Node Modules

To do: View

Learn about the concept of Node modules and how to use them.

2. Exercise: Understanding Node Modules

https://www.youtube.com/watch?v=CXpDB7Ycins

[Click here if you wish to open this video in its own window.](#)

What You'll Do

- Learn about writing Node applications using JavaScript.
- Understand the basics of Node modules and how to write simple file-based Node modules.

Create a new Node application

- On your computer's filesystem, go to your **NucampFolder/5-NodeJS-Express-MongoDB** folder.
- Create a new folder named **node-examples** and open it with VS Code.
- Create a file named **app.js** and add the following code to this file:

```javascript
const rect = {
    perimeter: (x, y) => 2 * (x + y),
    area: (x, y) => x * y
};

function solveRect(l, w) {
    console.log(`Solving for rectangle with dimensions: ${l}, ${w}`);

    if (l <= 0 || w <= 0) {
        console.log(`Rectangle dimensions must be greater than zero. Received: ${l}, ${w}`);
    } else {
        console.log(`Area of rectangle: ${rect.area(l, w)}`);
        console.log(`Perimeter of rectangle: ${rect.perimeter(l, w)}`);
    }
}

solveRect(2, 4);
solveRect(3, 5);
solveRect(0, 5);
solveRect(5, -3);
```

- To run the Node application, type the following into your bash terminal, inside the **node-examples** folder:

```
node app
```

- **Optional:**
  - To initialize a local Git repository and add the current files in the folder to the repository, type the following into your bash terminal:

```
git init
```

```
git add .
```

  - Then, make a Git commit with the message "Simple Node Example".

Convert your Node app to use a module

- Now, create a file named **rectangle.js**, and add the following code to it:

```
exports.perimeter = (x, y) => 2 * (x + y);
exports.area = (x, y) => x * y;
```

- Then, update **app.js** as follows, replacing the entire declaration of **rect** you added previously with the line below:

```
const rect = require('./rectangle');

. . .
```

- Run the Node application again with the **node app** command and observe that the result will be the same.
- **Optional:** Make another Git commit with the message "Simple Node Module".

Summary

- In this exercise, you learned about writing a basic Node application using JavaScript and run it using the Node CLI command. You also learned how to write a simple Node module and import it into your Node application.

Additional Resources

- [MDN - JavaScript modules](#)
- [FlavioCopes - Introduction to CommonJS](#)
- [FreeCodeCamp - Requiring Modules in Node.js - Everything You Need To Know](#)
- [NodeJS - What is Require?](#)
- [Understanding Module Exports and Exports in Node.js](#)

NEXT ACTIVITY

[Code Challenge: Node Modules](#)

PREVIOUS ACTIVITY

[Prerequisites: Postman and Node](#)

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