

Java Script

This exercise consists of a couple of small JS programs. Tests are included, so you can check if your Program does what it's supposed to.

If you forgot how to run the tests – check exercise 13 – hint: `npm test <prog>.spec.js` and `node <prog>.js`

1_fibonacci

Get the n-th fib – check the specs (what happens with neg numbers e.g.)

2_getTheTitles (bonus)

Pretty simple and straightforward – we haven't talked about objects yet – still it's a good exercise to see how you can access attributes in an object. Arrays work pretty much the same as in any language (index starts at 0), access an element via `[]` e.g. `myArray[0]`

3_caesar

Implement a Caesar encryption. Hints:

- Only encrypt characters a-zA-Z don't encrypt special characters
- Keep Uppercase/Lowercase
- You can get the ordinal of a character with `"a".charCodeAt(0)`
- You can get the character for an ordinal via `String.fromCharCode(n)`
- You can access a String like an array
- Be aware that the mod function in js does not work the same as in python, so `-34 % 10` is `-4` instead of `6` use this

```
function mod(n, m) {  
    return ((n % m) + m) % m;  
}
```

4_schere_stein_papier

Implement a simple rock, paper, scissors game. For the user input we will make use of the prompt, so this time we need to include our script in an html page and use the browser to run it. Create an index.html for that purpose.

The computer plays against the player, whoever wins 3 rounds first is the winner. Create at least a function

`playRound(playerSelection, computerSelection)`

Use const when appropriate, to start the game, just add code (e.g. a function call) in your js file. Try first with `console.log("works")` to see if your js is correctly included!

Hints:

- With `Math.random` you can get a random number between 0 and 1, `Math.floor` gives you the integer part.
- `Prompt("Message")` displays a prompt
- F12 and Konsole shows you the js output
- With `<script src=""> </script>` you can include a js file in an html file – do this at the end of your html file.