JavaScript – Lab 7: Student Submissions

Assigned: 10/24/22

Due: 10/31/22

Completed: 10/31/22

<https://lms.grandcircus.co/mod/assign/view.php?id=22731>

<https://docs.google.com/document/d/1ocAGhU56VwV-GZTRLD4WZZCjlhS3qE9VSVChj9CvskU/preview>

**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 |

1. 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.

1. Declare a function named deleteSubmissionByIndex

* Parameter(s): array, index
* Functionality: remove an object from the array at the specified index using the splice method.

1. 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.

1. 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.

1. 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.

1. 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

1. Declare a function named findAverageScore

* Parameter(s): array
* Functionality: return the average quiz score.  Use a for...of loop.

1. 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.

1. 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.

**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]).

1. 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 }).