JavaScript exercises

1. Lesson

Create a function which expects one string parameter then iterates backward through the string, and at the end it returns the reversed string.
Example: if the input is **'apple'** then the output should be **'elppa'**

2. Lesson

Create a function which expects one string and two numbers (indexes) as parameters. The function has to take a substring (the string between the indexes) of the original string, then concatenate this substring twice after each other.
Example: if the inputs are **'apple', 0, 3** then the output should be **'appapp'**
Hint: In JavaScript (NaN === NaN) comparison gives `false`, so when we want to check if a number is NaN then we should use the isNaN built-in method.

3. Lesson

Create a function which expects an array of numbers parameter then returns with an array numbers which contains only the **even** numbers from the original array.
Example: if the input is **[1, 2, 3, 4, 5]** then the output should be **[2, 4]**

4. Lesson

Create a function which expects one string parameter then returns with an array of numbers with the numbers found in the input string.
Example: if the input is **'ap1ple93'** then the output should be **[1, 9, 3]**

5. Lesson

Create a function which expects one number parameter (x) then returns with a function which expects one number parameter (y) — this second function should multiply **y** by **x** and returns the result (this is the closure construction).
Example: if the inputs are **x=10** and **y=5** then the output should be **50**

6. Lesson

Create a function which expects one number parameter (between 0 and 100) then returns with the grade associated to that number.
The grading table is:
- 0-50% - 1
- 51-60% - 2

- 61-70% - 3
- 71-85% - 4
- 86-100% - 5

Example: if the input is **73** then the output should be **4**

7. Lesson

Create a function which expects one number parameter then generates a random number between 1 and the given parameter, then it returns with this generated number.
Hint: MDN documentation of how to generate a random number in JavaScript: https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Math/random

8. Lesson

Extend the previous lesson with error handling: if the given parameter is 0 or negative number then the function should throw an error.
Example: if the input is **-5** then the output should be **'Not valid input' error**

9. Lesson

Create a function which expects one object parameter with two keys (`firstName` and `lastName`) then concatenate the values of these keys into a new string, but there should be a whitespace separator between the values. Then add this newly created string into the original object's `name` field, then remove the `firstName` and `lastName` fields from the object.
Example: if the input is **{firstName: 'John', lastName: 'Doe'}** then the output should be **{name: 'John Doe'}**

10. Lesson

Create a function which expects one string and one number as parameters then concatenate the input string after each other as many times as the number parameter defines.
Example: if the input is **'apple', 3** then the output should be **'appleappleapple'**