

Module 3: Introduction to JavaScript

Practice Activity 3.1: Working with Variables

Exercises

Task 1: Declare two variables `a` and `b`. Assign the value 3 to the variable `a` and the value 5 to the variable `b`. Use the `console.log()` method to output the sum of `a` and `b`.

Starter code:

```
// Declare a variable 'a' and assign a value 3 to it

// Declare a variable 'b' and assign a value 5 to it

// Log the sum of 'a' and 'b'

//Do not change this line of code:
Module.exports = { a, b }
```

Expected solution:

```
// Declare a variable 'a' and assign a value 3 to it
let a = 3;

// Declare a variable 'b' and assign a value 5 to it
let b = 5;

// Log the sum of 'a' and 'b'
console.log(a + b);

//Do not change this line of code:
Module.exports = { a, b }
```

Test:

```
const { a, b } = require('./variables');

describe('Test variables', () => {
  test('Variables a and b should exist and have the correct values', () => {
    expect(a).toBeDefined();
    expect(b).toBeDefined();
    expect(a).toBe(3);
    expect(b).toBe(5);
  });
});
```

Now that you have declared variables, you can use them for other operations.

Task 2: Declare four variables.

- The first one is sum, which stores the sum of the two variables a and b. Log its value.
- The second one is difference, which stores the difference between a and b ($a - b$). Log its value.
- The third one is product, which stores the product of a and b. Log its value.
- The last one is ratio, which stores the value of a divided by b. Log its value.

Starter code:

```
// Don't change this line of code. We can declare two variables using a single 'let' by the way!
let a = 3, b = 5;

//Your code here. Declare the 4 variables as per the instructions.

//Don't change this line of code either.
module.exports = { sum, difference, product, ratio }
```

Expected solution:

```
// Don't change this line of code. We can declare two variables using a
single 'let' by the way!
let a = 3, b = 5;

//Your code here. Declare the 4 variables as per the instructions.
let sum = a + b;
console.log(sum);
let difference = a - b;
console.log(difference);

let product = a * b;
console.log(product);

let ratio = a / b;
console.log(ratio);

//Don't change this line of code either.
module.exports = { sum, difference, product, ratio }
```

Test:

```
const { sum, difference, product, ratio } =
require('./variables');

describe('Test variables', () => {
  test('Variables sum, difference, product and ratio should
exist and have the correct values', () => {
    expect(sum).toBeDefined();
    expect(difference).toBeDefined();
    expect(product).toBeDefined();
    expect(ratio).toBeDefined();
    expect(sum).toBe(8);
    expect(difference).toBe(-2);
    expect(product).toBe(15);
    expect(ratio).toBe(0.6);
  });
});
```