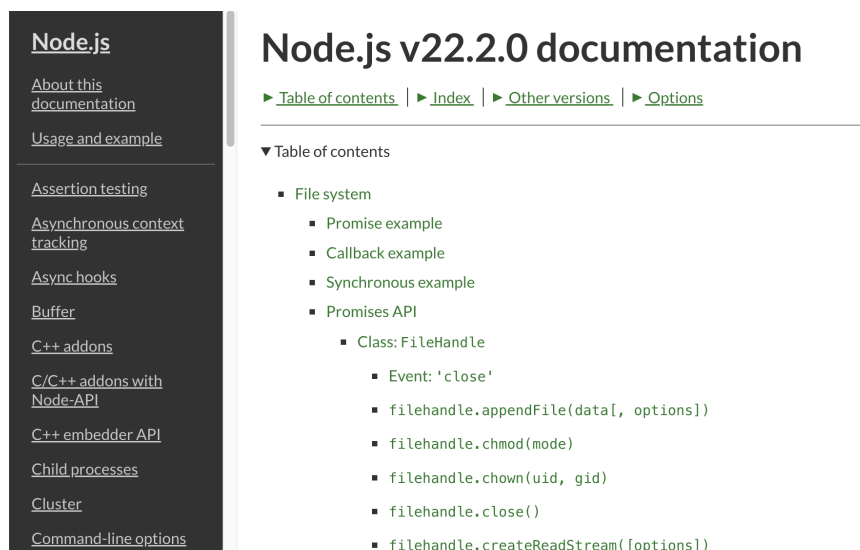


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Native Module di Node JS tersedia di <https://nodejs.org/api/documentation.html>.

Node.js berjalan pada Mesin JavaScript V8, yang merupakan program C tersendiri. Kita dapat menulis kode yang berinteraksi langsung dengan program C ini dalam bahasanya sendiri, yang sangat bagus karena kita dapat menghindari banyak serialisasi dan overhead komunikasi yang mahal.

Kali ini kita membahas File System saja.



The screenshot shows the Node.js v22.2.0 documentation page. The left sidebar contains a navigation menu with links like 'About this documentation', 'Usage and example', 'Assertion testing', 'Asynchronous context tracking', 'Async hooks', 'Buffer', 'C++ addons', 'C/C++ addons with Node-API', 'C++ embedder API', 'Child processes', 'Cluster', and 'Command-line options'. The main content area is titled 'Node.js v22.2.0 documentation' and includes a 'Table of contents' section. Under 'Table of contents', the 'File system' section is expanded, showing sub-items: 'Promise example', 'Callback example', 'Synchronous example', 'Promises API', and 'Class: FileHandle'. The 'Class: FileHandle' section lists several methods: 'Event: \'close\'', 'filehandle.appendFile(data[, options])', 'filehandle.chmod(mode)', 'filehandle.chown(uid, gid)', 'filehandle.close()', and 'filehandle.createReadStream([options])'.

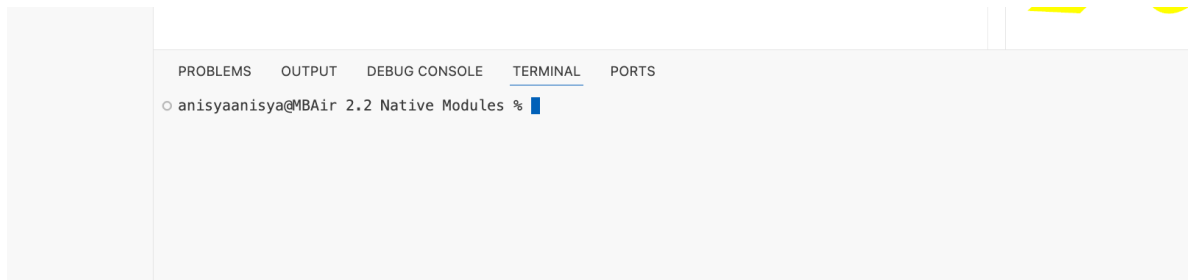
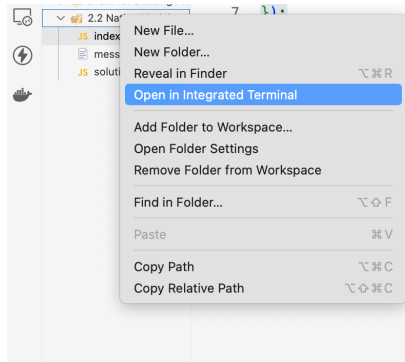
A. Write File

Buatkan 1 Folder Baru yang berisikan file index.js

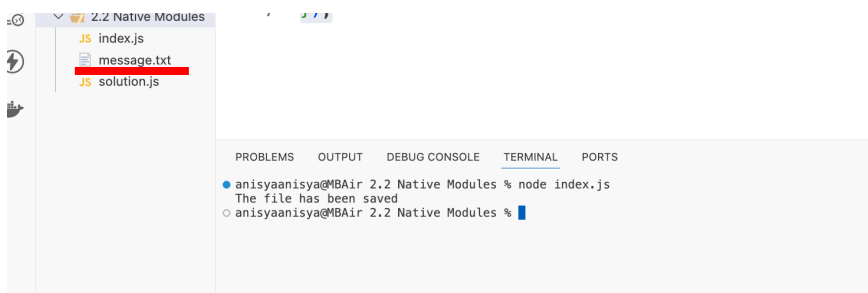
```
const fs=require("fs"); //fs=file system
fs.writeFile("message.txt","Hello from NodeJS",(err)=>{
    if(err) throw err;
    {
console.log("The file has been saved");
    }
});
```

1. Klik kanan folder posisi file index.js ini. Lalu pilih Terminal

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2. Ketikkan **node index.js**



Program diatas, ditujukan untuk membuat file **message.txt** yang berisikan text **Hello from NodeJS**.

B. Read File

1. Kita modifikasi script **index.js** sebelumnya.

```
const fs=require("fs"); //fs=file system
fs.readFile('./message.txt', (err, data) => {
    if (err) throw err;
    console.log(data);
});
```

2. Kita jalankan dengan mengetikkan node index.js

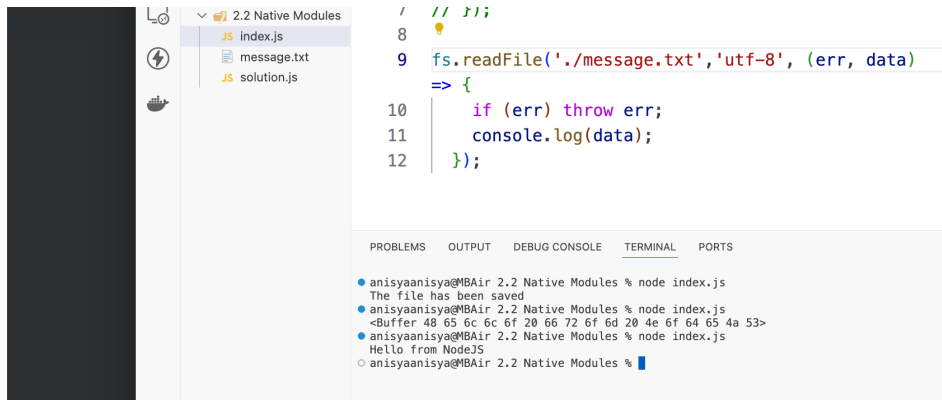


```
9 fs.readFile('./message.txt', (err, data) => {
10   if (err) throw err;
11   console.log(data);
12 });
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

- anisyaanisyaa@MBAir 2.2 Native Modules % node index.js
The file has been saved
- anisyaanisyaa@MBAir 2.2 Native Modules % node index.js
<Buffer 48 65 6c 6c 6f 20 66 72 6f 6d 20 4e 6f 64 65 4a 53>
- anisyaanisyaa@MBAir 2.2 Native Modules % █

3. Maka akan ditampilkan beberapa karakter yang tidak kita pahami. Untuk mengatasi ini, kita gunakan "charset=utf-8"



```
8 // }));
9 fs.readFile('./message.txt', 'utf-8', (err, data)
=> {
10   if (err) throw err;
11   console.log(data);
12 });
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

- anisyaanisyaa@MBAir 2.2 Native Modules % node index.js
The file has been saved
- anisyaanisyaa@MBAir 2.2 Native Modules % node index.js
<Buffer 48 65 6c 6c 6f 20 66 72 6f 6d 20 4e 6f 64 65 4a 53>
- anisyaanisyaa@MBAir 2.2 Native Modules % node index.js
Hello from NodeJS
- anisyaanisyaa@MBAir 2.2 Native Modules % █