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Roll No : 36

Div : MSCICT Sem-3

Subject : OSWD

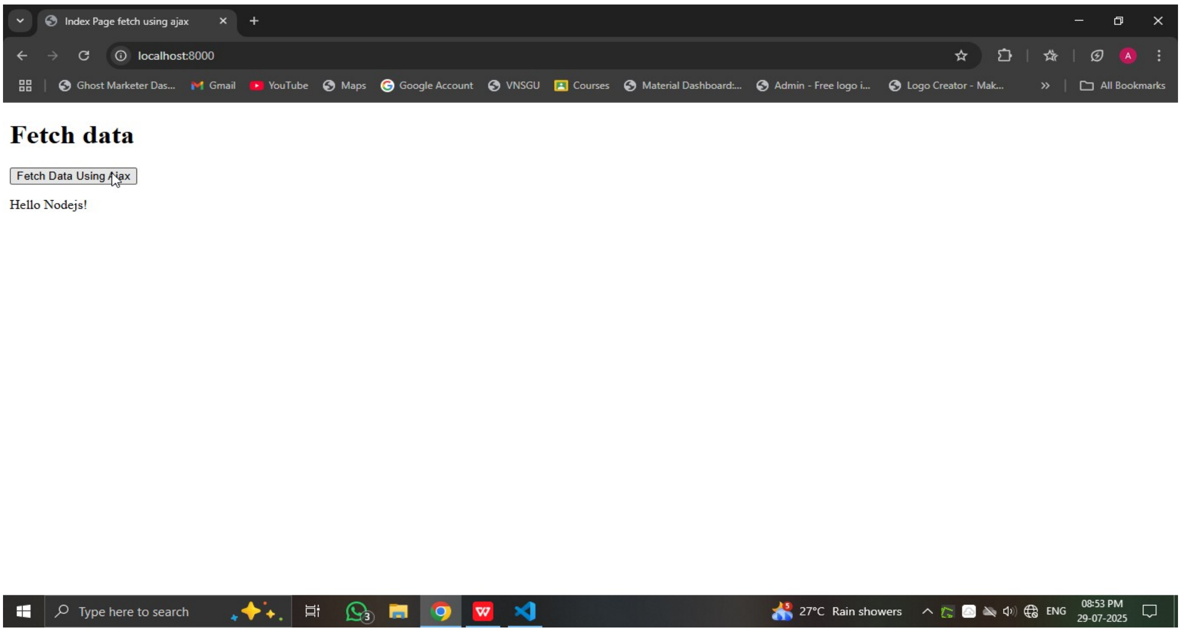
Assignment : Practical Assignment-1

Githhub Link:
https://github.com/AstiPaladiya/36_Asti_Paladiya_2025_MSCICT3

NPM Package Link :
https://www.npmjs.com/package/string-modify-tools

1. Develop nodejs application with following requirements:

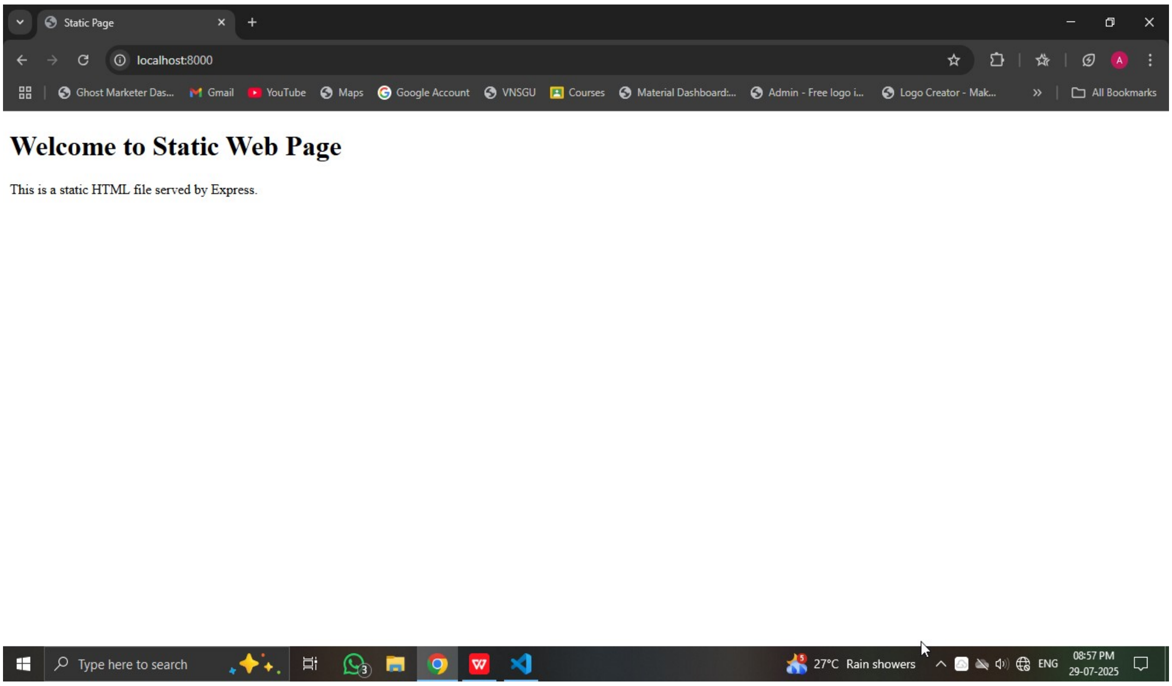
- Develop a route "/gethello" with GET method. It displays "Hello NodeJS!!" as response.
- Make an HTML page and display.
- Call "/gethello" route from HTML page using AJAX call. (Any frontend AJAX call API can be
used.)



Fetch data

Hello Nodejs!

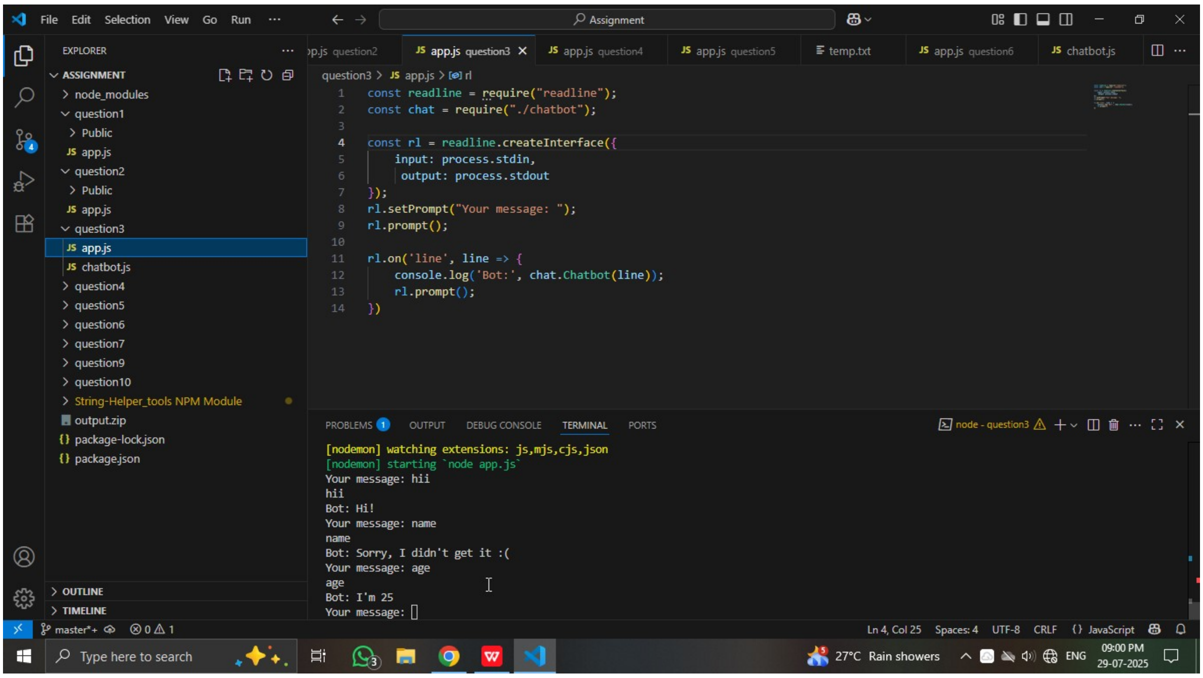
2. Develop a web server which serves static resources.



Welcome to Static Web Page

This is a static HTML file served by Express.

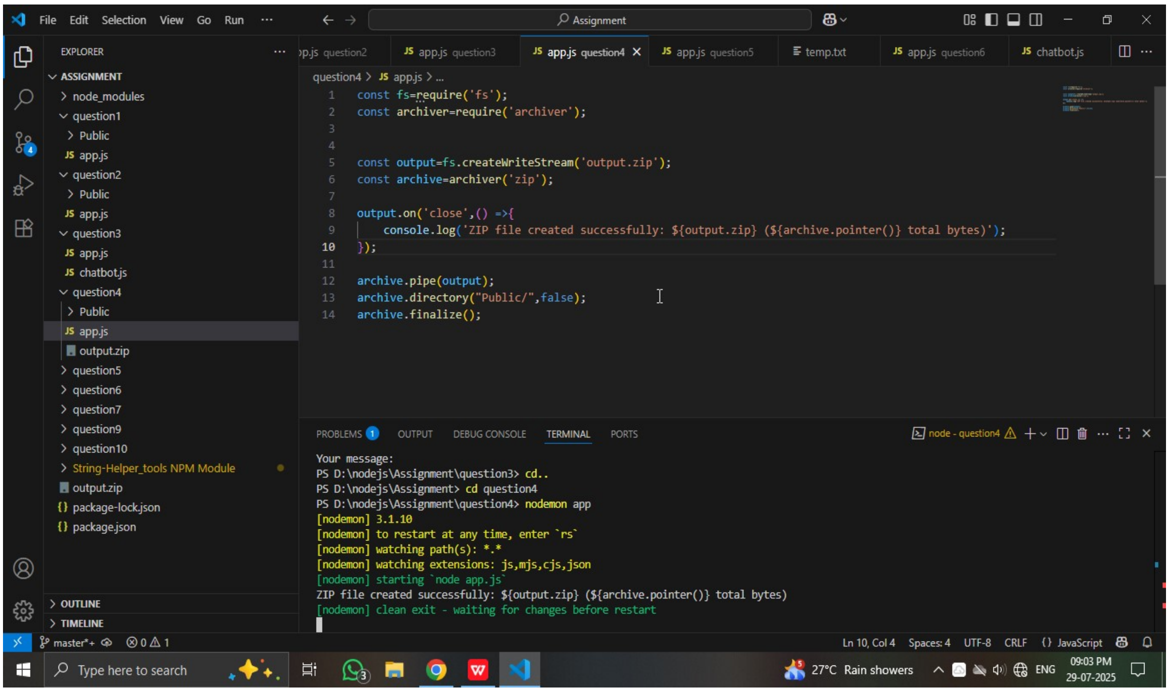
3. Develop a module for domain specific chatbot and use it in a command line application.



```
const readline = require("readline");
const chat = require("./chatbot");

const rl = readline.createInterface({
    input: process.stdin,
     output: process.stdout
});
rl.setPrompt("Your message: ");
rl.prompt();

rl.on('line', line => {
    console.log('Bot:', chat.Chatbot(line));
    rl.prompt();
})
```

```
[nodemon] watching extensions: js,mjs,cjs,json
[nodemon] starting `node app.js`
Your message: hii
hii
Bot: Hi!
Your message: name
name
Bot: Sorry, I didn't get it :(
Your message: age
age
Bot: I'm 25
Your message: 
```

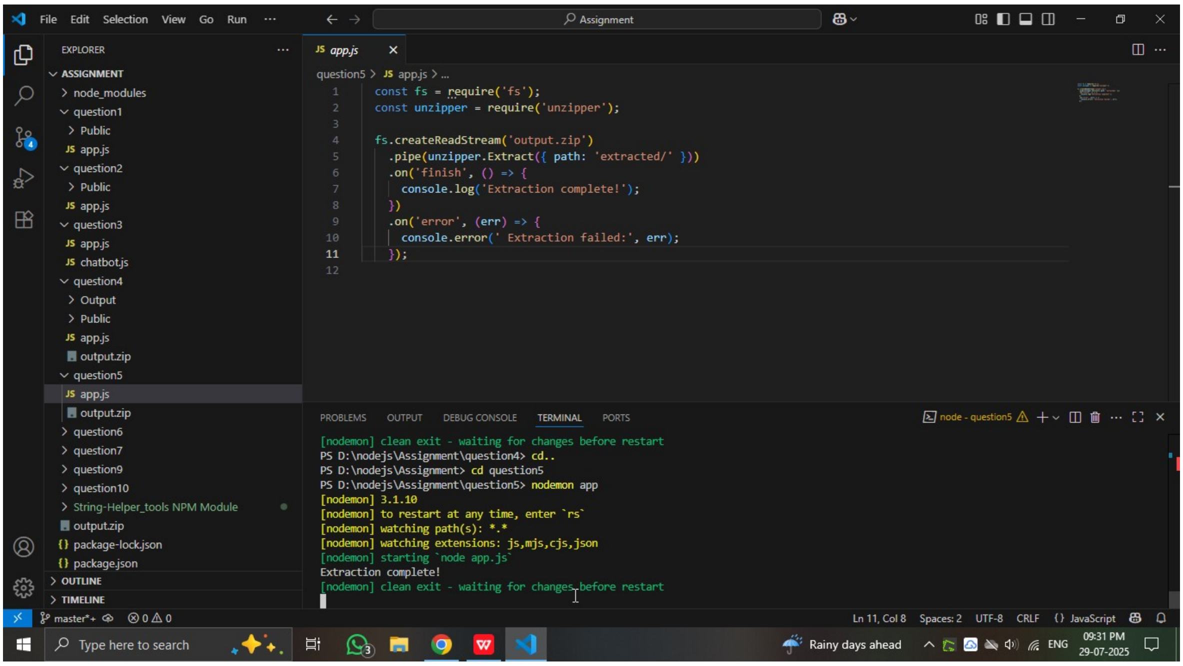
4. Write a program to create a compressed zip file for a folder.



```
const fs=require('fs');
const archiver=require('archiver');


const output=fs.createWriteStream('output.zip');
const archive=archiver('zip');

output.on('close',() =>{
    console.log('ZIP file created successfully: ${output.zip} (${archive.pointer()} total bytes)');
});

archive.pipe(output);
archive.directory("Public/",false);
archive.finalize();
```

```
Your message:
PS D:\nodejs\Assignment\question3> cd..
PS D:\nodejs\Assignment> cd question4
PS D:\nodejs\Assignment\question4> nodemon app
[nodemon] 3.1.10
[nodemon] to restart at any time, enter `rs`
[nodemon] watching path(s): *.*
[nodemon] watching extensions: js,mjs,cjs,json
[nodemon] starting `node app.js`
ZIP file created successfully: ${output.zip} (${archive.pointer()} total bytes)
[nodemon] clean exit - waiting for changes before restart
```

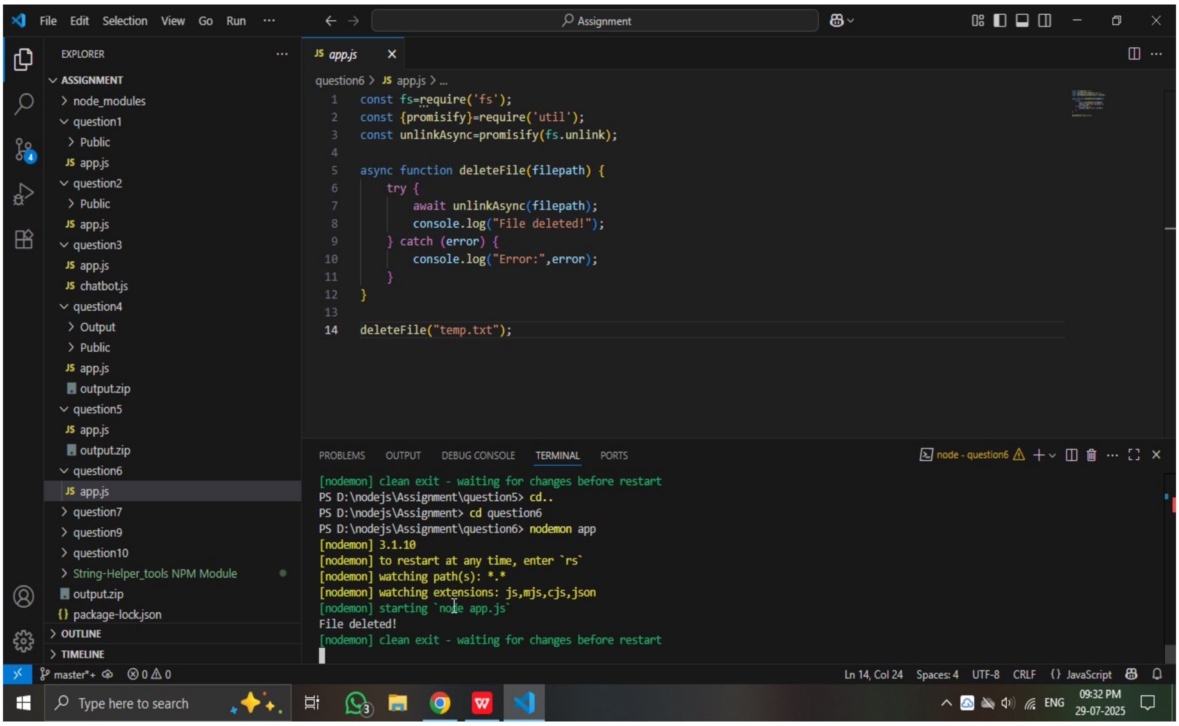
5. Write a program to extract a zip file.



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

fs.createReadStream('output.zip')
  .pipe(unzipper.Extract({ path: 'extracted/' }))
  .on('finish', () => {
    console.log('Extraction complete!');
  })
  .on('error', (err) => {
    console.error(' Extraction failed:', err);
  });
```

```
[nodemon] clean exit - waiting for changes before restart
PS D:\nodejs\Assignment\question4> cd..
PS D:\nodejs\Assignment> cd question5
PS D:\nodejs\Assignment\question5> nodemon app
[nodemon] 3.1.10
[nodemon] to restart at any time, enter `rs`
[nodemon] watching path(s): *.*
[nodemon] watching extensions: js,mjs,cjs,json
[nodemon] starting `node app.js`
Extraction complete!
[nodemon] clean exit - waiting for changes before restart
```

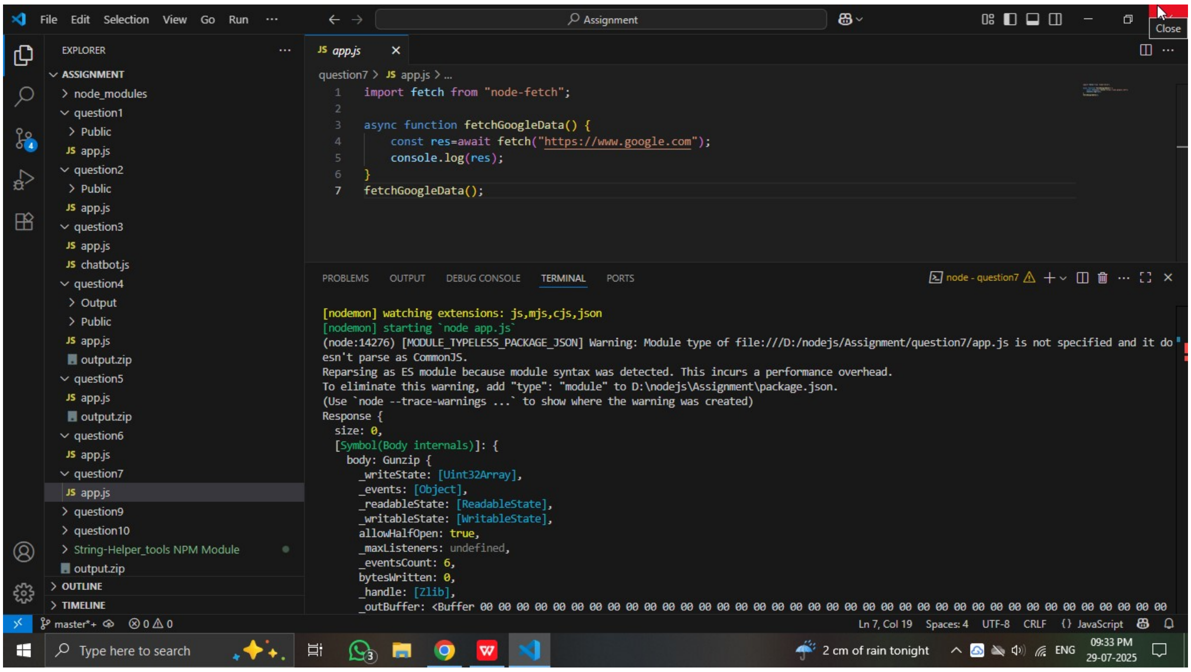
6. Write a program to promisify fs.unlink function and call it.



```javascript
const fs=require('fs');
const {promisify}=require('util');
const unlinkAsync=promisify(fs.unlink);

async function deleteFile(filepath) {
    try {
        await unlinkAsync(filepath);
        console.log("File deleted!");
    } catch (error) {
        console.log("Error:",error);
    }
}

deleteFile("temp.txt");
```

```
[nodemon] clean exit - waiting for changes before restart
PS D:\nodejs\Assignment\question5> cd..
PS D:\nodejs\Assignment> cd question6
PS D:\nodejs\Assignment\question6> nodemon app
[nodemon] 3.1.10
[nodemon] to restart at any time, enter `rs`
[nodemon] watching path(s): *.*
[nodemon] watching extensions: js,mjs,cjs,json
[nodemon] starting `node app.js`
File deleted!
[nodemon] clean exit - waiting for changes before restart
```

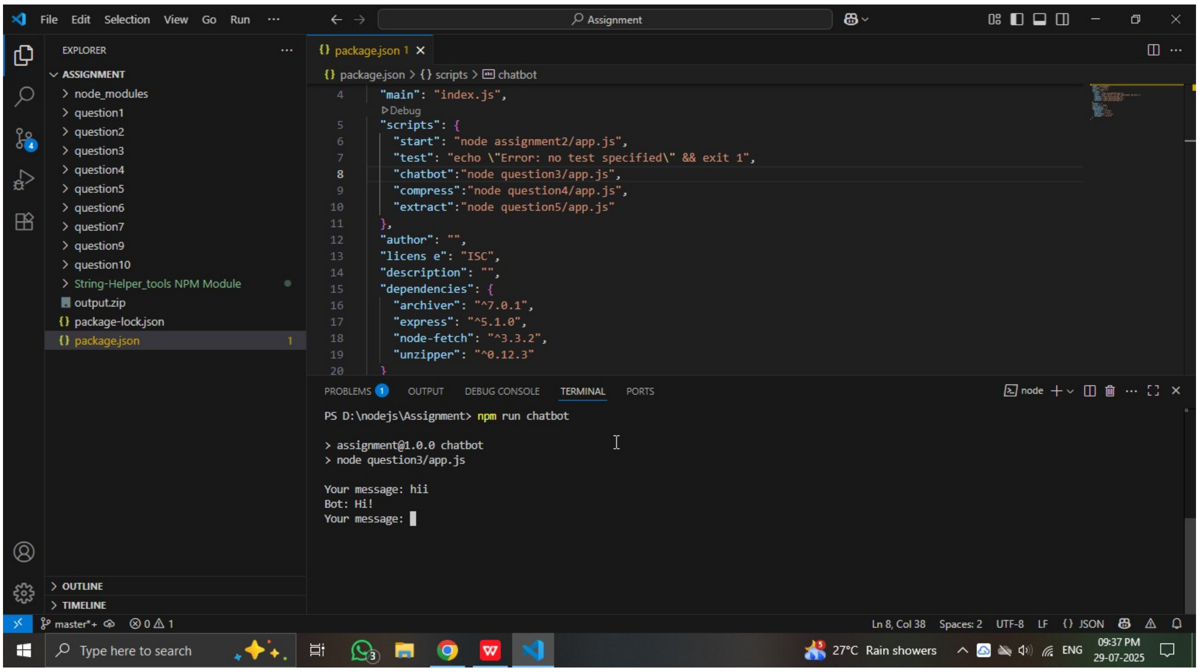
7. Fetch data of google page using note-fetch using async-await model.



```javascript
import fetch from "node-fetch";

async function fetchGoogleData() {
    const res=await fetch("https://www.google.com");
    console.log(res);
}
fetchGoogleData();
```

```
[nodemon] watching extensions: js,mjs,cjs,json
[nodemon] starting `node app.js`
(node:14276) [MODULE_TYPELESS_PACKAGE_JSON] Warning: Module type of file:///D:/nodejs/Assignment/question7/app.js is not specified and it do
esn't parse as CommonJS.
Reparsing as ES module because module syntax was detected. This incurs a performance overhead.
To eliminate this warning, add "type": "module" to D:\nodejs\Assignment\package.json.
(Use `node --trace-warnings ...` to show where the warning was created)
Response {
  size: 0,
  [Symbol(Body internals)]: {
    body: Gunzip {
      _writeState: [Uint32Array],
      _events: [Object],
      _readableState: [ReadableState],
      _writableState: [WritableState],
      allowHalfOpen: true,
      _maxListeners: undefined,
      _eventsCount: 6,
      bytesWritten: 0,
      _handle: [Zlib],
      _outBuffer: <Buffer 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
```

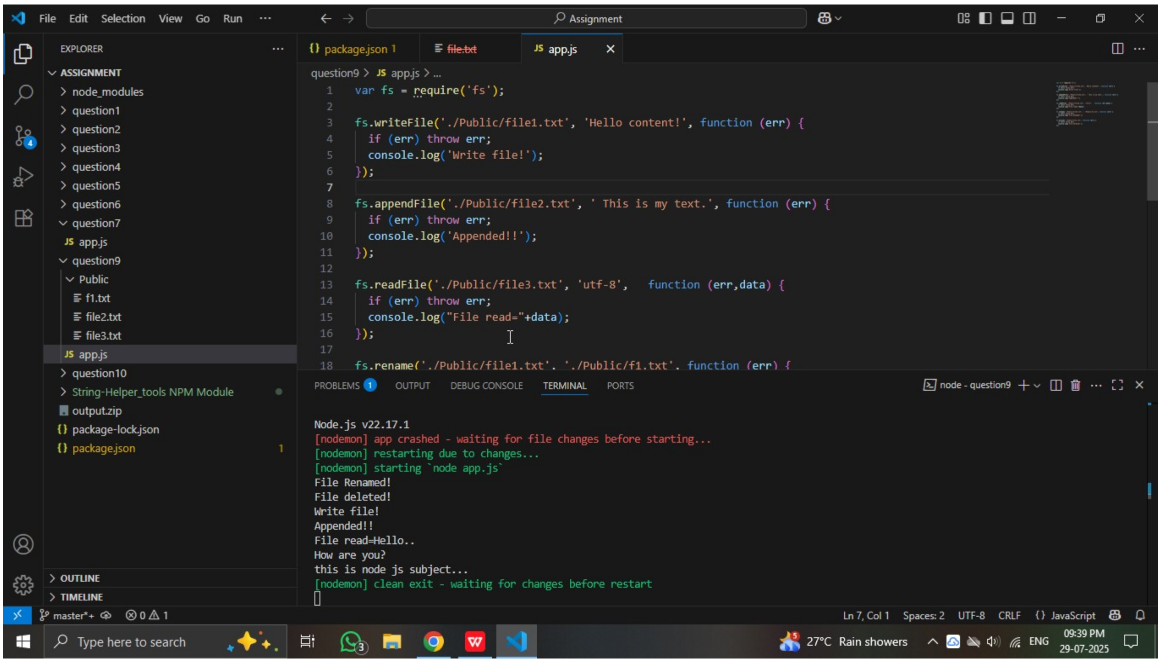
8. Set a server script, a test script and 3 user defined scripts in package.json file in your nodejs application.



```json
  "main": "index.js",
  "scripts": {
    "start": "node assignment2/app.js",
    "test": "echo \"Error: no test specified\" && exit 1",
    "chatbot":"node question3/app.js",
    "compress":"node question4/app.js",
    "extract":"node question5/app.js"
  },
  "author": "",
  "licens e": "ISC",
  "description": "",
  "dependencies": {
    "archiver": "^7.0.1",
    "express": "^5.1.0",
    "node-fetch": "^3.3.2",
    "unzipper": "^0.12.3"
  }
```

```
PS D:\nodejs\Assignment> npm run chatbot

> assignment@1.0.0 chatbot
> node question3/app.js

Your message: hii
Bot: Hi!
Your message: 
```

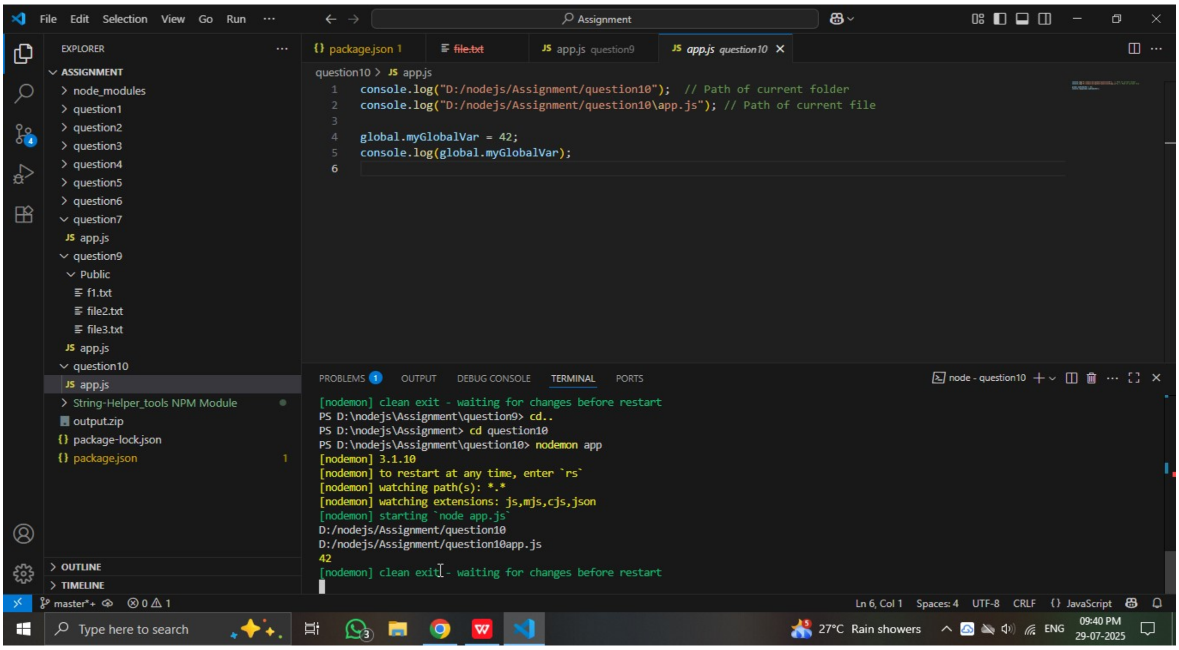
9. A program which calls useful functions in fs modile.



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

fs.writeFile('./Public/file1.txt', 'Hello content!', function (err) {
  if (err) throw err;
  console.log('Write file!');
});

fs.appendFile('./Public/file2.txt', ' This is my text.', function (err) {
  if (err) throw err;
  console.log('Appended!!');
});

fs.readFile('./Public/file3.txt', 'utf-8',   function (err,data) {
  if (err) throw err;
  console.log("File read="+data);
});

fs.rename('./Public/file1.txt', './Public/f1.txt', function (err) {
```

```
Node.js v22.17.1
[nodemon] app crashed - waiting for file changes before starting...
[nodemon] restarting due to changes...
[nodemon] starting `node app.js`
File Renamed!
File deleted!
Write file!
Appended!!
File read=Hello..
How are you?
this is node js subject...
[nodemon] clean exit - waiting for changes before restart
```

10. A program which uses global objects in nodejs.

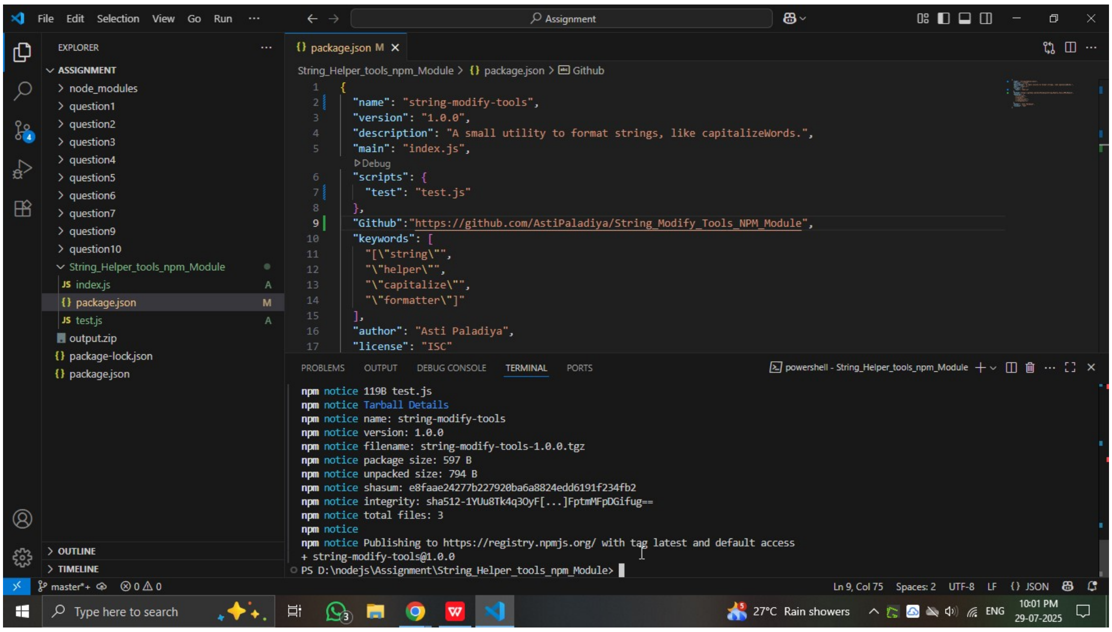


```
console.log("D:/nodejs/Assignment/question10");  // Path of current folder
console.log("D:/nodejs/Assignment/question10\app.js"); // Path of current file

global.myGlobalVar = 42;
console.log(global.myGlobalVar);
```

```
[nodemon] clean exit - waiting for changes before restart
PS D:\nodejs\Assignment\question9> cd..
PS D:\nodejs\Assignment> cd question10
PS D:\nodejs\Assignment\question10> nodemon app
[nodemon] 3.1.10
[nodemon] to restart at any time, enter `rs`
[nodemon] watching path(s): *.*
[nodemon] watching extensions: js,mjs,cjs,json
[nodemon] starting `node app.js`
D:/nodejs/Assignment/question10
D:/nodejs/Assignment/question10app.js
42
[nodemon] clean exit - waiting for changes before restart
```

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

- ✓ **Package Link**:https://www.npmjs.com/package/string-modify-tools



```
{
  "name": "string-modify-tools",
  "version": "1.0.0",
  "description": "A small utility to format strings, like capitalizeWords.",
  "main": "index.js",
  "scripts": {
    "test": "test.js"
  },
  "Github":"https://github.com/AstiPaladiya/String_Modify_Tools_NPM_Module",
  "keywords": [
    "[\"string\"",
    "\"helper\"",
    "\"capitalize\"",
    "\"formatter\"]"
  ],
  "author": "Asti Paladiya",
  "license": "ISC"
```

```
npm notice 119B test.js
npm notice Tarball Details
npm notice name: string-modify-tools
npm notice version: 1.0.0
npm notice filename: string-modify-tools-1.0.0.tgz
npm notice package size: 597 B
npm notice unpacked size: 794 B
npm notice shasum: e8faae24277b227920ba6a8824edd6191f234fb2
npm notice integrity: sha512-1YUu8Tk4q3OyF[...]FptmMFpDGifug==
npm notice total files: 3
npm notice
npm notice Publishing to https://registry.npmjs.org/ with tag latest and default access
+ string-modify-tools@1.0.0
PS D:\nodejs\Assignment\String_Helper_tools_npm_Module>
```