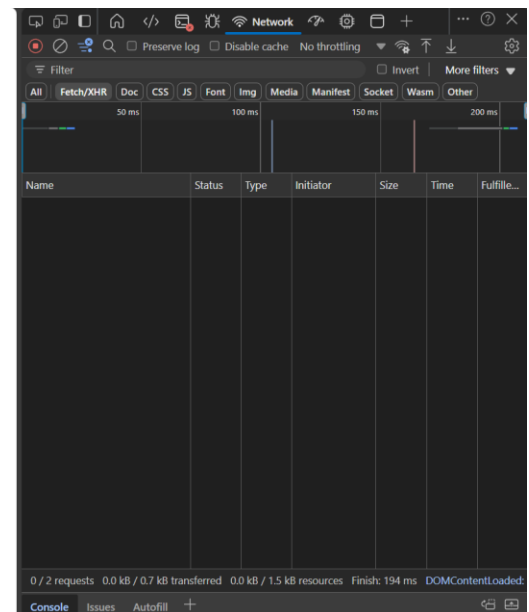


Practical Assignment- 1

1. Develop nodejs application with following requirements:
 - Develop a route `"/gethello"` with GET method. It displays `"Hello NodeJS!!"` as response.
 - Make an HTML page and display.
 - Call `"/gethello"` route from HTML page using AJAX call. (Any frontend AJAX call API can be used.)

Node.js AJAX Example

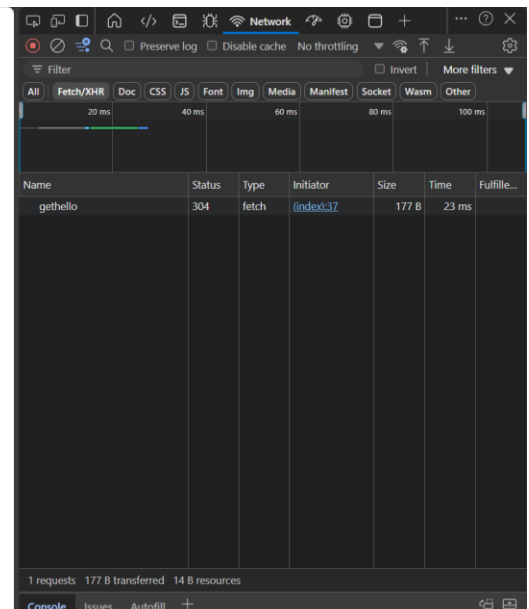
Call /gethello



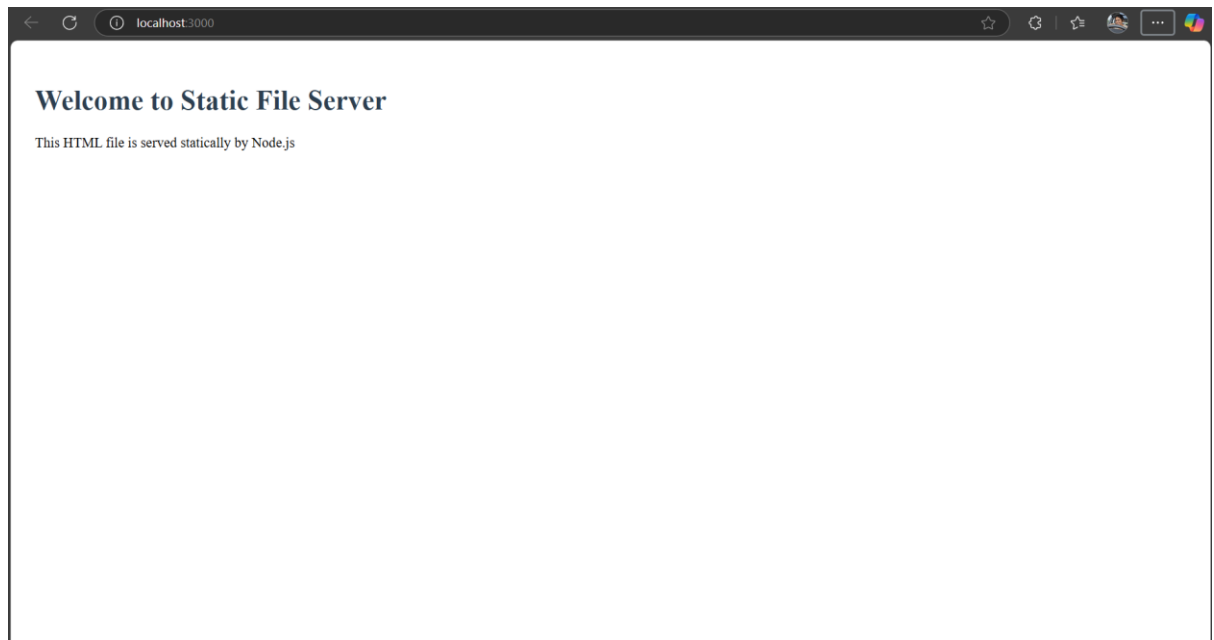
Node.js AJAX Example

Call /gethello

Hello NodeJS!!



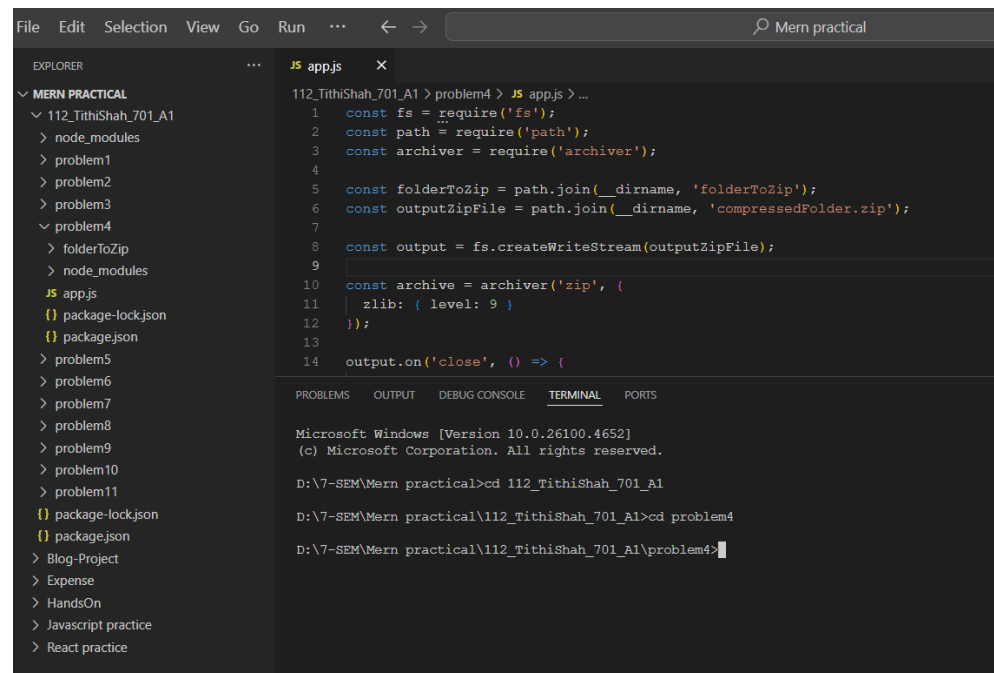
2. Develop a web server which serves static resources.



3. Develop a module for domain specific chatbot and use it in a command line application.

```
D:\7-SEM\Mern practical\112 TithiShah 701 A1\problem3>node app.js
Chatbot: Hello! Ask me about weather or facts. Type 'bye' to exit.
You: hi
Chatbot: Hey! How can I help?
You: tell me about weather
Chatbot: Cloudy with a chance of meatballs.
You: fact
Chatbot: The sky is blue.
You: another fact
Chatbot: Node.js is awesome!
You: bye
Chatbot: See you later!
```

4. Write a program to create a compressed zip file for a folder.



```
File Edit Selection View Go Run ... ← → Memn practical
```

EXPLORER

- 112_TithiShah_701_A1
 - node_modules
 - problem1
 - problem2
 - problem3
 - problem4
 - folderToZip
 - node_modules
 - app.js
 - package-lock.json
 - package.json
 - problem5
 - problem6
 - problem7
 - problem8
 - problem9
 - problem10
 - problem11
 - package-lock.json
 - package.json
 - Blog-Project
 - Expense
 - HandsOn
 - Javascript practice
 - React practice

112_TithiShah_701_A1 > problem4 > JS app.js > ...

```
1 const fs = require('fs');
2 const path = require('path');
3 const archiver = require('archiver');
4
5 const folderToZip = path.join(__dirname, 'folderToZip');
6 const outputZipFile = path.join(__dirname, 'compressedFolder.zip');
7
8 const output = fs.createWriteStream(outputZipFile);
9
10 const archive = archiver('zip', {
11   zlib: { level: 9 }
12 });
13
14 output.on('close', () => {
```

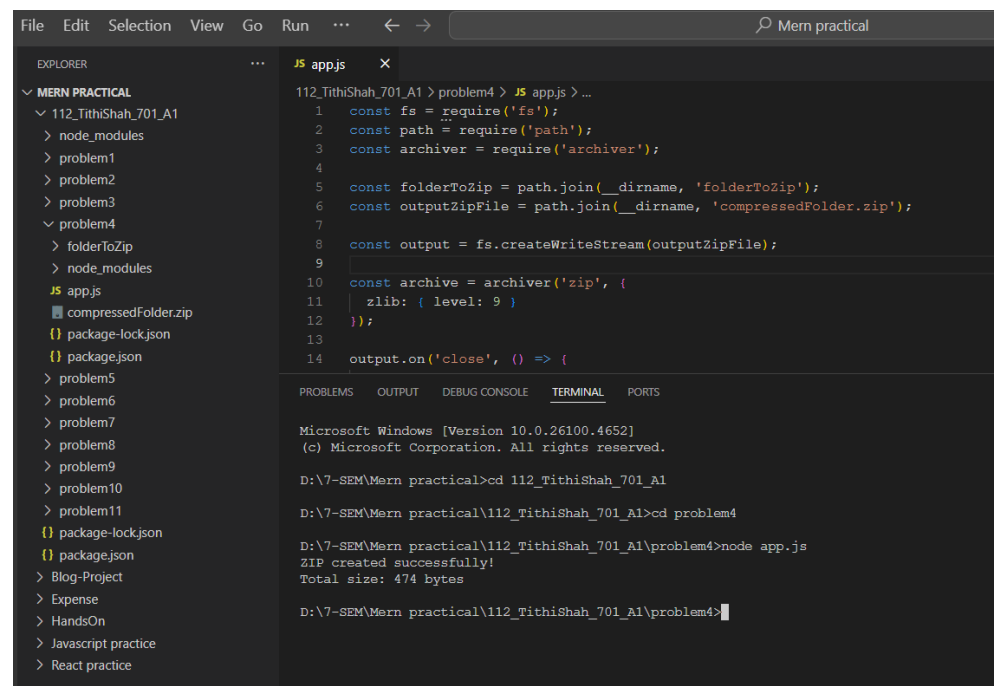
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

Microsoft Windows [Version 10.0.26100.4652]
(c) Microsoft Corporation. All rights reserved.

D:\7-SEM\Mern practical>cd 112_TithiShah_701_A1

D:\7-SEM\Mern practical\112_TithiShah_701_A1>cd problem4

D:\7-SEM\Mern practical\112_TithiShah_701_A1\problem4>



```
File Edit Selection View Go Run ... ← → Memn practical
```

EXPLORER

- 112_TithiShah_701_A1
 - node_modules
 - problem1
 - problem2
 - problem3
 - problem4
 - folderToZip
 - node_modules
 - app.js
 - compressedFolder.zip
 - package-lock.json
 - package.json
 - problem5
 - problem6
 - problem7
 - problem8
 - problem9
 - problem10
 - problem11
 - package-lock.json
 - package.json
 - Blog-Project
 - Expense
 - HandsOn
 - Javascript practice
 - React practice

112_TithiShah_701_A1 > problem4 > JS app.js > ...

```
1 const fs = require('fs');
2 const path = require('path');
3 const archiver = require('archiver');
4
5 const folderToZip = path.join(__dirname, 'folderToZip');
6 const outputZipFile = path.join(__dirname, 'compressedFolder.zip');
7
8 const output = fs.createWriteStream(outputZipFile);
9
10 const archive = archiver('zip', {
11   zlib: { level: 9 }
12 });
13
14 output.on('close', () => {
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

Microsoft Windows [Version 10.0.26100.4652]
(c) Microsoft Corporation. All rights reserved.

D:\7-SEM\Mern practical>cd 112_TithiShah_701_A1

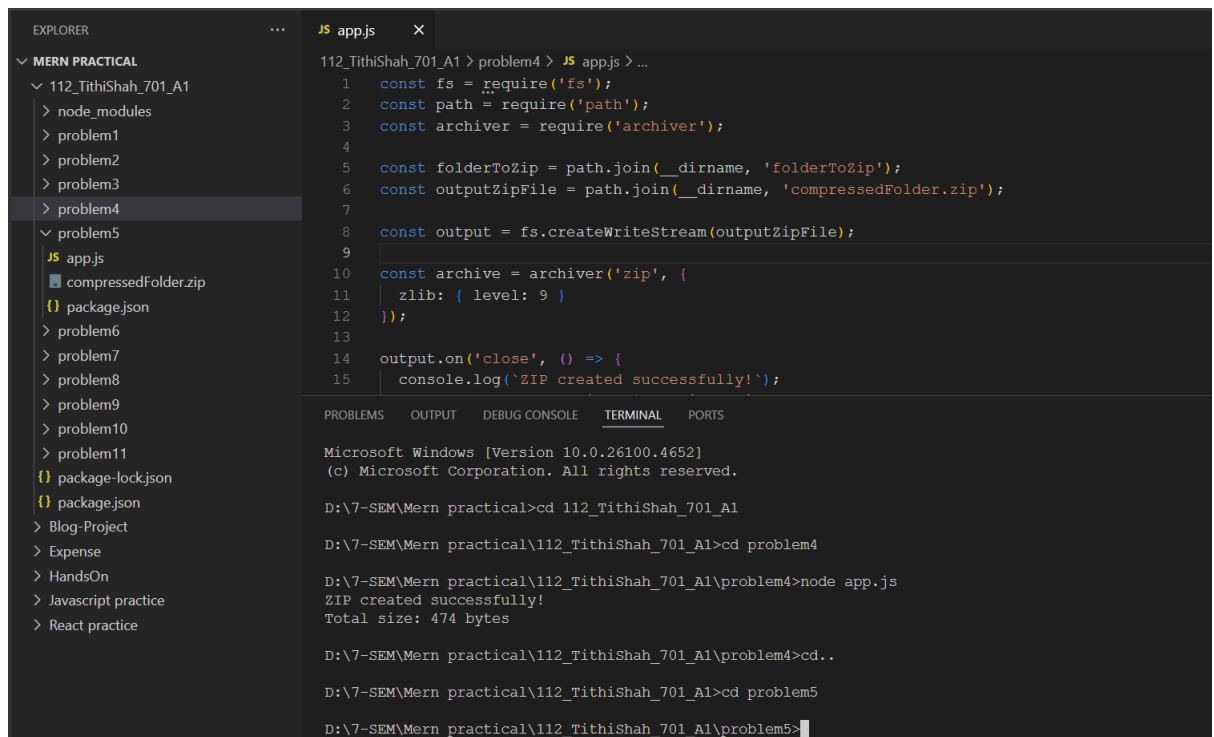
D:\7-SEM\Mern practical\112_TithiShah_701_A1>cd problem4

D:\7-SEM\Mern practical\112_TithiShah_701_A1\problem4>node app.js

ZIP created successfully!
Total size: 474 bytes

D:\7-SEM\Mern practical\112_TithiShah_701_A1\problem4>

5. Write a program to extract a zip file.



The screenshot shows the VS Code interface with the Explorer, Source Control, and Run and Debug panels. The Explorer panel shows the file structure of a project named 'MERN PRACTICAL'. The file 'app.js' is selected in the 'problem5' folder. The Source Control panel shows the changes made to 'app.js'. The Run and Debug panel shows the terminal output of the program.

```
112_TithiShah_701_A1 > problem4 > JS app.js > ...
1  const fs = require('fs');
2  const path = require('path');
3  const archiver = require('archiver');
4
5  const folderToZip = path.join(__dirname, 'folderToZip');
6  const outputZipFile = path.join(__dirname, 'compressedFolder.zip');
7
8  const output = fs.createWriteStream(outputZipFile);
9
10 const archive = archiver('zip', {
11   zlib: { level: 9 }
12 });
13
14 output.on('close', () => {
15   console.log(`ZIP created successfully!`);
16 });
```

Microsoft Windows [Version 10.0.26100.4652]
(c) Microsoft Corporation. All rights reserved.

D:\7-SEM\Mern practical>cd 112_TithiShah_701_A1

D:\7-SEM\Mern practical\112_TithiShah_701_A1>cd problem4

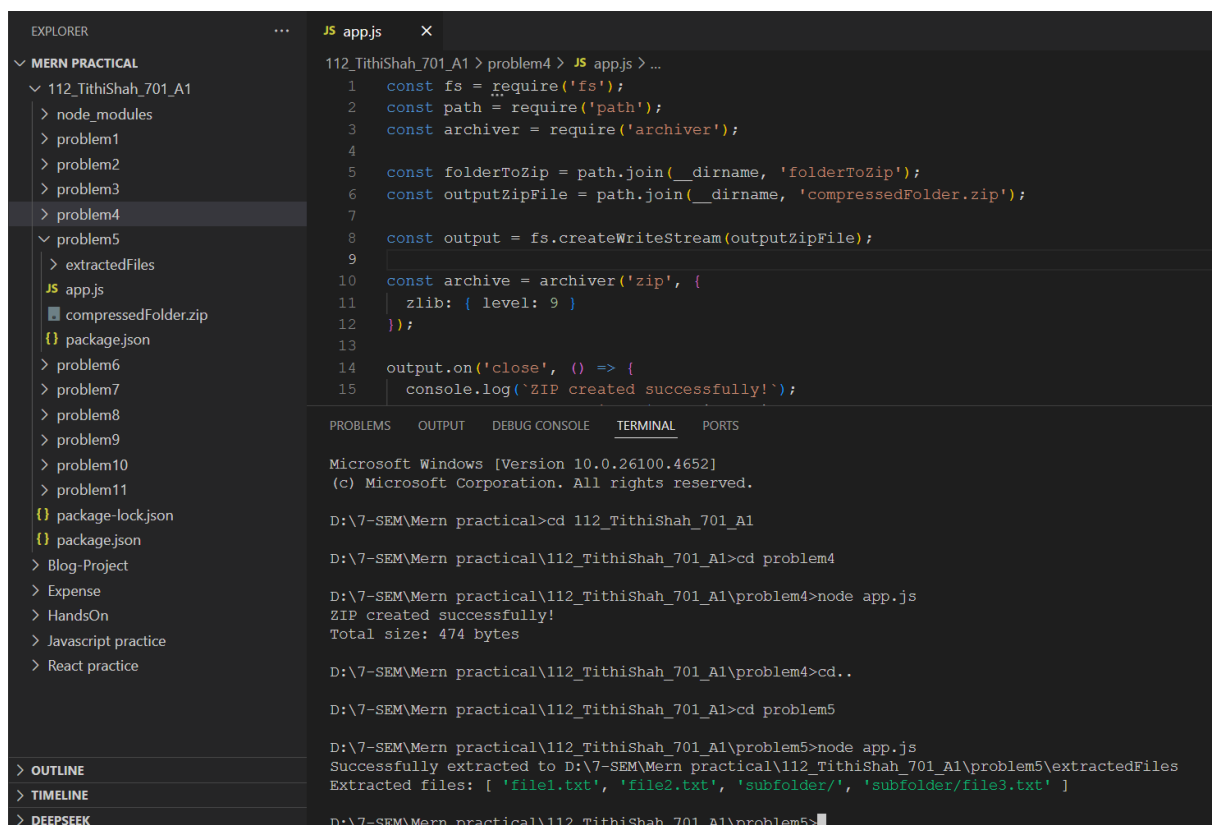
D:\7-SEM\Mern practical\112_TithiShah_701_A1\problem4>node app.js

ZIP created successfully!
Total size: 474 bytes

D:\7-SEM\Mern practical\112_TithiShah_701_A1\problem4>cd..

D:\7-SEM\Mern practical\112_TithiShah_701_A1>cd problem5

D:\7-SEM\Mern practical\112_TithiShah_701_A1\problem5>



The screenshot shows the VS Code interface with the Explorer, Source Control, and Run and Debug panels. The Explorer panel shows the file structure of a project named 'MERN PRACTICAL'. The file 'app.js' is selected in the 'problem5' folder. The Source Control panel shows the changes made to 'app.js'. The Run and Debug panel shows the terminal output of the program.

```
112_TithiShah_701_A1 > problem4 > JS app.js > ...
1  const fs = require('fs');
2  const path = require('path');
3  const archiver = require('archiver');
4
5  const folderToZip = path.join(__dirname, 'folderToZip');
6  const outputZipFile = path.join(__dirname, 'compressedFolder.zip');
7
8  const output = fs.createWriteStream(outputZipFile);
9
10 const archive = archiver('zip', {
11   zlib: { level: 9 }
12 });
13
14 output.on('close', () => {
15   console.log(`ZIP created successfully!`);
16 });
```

Microsoft Windows [Version 10.0.26100.4652]
(c) Microsoft Corporation. All rights reserved.

D:\7-SEM\Mern practical>cd 112_TithiShah_701_A1

D:\7-SEM\Mern practical\112_TithiShah_701_A1>cd problem4

D:\7-SEM\Mern practical\112_TithiShah_701_A1\problem4>node app.js

ZIP created successfully!
Total size: 474 bytes

D:\7-SEM\Mern practical\112_TithiShah_701_A1\problem4>cd..

D:\7-SEM\Mern practical\112_TithiShah_701_A1>cd problem5

D:\7-SEM\Mern practical\112_TithiShah_701_A1\problem5>node app.js

Successfully extracted to D:\7-SEM\Mern practical\112_TithiShah_701_A1\problem5\extractedFiles
Extracted files: ['file1.txt', 'file2.txt', 'subfolder/', 'subfolder/file3.txt']

D:\7-SEM\Mern practical\112_TithiShah_701_A1\problem5>

6. Write a program to promisify fs.unlink function and call it.

The screenshot shows the VS Code interface with the Explorer on the left and the Editor on the right. The Explorer shows a project structure with a folder named '112_TithiShah_701_A1' containing several 'problem' subfolders. The Editor shows the 'app.js' file with the following code:

```
112_TithiShah_701_A1 > problem6 > JS app.js > deleteFile
1  const fs = require('fs');
2  const util = require('util');
3
4  const unlinkAsync = util.promisify(fs.unlink);
5
6  async function deleteFile(filePath) {
7      try {
8          await unlinkAsync(filePath);
9          console.log(`Successfully deleted ${filePath}`);
10     }
```

The bottom panel shows the 'TERMINAL' tab with the following commands and output:

```
Microsoft Windows [Version 10.0.26100.4652]
(c) Microsoft Corporation. All rights reserved.

D:\7-SEM\Mern practical>cd 112_TithiShah_701_A1

D:\7-SEM\Mern practical\112_TithiShah_701_A1>cd problem6

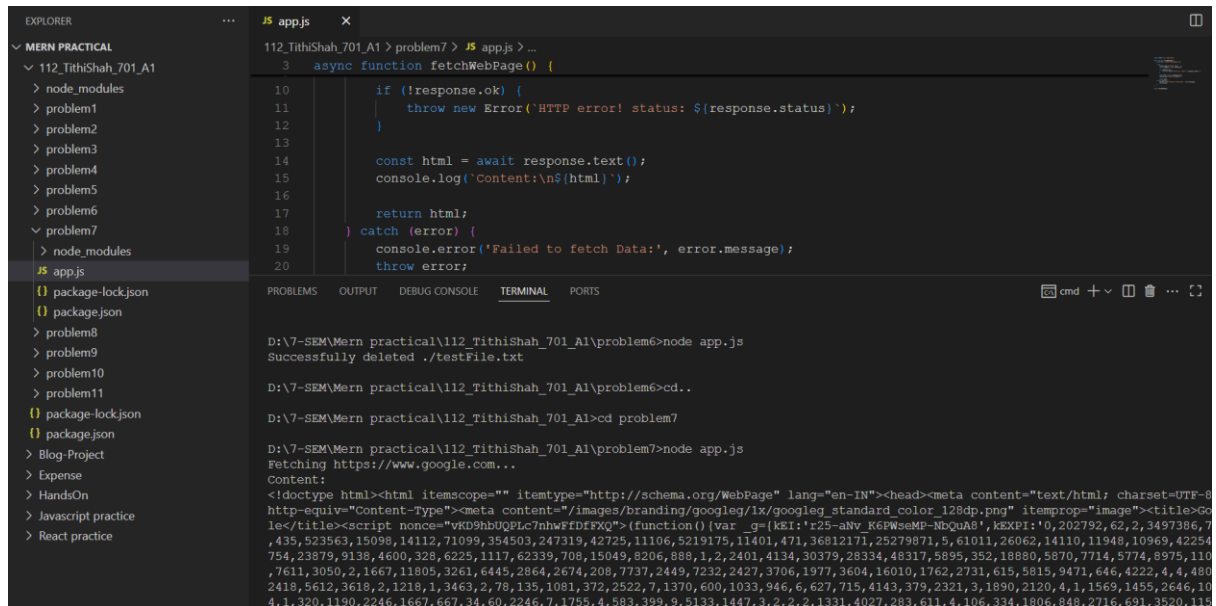
D:\7-SEM\Mern practical\112_TithiShah_701_A1\problem6>
```

The screenshot shows the same VS Code interface as the previous one, but now the 'deleteFile' function is being called. The code in 'app.js' is the same as before. The 'TERMINAL' tab shows the following commands and output:

```
D:\7-SEM\Mern practical\112_TithiShah_701_A1\problem6>node app.js
Successfully deleted ./testFile.txt

D:\7-SEM\Mern practical\112_TithiShah_701_A1\problem6>
```

7. Fetch data of google page using node-fetch using async-await model.



```
112_TithiShah_701_A1 > problem7 > JS app.js > ...
3 async function fetchWebPage() {
10     if (!response.ok) {
11         throw new Error('HTTP error! status: ${response.status}');
12     }
13
14     const html = await response.text();
15     console.log(`Content:\n${html}`);
16
17     return html;
18 } catch (error) {
19     console.error('Failed to fetch Data:', error.message);
20     throw error;
}
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

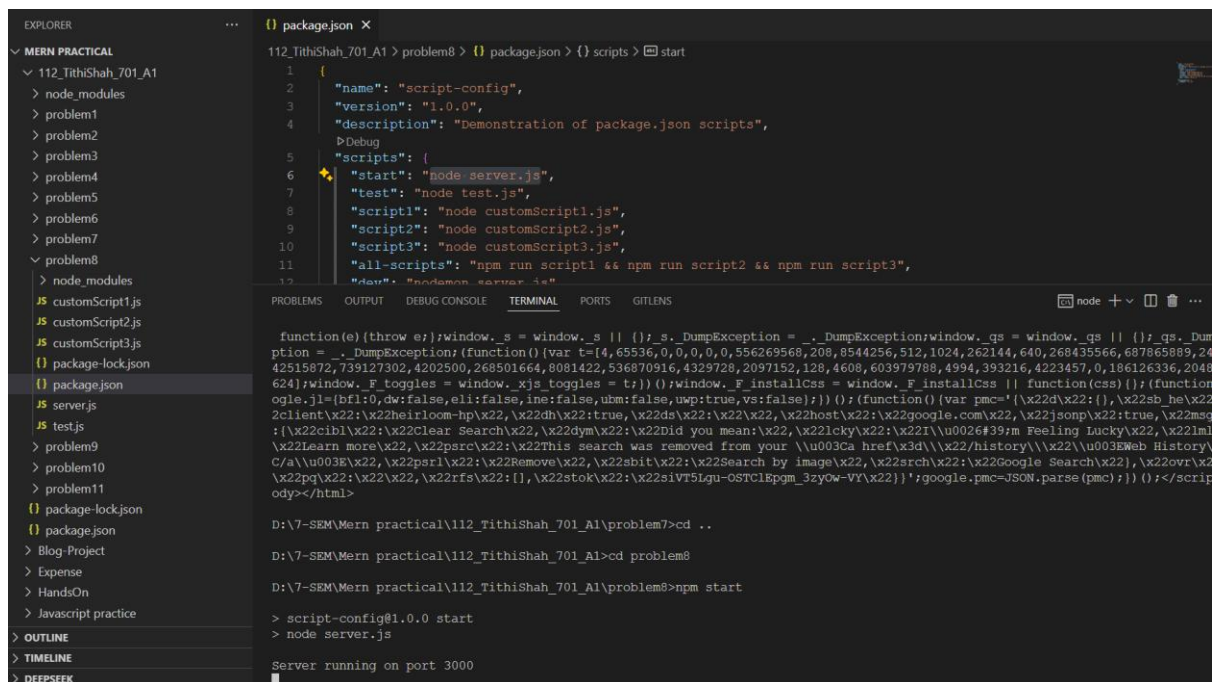
D:\7-SEM\Wern practical\112_TithiShah_701_A1\problem6>node app.js
Successfully deleted ./testFile.txt

D:\7-SEM\Wern practical\112_TithiShah_701_A1\problem6>cd..

D:\7-SEM\Wern practical\112_TithiShah_701_A1>cd problem7

D:\7-SEM\Wern practical\112_TithiShah_701_A1\problem7>node app.js
Fetching https://www.google.com...
Content:
<!doctype html><html itemscope="" itemtype="http://schema.org/WebPage" lang="en-IN"><head><meta content="text/html; charset=UTF-8" http-equiv="Content-Type"><meta content="/images/branding/google/lx/google_standard_color_128dp.png" itemprop="image"><title>Google</title><script nonce="vKD9hbUQPLc7nhwFdfFXQ">(function() {var _g={kEI:'r25-aNv_K6FWseMP-NbQuA8',kEXPI:'0,202792,62,2,3497386,7,435,523563,15098,14112,71099,354503,247319,42725,11106,5219175,11401,471,36812171,25279871,5,61011,26062,14110,11948,10969,42254,754,23879,9138,4600,328,6225,1117,62339,708,15049,8206,888,1,2,2401,4134,30379,28334,48317,5895,352,18880,5870,7714,5774,8975,110,7611,3050,2,1667,11805,3261,6445,2864,2674,208,7737,2449,7232,2427,3706,1977,3604,16010,1762,2731,615,5815,9471,646,4222,4,4,480,2418,5612,3618,2,1218,1,3463,2,78,135,1081,372,2522,7,1370,600,1033,946,6,627,715,4143,379,2321,3,1890,2120,4,1,1569,1455,2646,10,4,1,320,1190,2246,1667,667,34,60,2246,7,1755,4,583,399,9,5133,1447,3,2,2,2,1331,4027,283,611,4,106,334,1806,848,2716,691,3520,119

8. Set a server script, a test script and 3 user defined scripts in package.json file in your nodejs application.



```
112_TithiShah_701_A1 > problem8 > {} package.json > {} scripts > start
1 {
2     "name": "script-config",
3     "version": "1.0.0",
4     "description": "Demonstration of package.json scripts",
5     "scripts": {
6         "start": "node server.js",
7         "test": "node test.js",
8         "script1": "node customScript1.js",
9         "script2": "node customScript2.js",
10        "script3": "node customScript3.js",
11        "all-scripts": "npm run script1 && npm run script2 && npm run script3",
12        "dev": "nodemon server.js"
13    }
14 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS GITLENS

D:\7-SEM\Wern practical\112_TithiShah_701_A1\problem7>cd ..

D:\7-SEM\Wern practical\112_TithiShah_701_A1>cd problem8

D:\7-SEM\Wern practical\112_TithiShah_701_A1\problem8>npm start

> script-config@1.0.0 start
> node server.js

Server running on port 3000

```
D:\7-SEM\Mern practical\112_TithiShah_701_A1\problem8>npm run script1
```

```
> script-config@1.0.0 script1  
> node customScript1.js
```

```
Custom Script 1: Current timestamp 2025-07-21T16:50:22.066Z
```

```
D:\7-SEM\Mern practical\112_TithiShah_701_A1\problem8>npm run script2
```

```
> script-config@1.0.0 script2  
> node customScript2.js
```

```
Custom Script 2: System Info  
Platform: win32  
CPU Cores: 12
```

```
D:\7-SEM\Mern practical\112_TithiShah_701_A1\problem8>npm run script3
```

```
> script-config@1.0.0 script3  
> node customScript3.js
```

```
Custom Script 3: Directory Contents  
- customScript1.js  
- customScript2.js  
- customScript3.js  
- node_modules  
- package-lock.json  
- package.json  
- server.js  
- test.js
```

```
D:\7-SEM\Mern practical\112_TithiShah_701_A1\problem8>
```

```
D:\7-SEM\Mern practical\112_TithiShah_701_A1\problem8>npm test
```

```
> script-config@1.0.0 test  
> node test.js
```

```
All tests passed!
```

```
D:\7-SEM\Mern practical\112_TithiShah_701_A1\problem8>
```

9. A program which calls useful functions in fs module.

```

D:\7-SEM\Mern practical\112_TithiShah_701_A1\problem9>node app.js
Created test directory
Created subdirectory
File written successfully
File content: Hello FS Module!
Content appended
File renamed
Directory contents: [ 'newDir', 'renamed.txt' ]
File stats: { size: 35, modified: 2025-07-21T16:52:30.115Z, isFile: true }
File copied
Watching for file changes...

```

10. A program which uses global objects in nodejs.

```

D:\7-SEM\Mern practical\112_TithiShah_701_A1\problem10>node app.js
File path: D:\7-SEM\Mern practical\112_TithiShah_701_A1\problem10\app.js
Directory path: D:\7-SEM\Mern practical\112_TithiShah_701_A1\problem10

=== Process Information ===
Node version: v22.17.0
Platform: win32
Current working directory: D:\7-SEM\Mern practical\112_TithiShah_701_A1\problem10
Environment variables: 61 variables found

Buffer content: <Buffer 48 65 6c 6c 6f 20 47 6c 6f 62 61 6c 20 4f 62 6a 65 63 74 73>
Buffer to string: Hello Global Objects

Timers demonstration:
This is an error message
This is a warning

```

(index)	a	b
0	1	2
1	3	4

```

URL parts:
Hostname: example.com
Path: /path
Query params: Tithi

Utility globals:
Current directory files: [ 'app.js', 'globalsHelper.js', 'package.json' ]
Is 10 > 5? 10 > 5 is true

=== Module Wrapper Demonstration ===
This code runs in its own module scope
Filename in helper: D:\7-SEM\Mern practical\112_TithiShah_701_A1\problem10\globalsHelper.js
This executes after 1 second
This executes every 2 seconds
This executes every 2 seconds
Stopped the interval

D:\7-SEM\Mern practical\112_TithiShah_701_A1\problem10>

```

11. Develop a useful package and publish it on npmjs.com

tinytimeago_tithi
1.0.0 • [Public](#) • Published 2 minutes ago

[📖 Readme](#) [📄 Code](#) [Beta](#) [📦 0 Dependencies](#) [🔗 0 Dependents](#) [📦 1 Versions](#) [⚙️ Settings](#)

tinytimeago

A super tiny function to convert Date to time-ago format

Usage

```
const timeago = require('tinytimeago');

console.log(timeago(new Date(Date.now() - 90 * 1000))); // "1 minute ago"
```

Install

Install

> npm i tinytimeago_tithi

📄

Version	License
1.0.0	MIT
Unpacked Size	Total Files
1.12 kB	3
Last publish	
2 minutes ago	