Node.js Intro

Open-source runtime server environment to execute JS code

What is Node.js ?

Node.js® is a JavaScript runtime environment built on Chrome's V8 JavaScript engine.

"V8 is Google's open source high-performance JavaScript and WebAssembly engine, written in C++"

Node.js

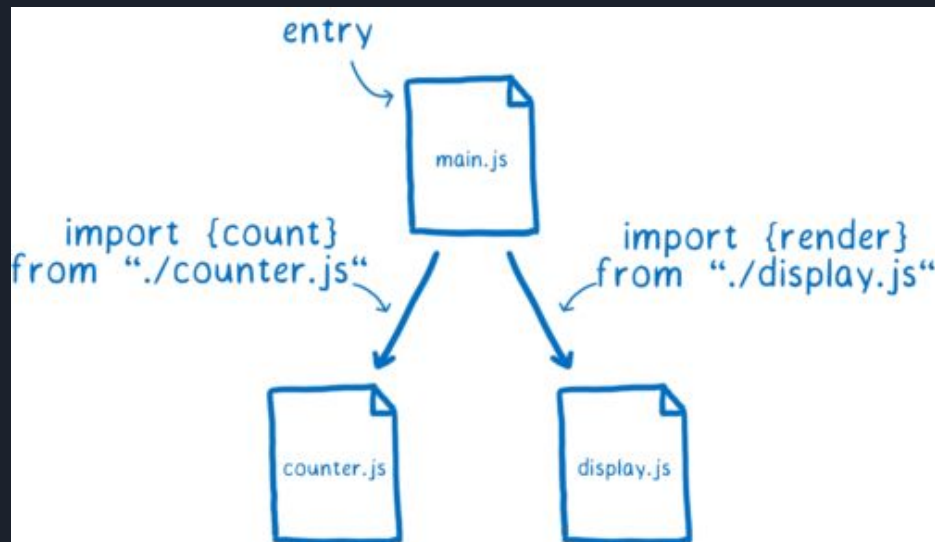We can run JavaScript files the same way as we just run Node.

By specify the name of the file after node, we will execute the JavaScript code in our terminal

```
Chojiu@chojiu2 MINGW64 ~/Programmation/IronHack
$ node index.js
```

Modules

A module is a small block of reusable code that we can import in differents files.

It helps to get our code cleaner.

Modules exports

To create a module, create a separate js file, write your code and use module.exports

```
function sum(a,b) {
    return a + b
}

module.exports = sum
```

Require the module

Now, you can import this module in any other file using require

```
// another file

const sum = require('./sum')
```

NPM

Npm stands for Node Package Manager.

With Npm you'll be able to use modules from other developers inside your projects

NPM init

To use npm in a project, we need to initialise the project using npm init

It's possible to use npm init with the -y flag to use all default values.

To install a module as you know we use the npm install command with the name of the package

Npm

We can then use the module using require.

```javascript
const chalk = require('chalk')

console.log(chalk.blue('Hello, npm!'))
```

Practice lvl 1

Create a Node.js project and use an external package:

- initiating a new Node.js project called "ironHackers".
- When you type npm start in the console, the program should display the names of 4 of your colleagues in different colours. To do this, use the chalk package
- Your code must be versioned and available for deposit to your github account, without the nodes-modules pushed

HTTP server

Node.js also have already integrated modules as http.

```
const http = require('http')
...

const host = 'localhost';
const port = 8000;
```

HTTP server

```
const server = http.createServer((req, res) => {
    res.end('My first server')
});


server.listen(port, host, () => {
    console.log(`Server is running on http://${host}:${port}`);
})
```

Practice lvl 2

- Use the fs (file-system) module to write a file in your folder
- Use the fs (file-system) module to read the previous created file and console.log the data
- Create a http server who runs on localhost:8000, the response an h1 with hello world
- Using axios, fetch http://www.google.com using the response of the api call create a file html with the data you obtain.