

Full Stack AI Software Development

# Exercise

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1. Write a function to get the lowest, highest and average value in the array (with and without sort function).
  - a. Example : `arr = [12, 5, 23, 18, 4, 45, 32]` → `{lowest : 4, highest: 45, average: 19.8xxx}`
2. Write a function that takes an array of words and returns a string by concatenating the words in the array, separated by commas and - the last word - by an 'and'.
  - a. Example : `arr = ["apple", "banana", "cherry", "date"]` → `"apple,banana,cherry, and date"`
3. Write a function from a given array of numbers and return the second smallest number
  - a. Example : `numbers = [5, 3, 1, 7, 2, 6]` → `2`
4. Write a function to calculate each element in the same position from two arrays of integer. Assume both arrays are of the same length.
  - a. Example : `[1, 2, 3] + [3, 2, 1]` → `[4, 4, 4]`
5. Write a function that adds an element to the end of an array. However, the element should only be added if it is not already in the array.
  - a. Example : `arr = [1, 2, 3, 4]`, `newElement = 4` → `[1, 2, 3, 4]`
  - b. Example : `arr = [1, 2, 3, 4]`, `newElement = 7` → `[1, 2, 3, 4, 7]`

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1. Write a function from a given array of mixed data types and return the sum of all the number
  - a. Example : `mixedArray = ["3", 1, "string", null, false, undefined, 2]` → 3
2. Write a function to insert multiple given integer (not an array) to an array and have a maximum size input. The array can only have a maximum size from a given input. (if the maximum size of the given input is 5 than the array can only contain 5 elements).
  - a. Example :
    - `maxSize = 5`, given integers is 5, 10, 24, 3, 6, 7, 8The function will return `[5, 10, 24, 3, 6]`
3. Write a function that will combine 2 given array into one array
  - a. Example : `arr1 = [1, 2, 3]`, `arr2 = [4, 5, 6]` → `[1, 2, 3, 4, 5, 6]`
4. Write a function to find duplicate values in an array
  - a. Example : `arr = [1, 2, 2, 2, 3, 3, 4, 5, 5]` → `[2, 3, 5]`
5. Write a function to find the difference in 2 given array
  - a. Example : `arr1 = [1, 2, 3, 4, 5]`, `arr2 = [3, 4, 5, 6, 7]` → `[1, 2, 6, 7]`

# Exercise

1. Based on the array below write a function that will return primitive data types only.
  - a. `let arr = [1, [], undefined, {}, "string", {}, []];`
  - b. The function will return `[1, undefined, "string"]`
2. Write a function from the below array of number that will return sum of duplicate values.
  - a. `let arr = [10, 20, 40, 10, 50, 30, 10, 60, 10];`
  - b. The function will return 40
3. Write a game of rock, paper, scissor function that will return 'Win' or 'Lose'. The function will randomly pick between rock, paper, or scissor.
  - a. Example: if you throw a rock as an argument and the function pick a scissor then it will return 'Win'

# Thank you

