

Main assignment #1: Write tests for the **Project: Library**, if needed improve the original code, log your changes so you can present them during the assignment's session!

Main assignment #2: Write tests for the following, and then make the tests pass!

1. A **capitalize** function that takes a string and returns it with the first character capitalized.
2. A **reverseString** function that takes a string and returns it reversed.
3. A **calculator** object that contains functions for the basic operations: **add**, **subtract**, **divide**, and **multiply**. Each of these functions should take two numbers and return the correct calculation.
4. A **caesarCipher** function that takes a string and returns it with each character "shifted". Read more about how a Caesar cipher works on this [website](#).
 - a. Don't forget to test wrapping from z to a.
 - b. Don't forget to test keeping the same case.
 - c. Don't forget to test punctuation!
 - d. For this one, you may want to split the final function into a few smaller functions. One concept of Testing is that you don't need to explicitly test every function you write... Just the public ones. So in this case you only need tests for the final **caesarCipher** function. If it works as expected you can rest assured that your smaller helper functions are doing what they're supposed to.
5. An **analyzeArray** function that takes an array of numbers and returns an object with the following properties: **average**, **min**, **max**, and **length**.

```
const object = analyzeArray([1,8,3,4,2,6]);

object == {
  average: 4,
  min: 1,
  max: 8,
  length: 6
};
```

NOTE: By default, the current version of Jest will not recognize ES6 import statements. For you to be able to use ES6 modules for this project you may do the following:

- 1) Install the @babel/preset-env package

```
npm i -D @babel/preset-en
```

- 2) Create a **.babelrc** file in the project's root with the following lines of code:

```
{ "presets": ["@babel/preset-env"] }
```

This will allow you to use import statements. Note that in the Jest docs similar instructions are laid out [here](#).