JavaScript Data Structure Task

# Number

1. Write a function which defines if a given value is a number. Use this function in the next tasks to define if a given value is a number;

*console.log(isNumber("JavaScript")); // false*

*console.log(isNumber (2)); // true*

1. Write a function which defines if a given number is negative or not. Do not forget to check if the given value is a number.

*console.log(isNegative(2)); // false*

*console.log(isNegative(-2)); // true*

1. Write a function which defines if a given number is positive or not. Do not forget to check if the given value is a number.

*console.log(isPositive(2)); // true*

*console.log(isPositive(-2)); // false*

1. Write a function which calculates a factorial for a given number (use recursion in your algorithm). Do not forget to check if the given value is a number.
2. Write a function which returns if the number is prime or not. Do not forget to check if the given value is a number.

# String

1. Write a function which defines if a given value is a string. Use this function in the next tasks to define if a given value is a string;

*console.log(isString("JavaScript")); // true*

*console.log(isString(2)); // false*

1. Write a function which defines if a given value can be casted to a number;

*console.log(canParseToNumber("2")); // true*

1. Write a function which returns a given string length. Do not forget to check if the given value is a string;

*console.log(getStringLength("JS ")); // 2*

1. Write a JavaScript function to convert a string into camel case;

*console.log(camelize("Java Script")); // "JavaScript"*

1. Write a JavaScript function to capitalize the first letter of a string;

*console.log(capitalize("javaScript")); // "JavaScript"*

1. Write a JavaScript function which return the number of occurrences of a given substring in a string.

*console.log(findOccurrences("a", “JavaScript” )); // 2*

*console.log(findOccurrences ("ja", “JavaScript” )); // 1*

*console.log(findOccurrences ("", “JavaScript” )); // 0*

*console.log(findOccurrences ("b", “JavaScript” )); // 0*

# Array

1. Write a function which defines if a given value is an array. Use this function in the next tasks to define if a given value is an array;

*console.log(isArrray([]); // true*

*console.log(isArray(2)); // false*

1. Write a JavaScript function to remove. 'null', '0', '""', 'false', 'undefined' and 'NaN' values from an array
2. Write a JavaScript function to find the highest value in an array
3. Write a JavaScript function to find the lowest value in an array
4. Write a JavaScript function to split a string and convert it into an array of words;
5. Write a JavaScript function to find the most frequent item of an array.
6. Write a JavaScript function to clone an array
7. Write a JavaScript program to remove duplicate strings from a string array (ignore case sensitivity)
8. Write a JavaScript function to merge two arrays and removes all duplicates elements
9. Write a JavaScript function to remove a specific element from an array
10. Write a JavaScript function to sort the following array of objects by title value using ‘sort’ method

*var library = [*

*{ author: 'Bill Gates', title: 'The Road Ahead', libraryID: 1254},*

*{ author: 'Steve Jobs', title: 'Walter Isaacson', libraryID: 4264},*

*{ author: 'Suzanne Collins', title: 'Mockingjay: The Final Book of The Hunger Games', libraryID: 3245}*

*];*

# Objects

1. Write a JavaScript program to get the length of a JavaScript object
2. Write a JavaScript program to list the properties of a JavaScript object

# Date

1. Write a JavaScript function to get difference between two dates in days.
2. Write a JavaScript function gets the current date.
3. Write a JavaScript function which displays the current day and time in the following format.

*console.log(formatDate(new Date())); // Oct 22 2016, 11:45*