

Node Js

What is NodeJS?

I don't know much about nodejs

It is so big

| Just from my experience

Nodejs allow you

working with file =>

by Javascript

- ▶ Build Backend
- ▶ Build Frontend
- ▶ Build Application
- ▶ Build Tools
- ▶ Build tons of things...

| Content

Basics

Modules

Path

File System

Hello world

1. Open Terminal

2. Type: node, press enter

Welcome to Node.js v18.12.1.

Type ".help" for more information.

3. Type: console.log("Hello World"), press enter

```
> console.log("Hello World");
```

Hello World

```
// you are in console window of nodejs
```

| Nodejs vs browser

Same Thing

- `globalThis`
- `setTimeout`, `setInterval`
- `console.log`, `console.error`
- js engine
- event loop, event queue

NodeJs	Browser
<code>global</code> , <code>process</code>	<code>window</code> , <code>document</code>
<code>require</code> + <code>import</code>	<code>import</code>
CommonJs + ES Module	Only ES modules
Event Emitter	Event Target

Node Module

```
// every file in nodejs is a module  
console.log(module);
```

```
// Every variables is private by  
default.  
const AGE = 30;
```

```
// You need to export this to using  
outside  
module.exports = AGE;  
module.exports = { age: AGE };
```

```
Module {  
  id: '.',  
  path: '/Users/kamemaster/WORK/training-source/node-project/  
test.js',  
  exports: {},  
  filename: '/Users/kamemaster/WORK/training-source/node-project/  
test.js',  
  loaded: false,  
  children: [],  
  paths: [  
    '/Users/kamemaster/WORK/training-source/node-project/  
node_modules',  
    '/Users/kamemaster/WORK/training-source/node_modules',  
    ...  
  ]  
}
```


Init Project

```
// npm init -y
{
  "name": "project",
  "version": "1.0.0",
  "description": "",
  "main": "test.js",
  "scripts": {
    "test": "echo \"Error: no test specified\" && exit 1"
  },
  "keywords": [],
  "author": "",
  "license": "ISC",
  "type": "module"// using es module
}
```

| path

```
const path = require("path");
```

```
console.log(path.extname("sound.mp3"));  
// .mp3
```

```
console.log(path.dirname(__dirname));  
// /Users/kamemaster/WORK/training-source
```

```
console.log(path.resolve(__dirname, "./src/app.js"));  
// /Users/kamemaster/WORK/training-source/node-project/  
src/app.js
```

```
console.log(path.join(__dirname, "newFolder",  
"newFile.js"));  
// /Users/kamemaster/WORK/training-source/node-project/  
newFolder/newFile.js
```

File System

```
const fs = require("fs");
const path = require("path");
// create new dir
fs.mkdir(path.join(__dirname, 'My test'), (err) => {
  if (err) {
    return console.error(err);
  }
  console.log('Directory created successfully!');
});
```

fs.stat

```
const fs = require('fs');
try {
  const stats = fs.statSync('YourPath');
  for (let key in stats) {
    if (typeof stats[key] === "function") {
      console.log(key);
    }
  }
} catch (err) {
  console.error(err);
}
```

isFile
_checkModeProperty
isDirectory
isBlockDevice
isCharacterDevice
isSymbolicLink
isFIFO
isSocket

Read and write file

```
const fs = require('fs');
```

```
const jsonFile = process.argv[2];
```

```
function readFile(filePath) {  
  const result = fs.readFileSync(filePath, "utf8");  
  return JSON.parse(result) ;  
}
```

```
const jsonData = readFile(jsonFile);
```

```
jsonData.score = 250;
```

```
jsonData.newProp = "newProperty";
```

```
jsonData.score++;
```

```
writeJsonFile(jsonFile, jsonData);
```

```
function writeJsonFile(filePath, data) {  
  const newData = JSON.stringify(data, null, "\t")  
  fs.writeFileSync(filePath, newData);  
}
```

Assignment

NodeJS tools

1. function read json file => javascript object
2. add one more property for result => write it to your file
3. function search all image in a folder
4. function copy all image type "png" to new folder
5. function resize all images to 70%
6. tool create index.js, import all script in "src"