

## JAVASCRIPT LAB 3 - STUDENT SUBMISSIONS

**Task:** Create an array of objects representing student submissions. Define a variety of functions for working with such an array. Also call each of the functions at least once to test it.

**Build Specifications:**

1. Declare a variable named **submissions** that is initialized to an array with the following objects:

name	score	date	passed
Jane	95	2020-01-24	true
Joe	77	2018-05-14	true
Jack	59	2019-07-05	false
Jill	88	2020-04-22	true

2. Declare a function named **addSubmission**
  - Parameter(s): **array, newName, newScore, newDate**
  - Functionality: construct an object and push it into the **array**. The object must have the same properties as the objects already in the array. Use conditional statements to set the value for the **passed** property to **true** if the score is greater than or equal to 60 and **false** otherwise.
3. Declare a function named **deleteSubmissionByIndex**
  - Parameter(s): **array, index**
  - Functionality: remove the object from the **array** at the specified **index** using the splice method.
4. Declare a function named **deleteSubmissionByName**
  - Parameter(s): **array, name**
  - Functionality: remove the object from the array that has the provided **name**. Incorporate the `findIndex` method and the splice method.
5. Declare a function named **editSubmission**
  - Parameter(s): **array, index, score**
  - Functionality: update an object's **score** in the **array** at the specified **index**. Use conditional statements to set the value for the **passed** property to **true** if the score is greater than or equal to 60 and **false** otherwise.

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6. Declare a function named **findSubmissionByName**
  - Parameter(s): **array, name**
  - Functionality: return the object in the **array** that has the provided **name**. Use the **find** method.
7. Declare a function named **findLowestScore**
  - Parameter(s): **array**
  - Functionality: return the object in the **array** that has the lowest score. Use the **forEach** method to loop through the whole array.
8. Declare a function named **findAverageScore**
  - Parameter(s): **array**
  - Functionality: return the average quiz score. Use a **for...of** loop.
9. Declare a function named **filterPassing**
  - Parameter(s): **array**
  - Functionality: return a new array using the **filter** method. The filter method should find objects in the **array** that have passing scores.
10. Declare a function named **filter90AndAbove**
  - Parameter(s): **array**
  - Functionality: return a new array using the **filter** method. The filter method should find objects in the **array** that have scores greater than or equal to 90.

**Tests:** Same as build specifications.

### Extended Challenges:

1. Create a function named **createRange**
  - Parameter(s): **start, end**
  - Functionality: construct and return an array of integers starting with the start parameter and ending at the end parameter. e.g **createRange(2, 5)** returns **[2, 3, 4, 5]**.
2. Create a function named **countElements**
  - Parameter(s): **array** (an array of strings)
  - Functionality: construct and return an object with the array values as keys and the number of times that key appears in the array as values. e.g.  
**countElements(['a', 'b', 'a', 'c', 'a', 'b'])** returns **{ a: 3, b: 2, c: 1 }**.

