IMY 220
Assignment 3:
ES6

Due: Wednesday 15 September at 13:00.

The submission instructions are available on ClickUP. Any deviation from these instructions will cause a 10% deduction from your mark.

Instructions

- Create a class definition for an object in JavaScript called *QuizHandler*, which contains some functionality for managing and displaying an array of quizzes.
- Download *index.html* and *script.js* from ClickUP. These contain the basic HTML for a valid HTML5 document and a populated JS array. You must include *script.js* inside *index.html*.

You must also create a new file called *QuizHandler.js* which will contain all the code for the QuizHandler object. You must also include this file inside *index.html*.

You are also not allowed to write **any** loops for this assignment or use the *.foreach()* function. All of the functionality must be implemented with the appropriate JS Array functions as discussed in the slides and resources linked from the slides.

Note: where you are unable to complete functionality using JS Array functions, you will still receive some marks for completing the functionality with loops. You will receive more marks for functionality that works according to the requirements but uses loops than for code that uses JS Array functions but does not work.

You must use ES6 syntax discussed in class wherever appropriate. This includes class definitions, arrow functions, and variable declarations.

Section 1 – QuizHandler object

Create a constructor for an object in JavaScript called *QuizHandler* which takes one argument: an array of objects. You may assume this array will always be an array of objects similar to the *quizzes* variable in *script.js*. This array must be saved as a member variable of the object.

This object must have three member functions, each of which is described below:

1. *getScoresAbove(score)* – this function must receive one argument (which you may assume will always be a positive integer) and must return an array of all the objects in the member variable array that have a score higher than the given score.
2. *getUniqueCreator()* – this function receives no arguments and returns an array with all items with only the first quiz of for each creator included. For example, given the following array of objects…

```
[{quiz: "The Cats Quiz", creator: "I_Make_Quizzes", score: 74}, {quiz: "Do
You Know Marvel?", creator: "QuizLover55", score: 48}, {quiz: "Do You Know
Disney?", creator: "QuizLover55", score: 78}, {quiz: "Random Trivia Quiz",
creator: "ThatTrviaMastr", score: 88}, {quiz: "Anime Trivia Quiz", creator:
 "ThatTrviaMastr", score: 68},]
```

      …the function should return the following array:

```
[{quiz: "The Cats Quiz", creator: "I_Make_Quizzes", score: 74}, {quiz: "Do
You Know Marvel?", creator: "QuizLover55", score: 48}, {quiz: "Random
Trivia Quiz", creator: "ThatTrviaMastr", score: 88}]
```

      HINT: you can return an array from *reduce()* if you supply an empty array as its initial value.

3. *getDescriptions()* – this function takes one/more optional argument(s), which can either be a single array of objects or any number of objects. The function must return an array of strings where each string is a summary of an object in the following format:
   [quiz] (created by: [creator]): [s]%.
   For example, the following object…

```
{quiz: "The Dogs Quiz", creator: "I_Make_Quizzes", score: 45};
```

      …must be summarised as follows: "***The Dogs Quiz (created by: I_Make_Quizzes): 45%***".

      If no argument is given to the function, it must use the member variable array as the list to be summarised. If an array of objects is given, it must use that as the list.
      HINT: you can check if a variable is an array with the following code: *variable.constructor === Array* (where *variable* is the name of your variable)
      It can also be given any number of objects as individual arguments, in which case it must summarise each, for example, if the function is called as follows:

```
getDescriptions({quiz: "The Dogs Quiz", creator: "I_Make_Quizzes", score: 4
5}, {quiz: "Anime Trivia Quiz", creator: "ThatTrviaMastr", score: 68})
```

      …it must summarise each object in turn:

```
["The Dogs Quiz (created by: I_Make_Quizzes): 45%", "Anime Trivia Quiz
(created by: ThatTrviaMastr): 68%"]
```

Additional Information

- Refer to the slides and online resources for help

Submit only the following file(s) according to the submission instructions.

- *index.html*
- *script.js*
- *QuizHandler.js*