Subject : Application Development Using Full Stack (701)

Assignment-1

Name : Anghan Deep J.
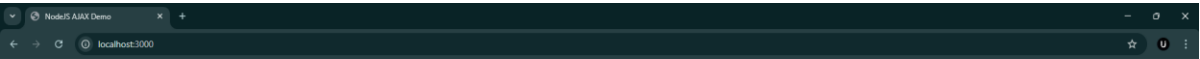
Sem : M.Sc(IT) 7th

Div : B

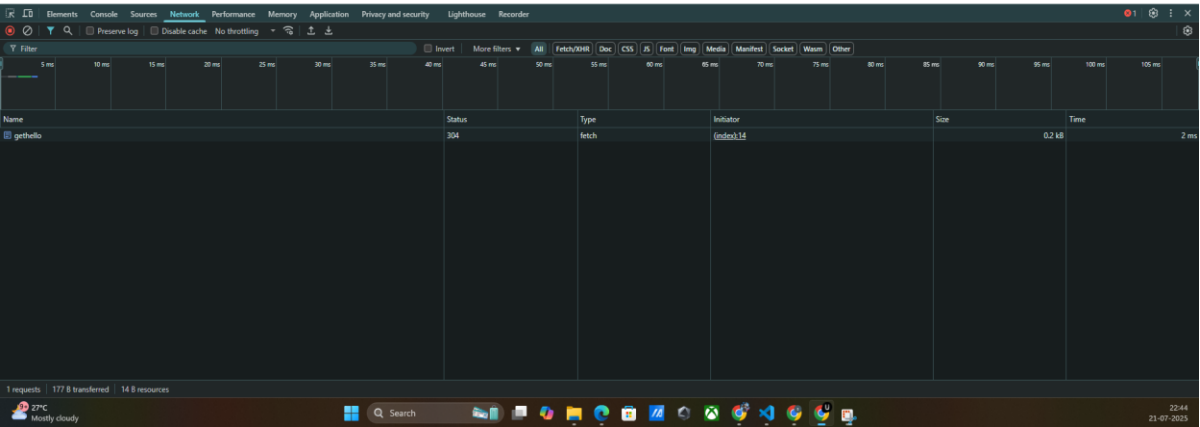Roll No : 140

SPID : 2022026127

Problem - 1

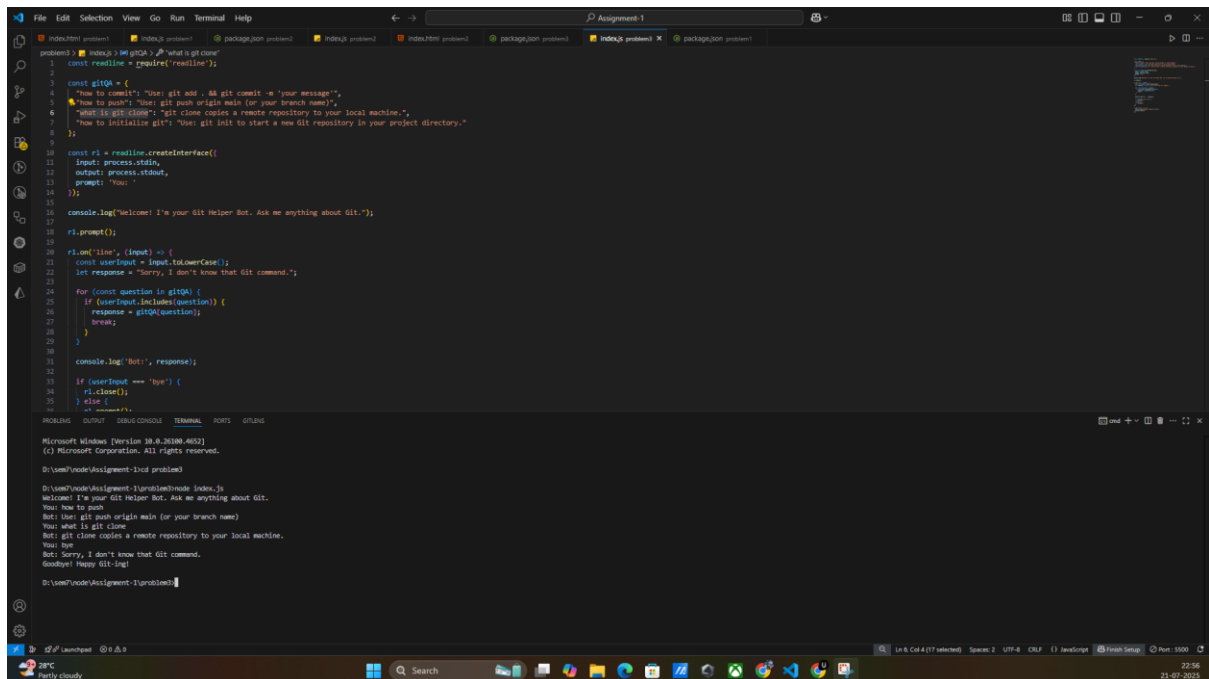**Question 1**

Get Hello

Hello NodeJS!!
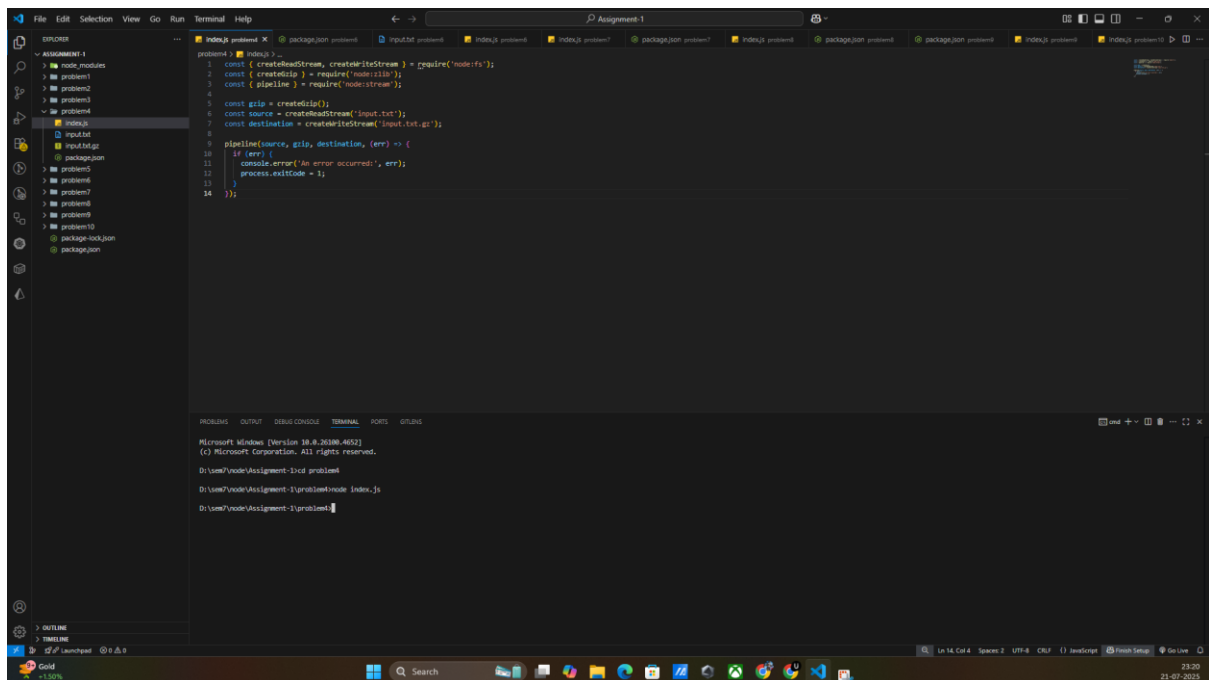

Problem – 2

This is Static File as HTML Content

Problem – 3


```javascript
const readline = require('readline');

const gitQA = {
  "how to commit": "Use: git add . && git commit -m 'your message'",
  "how to push": "Use: git push origin main (or your branch name)",
  "what is git clone": "git clone copies a remote repository to your local machine.",
  "how to initialize git": "Use: git init to start a new Git repository in your project directory."
};

const rl = readline.createInterface({
  input: process.stdin,
  output: process.stdout,
  prompt: 'You: '
});

console.log("Welcome! I'm your Git Helper Bot. Ask me anything about Git.");

rl.prompt();

rl.on('line', (input) => {
  const userInput = input.toLowerCase();
  let response = "Sorry, I don't know that Git command.";

  for (const question in gitQA) {
    if (userInput.includes(question)) {
      response = gitQA[question];
      break;
    }
  }

  console.log('Bot:', response);

  if (userInput === 'bye') {
    rl.close();
  } else {
```

```
Microsoft Windows [Version 10.0.26100.4652]
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D:\sem7\node\Assignment-1>cd problem3

D:\sem7\node\Assignment-1\problem3>node index.js
Welcome! I'm your Git Helper Bot. Ask me anything about Git.
You: how to push
Bot: Use: git push origin main (or your branch name)
You: what is git clone
Bot: git clone copies a remote repository to your local machine.
You: bye
Bot: Sorry, I don't know that Git command.
Goodbye! Happy Git-ing!

D:\sem7\node\Assignment-1\problem3>
```
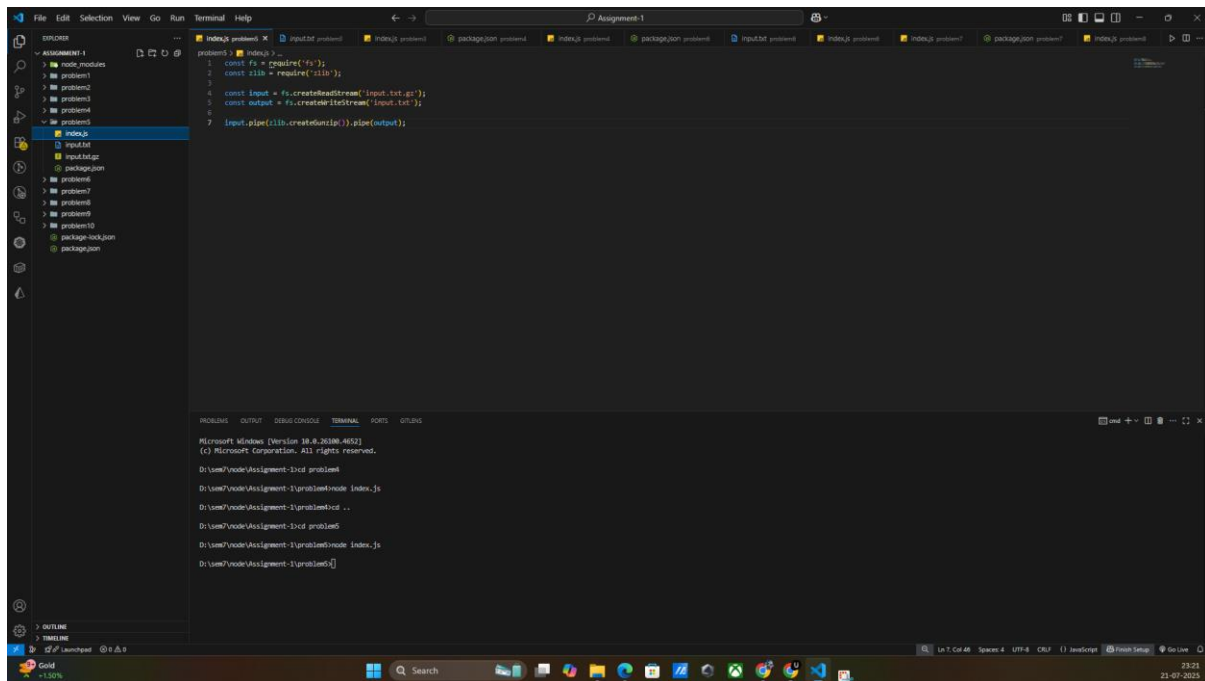
Problem – 4


```javascript
const { createReadStream, createWriteStream } = require('node:fs');
const { createGzip } = require('node:zlib');
const { pipeline } = require('node:stream');

const gzip = createGzip();
const source = createReadStream('input.txt');
const destination = createWriteStream('input.txt.gz');

pipeline(source, gzip, destination, (err) => {
  if (err) {
    console.error('An error occurred:', err);
    process.exitCode = 1;
  }
});
```

```
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D:\sem7\node\Assignment-1>cd problem4

D:\sem7\node\Assignment-1\problem4>node index.js

D:\sem7\node\Assignment-1\problem4>
```
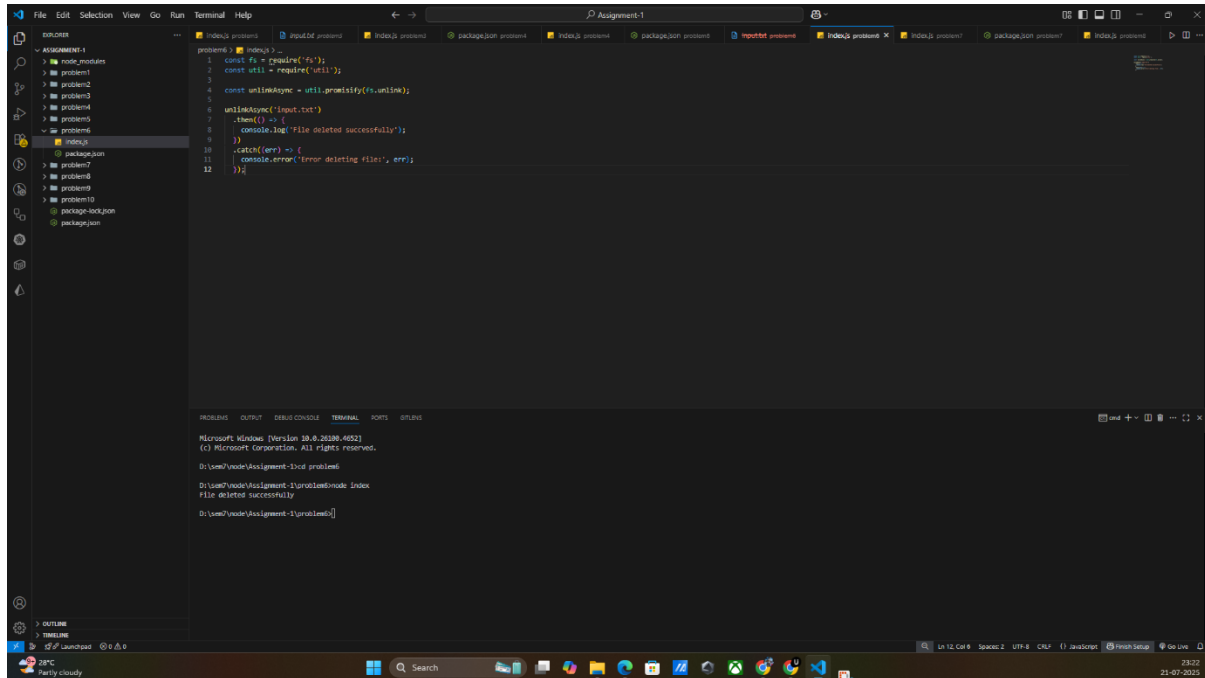
Problem – 5


```js
const fs = require('fs');
const zlib = require('zlib');

const input = fs.createReadStream("input.txt.gz");
const output = fs.createWriteStream("input.txt");

input.pipe(zlib.createGunzip()).pipe(output);
```

```
Microsoft Windows [Version 10.0.26100.4652]
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D:\sem7\node\Assignment-1>cd problem4

D:\sem7\node\Assignment-1\problem4>node index.js

D:\sem7\node\Assignment-1\problem4>cd ..

D:\sem7\node\Assignment-1>cd problem5

D:\sem7\node\Assignment-1\problem5>node index.js

D:\sem7\node\Assignment-1\problem5>
```

Problem – 6


```js
const fs = require('fs');
const util = require('util');

const unlinkAsync = util.promisify(fs.unlink);

unlinkAsync('input.txt')
  .then(() => {
    console.log('File deleted successfully');
  })
  .catch((err) => {
    console.error('Error deleting file:', err);
  });
```

```
Microsoft Windows [Version 10.0.26100.4652]
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D:\sem7\node\Assignment-1>cd problem6

D:\sem7\node\Assignment-1\problem6>node index
File deleted successfully

D:\sem7\node\Assignment-1\problem6>
```

Problem – 7


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

async function fetchGooglePage() {

  try {

    const response = await fetch('https://www.google.com');

    if (!response.ok) {
      throw new Error(`HTTP error! status: ${response.status}`);
    }

    const html = await response.text();

    console.log('Google Homepage HTML:\n');

    console.log(html.slice(0, 500)); // Print first 500 characters

  } catch (err) {

    console.error('Failed to fetch Google page:', err.message);

  }
}

fetchGooglePage();
```

Problem – 8


```json
{
  "name": "problem8",
  "version": "1.0.0",
  "description": "",
  "main": "index.js",
  "scripts": {
    "start": "node index",
    "test": "echo \"No test specified\" && exit 0",

    "build": "echo Building the project...",
    "lint": "echo Running linter..."
  },
  "keywords": [],
  "author": "",
  "license": "ISC"
}
```
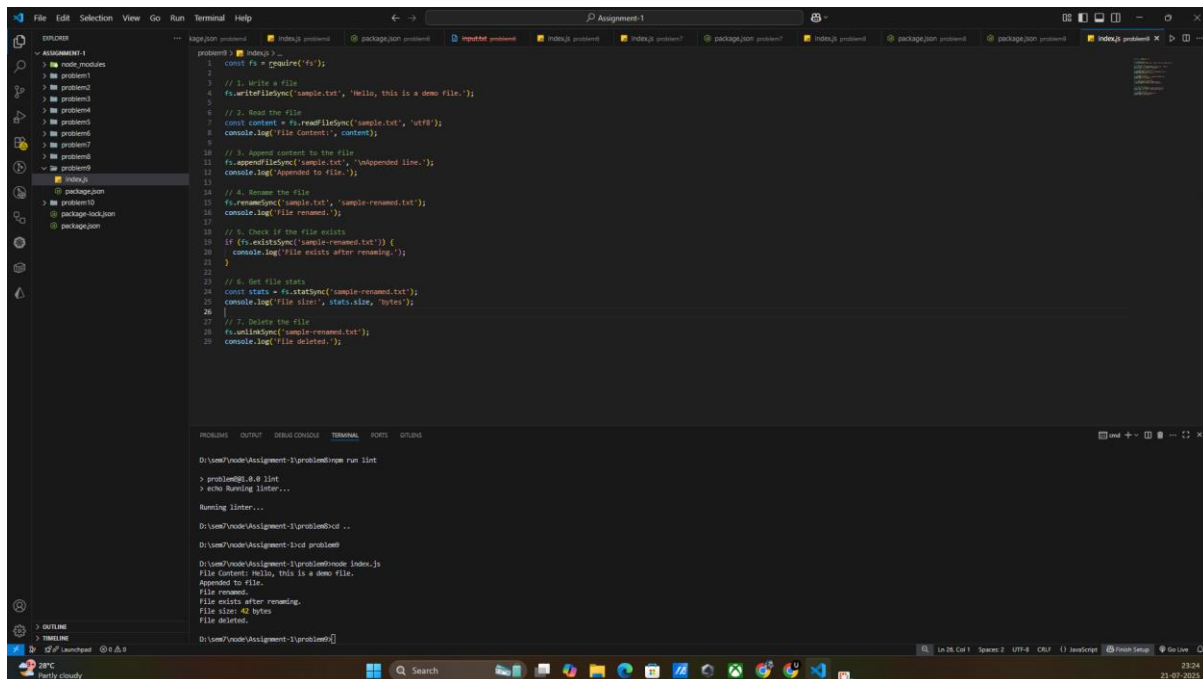
Problem – 9


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

// 1. Write a file
fs.writeFileSync('sample.txt', 'Hello, this is a demo file.');

// 2. Read the file
const content = fs.readFileSync('sample.txt', 'utf8');
console.log('File Content:', content);

// 3. Append content to the file
fs.appendFileSync('sample.txt', '\nAppended line.');
console.log('Appended to file.');

// 4. Rename the file
fs.renameSync('sample.txt', 'sample-renamed.txt');
console.log('File renamed.');

// 5. Check if the file exists
if (fs.existsSync('sample-renamed.txt')) {
  console.log('File exists after renaming.');
}

// 6. Get file stats
const stats = fs.statSync('sample-renamed.txt');
console.log('File size:', stats.size, 'bytes');

// 7. Delete the file
fs.unlinkSync('sample-renamed.txt');
console.log('File deleted.');
```
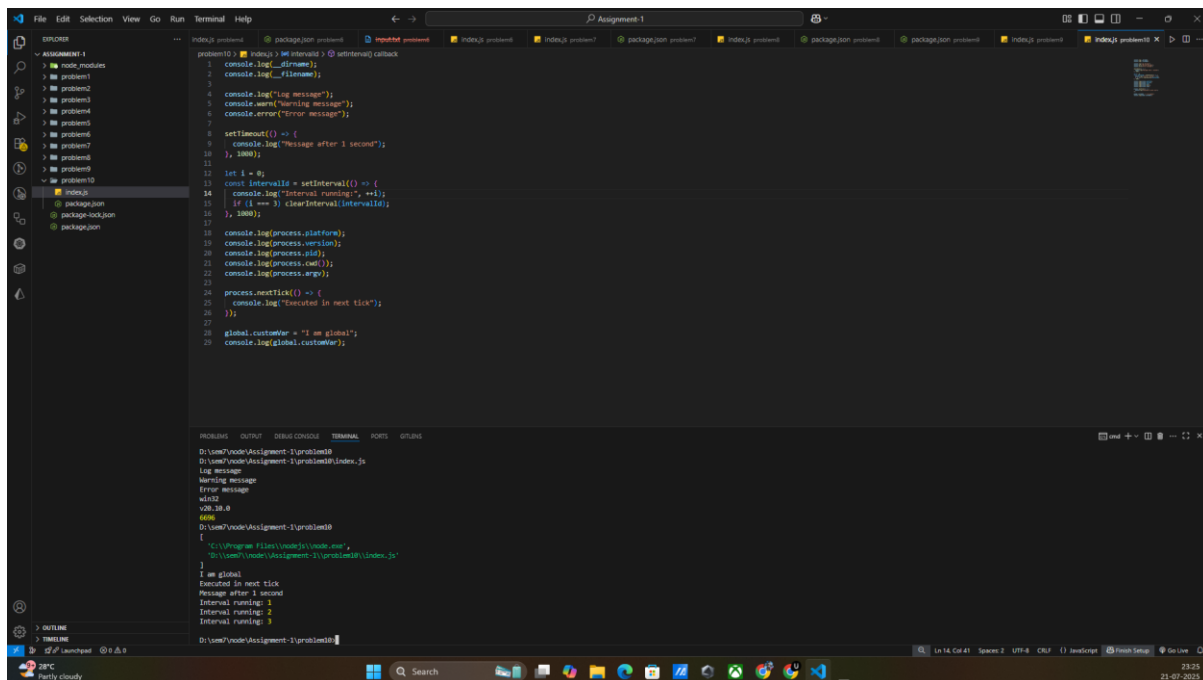
```
D:\sem7\node\Assignment-1\problem8>npm run lint

> problem8@1.0.0 lint
> echo Running linter...

Running linter...

D:\sem7\node\Assignment-1\problem8>cd ..

D:\sem7\node\Assignment-1>cd problem9

D:\sem7\node\Assignment-1\problem9>node index.js
File Content: Hello, this is a demo file.
Appended to file.
File renamed.
File exists after renaming.
File size: 42 bytes
File deleted.

D:\sem7\node\Assignment-1\problem9>
```

Problem – 10


```javascript
console.log(__dirname);
console.log(__filename);

console.log("Log message");
console.warn("Warning message");
console.error("Error message");

setTimeout(() => {
  console.log("Message after 1 second");
}, 1000);

let i = 0;
const intervalId = setInterval(() => {
  console.log("Interval running:", ++i);
  if (i === 3) clearInterval(intervalId);
}, 1000);

console.log(process.platform);
console.log(process.version);
console.log(process.pid);
console.log(process.cwd());
console.log(process.argv);

process.nextTick(() => {
  console.log("Executed in next tick");
});

global.customVar = "I am global";
console.log(global.customVar);
```

```
D:\sem7\node\Assignment-1\problem10
D:\sem7\node\Assignment-1\problem10\index.js
Log message
Warning message
Error message
win32
v20.10.0
6696
D:\sem7\node\Assignment-1\problem10
[
  'C:\\Program Files\\nodejs\\node.exe',
  'D:\\sem7\\node\\Assignment-1\\problem10\\index.js'
]
I am global
Executed in next tick
Message after 1 second
Interval running: 1
Interval running: 2
Interval running: 3

D:\sem7\node\Assignment-1\problem10>
```