Hack your future BE

JAVASCRIPT 2

The capacity to learn is a gift,
the ability to learn is a skill,
the willingness to learn is a choice

–BRIAN HERBERT

FUNCTIONS

JSON

ARRAYS

FUNCTION DECLARATION

```
function square(number) {
  return number * number;
}
```

FUNCTION EXPRESSION

```
var square = function(number) {
  return number * number;
};
```

```
console.log(square(5));
/* ... */
function square(n) { return n * n; }
```

```
console.log(square); // undefined
console.log(square(5));
var square = function(n) {
  return n * n;
}
```

```
function map(f, a) {
  var result = [];
  var i;
  for (i = 0; i != a.length; i++)
    result[i] = f(a[i]);
  return result;
}

var f = function(x) {
    return x * x * x;
}
```

RECURSIVE FUNCTION

```
function loop(x) {
  if (x >= 10)
    return;
  // do stuff
  loop(x + 1); // Recursive call
}
loop(0);
```

DEFAULT PARAMETER

```
function multiply(a, b = 1) {
  return a * b;
}
```

```
multiply(5); // 5
```

THIS

```
function Person() {
  // The Person() constructor defines `this` as itself.
  this.age = 0;

  setInterval(function growUp() {
    // In nonstrict mode, the growUp() function defines `this`
    // as the global object, which is different from the `this`
    // defined by the Person() constructor.
    this.age++;
  }, 1000);
}

var p = new Person();
```

THIS

```
function Person() {
  this.age = 0;
  setInterval(() => {
    // this properly refers to the person object
    this.age++;  }, 1000);
}

var p = new Person();
```

ARRAY
METHODS

- What is the return value of this method?

- What does this method do to the original array it is used on

ARRAY

- Add item to end of array
- Add item to beginning of array
- Remove first element from array
- Remove last element from array
- Remove specific element from array by index
- Find index of element in array

ARRAY

.MAP()

creates a new array with the results of calling a provided function on every element in the calling array.

ARRAY

.FILTER()

creates a new array with all elements that pass the test implemented by the provided function.

ARRAY

.MAP()

```
var numbers = [1, 4, 9];
var doubles = numbers.map(function(num) {
  return num * 2;
});
```

ARRAY

.MAP()

```
const elems =
  document.querySelectorAll('select option:checked’);

const values = elems.map((obj) => {
  return obj.value;
});
```

ARRAY

.FILTER()

```
const filtered = [12, 5, 8, 130, 44]
  .filter((value) => {
    return value >= 10;
  });
```

ARRAY

.FILTER()

```
const fruits = ['apple', 'banana', 'grapes', 'mango', 'orange'];
```

```
/* Array filters items based on search criteria */
function filterItems(query) {
  return fruits.filter((el) => {
      return el.toLowerCase().indexOf(query.toLowerCase()) > -1;
  })
}

console.log(filterItems('ap')); // ['apple', 'grapes']
console.log(filterItems('an')); // ['banana', 'mango', 'orange']
```

JSON

EXERCISE

ARRAY EXERCISE

- Write a JavaScript function to get the first element of an array. Passing a parameter 'n' will return the first 'n' elements of the array.
- Write a JavaScript program which accept a number as input and insert dashes (-) between each two even numbers. For example if you accept 025468 the output should be 0-254-6-8.
- Write a JavaScript program to find the most frequent item of an array.
- Write a JavaScript program which accept a string as input and swap the case of each character. For example if you input 'The Quick Brown Fox' the output should be 'tHE qUICK bROWN fOX'.

JSON EXERCISE

- Write a JavaScript program to get the length of an JavaScript object.

- Write a JavaScript function to check if an object contains given property.

- Write a JavaScript program to create a Clock.

    - Console, every second :”14:37:42”,”14:37:43", “14:37:44”, "14:37:45"

DEBUGGING

HOMEWORK