

Assignment 1:

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Subject: Node & ReactJS Development

Semester: 5TH

Repo link: <https://github.com/Dipanshudk46/node-js-assignment-1>

Question 1: Steps for Downloading and Installing Node.js on Windows

Aim:

To download and install Node.js on a Windows system.

Steps:

1. Open your web browser and go to <https://nodejs.org>.
2. You will see two versions:
 - **LTS (Long Term Support)** → Recommended for most users.
 - **Current** → Latest features but not always stable.
Choose **LTS**.
3. Download the **Windows Installer (.msi)** file.
4. Run the installer:
 - Click **Next**.
 - Accept the license agreement.
 - Click **Next**.
 - Choose the installation folder (default: C:\Program Files\nodejs).
 - Keep all default options checked.
 - Click **Install**.
5. After installation, open **Command Prompt** or **VS Code Terminal**.
6. Type the following commands to check installation:

```
node -v  
npm -v
```

node -v shows the installed Node.js version.

npm -v shows the installed Node Package Manager version

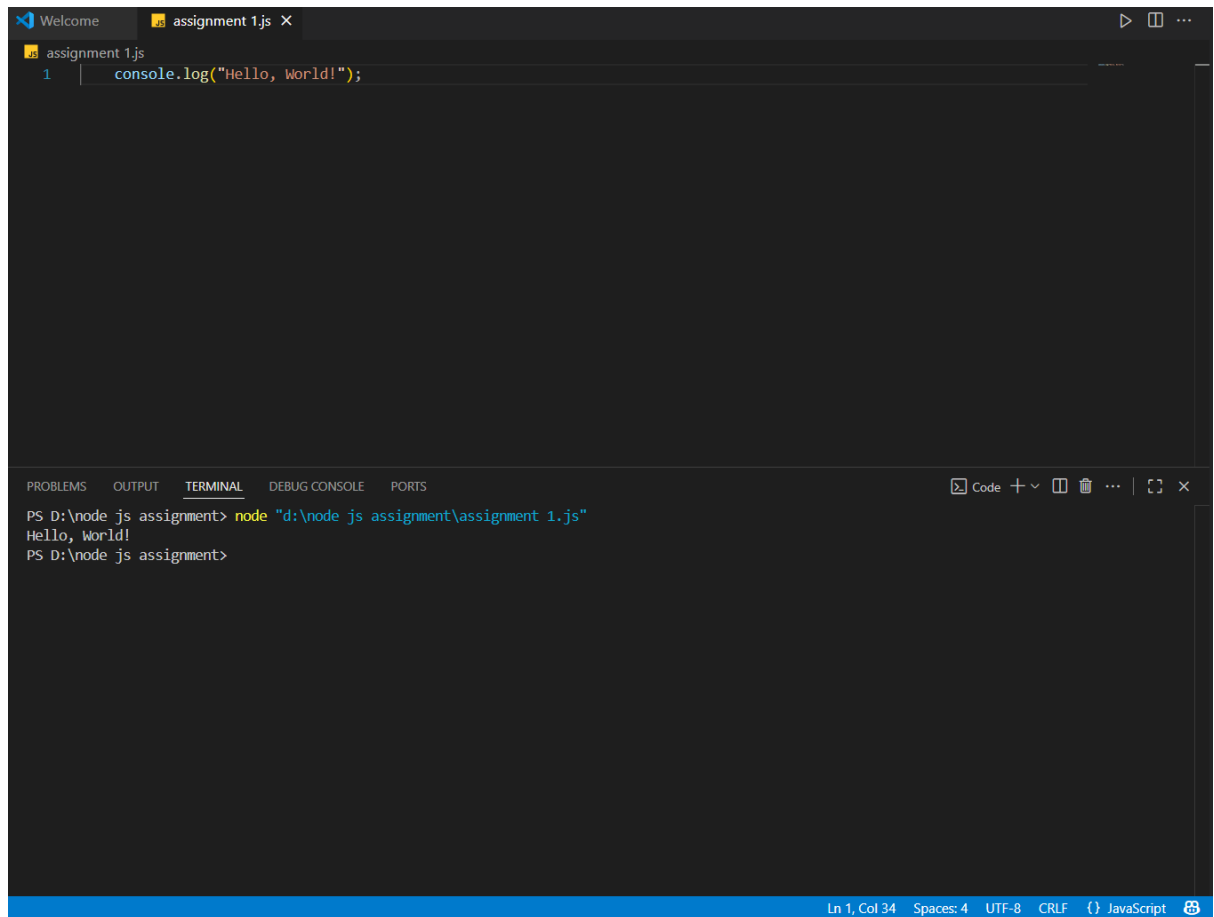
Conclusion:

Node.js and npm are successfully installed on Windows and ready to use.

Question 2: Create File with First Name and Student ID and Print Hello World

Steps:

1. Open VS Code.
2. Create a new file named:
3. Write the following code:



```
assignment 1.js
1 | console.log("Hello, World!");
```

```
PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE PORTS
PS D:\node js assignment> node "d:\node js assignment\assignment 1.js"
Hello, World!
PS D:\node js assignment>
```

Ln 1, Col 34 Spaces: 4 UTF-8 CRLF {} JavaScript

4. • Save the file.
5. • Run in terminal: node assignment 1.js

Q3: Create a Basic HTTP Server and Perform File Read/Write

Steps:

1. Open VS Code.
2. Create a file named: server.js
3. Write the following code:

The screenshot shows the Visual Studio Code editor interface. On the left, the Explorer sidebar shows a project structure with files: Welcome, assignment 1.js, server.js, assignment 1.docx, assignment 1.js, example.txt, and server.js. The main editor area displays the content of `server.js`, which is a Node.js script that reads a file and serves its content over HTTP. The script includes comments and code for file reading, error handling, and server setup. The terminal at the bottom shows the command `node "d:\node js assignment\server.js"` being executed, resulting in the output `Server running at http://localhost:3000/`.

```
1 const http = require('http');
2 const fs = require('fs');
3
4 // Write data to a file
5 fs.writeFileSync('example.txt', 'This is a sample text file created by Node.js');
6
7 // Create HTTP server
8 const server = http.createServer((req, res) => {
9   fs.readFile('example.txt', (err, data) => {
10     if (err) {
11       res.writeHead(500, { 'Content-Type': 'text/plain' });
12       res.end('Error reading file');
13     } else {
14       res.writeHead(200, { 'Content-Type': 'text/plain' });
15       res.end(data);
16     }
17   });
18 });
19
20 // Server listening on port 3000
21 server.listen(3000, () => {
22   console.log("Server running at http://localhost:3000/");
23 });
24
```

PS D:\node js assignment> node "d:\node js assignment\server.js"
Server running at http://localhost:3000/

4. Run in terminal: `node server.js`
5. Open your browser and go to: <http://localhost:3000/>

