

Introcution to JavaScript

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March 2023

What learned we last Week?

- Comparisons `1 > 2` , `'a' !== 'b'`
- Branching `if (condition) { ... } else { ... }`
- Loops `while (condition) { ... }` ,
`for (let i = 0; i < 10; i++) { ... }`
- Logical Operators `&&` , `||` , `!`
- Prompt `let answer = prompt('What is your name?')`

Tipp: Dont forget to commit and push your changes.

Goals of this week

- Functions
- Function Arguments
- Return Values
- Function Scope
- Function Hoisting
- Function Expressions
- Arrow Functions

Functions

```
function functionName(parameter1, parameter2) {  
    // code to be executed  
}
```

```
functionName(argument1, argument2);
```

```
function add(a, b) {  
    return a + b;  
}
```

```
let result = add(1, 2); // result = 3
```

Function Arguments

```
let message = "Hello World";

function formatMessage(msg) {
    return "!" + msg + "!";
}

console.log(formatMessage(message)); // !Hello World!
console.log(message); // Hello World
```

Return Values

```
function isAdult(age) {  
    if (age >= 18) {  
        return true;  
    } else {  
        return false;  
    }  
}  
  
isAdult(17); // false
```

```
function add(a, b) {  
    if(typeof a !== 'number') {  
        return;  
    }  
    if(typeof b !== 'number') {  
        return;  
    }  
    return a + b;  
}
```

Default Arguments

```
function add(a, b = 0) {  
    return a + b;  
}
```

```
add(1); // 1
```

```
add(1, 2); // 3
```

Function Scope

```
let message = "Hello World";

function formatMessage() {
  console.log(message); // Hello World

  let message = "Hello Universe";

  console.log(message); // Hello Universe
}
```

Function Expressions

```
let add = function(a, b) {  
    return a + b;  
}
```

```
add(1, 2); // 3
```

```
function callTwice(fn) {  
    fn();  
    fn();  
}
```

```
callTwice(function() {  
    console.log("Hello World");  
});
```

```
// Hello World  
// Hello World
```

Arrow Functions

```
let add = (a, b) => a + b
```

```
let sub = (a, b) => {  
  return a - b;  
}
```

```
add(1, 2); // 3
```

```
sub(1, 2); // -1
```

Tasks and Points

Goal is to get 100 Points.

- `basic-branching` 20
- `basic-logical-operators` 20
- `basic-comparisons` 20
- `basic-loops` 20
- `basic-prompt` 20
- `calculator` 30
- `fibonacci` 30
- `fizzbuzz` 30
- `pyramid` 30
- `quiz` 40
- `rock-paper-scissors` 40