

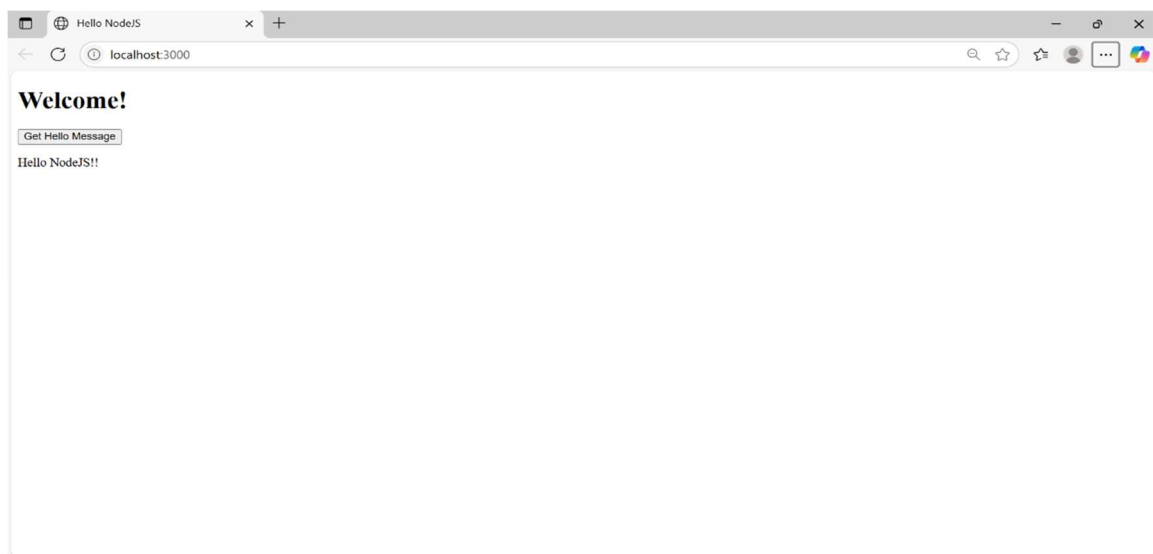
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Div: ICT-3

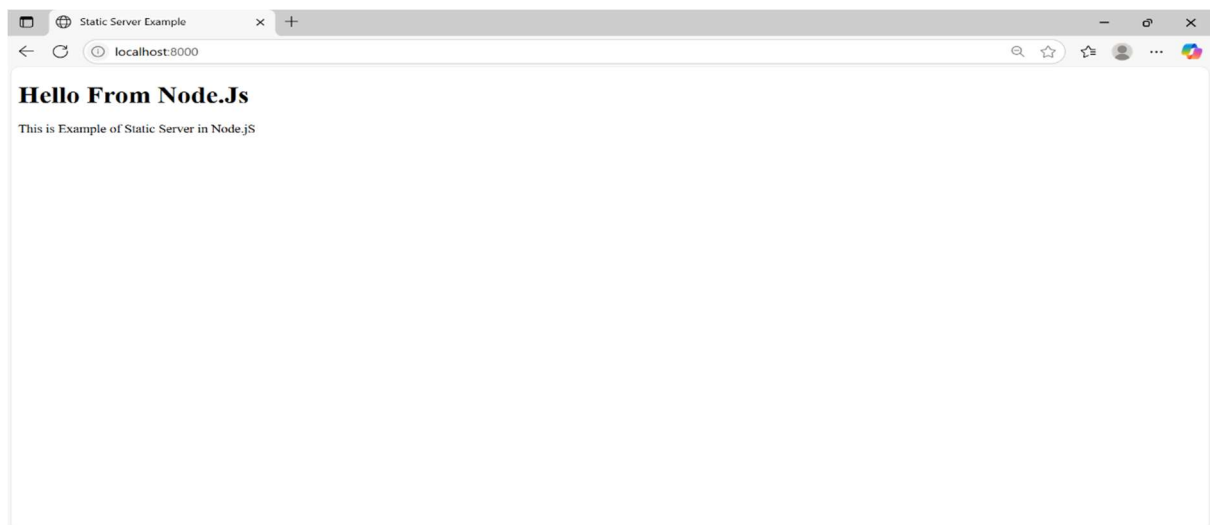
Roll No: 32

Subject: Open-Source Web Development (306)

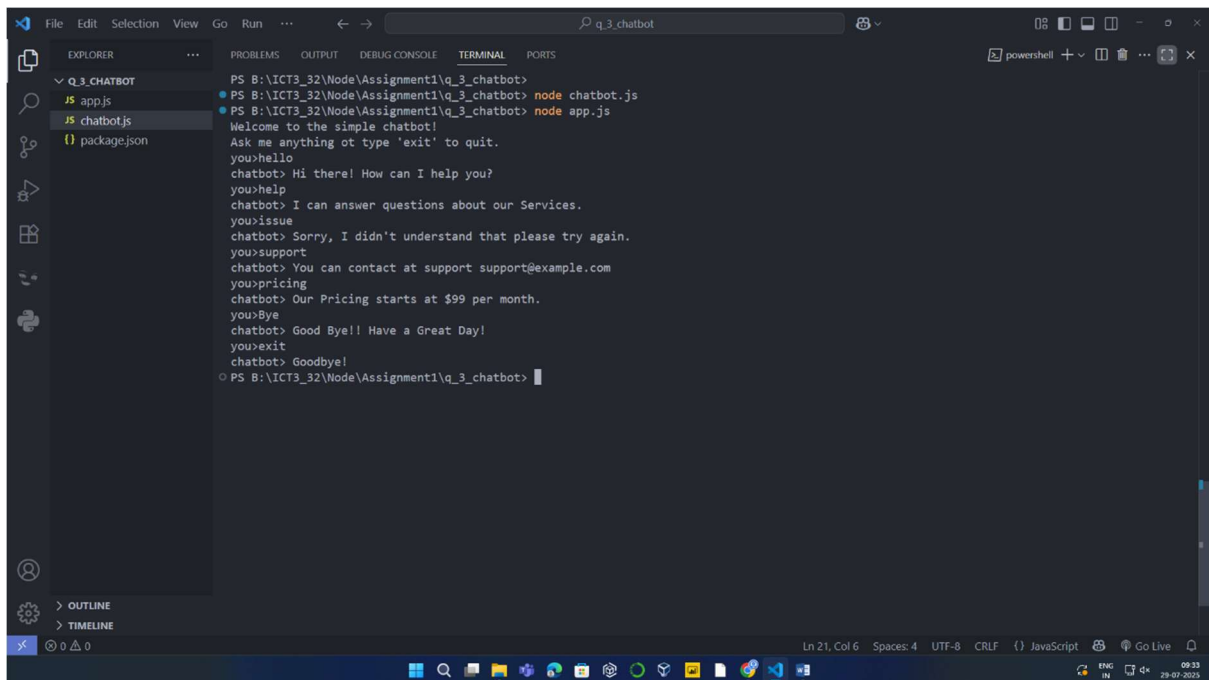
1. Develop a route "/gethello" with GET method. It displays "Hello NodeJS!!" as response. Make an HTML page and display. Call "/gethello" route from HTML page using AJAX call. (Any frontend AJAX call API can be used.)



2. Develop a web server which serves static resources.



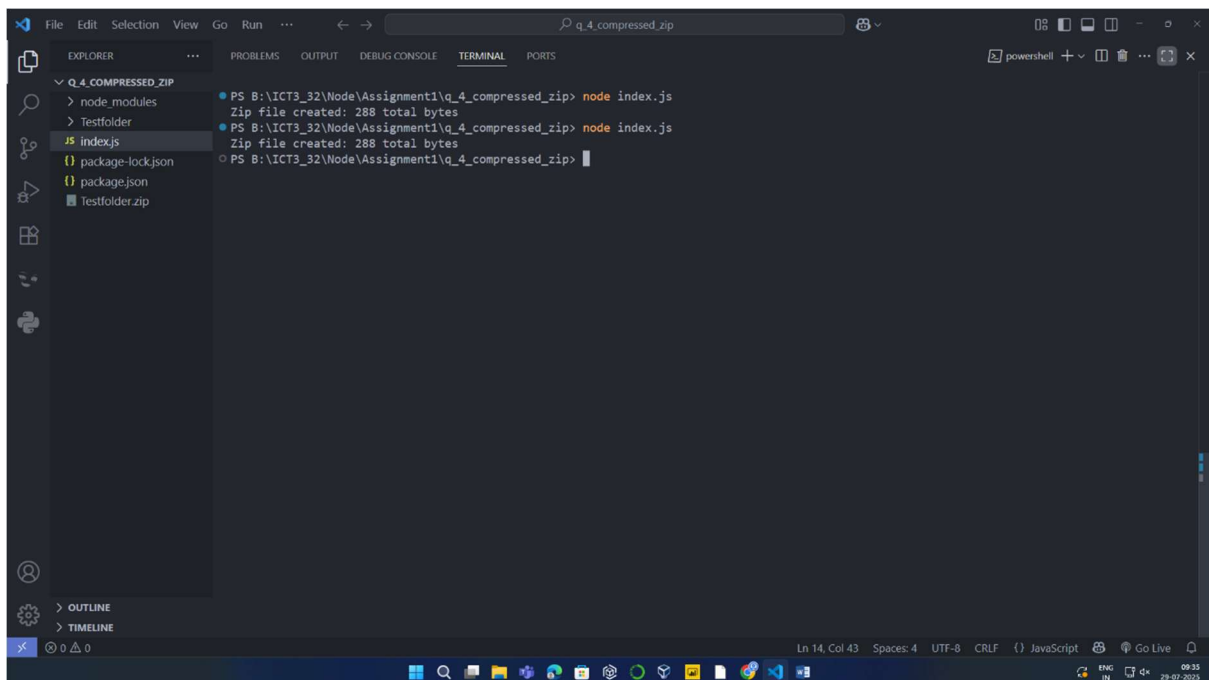
3. Develop a module for domain specific chatbot and use it in a command line application.



The screenshot shows a Visual Studio Code editor with a project named 'q_3_chatbot'. The Explorer pane on the left shows files: 'app.js', 'chatbot.js', and 'package.json'. The Terminal pane on the right shows the following output:

```
PS B:\ICT3_32\Node\Assignment1\q_3_chatbot>
PS B:\ICT3_32\Node\Assignment1\q_3_chatbot> node chatbot.js
PS B:\ICT3_32\Node\Assignment1\q_3_chatbot> node app.js
Welcome to the simple chatbot!
Ask me anything ot type 'exit' to quit.
you>hello
chatbot> Hi there! How can I help you?
you>help
chatbot> I can answer questions about our Services.
you>issue
chatbot> Sorry, I didn't understand that please try again.
you>support
chatbot> You can contact at support support@example.com
you>pricing
chatbot> Our Pricing starts at $99 per month.
you>Bye
chatbot> Good Bye!! Have a Great Day!
you>exit
chatbot> Goodbye!
PS B:\ICT3_32\Node\Assignment1\q_3_chatbot>
```

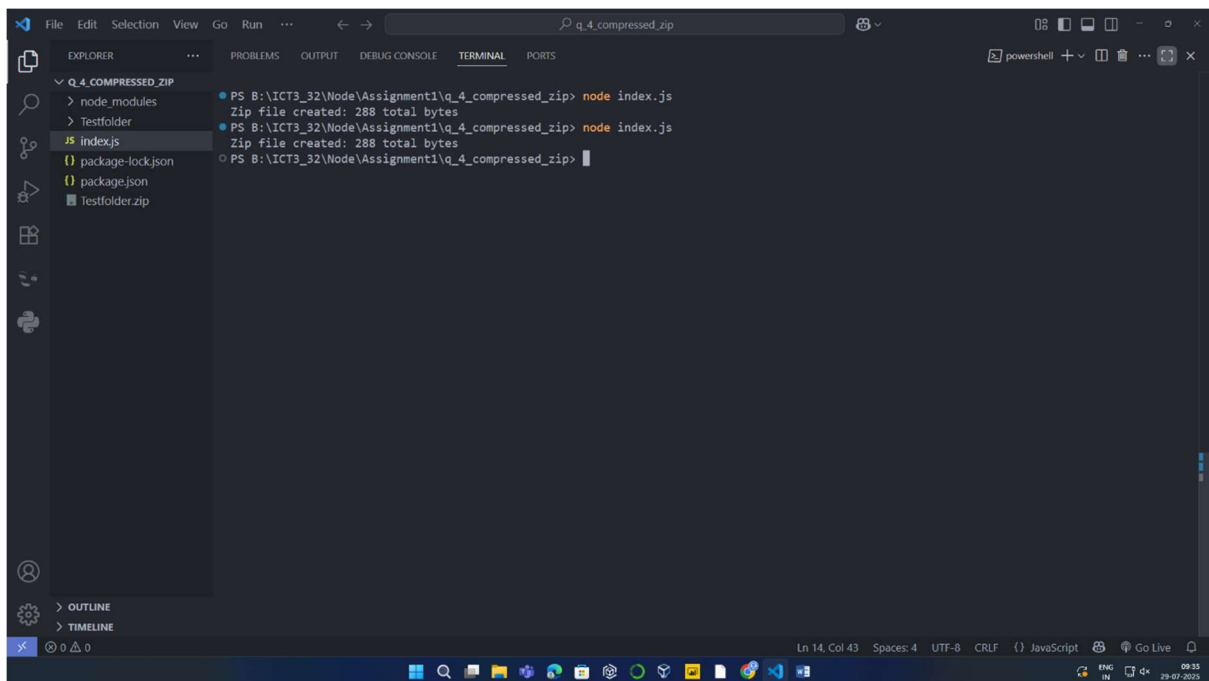
4. Write a program to create a compressed zip file for a folder.



The screenshot shows a Visual Studio Code editor with a project named 'q_4_compressed_zip'. The Explorer pane on the left shows files: 'node_modules', 'Testfolder', 'index.js', 'package-lock.json', 'package.json', and 'Testfolder.zip'. The Terminal pane on the right shows the following output:

```
PS B:\ICT3_32\Node\Assignment1\q_4_compressed_zip> node index.js
Zip file created: 288 total bytes
PS B:\ICT3_32\Node\Assignment1\q_4_compressed_zip> node index.js
Zip file created: 288 total bytes
PS B:\ICT3_32\Node\Assignment1\q_4_compressed_zip>
```

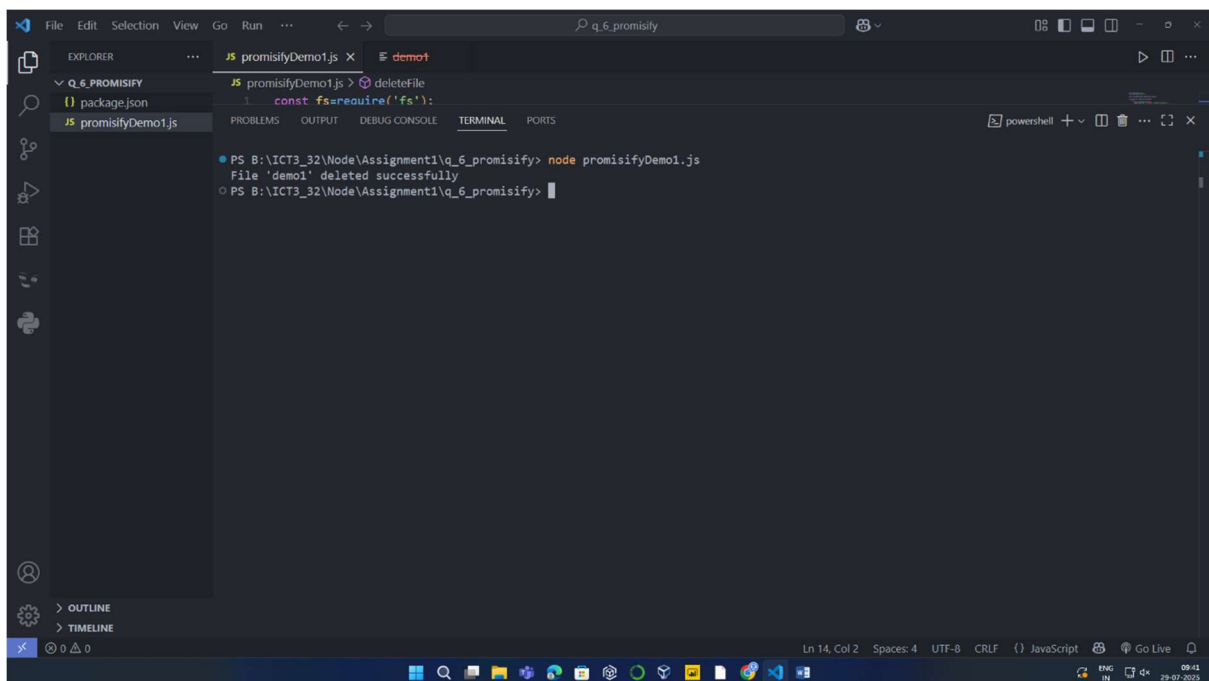
5. Write a program to extract a zip file.



The screenshot shows the Visual Studio Code interface with a terminal window open. The Explorer pane on the left shows a project named 'Q_4_COMPRESSED_ZIP' with files 'index.js', 'package-lock.json', and 'testfolder.zip'. The terminal window has the title 'q_4_compressed.zip' and shows the following commands and output:

```
PS B:\ICT3_32\Node\Assignment1\q_4_compressed_zip> node index.js
Zip file created: 288 total bytes
PS B:\ICT3_32\Node\Assignment1\q_4_compressed_zip> node index.js
Zip file created: 288 total bytes
PS B:\ICT3_32\Node\Assignment1\q_4_compressed_zip>
```

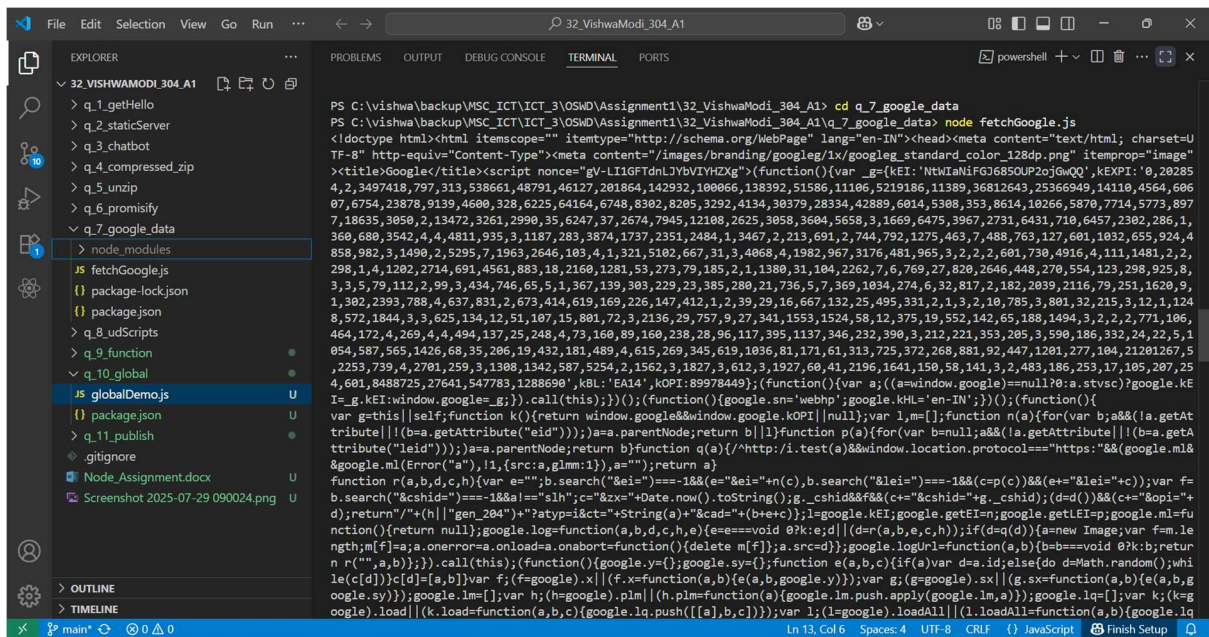
6. Write a program to promisify fs.unlink function and call it.



The screenshot shows the Visual Studio Code interface with a terminal window open. The Explorer pane on the left shows a project named 'Q_6_PROMISIFY' with files 'package.json' and 'promisifyDemo1.js'. The terminal window has the title 'q_6_promisify' and shows the following commands and output:

```
PS B:\ICT3_32\Node\Assignment1\q_6_promisify> node promisifyDemo1.js
File 'demo1' deleted successfully
PS B:\ICT3_32\Node\Assignment1\q_6_promisify>
```

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



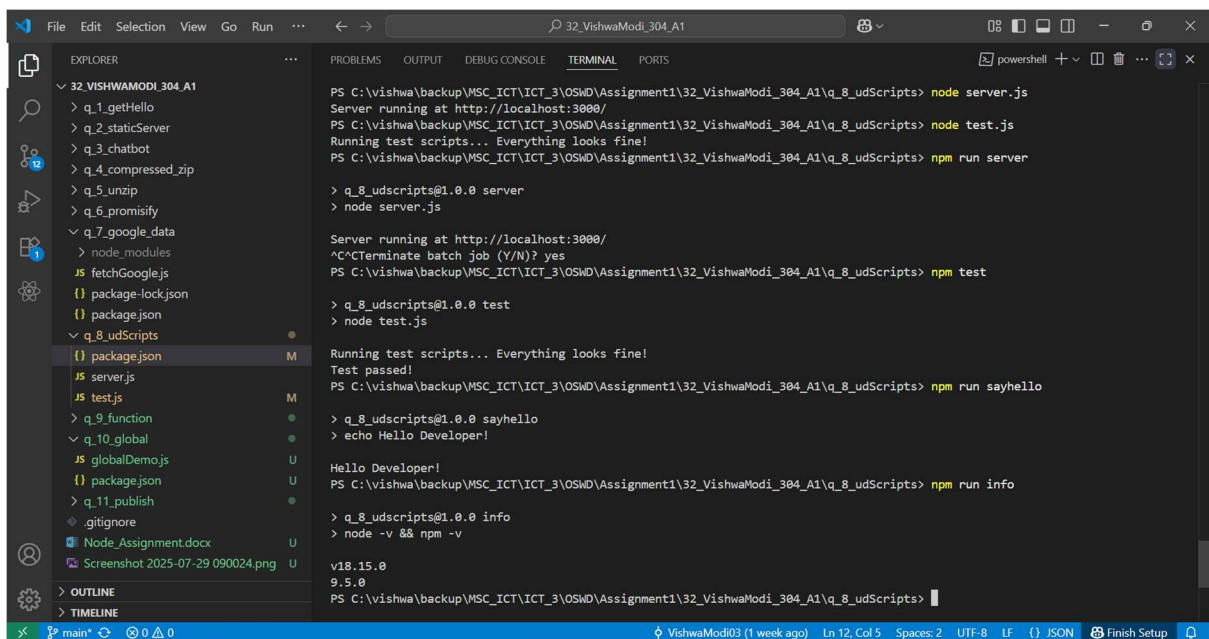
The screenshot shows a VS Code editor with a project named '32_VISHWAMODI_304_A1'. The Explorer sidebar on the left shows a file tree with the following structure:

- 32_VISHWAMODI_304_A1
 - q_1_getHello
 - q_2_staticServer
 - q_3_chatbot
 - q_4_compressed_zip
 - q_5_unzip
 - q_6_promisify
 - q_7_google_data
 - node_modules
 - fetchGoogle.js
 - package-lock.json
 - package.json
 - q_8_udScripts
 - q_9_function
 - q_10_global
 - globalDemo.js
 - package.json
 - q_11_publish
 - .gitignore
 - Node_Assignment.docx
 - Screenshot 2025-07-29 090024.png

The main editor area shows the 'TERMINAL' tab with the following commands and output:

```
PS C:\vishwa\backup\MSC ICT\ICT_3\OSWD\Assignment1\32_VishwaModi_304_A1> cd q_7_google_data
PS C:\vishwa\backup\MSC ICT\ICT_3\OSWD\Assignment1\32_VishwaModi_304_A1\q_7_google_data> node fetchGoogle.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/googleg/1x/googleg_standard_color_128dp.png" itemprop="image"><title>Google</title><script nonce="gv-LIIGFTdnlJYbVIYH2Xg">(function(){var _g={kEI:'NtHtInFGJ6S0UP2ojGwQQ',kEXPI:'0,202854,2,3497418,797,313,538661,48791,46127,201864,142932,100066,138392,51586,11106,5219186,11389,36812643,25366949,14110,4564,60607,6754,23878,9139,4600,328,6225,64164,6748,8302,8205,3292,4134,30379,28334,42889,6014,5308,353,8614,10266,5870,7714,5773,8977,18635,3050,2,13472,3261,2990,35,6247,37,2674,7945,12108,2625,3058,3604,5658,3,1669,6475,3967,2731,6431,710,6457,2302,286,1,360,680,3542,4,4,4811,935,3,1187,283,3874,1737,2351,2484,1,3467,2,213,691,2,744,792,1275,463,7,488,763,127,601,1032,655,924,4,858,982,3,1490,2,5295,7,1963,2646,103,4,1,321,5102,667,31,3,4068,4,1982,967,3176,481,965,3,2,2,2,601,730,4916,4,111,1481,2,2,298,1,4,1202,2714,691,4561,883,18,2160,1281,53,273,79,185,2,1,1380,31,104,2262,7,6,769,27,820,266,448,270,554,123,298,925,8,3,3,5,79,112,2,99,3,434,746,65,5,1,367,139,303,229,23,385,280,21,736,5,7,369,1034,274,6,32,817,2,182,2039,2116,79,251,1620,9,1,302,2393,788,4,637,831,2,673,414,619,169,226,147,412,1,2,39,29,16,667,132,25,495,331,2,1,3,2,10,785,3,801,32,215,3,12,1,1248,572,1844,3,3,625,134,12,51,107,15,801,72,3,2136,29,757,9,27,341,1553,1524,58,12,375,19,552,142,65,188,1494,3,2,2,2,771,106,464,172,4,269,4,4,494,137,25,248,4,73,160,89,160,238,20,96,117,395,1137,346,232,390,3,212,221,353,205,3,590,186,332,24,22,5,1054,587,565,1426,68,35,206,19,432,181,489,4,615,269,345,619,1036,81,171,61,313,725,372,268,881,92,447,1201,277,104,21201267,5,2253,739,4,2701,259,3,1308,1342,587,5254,2,1562,3,1027,3,612,3,1927,60,41,2196,1641,150,58,141,3,2,483,186,253,17,105,207,25,4,601,8488725,27641,547783,1288690,kBL:'EA14',kOPT:'89978449'};(function(){var a;((a=window.google)==null?0:a.stvcs)?google.kEI=g.kEI:window.google=g;}).call(this);})();(function(){google.sn='webhp';google.kHL='en-IN'});})();(function(){var g=this||self;function k(){return window.google&&window.google.kOPT||null;var l,m=[];function n(a){for(var b;a&&(a.getAttribute('b=a.getAttribute('eid'))));a=a.parentNode;return b}}function p(a){for(var b=null;a&&(a.getAttribute('b=a.getAttribute('eid'))));a=a.parentNode;return b}}function q(a){/http:\/\./test(a)&&window.location.protocol=='https:'&&google.ml&google.ml(Error("a"),1,{src:a,gimm:1}),a=""};return a}function r(a,b,d,c,h){var e="";b.search("&ei=")===-1&&(e="&ei="+n(c),b.search("&ei=")===-1&&(c=p(c))&&(e+= "&ei="+c));var f=b.search("&csid=")===-1&&(e+="&slh";c="&xz="+Date.now().toString();g._csid&&f&&(c+="&csid="+g._csid);(d=d())&&(c+="&opi="+d);return"/"+h+"/gen_204"+"?atyp=i&ct="+String(a)+"&cad="+b+(e+c);l=google.kEI;google.getEI=n;google.getEI=p;google.ml=function(){return null;google.log=function(a,b,d,c,h,e){e=e===void 0?k:e;d||(d=r(a,b,e,c,h));if(d(q(d)){a=new Image;var f=m.length;m[f]=a;a.onerror=a.onload=a.onabort=function(){delete m[f];a.src=d}};google.logUrl=function(a,b){b=b===void 0?k:b;return r("","a,b)});}).call(this);(function(){google.y={};google.sy={};function e(a,b,c){if(a)var d=a.id;else do d=Math.random();while(c[d])c[d]=[a,b]}var f;(f=google.x)l(f.x=function(a,b){e(a,b,google.y)});var g;(g=google.sx)l(g.sx=function(a,b){e(a,b,google.sy)});google.lm=[];var h;(h=google.plm)l(h.plm=function(a){google.lm.push.apply(google.lm,a)});google.lq=[];var k;(k=google.lq).load||(k.load=function(a,b,c){google.lq.push([a,b,c]);var l;(l=google).loadAll||l.loadAll=function(a,b){google.lq
```

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



The screenshot shows a VS Code editor with a project named '32_VISHWAMODI_304_A1'. The Explorer sidebar on the left shows a file tree with the following structure:

- 32_VISHWAMODI_304_A1
 - q_1_getHello
 - q_2_staticServer
 - q_3_chatbot
 - q_4_compressed_zip
 - q_5_unzip
 - q_6_promisify
 - q_7_google_data
 - node_modules
 - fetchGoogle.js
 - package-lock.json
 - package.json
 - q_8_udScripts
 - q_9_function
 - q_10_global
 - globalDemo.js
 - package.json
 - q_11_publish
 - .gitignore
 - Node_Assignment.docx
 - Screenshot 2025-07-29 090024.png

The main editor area shows the 'TERMINAL' tab with the following commands and output:

```
PS C:\vishwa\backup\MSC ICT\ICT_3\OSWD\Assignment1\32_VishwaModi_304_A1\q_8_udScripts> node server.js
Server running at http://localhost:3000/
PS C:\vishwa\backup\MSC ICT\ICT_3\OSWD\Assignment1\32_VishwaModi_304_A1\q_8_udScripts> node test.js
Running test scripts... Everything looks fine!
PS C:\vishwa\backup\MSC ICT\ICT_3\OSWD\Assignment1\32_VishwaModi_304_A1\q_8_udScripts> npm run server

> q_8_udscripts@1.0.0 server
> node server.js

Server running at http://localhost:3000/
^C^CTerminate batch job (Y/N)? yes
PS C:\vishwa\backup\MSC ICT\ICT_3\OSWD\Assignment1\32_VishwaModi_304_A1\q_8_udScripts> npm test

> q_8_udscripts@1.0.0 test
> node test.js

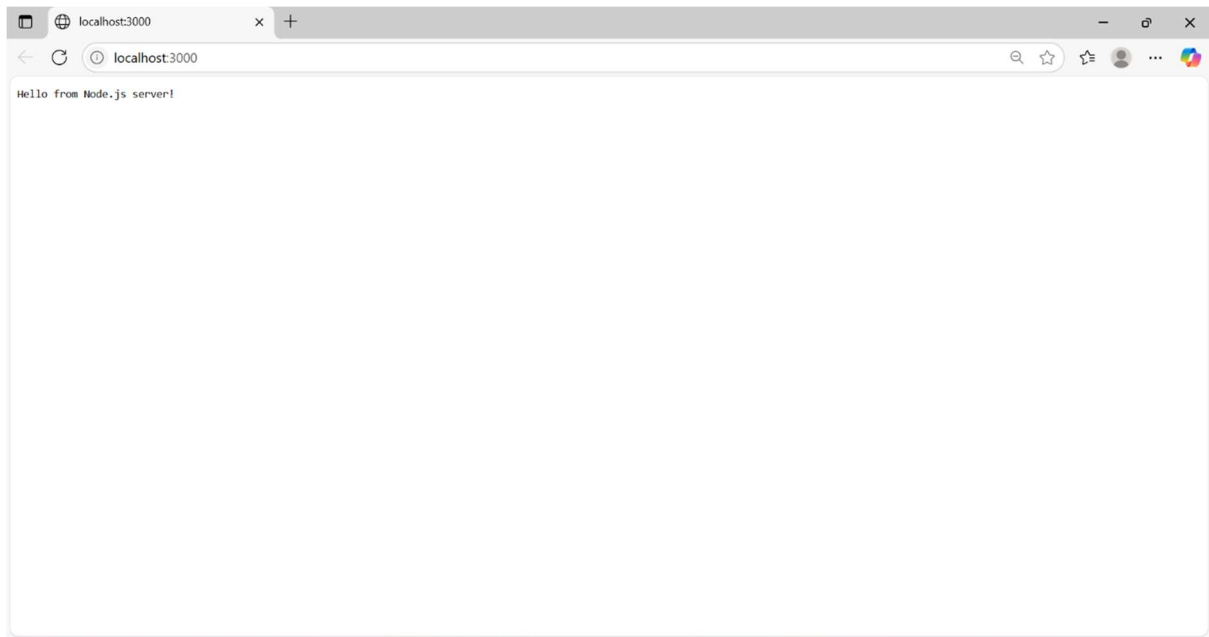
Running test scripts... Everything looks fine!
Test passed!
PS C:\vishwa\backup\MSC ICT\ICT_3\OSWD\Assignment1\32_VishwaModi_304_A1\q_8_udScripts> npm run sayhello

> q_8_udscripts@1.0.0 sayhello
> echo Hello Developer!

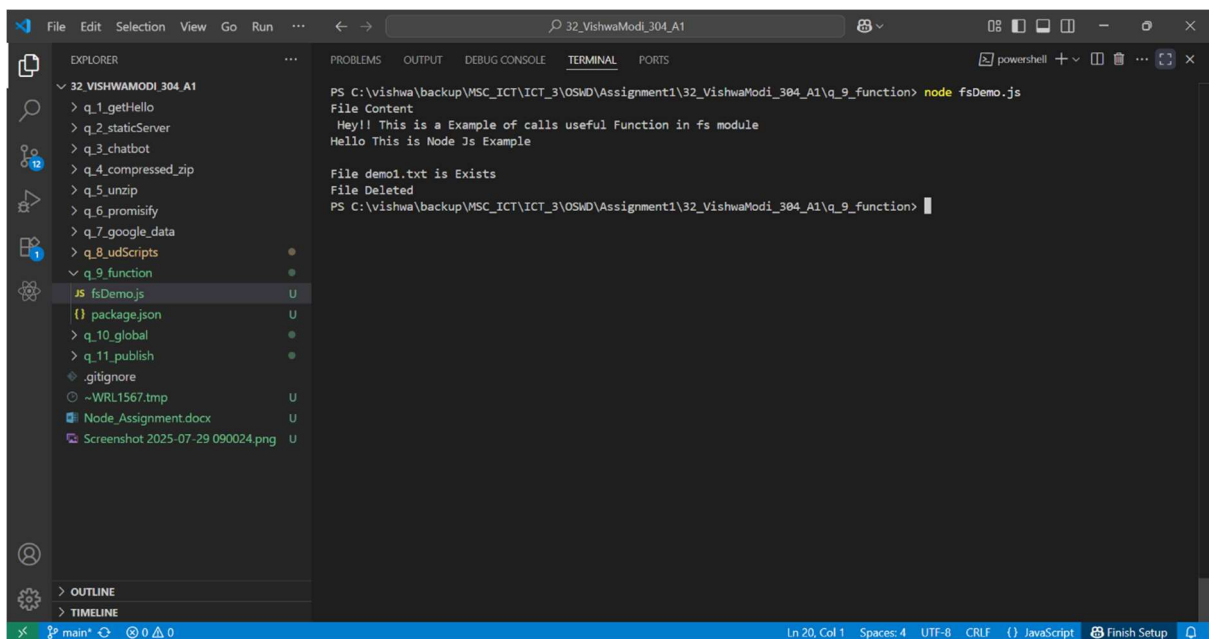
Hello Developer!
PS C:\vishwa\backup\MSC ICT\ICT_3\OSWD\Assignment1\32_VishwaModi_304_A1\q_8_udScripts> npm run info

> q_8_udscripts@1.0.0 info
> node -v && npm -v

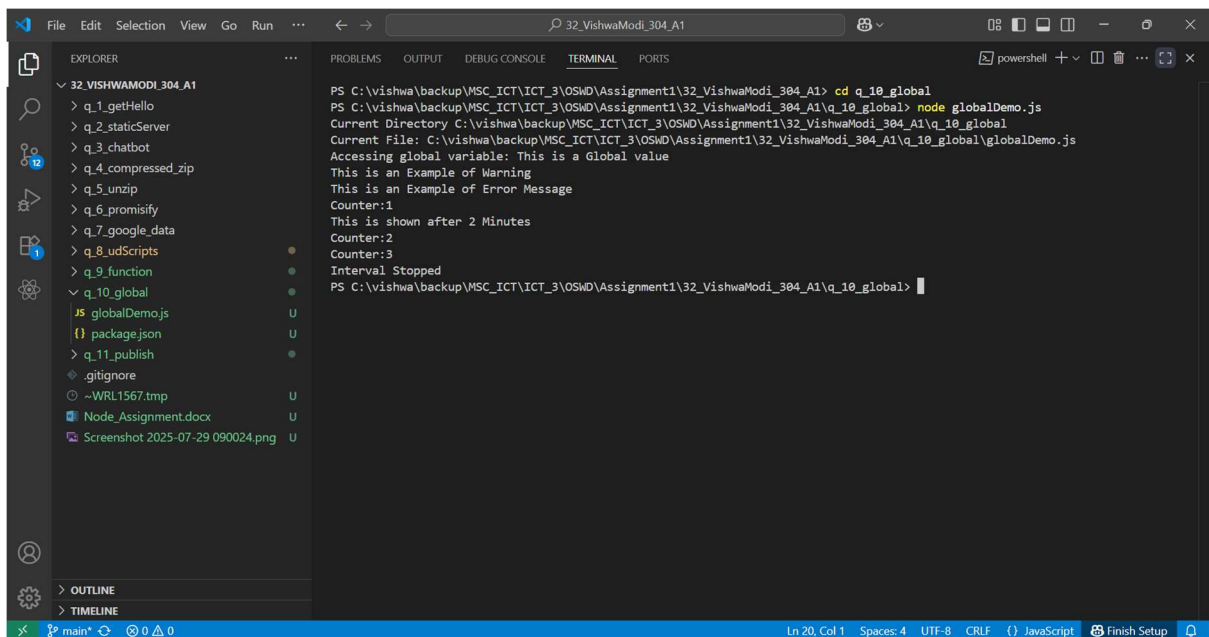
v18.15.0
9.5.0
PS C:\vishwa\backup\MSC ICT\ICT_3\OSWD\Assignment1\32_VishwaModi_304_A1\q_8_udScripts>
```



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



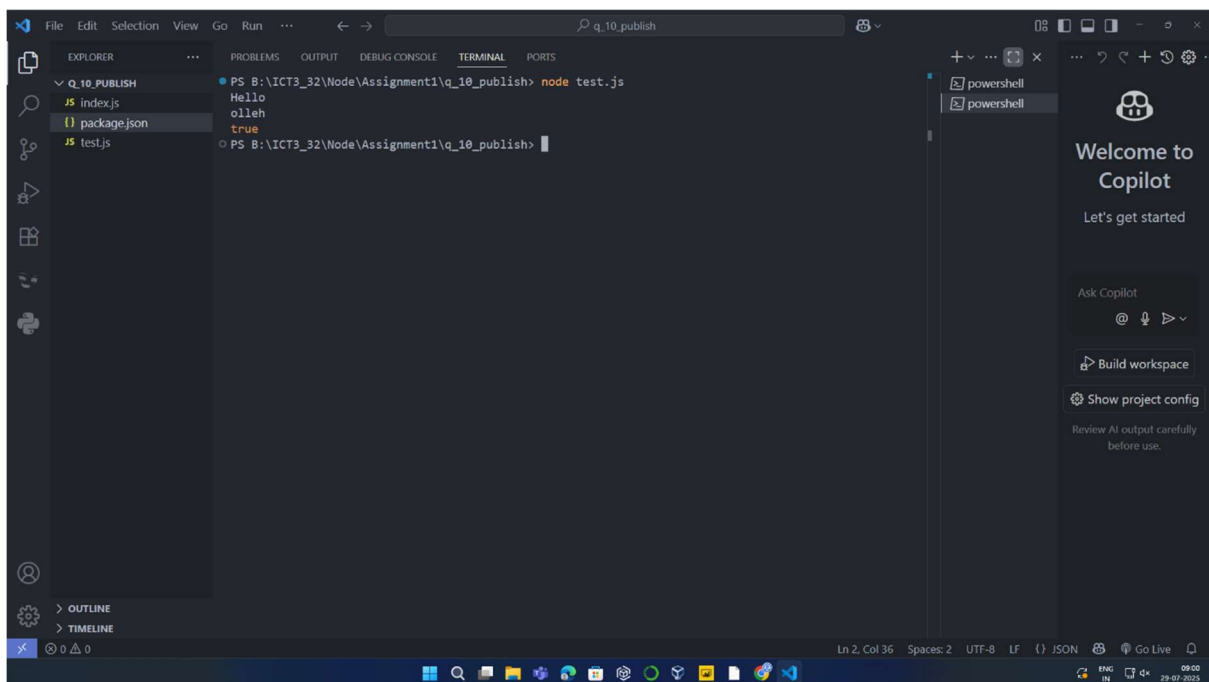
10. A program which uses global objects in nodejs.



The screenshot shows a Visual Studio Code editor with a file explorer on the left displaying a project named '32_VISHWAMODI_304_A1'. The file list includes 'q_1_getHello', 'q_2_staticServer', 'q_3_chatbot', 'q_4_compressed_zip', 'q_5_unzip', 'q_6_promisify', 'q_7_google_data', 'q_8_udScripts', 'q_9_function', 'q_10_global', 'globalDemo.js', 'package.json', 'q_11_publish', '.gitignore', '~WRL1567.tmp', 'Node_Assignment.docx', and 'Screenshot 2025-07-29 090024.png'. The 'q_10_global' folder is selected. The terminal on the right shows the following commands and output:

```
PS C:\vishwa\backup\MSC_ICT\ICT_3\OSWD\Assignment1\32_VishwaModi_304_A1> cd q_10_global
PS C:\vishwa\backup\MSC_ICT\ICT_3\OSWD\Assignment1\32_VishwaModi_304_A1\q_10_global> node globalDemo.js
Current Directory C:\vishwa\backup\MSC_ICT\ICT_3\OSWD\Assignment1\32_VishwaModi_304_A1\q_10_global
Current File: C:\vishwa\backup\MSC_ICT\ICT_3\OSWD\Assignment1\32_VishwaModi_304_A1\q_10_global\globalDemo.js
Accessing global variable: This is a Global value
This is an Example of Warning
This is an Example of Error Message
Counter:1
This is shown after 2 Minutes
Counter:2
Counter:3
Interval Stopped
PS C:\vishwa\backup\MSC_ICT\ICT_3\OSWD\Assignment1\32_VishwaModi_304_A1\q_10_global>
```

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



The screenshot shows a Visual Studio Code editor with a file explorer on the left displaying a project named 'Q_10_PUBLISH'. The file list includes 'index.js', 'package.json', and 'test.js'. The terminal on the right shows the following commands and output:

```
PS B:\ICT3_32\Node\Assignment1\q_10_publish> node test.js
Hello
olleh
true
PS B:\ICT3_32\Node\Assignment1\q_10_publish>
```

The right sidebar shows the 'Welcome to Copilot' panel with options to 'Build workspace', 'Show project config', and 'Review AI output carefully before use.' The status bar at the bottom indicates 'Ln 2, Col 36', 'Spaces: 2', 'UTF-8', 'LF', 'JSON', and 'Go Live'.