Name : Dhodiya Krupali R.
Roll No : 11
MSC - ICT (Sem-3)

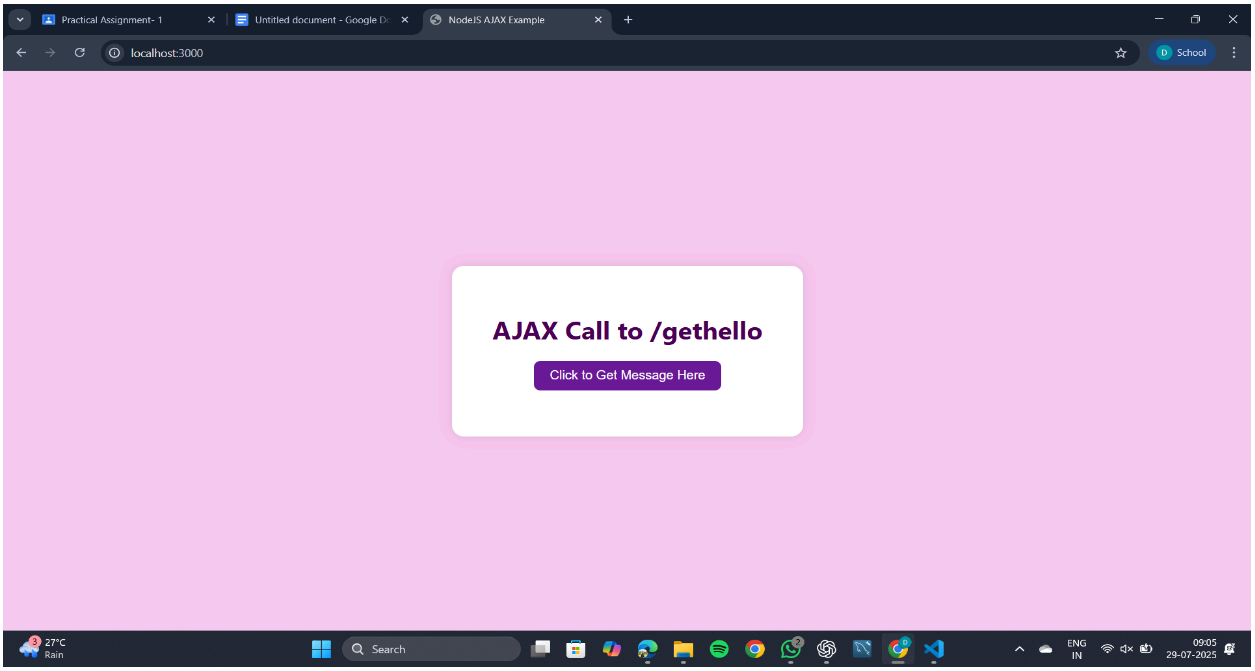
Practical Assignment- 1

GitHub Link : https://github.com/Krupali119/11_Krupali_dhodiya_701_A1

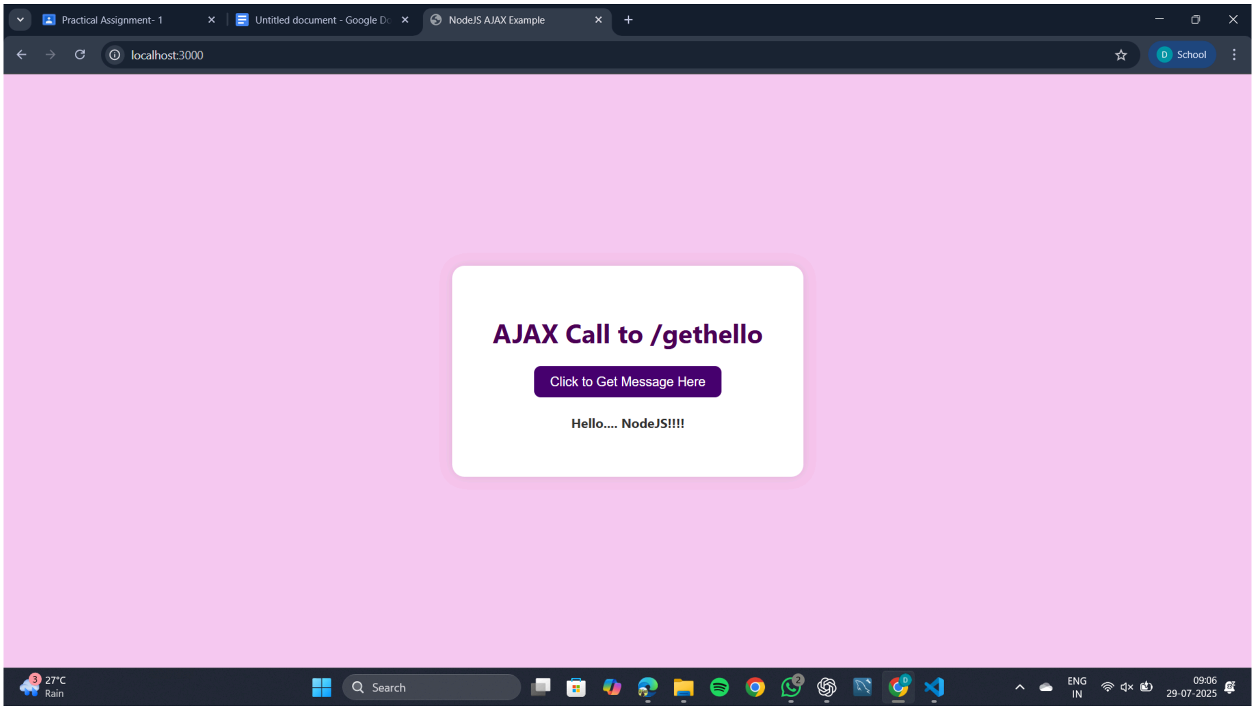
Q.1. Develop nodejs application with following requirements:

- **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.)**

Output :



AJAX Call to /gethello

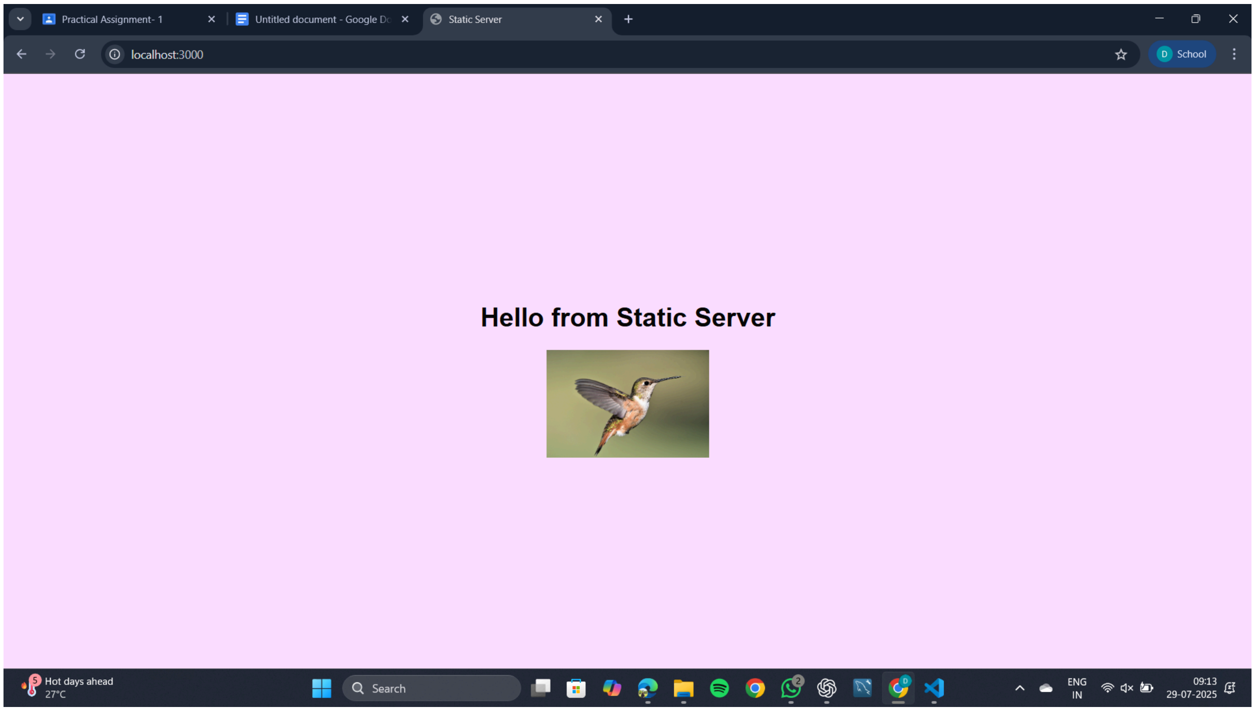


AJAX Call to /gethello

Hello.... NodeJS!!!!

Q.2. Develop a web server which serves static resources.

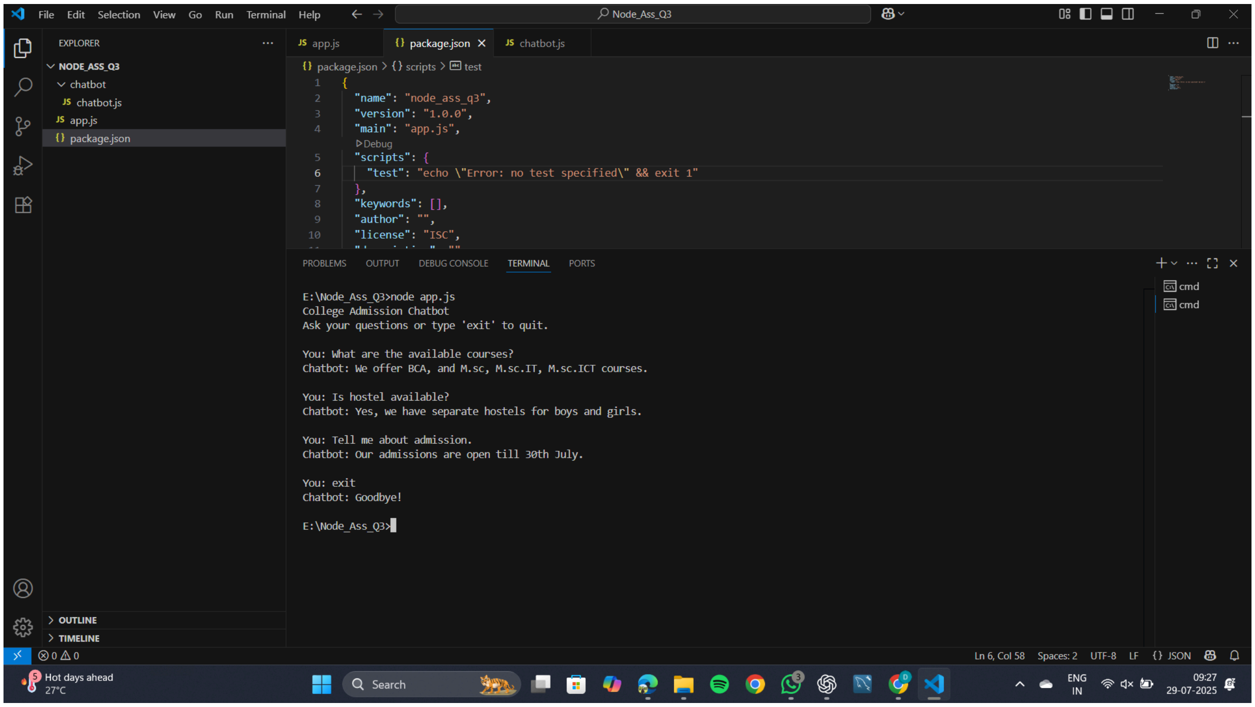
Output :



Hello from Static Server

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

Output :

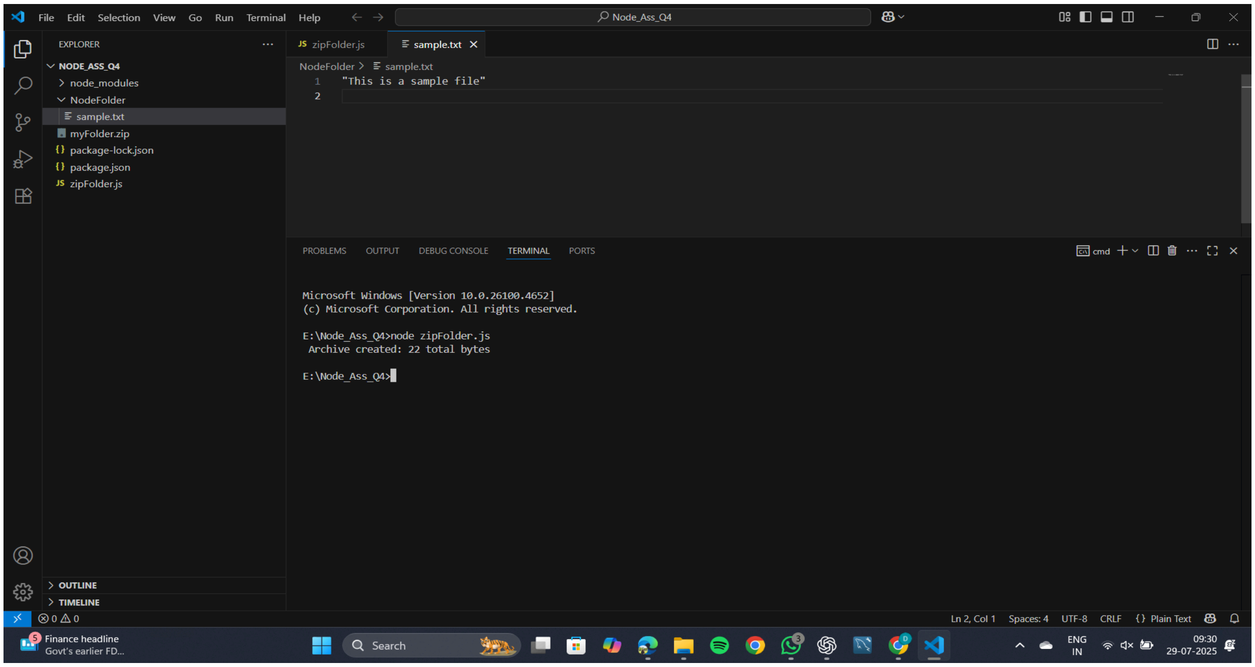


```json
{
  "name": "node_ass_q3",
  "version": "1.0.0",
  "main": "app.js",
  "scripts": {
    "test": "echo \"Error: no test specified\" && exit 1"
  },
  "keywords": [],
  "author": "",
  "license": "ISC",
```

```
E:\Node_Ass_Q3>node app.js
College Admission Chatbot
Ask your questions or type 'exit' to quit.

You: What are the available courses?
Chatbot: We offer BCA, and M.sc, M.sc.IT, M.sc.ICT courses.

You: Is hostel available?
Chatbot: Yes, we have separate hostels for boys and girls.

You: Tell me about admission.
Chatbot: Our admissions are open till 30th July.

You: exit
Chatbot: Goodbye!

E:\Node_Ass_Q3>
```

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

Output :

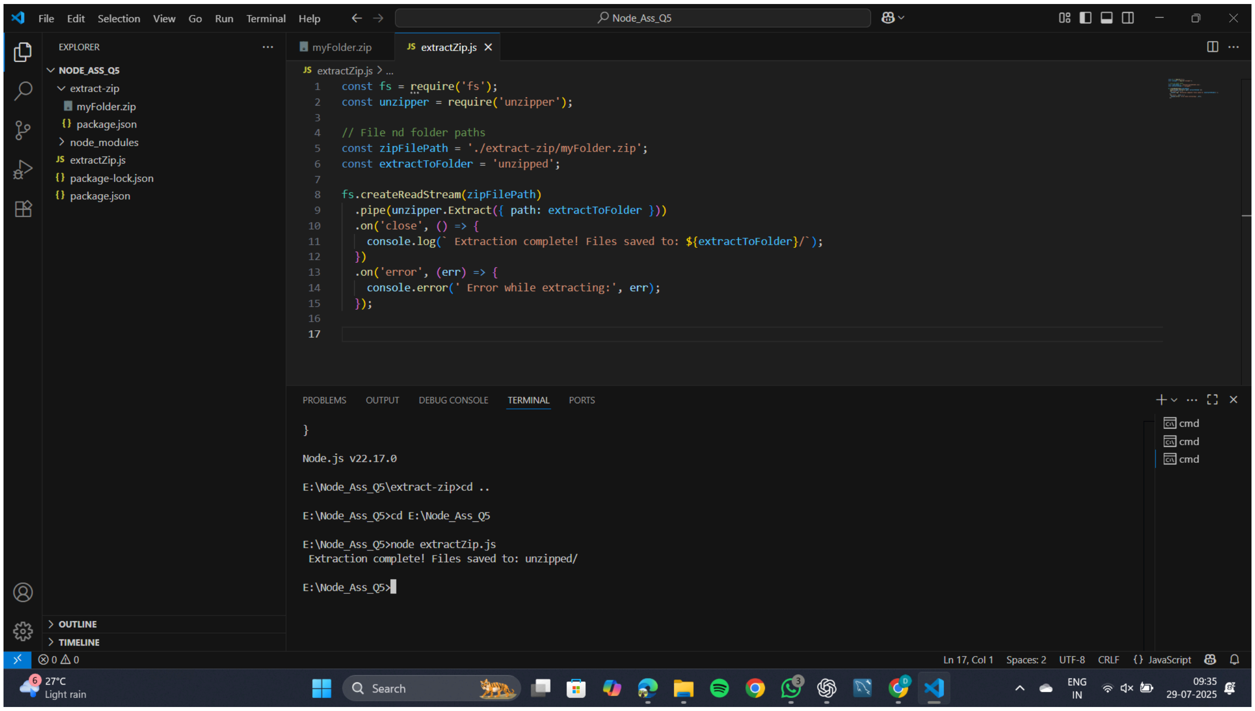


```
"This is a sample file"
```

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

E:\Node_Ass_Q4>node zipFolder.js
 Archive created: 22 total bytes

E:\Node_Ass_Q4>
```

Q.5. Write a program to extract a zip file.

Output :

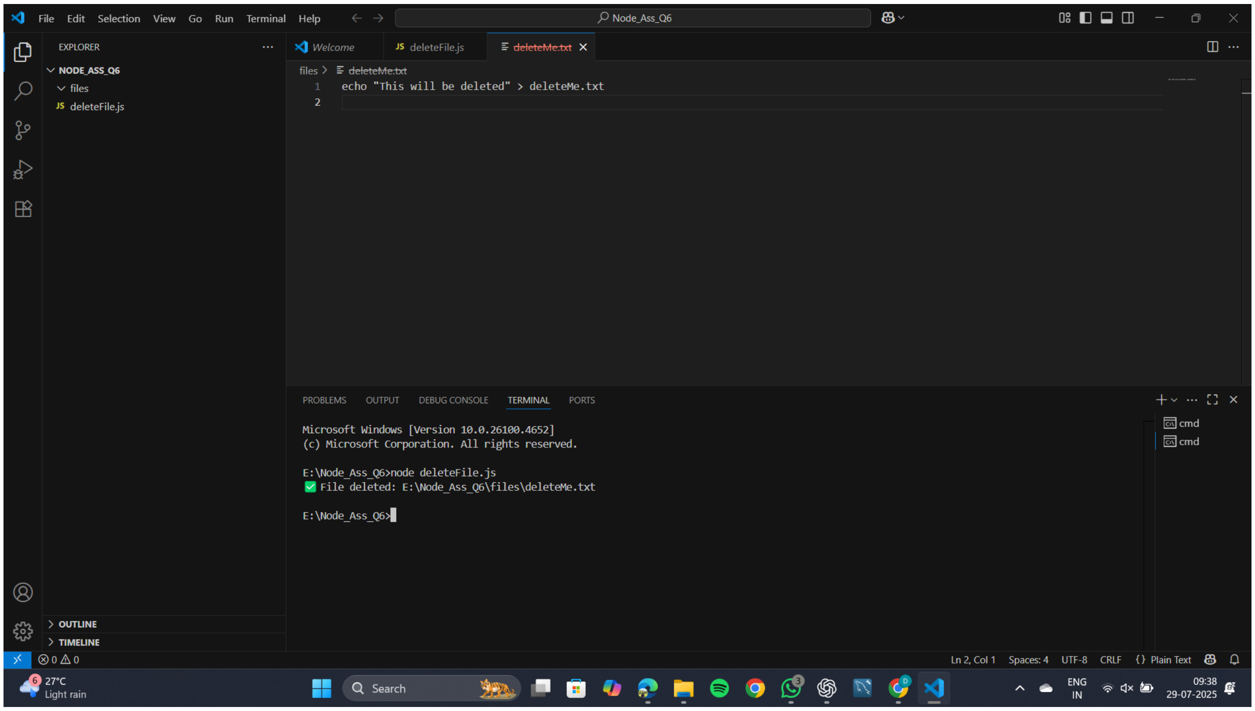


```javascript
const fs = require('fs');
const unzipper = require('unzipper');

// File nd folder paths
const zipFilePath = './extract-zip/myFolder.zip';
const extractToFolder = 'unzipped';

fs.createReadStream(zipFilePath)
  .pipe(unzipper.Extract({ path: extractToFolder }))
  .on('close', () => {
    console.log(` Extraction complete! Files saved to: ${extractToFolder}/`);
  })
  .on('error', (err) => {
    console.error(' Error while extracting:', err);
  });

```

```
}

Node.js v22.17.0

E:\Node_Ass_Q5\extract-zip>cd ..

E:\Node_Ass_Q5>cd E:\Node_Ass_Q5

E:\Node_Ass_Q5>node extractZip.js
 Extraction complete! Files saved to: unzipped/

E:\Node_Ass_Q5>
```

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

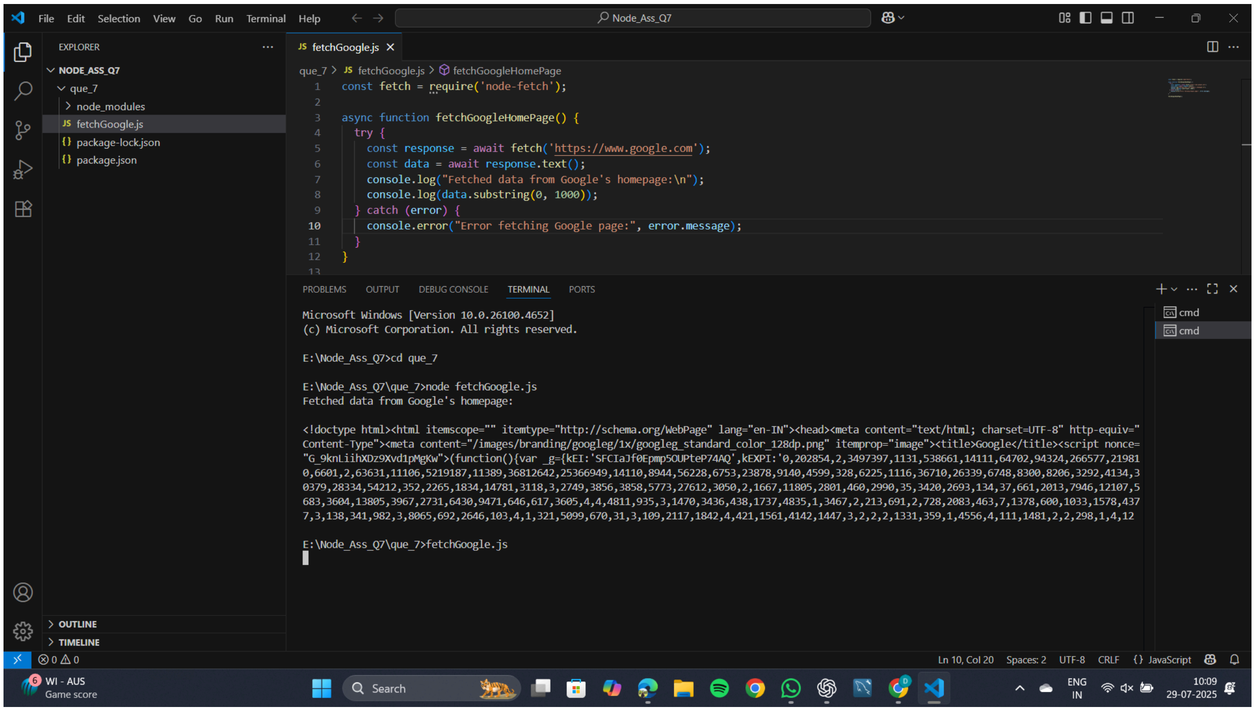
Output :



```
echo "This will be deleted" > deleteMe.txt

```

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

E:\Node_Ass_Q6>node deleteFile.js
✅ File deleted: E:\Node_Ass_Q6\files\deleteMe.txt

E:\Node_Ass_Q6>
```

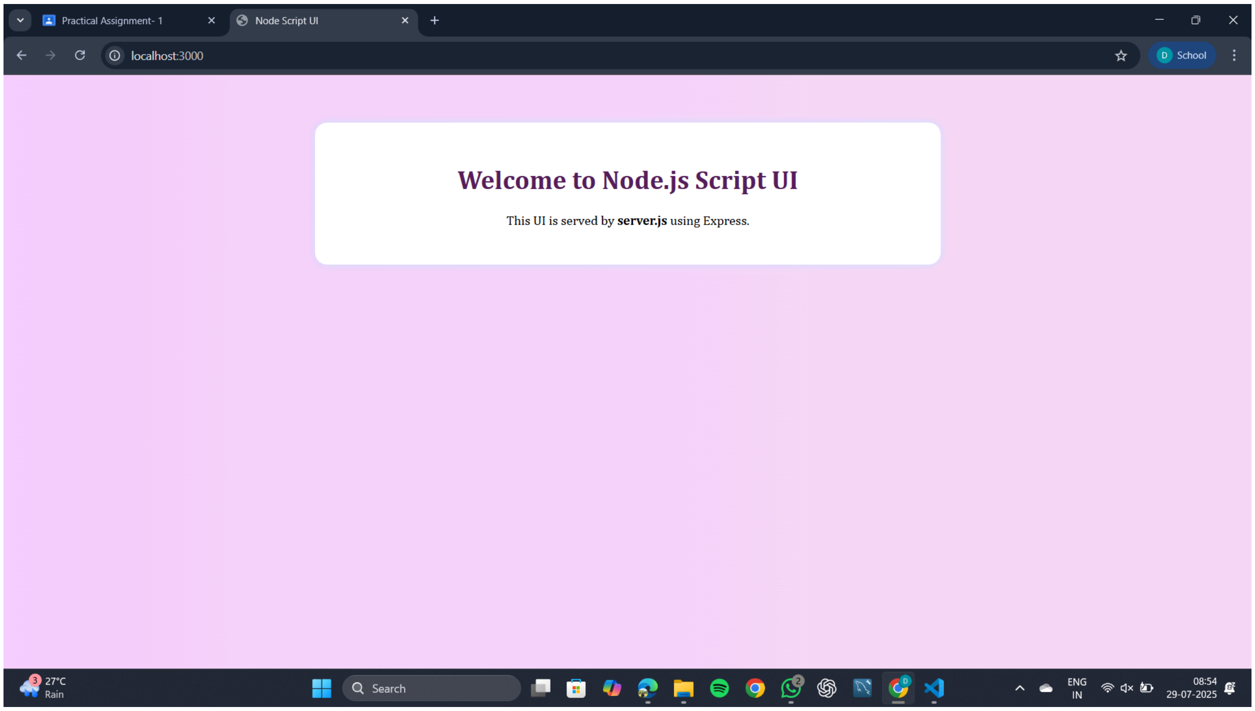
Q.7. Fetch data of google page using note-fetch using async-await model.



```
const fetch = require('node-fetch');

async function fetchGoogleHomePage() {
  try {
    const response = await fetch('https://www.google.com');
    const data = await response.text();
    console.log("Fetched data from Google's homepage:\n");
    console.log(data.substring(0, 1000));
  } catch (error) {
    console.error("Error fetching Google page:", error.message);
  }
}
```

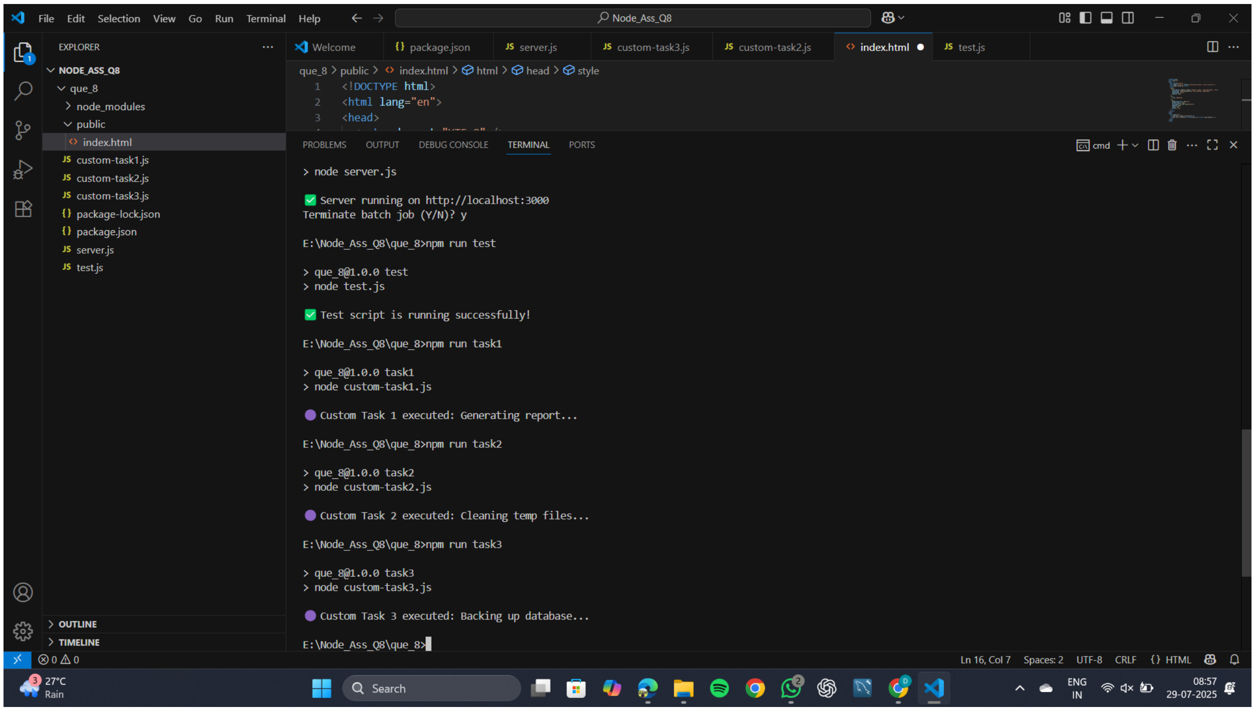
```
Microsoft Windows [Version 10.0.26100.4652]
(c) Microsoft Corporation. All rights reserved.

E:\Node_Ass_Q7>cd que_7

E:\Node_Ass_Q7\que_7>node fetchGoogle.js
Fetched data from Google's homepage:

<!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/googleg/1x/googleg_standard_color_128dp.png" itemprop="image"><title>Google</title><script nonce=
"G_9knLiihXDz9Xvd1pMgKw">(function(){var _g={kEI:'SFCIaJf0Epmp5OUPteP74AQ',kEXPI:'0,202854,2,3497397,1131,538661,14111,64702,94324,266577,21981
0,6601,2,63631,11106,5219187,11389,36812642,25366949,14110,8944,56228,6753,23878,9140,4599,328,6225,1116,36710,26339,6748,8300,8206,3292,4134,3
0379,28334,54212,352,2265,1834,14781,3118,3,2749,3856,3858,5773,27612,3050,2,1667,11805,2801,460,2990,35,3420,2693,134,37,661,2013,7946,12107,5
683,3604,13805,3967,2731,6430,9471,646,617,3605,4,4,4811,935,3,1470,3436,438,1737,4835,1,3467,2,213,691,2,728,2083,463,7,1378,600,1033,1578,437
7,3,138,341,982,3,8065,692,2646,103,4,1,321,5099,670,31,3,109,2117,1842,4,421,1561,4142,1447,3,2,2,2,1331,359,1,4556,4,111,1481,2,2,298,1,4,12

E:\Node_Ass_Q7\que_7>fetchGoogle.js
```

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



Welcome to Node.js Script UI

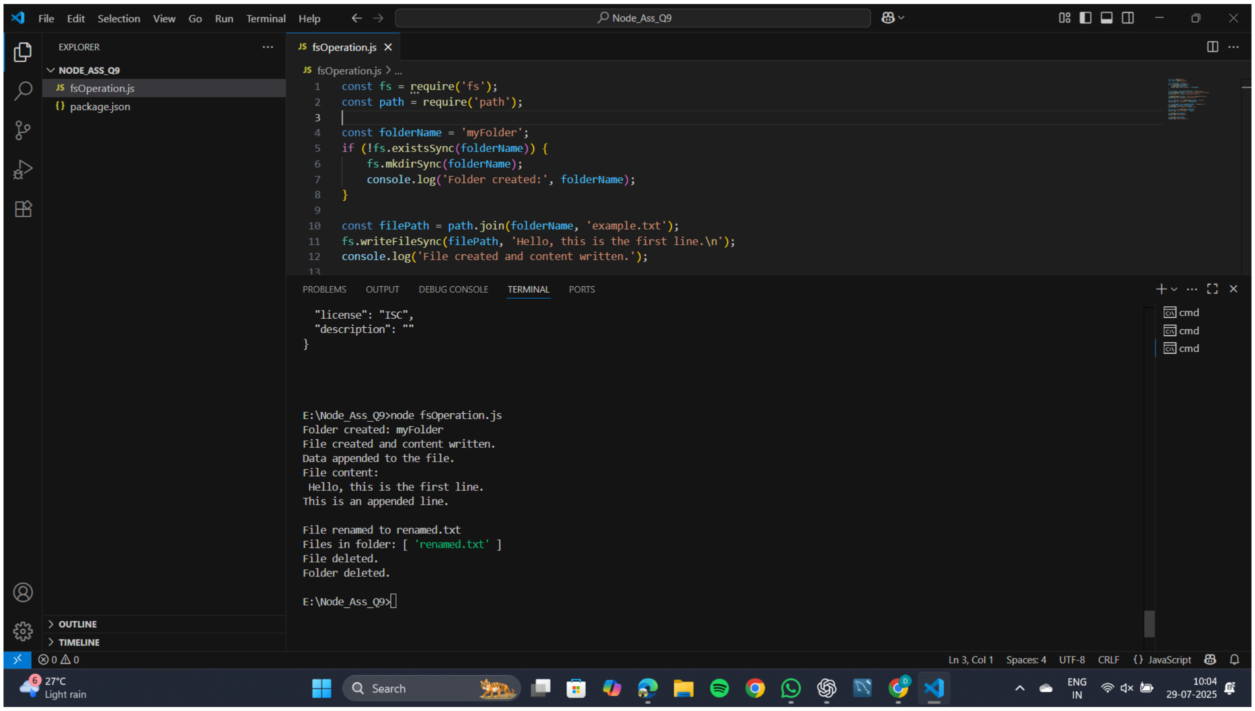
This UI is served by **server.js** using Express.



```html
<!DOCTYPE html>
<html lang="en">
<head>
```

```
> node server.js

✅ Server running on http://localhost:3000
Terminate batch job (Y/N)? y

E:\Node_Ass_Q8\que_8>npm run test

> que_8@1.0.0 test
> node test.js

✅ Test script is running successfully!

E:\Node_Ass_Q8\que_8>npm run task1

> que_8@1.0.0 task1
> node custom-task1.js

🟣 Custom Task 1 executed: Generating report...

E:\Node_Ass_Q8\que_8>npm run task2

> que_8@1.0.0 task2
> node custom-task2.js

🟣 Custom Task 2 executed: Cleaning temp files...

E:\Node_Ass_Q8\que_8>npm run task3

> que_8@1.0.0 task3
> node custom-task3.js

🟣 Custom Task 3 executed: Backing up database...

E:\Node_Ass_Q8\que_8>
```

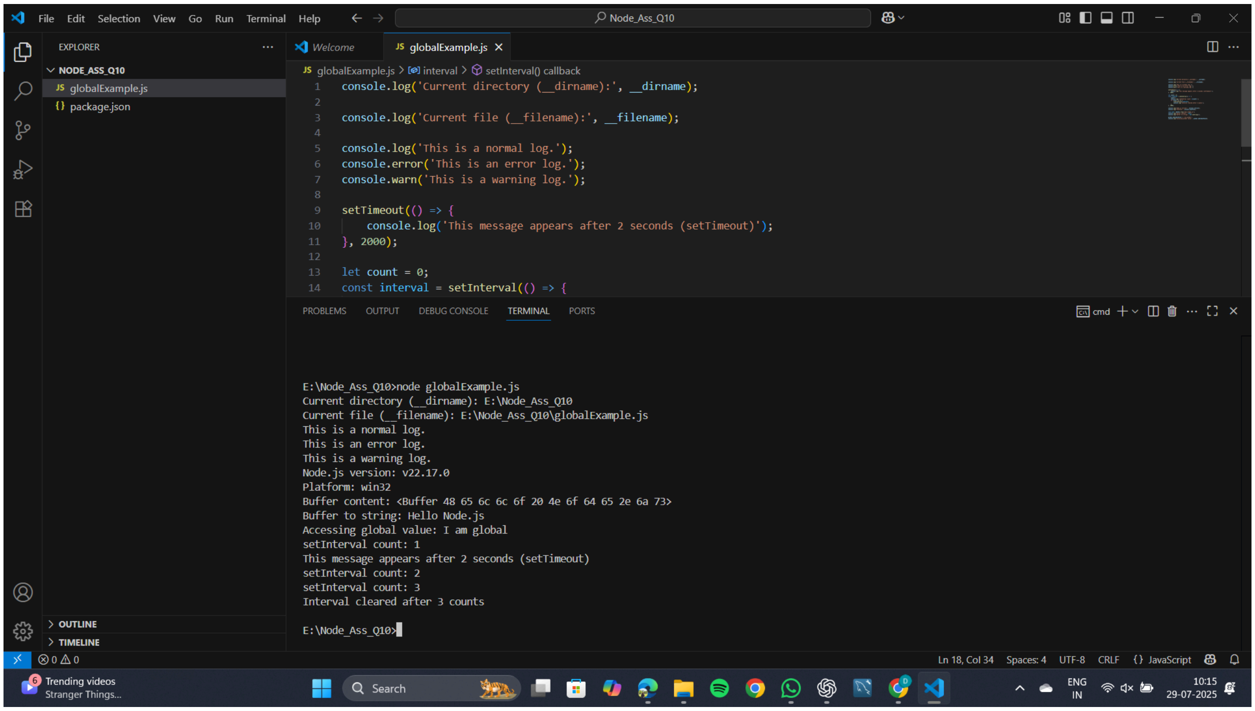
Q.9 A program which calls useful functions in fs modile.



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

const folderName = 'myFolder';
if (!fs.existsSync(folderName)) {
    fs.mkdirSync(folderName);
    console.log('Folder created:', folderName);
}

const filePath = path.join(folderName, 'example.txt');
fs.writeFileSync(filePath, 'Hello, this is the first line.\n');
console.log('File created and content written.');
```

```
  "license": "ISC",
  "description": ""
}



E:\Node_Ass_Q9>node fsOperation.js
Folder created: myFolder
File created and content written.
Data appended to the file.
File content:
 Hello, this is the first line.
This is an appended line.

File renamed to renamed.txt
Files in folder: [ 'renamed.txt' ]
File deleted.
Folder deleted.

E:\Node_Ass_Q9>
```

Q.10. A program which uses global objects in nodejs.

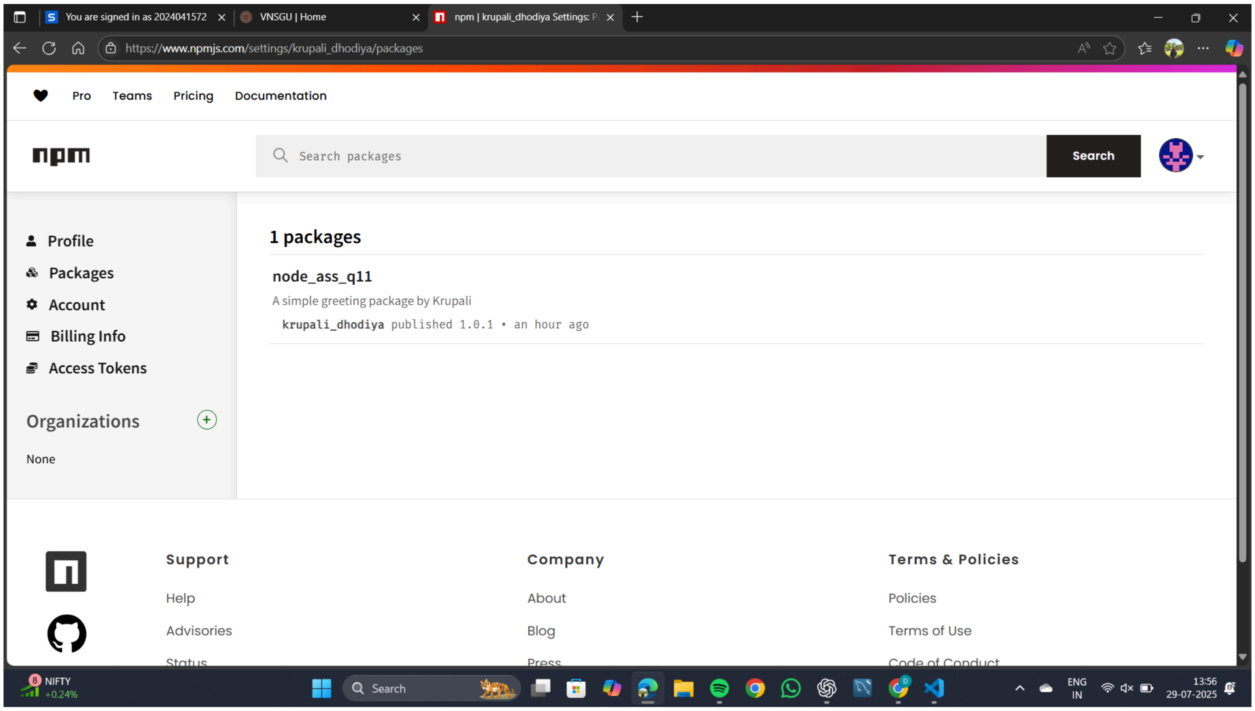


```javascript
console.log('Current directory (__dirname):', __dirname);

console.log('Current file (__filename):', __filename);

console.log('This is a normal log.');
console.error('This is an error log.');
console.warn('This is a warning log.');

setTimeout(() => {
    console.log('This message appears after 2 seconds (setTimeout)');
}, 2000);

let count = 0;
const interval = setInterval(() => {
```

```
E:\Node_Ass_Q10>node globalExample.js
Current directory (__dirname): E:\Node_Ass_Q10
Current file (__filename): E:\Node_Ass_Q10\globalExample.js
This is a normal log.
This is an error log.
This is a warning log.
Node.js version: v22.17.0
Platform: win32
Buffer content: <Buffer 48 65 6c 6c 6f 20 4e 6f 64 65 2e 6a 73>
Buffer to string: Hello Node.js
Accessing global value: I am global
setInterval count: 1
This message appears after 2 seconds (setTimeout)
setInterval count: 2
setInterval count: 3
Interval cleared after 3 counts

E:\Node_Ass_Q10>
```

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

node_ass_q11 - npm



1 packages

node_ass_q11

A simple greeting package by Krupali

krupali_dhodiya published 1.0.1 • an hour ago