

Algorithm and Data Structure Questions

1. Composite function

Write a function called "rokket" which produces the following output when called:

```
console.log(rokket(2)(5)(3)) // this outputs 30
console.log(rokket(4)(2)(2)) // this outputs 16
console.log(rokket(8)(2)(1)) // this also outputs 16
```

This function must work for any three integer numbers.

2. Longest string

Write a function called "rokket" which receives an array with several strings. It must output the longest (character length) string in the array.

Example:

```
const list = ['best', 'company', 'ever']

console.log(rokket(list)) // this outputs 'company'
```

3. String repetition

Write a function called "rokket" which receives a string **A** and an integer **N** and returns a new string with **A** repeated **N** times.

Example:

```
console.log(rokket('node', 5)) // this outputs 'nodenodenodenode'
console.log(rokket('abc', 2)) // this outputs 'abcabc'
```

4. Only last names

Write a function called "rokket" which receives a list of names from a contact book. Each name is an object consisting of a first name and last name. Return a list that shows only the last names.

Example:

```
const contacts = [
  { firstName: 'Juanito', lastName: 'Rokket' },
  { firstName: 'James', lastName: 'Bond' },
  { firstName: 'Harry', lastName: 'Potter' }
]

console.log(rokket(contacts)) // this outputs ['Rokket', 'Bond', 'Potter']
```

5. Unique numbers

Write a function called "rokket" which receives two number arrays of any size. Return a list containing the intersection of the two arrays (all unique numbers in both arrays).

Example:

```
console.log(rokket([1, 2, 5], [2, 1, 6])) // this outputs [1, 2, 5, 6]
console.log(rokket([1, 2, 3], [4, 5, 6])) // this outputs [1, 2, 3, 4, 5, 6]
```