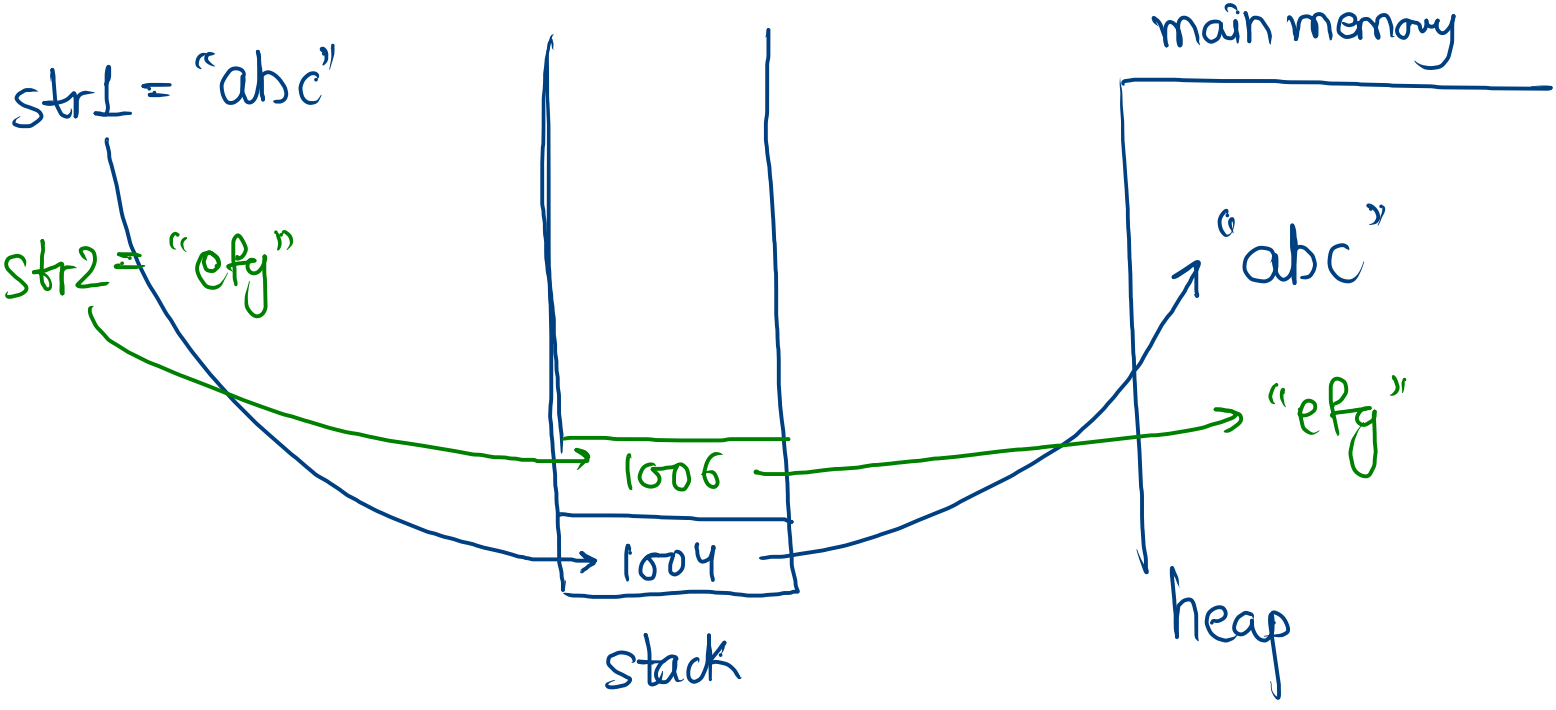
→ return type is boolean

Note :- while comparing Strings only use .equals method instead of ==

Jmp

optional

2 layer architecture



Print Indices of Vowels

str = "kunalswi"
0 1 2 3 4 5 6 7 8

output :- 1 3 6 8

code

```
    public static void main(String[] args) {
        Scanner scn = new Scanner(System.in);
        String str = scn.nextLine();
        printIndexes(str);
    }
    public static void printIndexes(String str) {
        for (int i = 0; i < str.length(); i++) {
            char ch = str.charAt(i);
            if ( isVowel(ch) == true ) {
                System.out.print(i + " ");
            }
        }
    }
    public static boolean isVowel(char ch) {
        return ch == 'a' || ch == 'e' || ch == 'i' || ch == 'o' || ch == 'u' || ch == 'A' || ch == 'E' ||
ch == 'I' || ch == 'O' || ch == 'U';
    }
```

Count Words

str = " This ___ is _ a ___ sentence " ;

i

count = 0 / 2 / 3

(count+1)

ans = 4

→ at what condition we can consider 1 word counted

cond^n

if char at i == space && char at (i-1) is not space

code

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

```
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    String str = scn.nextLine();
    int ans = countWords(str);
    System.out.println(ans);
}
public static int countWords(String str) {
    int count = 0;
    for (int i = 1; i < str.length(); i++) {
        if ( str.charAt(i) == ' ' && str.charAt(i - 1) != ' ' ) {
            count++;
        }
    }
    return count + 1;
}
```

Number is Pallindrome or not (2 pointer)

str = "n i t i n"

si ei

psudo code

1) create pointers si = 0, ei = len - 1

2) loop until si <= ei

2.1) if char at si != char at ei
return false

si++, ei--;

3) return true

Code

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

```java
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    String str = scn.nextLine();
    boolean ans = isPalindrome(str);
    if ( ans ) {
        System.out.println("The number is palindrome");
    } else {
        System.out.println("The number is not a palindrome");
    }
}
public static boolean isPalindrome(String str) {
    int si = 0;
    int ei = str.length() - 1;
    while ( si <= ei ) {
        if ( str.charAt(si) != str.charAt(ei) ) {
            return false;
        }
        si++;
        ei--;
    }
    return true;
}
```

Locate the Target String (gmp)

str = "geekstarsta"
0 1 2 3 4 5 6 7 8 9 10

target = "sta"
0 1 2

ans = 4

brute force

↳ generate all substrings
↳ check if any of it is equal to target

T.C = $O(2^n)$

problem

(2 pointer)

str = "geekstarsta"

0 1 2 3 4 5 6 7 8 9 10

i

target = "sta"

0 1 2

j