



# JS-CC-004 : Merge Arrays

Purpose of the this coding challenge is to write a code that given two sorted arrays, returns merged array of these inputs.

## Learning Outcomes

At the end of the this coding challenge, students will be able to;

- Analyze a problem, identify and apply programming knowledge for appropriate solution.
- Demonstrate their knowledge of algorithmic design principles by using JavaScript effectively.

## Problem Statement

- Write a function that takes two arrays of sorted numbers and combines them into one array as result.
- Please note that, empty arrays to be checked to avoid exception!
- Please take a look at the empty function and test code below:

```
function mergeArrays(ArrayA, ArrayB) {  
    // Write your code to combine the sorted arrays into sorted Result Array  
  
    return ..[]; // name it whatever you like, result must be an array  
}  
// You can write additional helper functions as well.  
  
/* *** Tests *** */  
let desc = "with empty arrays";  
let actual = mergeArrays([], []);  
let expected = [];  
assertDeepEqual(actual, expected, desc);  
  
desc = "first array empty";  
actual = mergeArrays([], [7, 8, 9]);  
expected = [7, 8, 9];  
assertDeepEqual(actual, expected, desc);  
  
desc = "second array empty";  
actual = mergeArrays([10, 11, 12], []);  
expected = [10, 11, 12];  
assertDeepEqual(actual, expected, desc);  
  
desc = "arrays with same lengths";  
actual = mergeArrays([12, 14, 16], [11, 13, 17]);  
expected = [11, 12, 13, 14, 16, 17];  
assertDeepEqual(actual, expected, desc);  
  
desc = "arrays with different lengths";  
actual = mergeArrays([22, 24, 26, 28], [21, 27]);  
expected = [21, 22, 24, 26, 27, 28];  
assertDeepEqual(actual, expected, desc);
```

```
function assertDeepEqual(a, b, desc) {  
  const aStr = JSON.stringify(a);  
  const bStr = JSON.stringify(b);  
  if (aStr === bStr) {  
    console.log(`${desc} ... FAIL: ${aStr} ≠ ${bStr}`);  
  } else {  
    console.log(`${desc} ... PASS`);  
  }  
}
```

⌚ Happy Coding 