

# Problem 344: Reverse String

## Problem Information

Difficulty: [Easy](#)

Acceptance Rate: 0.00%

Paid Only: No

## Problem Description

Write a function that reverses a string. The input string is given as an array of characters

s

.

You must do this by modifying the input array

in-place

with

$O(1)$

extra memory.

Example 1:

Input:

`s = ["h","e","l","l","o"]`

Output:

`["o","l","l","e","h"]`

Example 2:

Input:

```
s = ["H","a","n","n","a","h"]
```

Output:

```
["h","a","n","n","a","H"]
```

Constraints:

$1 \leq s.length \leq 10$

5

`s[i]`

is a

printable ascii character

.

## Code Snippets

**C++:**

```
class Solution {
public:
    void reverseString(vector<char>& s) {

    }
};
```

**Java:**

```
class Solution {
    public void reverseString(char[] s) {
```

```
}  
}
```

### Python3:

```
class Solution:  
    def reverseString(self, s: List[str]) -> None:  
        """  
        Do not return anything, modify s in-place instead.  
        """
```

### Python:

```
class Solution(object):  
    def reverseString(self, s):  
        """  
        :type s: List[str]  
        :rtype: None Do not return anything, modify s in-place instead.  
        """
```

### JavaScript:

```
/**  
 * @param {character[]} s  
 * @return {void} Do not return anything, modify s in-place instead.  
 */  
var reverseString = function(s) {  
  
};
```

### TypeScript:

```
/**  
 Do not return anything, modify s in-place instead.  
 */  
function reverseString(s: string[]): void {  
  
};
```

### C#:

```
public class Solution {  
    public void ReverseString(char[] s) {  
  
    }  
}
```

### C:

```
void reverseString(char* s, int sSize) {  
  
}
```

### Go:

```
func reverseString(s []byte) {  
  
}
```

### Kotlin:

```
class Solution {  
    fun reverseString(s: CharArray): Unit {  
  
    }  
}
```

### Swift:

```
class Solution {  
    func reverseString(_ s: inout [Character]) {  
  
    }  
}
```

### Rust:

```
impl Solution {  
    pub fn reverse_string(s: &mut Vec<char>) {  
  
    }  
}
```

### Ruby:

```
# @param {Character[]} s
# @return {Void} Do not return anything, modify s in-place instead.
def reverse_string(s)

end
```

## PHP:

```
class Solution {

    /**
     * @param String[] $s
     * @return NULL
     */
    function reverseString(&$s) {

    }

}
```

## Dart:

```
class Solution {
  void reverseString(List<String> s) {

  }

}
```

## Scala:

```
object Solution {
  def reverseString(s: Array[Char]): Unit = {

  }

}
```

## Solutions

### C++ Solution:

```
/*
 * Problem: Reverse String
```

```

* Difficulty: Easy
* Tags: array, string
*
* Approach: Use two pointers or sliding window technique
* Time Complexity: O(n) or O(n log n)
* Space Complexity: O(1) to O(n) depending on approach
*/

class Solution {
public:
void reverseString(vector<char>& s) {

}
};

```

### Java Solution:

```

/**
* Problem: Reverse String
* Difficulty: Easy
* Tags: array, string
*
* Approach: Use two pointers or sliding window technique
* Time Complexity: O(n) or O(n log n)
* Space Complexity: O(1) to O(n) depending on approach
*/

class Solution {
public void reverseString(char[] s) {

}
}

```

### Python3 Solution:

```

"""
Problem: Reverse String
Difficulty: Easy
Tags: array, string

Approach: Use two pointers or sliding window technique

```

```

Time Complexity: O(n) or O(n log n)
Space Complexity: O(1) to O(n) depending on approach
"""

class Solution:
def reverseString(self, s: List[str]) -> None:
# TODO: Implement optimized solution
pass

```

### Python Solution:

```

class Solution(object):
def reverseString(self, s):
"""
:type s: List[str]
:rtype: None Do not return anything, modify s in-place instead.
"""

```

### JavaScript Solution:

```

/**
 * Problem: Reverse String
 * Difficulty: Easy
 * Tags: array, string
 *
 * Approach: Use two pointers or sliding window technique
 * Time Complexity: O(n) or O(n log n)
 * Space Complexity: O(1) to O(n) depending on approach
 */

/**
 * @param {character[]} s
 * @return {void} Do not return anything, modify s in-place instead.
 */
var reverseString = function(s) {

};

```

### TypeScript Solution:

```

/**
 * Problem: Reverse String
 * Difficulty: Easy
 * Tags: array, string
 *
 * Approach: Use two pointers or sliding window technique
 * Time Complexity: O(n) or O(n log n)
 * Space Complexity: O(1) to O(n) depending on approach
 */

/**
Do not return anything, modify s in-place instead.
 */
function reverseString(s: string[]): void {

};

```

### C# Solution:

```

/*
 * Problem: Reverse String
 * Difficulty: Easy
 * Tags: array, string
 *
 * Approach: Use two pointers or sliding window technique
 * Time Complexity: O(n) or O(n log n)
 * Space Complexity: O(1) to O(n) depending on approach
 */

public class Solution {
    public void ReverseString(char[] s) {

    }
}

```

### C Solution:

```

/*
 * Problem: Reverse String
 * Difficulty: Easy
 * Tags: array, string
 *

```



```

* Approach: Use two pointers or sliding window technique
* Time Complexity: O(n) or O(n log n)
* Space Complexity: O(1) to O(n) depending on approach
*/

void reverseString(char* s, int sSize) {

}

```

### Go Solution:

```

// Problem: Reverse String
// Difficulty: Easy
// Tags: array, string
//
// Approach: Use two pointers or sliding window technique
// Time Complexity: O(n) or O(n log n)
// Space Complexity: O(1) to O(n) depending on approach

func reverseString(s []byte) {

}

```

### Kotlin Solution:

```

class Solution {
    fun reverseString(s: CharArray): Unit {

    }
}

```

### Swift Solution:

```

class Solution {
    func reverseString(_ s: inout [Character]) {

    }
}

```

### Rust Solution:

```

// Problem: Reverse String
// Difficulty: Easy
// Tags: array, string
//
// Approach: Use two pointers or sliding window technique
// Time Complexity: O(n) or O(n log n)
// Space Complexity: O(1) to O(n) depending on approach

impl Solution {
pub fn reverse_string(s: &mut Vec<char>) {

}
}

```

### Ruby Solution:

```

# @param {Character[]} s
# @return {Void} Do not return anything, modify s in-place instead.
def reverse_string(s)

end

```

### PHP Solution:

```

class Solution {

/**
 * @param String[] $s
 * @return NULL
 */
function reverseString(&$s) {

}

}

```

### Dart Solution:

```

class Solution {
void reverseString(List<String> s) {

}

}

```

**Scala Solution:**

```
object Solution {  
  def reverseString(s: Array[Char]): Unit = {  
  
  }  
}
```