

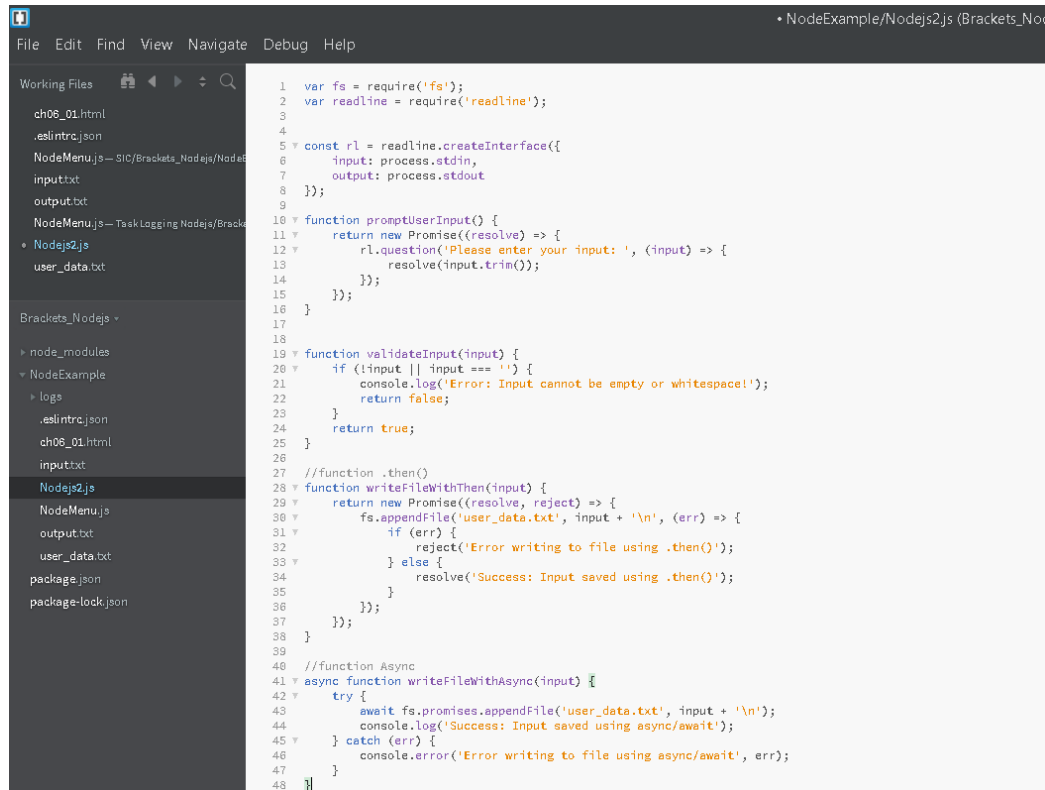
chapter_7_part_2_task

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TASK Node.js

Nodejs2.js

->Nodejs2.js script inside NodeExample folder ,Using the ‘readline’ module, this code will ask you to enter an input then the ‘fs.appendFile’ function will write that data into a file. It handles this in two ways which include using Promises with ‘.then()’ for chaining as well as ‘async/await’ for a more synchronous style and it includes error handling to control invalid input or file writing failures.



```
1 var fs = require('fs');
2 var readline = require('readline');
3
4
5 const rl = readline.createInterface({
6   input: process.stdin,
7   output: process.stdout
8 });
9
10 function promptUserInput() {
11   return new Promise((resolve) => {
12     rl.question('Please enter your input: ', (input) => {
13       resolve(input.trim());
14     });
15   });
16 }
17
18
19 function validateInput(input) {
20   if (!input || input === '') {
21     console.log('Error: Input cannot be empty or whitespace!');
22     return false;
23   }
24   return true;
25 }
26
27 //function .then()
28 function writeFileWithThen(input) {
29   return new Promise((resolve, reject) => {
30     fs.appendFile('user_data.txt', input + '\n', (err) => {
31       if (err) {
32         reject('Error writing to file using .then()');
33       } else {
34         resolve('Success: Input saved using .then()');
35       }
36     });
37   });
38 }
39
40 //function Async
41 async function writeFileWithAsync(input) {
42   try {
43     await fs.promises.appendFile('user_data.txt', input + '\n');
44     console.log('Success: Input saved using async/await');
45   } catch (err) {
46     console.error('Error writing to file using async/await', err);
47   }
48 }
```



```
42   try {
43     await fs.promises.appendFile('user_data.txt', input + '\n');
44     console.log('Success: Input saved using async/await');
45   } catch (err) {
46     console.error('Error writing to file using async/await', err);
47   }
48 }
49
50
51 async function main() {
52   let validInput = false;
53   let input = '';
54
55   while (!validInput) {
56     input = await promptUserInput();
57     if (validateInput(input)) {
58       validInput = true;
59     }
60   }
61   rl.question('Choose method for saving input (1 for .then, 2 for async/await): ', async (choice) => {
62     if (choice === '1') {
63       writeFileWithThen(input)
64         .then((message) => console.log(message))
65         .catch((error) => console.error(error));
66     } else if (choice === '2') {
67       await writeFileWithAsync(input);
68     } else {
69       console.log('Invalid choice. Please restart and choose 1 or 2.');
```

Node.js Terminal

- ➔ Use node Nodejs.js to run file
- ➔ 1st Choice using .then()
- ➔ 2nd Choice using async/await
- ➔ Input saved two times using async/await method and one time using .then() method
- ➔ Message Success indicating that the input was successfully written to the file.(Feedback for success)

```
Node.js command prompt - n x + v
Your environment has been set up for using Node.js 22.8.0 (x64) and npm.

C:\Users\Lenovo>cd NodeExample
The system cannot find the path specified.

C:\Users\Lenovo>cd C:\Users\Lenovo\SUMMER .2024\SIC\Brackets_Nodejs\NodeExample

C:\Users\Lenovo\SUMMER .2024\SIC\Brackets_Nodejs\NodeExample>node Nodejs2.js
Please enter your input: Hello Juliana
Choose method for saving input (1 for .then, 2 for async/await): 2
Success: Input saved using async/await

C:\Users\Lenovo\SUMMER .2024\SIC\Brackets_Nodejs\NodeExample>node Nodejs2.js
Please enter your input: Hiiiii
Choose method for saving input (1 for .then, 2 for async/await): 1
Success: Input saved using .then()

C:\Users\Lenovo\SUMMER .2024\SIC\Brackets_Nodejs\NodeExample>node Nodejs2.js
Please enter your input: Hello AGAINNN
Choose method for saving input (1 for .then, 2 for async/await): 2
Success: Input saved using async/await
```

- ➔ Write invalid path to throw an error

```
27 //function .then()
28 function writeFileWithThen(input) {
29     return new Promise((resolve, reject) => {
30         fs.appendFile('user/user_data.txt', input + '\n', (err) => {
31             if (err) {
32                 reject('Error writing to file using .then()');
33             } else {
34                 resolve('Success: Input saved using .then()');
35             }
36         });
37     });
38 }
39
```

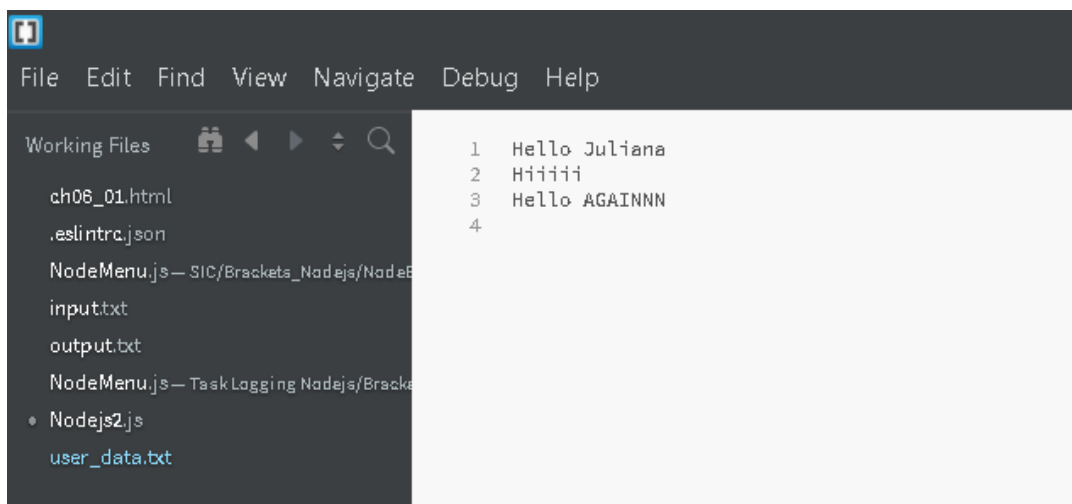
➔ Message Failure indicating that error occurred during writing the input to the file. (Feedback for failure)

```
C:\Users\Lenovo\SUMMER .2024\SIC\Brackets_Nodejs\NodeExample>node Nodejs2.js
Please enter your input: JULI
Choose method for saving input (1 for .then, 2 for async/await): 1
Error writing to file using .then()
C:\Users\Lenovo\SUMMER .2024\SIC\Brackets_Nodejs\NodeExample>
```

File Output

➔ Output file named user_data.txt, should append each new input to the file.

```
30     fs.appendFile('user_data.txt', input + '\n', (err) => {
31         if (err) {
32             reject('Error writing to file using .then()');
33         } else {
34             resolve('Success: Input saved using .then()');
35         }
36     });
37 });
```



Error Handling:

```
18
19 ▾ function validateInput(input) {
20 ▾   if (!input || input === ' ') {
21       console.log('Error: Input cannot be empty or whitespace!');
22       return false;
23   }
24   return true;
25 }
26 |
```

- ➔ Prints Error message if input empty or whitespace
- ➔ Ask user to re-enter valid data.

```
C:\Users\Lenovo\SUMMER .2024\SIC\Brackets_Nodejs\NodeExample>node Nodejs2.js
Please enter your input:
Error: Input cannot be empty or whitespace!
Please enter your input:
Error: Input cannot be empty or whitespace!
Please enter your input:
```

Main Flow:

```
--
51 ▾ async function main() {
52     let validInput = false;
53     let input = '';
54
55     while (!validInput) {
56         input = await promptUserInput();
57         if (validateInput(input)) {
58             validInput = true;
59         }
60     }
61     rl.question('Choose method for saving input (1 for .then, 2 for async/await): ', async (choice) => {
62         if (choice === '1') {
63             writeFileWithThen(input)
64                 .then((message) => console.log(message))
65                 .catch((error) => console.error(error));
66         } else if (choice === '2') {
67             await writeFileWithAsync(input);
68         } else {
69             console.log('Invalid choice. Please restart and choose 1 or 2.');
```