

## Practical Assignment 1

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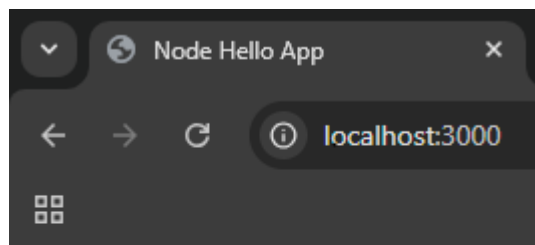
Subject: 304 Open Source Web Development

Roll No: 61

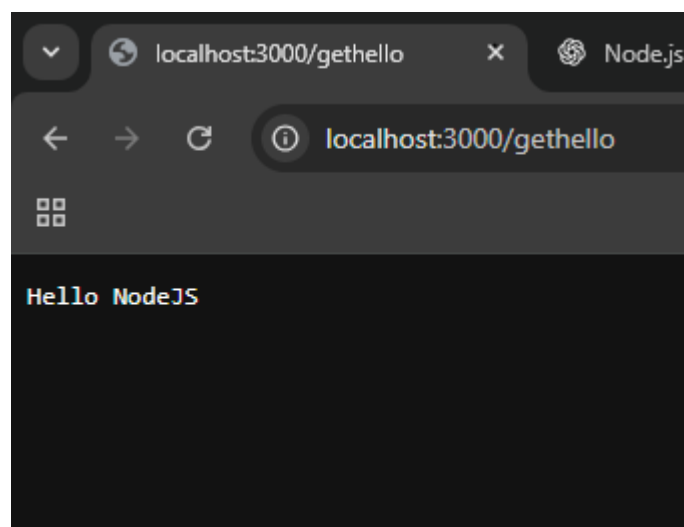
Class: ICT

1. Develop nodejs application with following requirements:

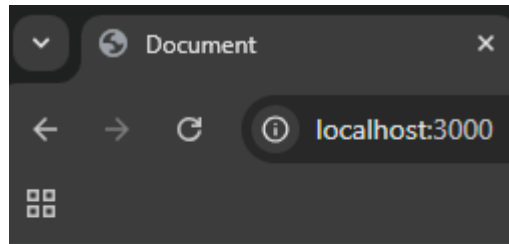
- Develop a route `"/gethello"` with GET method. It displays `"Hello NodeJS!!"` as response.
- Make an HTML page and display.
- Call `"/gethello"` route from HTML page using AJAX call. (Any frontend AJAX call API can be used.)



# Hello NodeJS



2. Develop a web server which serves static resources.

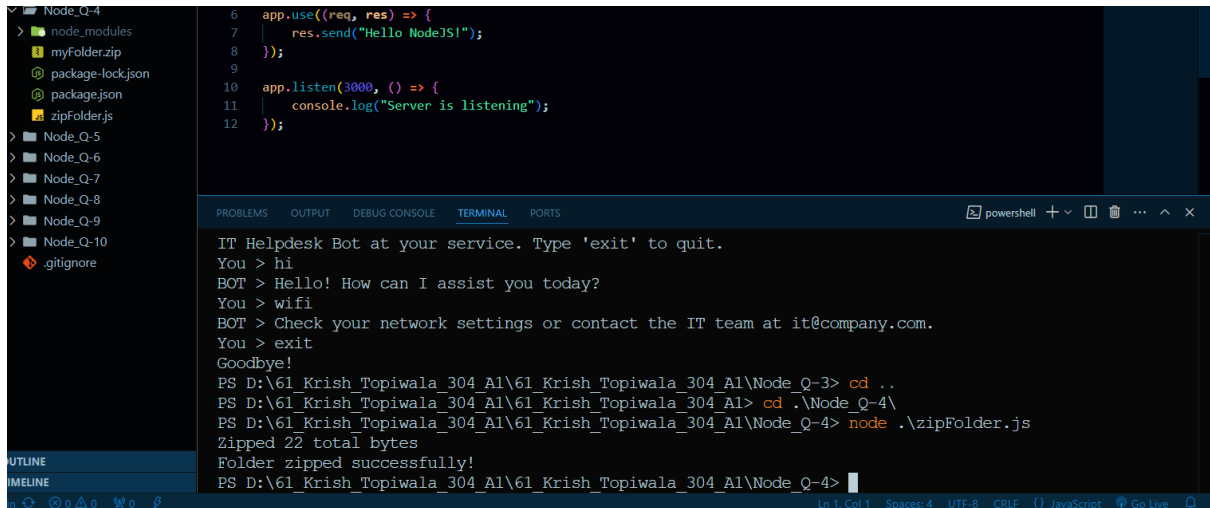


**This is static page**

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

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS  powershell + \nPS D:\\61_Krish_Topiwala_304_A1\\61_Krish_Topiwala_304_A1\\Node_Q-3> node app.js\nIT Helpdesk Bot at your service. Type 'exit' to quit.\nYou > hi\nBOT > Hello! How can I assist you today?\nYou > wifi\nBOT > Check your network settings or contact the IT team at it@company.com.\nYou > exit\nGoodbye!\nPS D:\\61_Krish_Topiwala_304_A1\\61_Krish_Topiwala_304_A1\\Node_Q-3> 
```

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



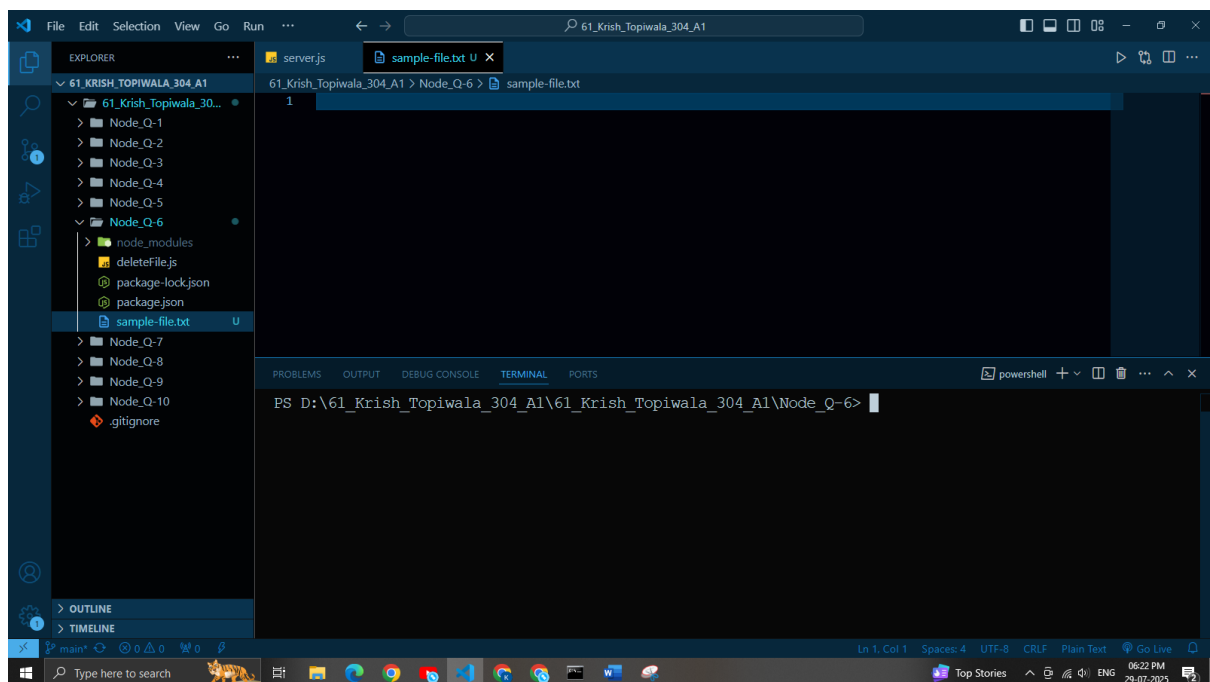
The screenshot shows a VS Code editor with a file explorer on the left displaying a project structure with folders Node\_Q-4 through Node\_Q-10 and files like myFolder.zip, package-lock.json, package.json, zipFolder.js, and .gitignore. The main editor shows a JavaScript file with the following code:

```
6 app.use((req, res) => {
7   res.send("Hello NodeJS!");
8 });
9
10 app.listen(3000, () => {
11   console.log("Server is listening");
12 });
```

The terminal at the bottom shows the execution of the application:

```
IT Helpdesk Bot at your service. Type 'exit' to quit.
You > hi
BOT > Hello! How can I assist you today?
You > wifi
BOT > Check your network settings or contact the IT team at it@company.com.
You > exit
Goodbye!
PS D:\61_Krish_Topiwala_304_A1\61_Krish_Topiwala_304_A1\Node_Q-3> cd ..
PS D:\61_Krish_Topiwala_304_A1\61_Krish_Topiwala_304_A1> cd .\Node_Q-4\
PS D:\61_Krish_Topiwala_304_A1\61_Krish_Topiwala_304_A1\Node_Q-4> node .\zipFolder.js
Zipped 22 total bytes
Folder zipped successfully!
PS D:\61_Krish_Topiwala_304_A1\61_Krish_Topiwala_304_A1\Node_Q-4>
```

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

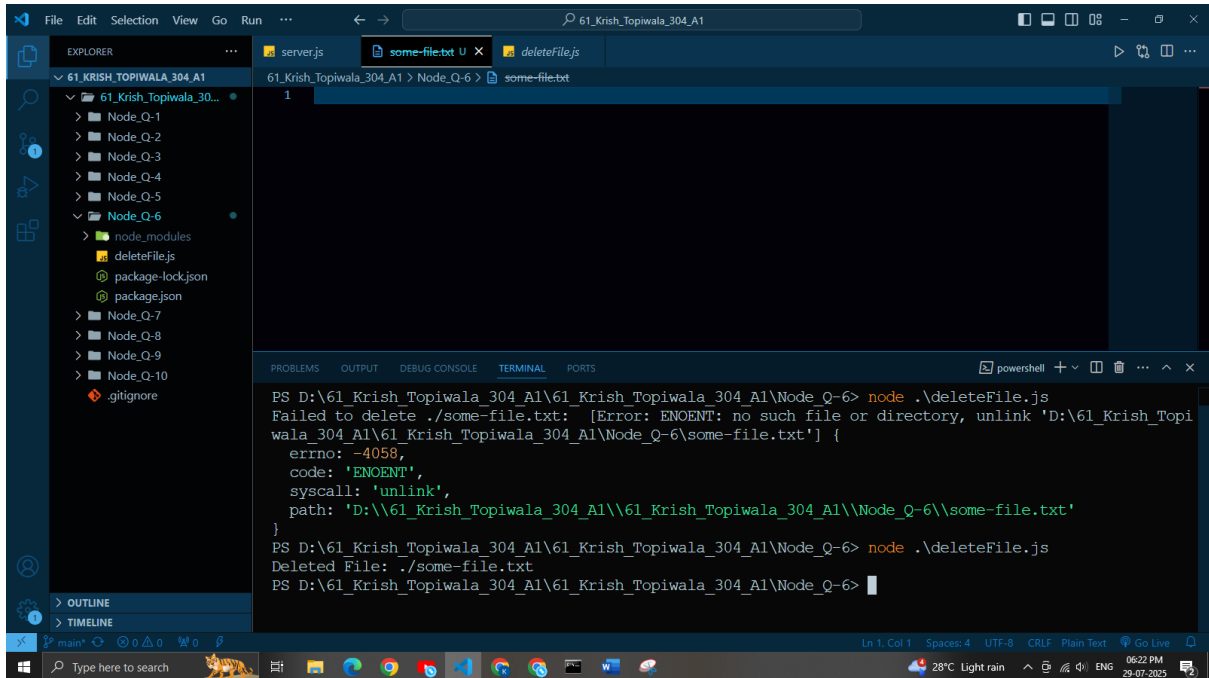


The screenshot shows a VS Code editor with a file explorer on the left displaying a project structure with folders Node\_Q-1 through Node\_Q-10 and files like deleteFile.js, package-lock.json, package.json, sample-file.txt, and .gitignore. The main editor shows a file named sample-file.txt with the following content:

```
1
```

The terminal at the bottom shows the execution of the application:

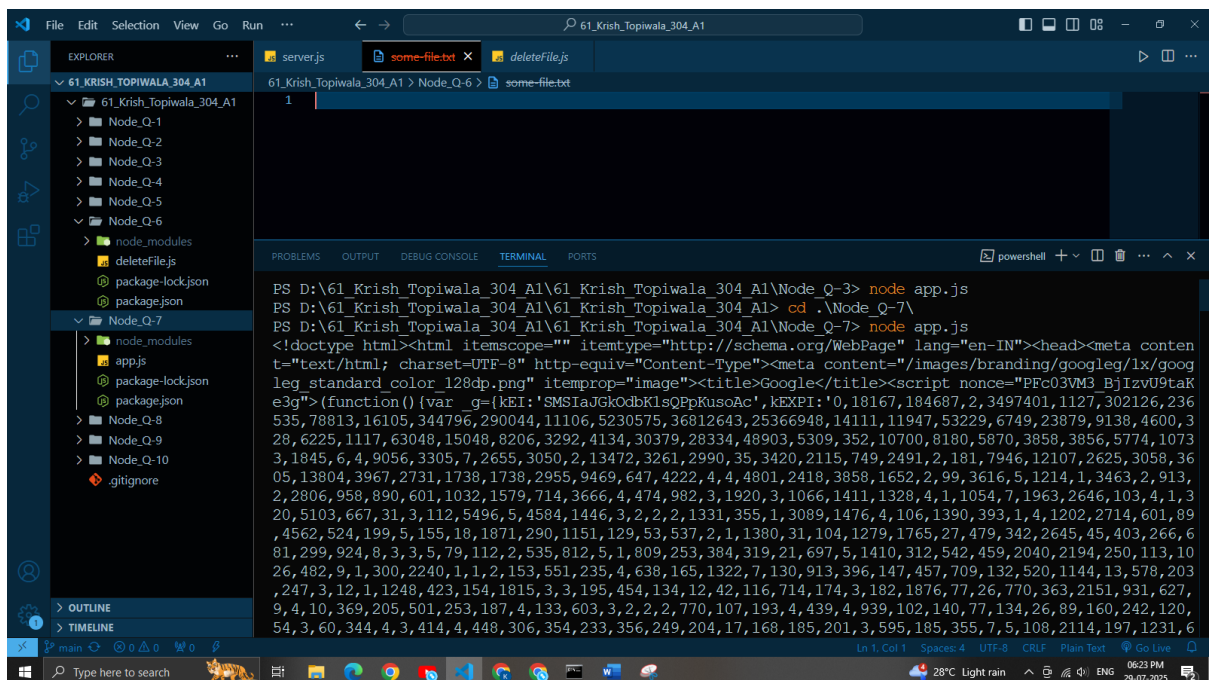
```
PS D:\61_Krish_Topiwala_304_A1\61_Krish_Topiwala_304_A1\Node_Q-6>
```



The screenshot shows the Visual Studio Code interface. The Explorer sidebar on the left displays a project structure with folders Node\_Q-1 through Node\_Q-10, and Node\_Q-6 containing node\_modules, deleteFile.js, package-lock.json, and package.json. The main editor area shows a file named 'some-file.txt' with the content '1'. The integrated terminal at the bottom, running PowerShell, shows the execution of 'node .\deleteFile.js'. The first command fails with an error: 'ENOENT: no such file or directory, unlink'. The second command, 'node .\deleteFile.js', successfully deletes the file, outputting 'Deleted File: ./some-file.txt'.

```
PS D:\61_Krish_Topiwala_304_A1\61_Krish_Topiwala_304_A1\Node_Q-6> node .\deleteFile.js
Failed to delete ./some-file.txt: [Error: ENOENT: no such file or directory, unlink 'D:\61_Krish_Topiwala_304_A1\61_Krish_Topiwala_304_A1\Node_Q-6\some-file.txt'] {
  errno: -4058,
  code: 'ENOENT',
  syscall: 'unlink',
  path: 'D:\\61_Krish_Topiwala_304_A1\\61_Krish_Topiwala_304_A1\\Node_Q-6\\some-file.txt'
}
PS D:\61_Krish_Topiwala_304_A1\61_Krish_Topiwala_304_A1\Node_Q-6> node .\deleteFile.js
Deleted File: ./some-file.txt
PS D:\61_Krish_Topiwala_304_A1\61_Krish_Topiwala_304_A1\Node_Q-6>
```

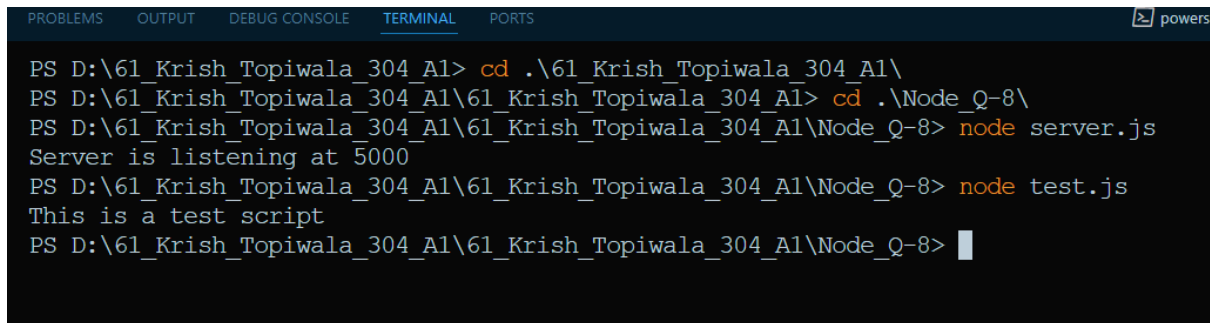
7. Fetch data of google page using note-fetch using async-await model.



The screenshot shows the Visual Studio Code interface. The Explorer sidebar on the left shows the project structure, with Node\_Q-7 containing node\_modules, app.js, package-lock.json, and package.json. The main editor area shows a file named 'some-file.txt' with the content '1'. The integrated terminal at the bottom, running PowerShell, shows the execution of 'node app.js' in the Node\_Q-7 directory. The output is a large block of HTML data, including the document type declaration, meta tags, and a large array of numbers.

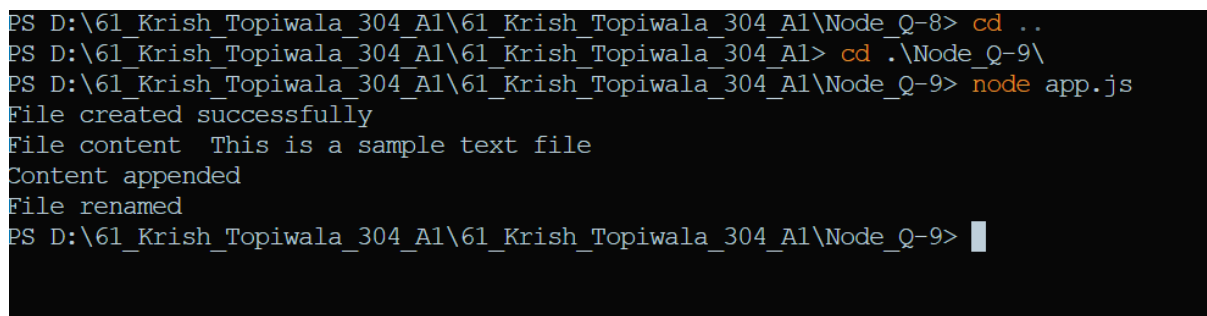
```
PS D:\61_Krish_Topiwala_304_A1\61_Krish_Topiwala_304_A1\Node_Q-7> node app.js
PS D:\61_Krish_Topiwala_304_A1\61_Krish_Topiwala_304_A1> cd .\Node_Q-7\
PS D:\61_Krish_Topiwala_304_A1\61_Krish_Topiwala_304_A1\Node_Q-7> node app.js
<!doctype html><html itemscope="" itemtype="http://schema.org/WebPage" lang="en-IN"><head><meta content="text/html; charset=UTF-8" http-equiv="Content-Type"><meta content="/images/branding/google/leg_standard_color_128dp.png" itemprop="image"><title>Google</title><script nonce="PFc03VM3_BjIzvU9taK e3g">(function() {var g=(kEI:'SMSIaJGkOdbKlSQQpKusoAc', kEXPI:'0,18167,184687,2,3497401,1127,302126,236535,78813,16105,344796,290044,11106,5230575,36812643,25366948,14111,11947,53229,6749,23879,9138,4600,328,6225,1117,63048,15048,8206,3292,4134,30379,28334,48903,5309,352,10700,8180,5870,3858,3856,5774,10733,1845,6,4,9056,3305,7,2655,3050,2,13472,3261,2990,35,3420,2115,749,2491,2,181,7946,12107,2625,3058,3605,13804,3967,2731,1738,1738,2955,9469,647,4222,4,4,4801,2418,3858,1652,2,99,3616,5,1214,1,3463,2,913,2,2806,958,890,601,1032,1579,714,3666,4,474,982,3,1920,3,1066,1411,1328,4,1,1054,7,1963,2646,103,4,1,320,5103,667,31,3,112,5496,5,4584,1446,3,2,2,2,1331,355,1,3089,1476,4,106,1390,393,1,4,1202,2714,601,89,4562,524,199,5,155,18,1871,290,1151,129,53,537,2,1,1380,31,104,1279,1765,27,479,342,2645,45,403,266,681,299,924,8,3,3,5,79,112,2,535,812,5,1,809,253,384,319,21,697,5,1410,312,542,459,2040,2194,250,113,1026,482,9,1,300,2240,1,1,2,153,551,235,4,638,165,1322,7,130,913,396,147,457,709,132,520,1144,13,578,203,247,3,12,1,1248,423,154,1815,3,3,195,454,134,12,42,116,714,174,3,182,1876,77,26,770,363,2151,931,627,9,4,10,369,205,501,253,187,4,133,603,3,2,2,2,770,107,193,4,439,4,939,102,140,77,134,26,89,160,242,120,54,3,60,344,4,3,414,4,448,306,354,233,356,249,204,17,168,185,201,3,595,185,355,7,5,108,2114,197,1231,6
```

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



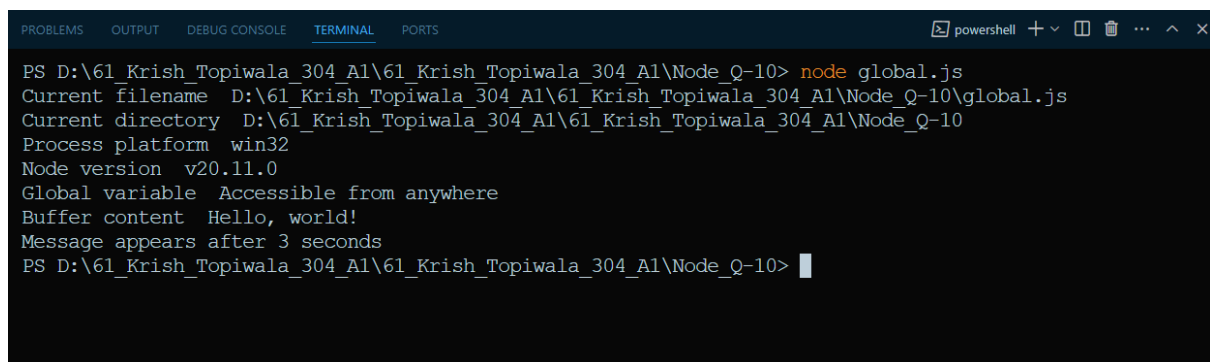
```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS powershell
PS D:\61_Krish_Topiwala_304_A1> cd .\61_Krish_Topiwala_304_A1\
PS D:\61_Krish_Topiwala_304_A1\61_Krish_Topiwala_304_A1> cd .\Node_Q-8\
PS D:\61_Krish_Topiwala_304_A1\61_Krish_Topiwala_304_A1\Node_Q-8> node server.js
Server is listening at 5000
PS D:\61_Krish_Topiwala_304_A1\61_Krish_Topiwala_304_A1\Node_Q-8> node test.js
This is a test script
PS D:\61_Krish_Topiwala_304_A1\61_Krish_Topiwala_304_A1\Node_Q-8> 
```

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



```
PS D:\61_Krish_Topiwala_304_A1\61_Krish_Topiwala_304_A1\Node_Q-8> cd ..
PS D:\61_Krish_Topiwala_304_A1\61_Krish_Topiwala_304_A1> cd .\Node_Q-9\
PS D:\61_Krish_Topiwala_304_A1\61_Krish_Topiwala_304_A1\Node_Q-9> node app.js
File created successfully
File content This is a sample text file
Content appended
File renamed
PS D:\61_Krish_Topiwala_304_A1\61_Krish_Topiwala_304_A1\Node_Q-9> 
```

10. A program which uses global objects in nodejs.



```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS powershell + - [ ] [ ] ... ^ x
PS D:\61_Krish_Topiwala_304_A1\61_Krish_Topiwala_304_A1\Node_Q-10> node global.js
Current filename D:\61_Krish_Topiwala_304_A1\61_Krish_Topiwala_304_A1\Node_Q-10\global.js
Current directory D:\61_Krish_Topiwala_304_A1\61_Krish_Topiwala_304_A1\Node_Q-10
Process platform win32
Node version v20.11.0
Global variable Accessible from anywhere
Buffer content Hello, world!
Message appears after 3 seconds
PS D:\61_Krish_Topiwala_304_A1\61_Krish_Topiwala_304_A1\Node_Q-10> 
```