NodeJS 初探

NodeJS 介紹、express.js 入門

Week 7

NodeJS 初探

- NodeJS
  - 脫離瀏覽器執行 JavaScript 的環境
- npm
  - node package manager

Terminal / Cmd 簡單操作

- cd my-work
  - 切換到 my-work 資料夾底下工作
- cd ..
  - 切換到上一層資料夾工作
- mkdir test-dir
  - 新增一個叫做 test-dir 的資料夾

NodeJS 初探

- 打開一個新的 js 檔案

- 用 console.log 搭配迴圈印出一些文字

- 在 cmd 用 nodejs 執行你剛剛的檔案 (node aa.js)

讀取檔案

```javascript
var fs = require('fs');

var data = fs.readFileSync('data.txt', 'utf-8');
console.log(data);
```

讀取檔案

```javascript
var fs = require('fs');
var readline = require('readline');

var reader = readline.createInterface({
    input: fs.createReadStream('numbers.txt')
});
var sum = 0;
reader.on('line', function(line) {
    var n = parseInt(line, 10);
    sum += n;
    console.log('讀到了一個數字：' + n);
    console.log('目前總和：' + sum);
});
console.log('sum1 = ' + sum);

reader.on('close', function(line) {
    console.log('sum2 = ' + sum);
});
```

寫入檔案

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

var outfile = fs.createWriteStream('output.txt');

var data = '';
for(var i = 0; i < 20; i++) {
    var n = Math.floor(Math.random() * 20);
    data += n + '\n';
}

outfile.write(data);
outfile.close();
```

寫入檔案

我覺得這樣好麻煩 QQ

`npm install buffered-writer`

寫入檔案

```javascript
var buffered_writer = require ("buffered-writer");

var writer = buffered_writer.open ("lines.txt");

for(var i = 0; i < 10; i++) {
    writer.write(i + '\n');
}

writer.close();
```

```javascript
var readline = require('readline');

var reader = readline.createInterface({
    input: process.stdin,
    output: process.stdout
});

var magic = Math.floor(Math.random() * 30);

function play_guess_number()
{
    reader.question('猜一個數字：', function(line) {
        var n = parseInt(line);
        if(n == magic){
            console.log('猜對囉！');
            reader.close();
            return;
        } else if(n > magic) {
            console.log('猜太大了');
        } else if (n < magic) {
            console.log('猜太小了');
        }
        play_guess_number();
    });
}

play_guess_number();
```

有點難懂嗎？

可是這就是 JavaScript QAQ

npm install readline-sync

```javascript
var readline = require('readline-sync');
var magic = Math.floor(Math.random() * 30);

function play_guess_number()
{

    while(true) {
        var n = parseInt(readline.question('Guess a number: '));
        if(n == magic){
            console.log('猜對囉！');
            break;
        } else if(n > magic) {
            console.log('猜太大了');
        } else if (n < magic) {
            console.log('猜太小了');
        }
    }
}

play_guess_number();
```

require?

引用 NodeJS 內建程式庫以及外部程式的方法，
可以引入內建的程式庫，
或是透過 npm install 安裝的外部程式庫

require!

接下來請新增兩個檔案，放在同一個資料夾執行

myadd.js

```javascript
function add2numbers(a, b)
{
    return a + b;
}

module.exports = add2numbers;
```

use-add.js

```javascript
var add2numbers = require('./myadd.js');

console.log('1 + 1 = ' + add2numbers(1, 1));
```