**Reverse words in a given string**

**https://www.geeksforgeeks.org/reverse-words-in-a-given-string/**

**Problem Statement:** Reverse the string word by word

For a given string **"here-is-a-boy"** we need to reverse the string to **"boy-a-is-here"**

**Approach**

**Step1:** First reverse the entire string

**Step2:** Swap each character of the reversed string when character '-' is encounter

**Explanation**

As per step 1 reverse the string

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| H | E | R | E | - | I | S | - | A | - | B | O | y |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Y | O | B | - | S | - | S | I | - | E | R | H | E |

After reversing the string, keep pointer index left and right at the start of reverse string, and start the loop

When character “-“ encounters, assign current index value to right pointer index and swap each element of the array from left index to till right index

i.e SwapCharacters(arrCharacters, **leftIdx, rightIdx - 1**);

after swapping, increment the left index value to point right index +1;

i.e leftIdx = rightIdx + 1;

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Y | O | B | - | S | - | S | I | - | E | R | H | E |

At the end when last character “-“encounter, reverse the string from the next index of last character “-“ to length-1 of array.