

## Day 17 - Introduction to Node.js & Basics

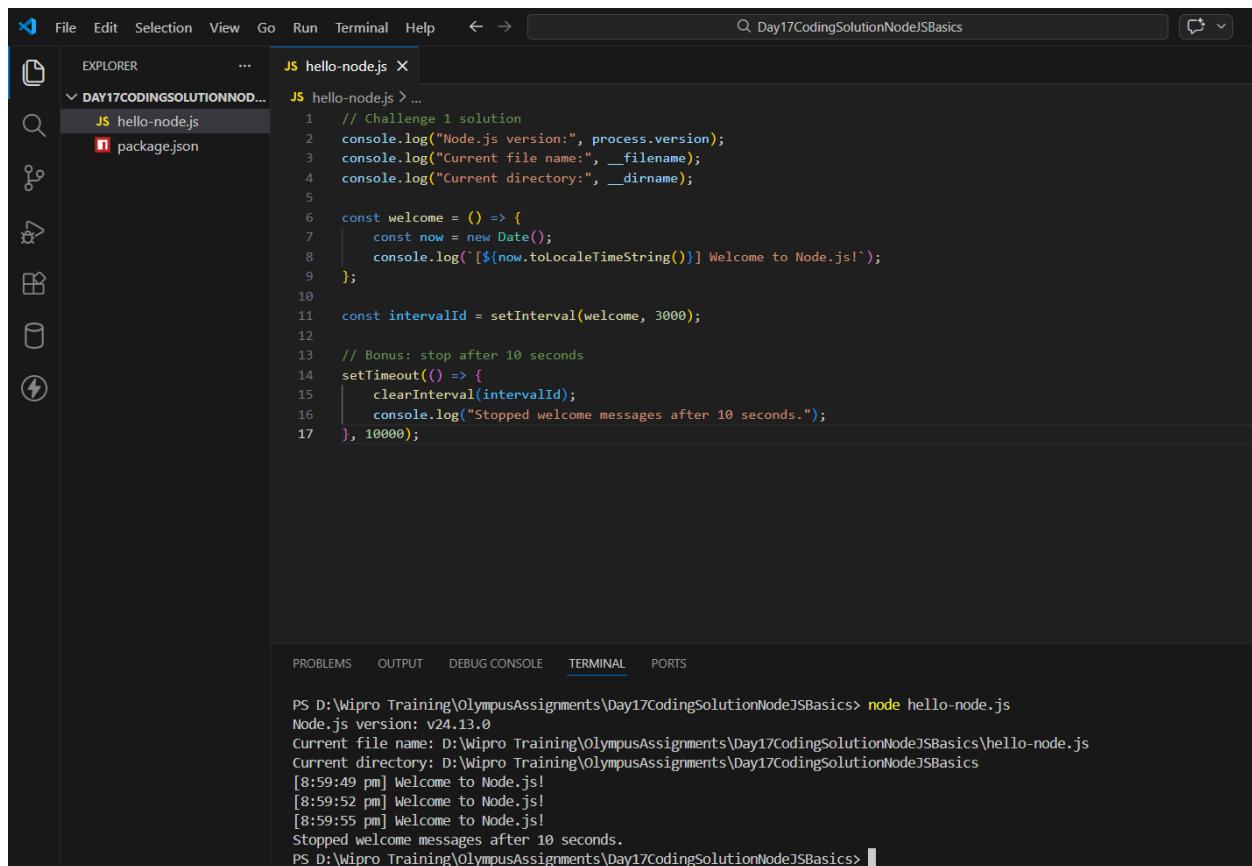
This report summarizes the three coding challenges completed as part of the Day 16 Node.js assignment. Each challenge demonstrates a key Node.js concept such as global objects, timers, CLI arguments, and external npm packages.

### Challenge 1: Hello Node

This challenge demonstrates Node.js fundamentals. The program prints the Node version, file name, and directory path. It uses setInterval() to display a welcome message every 3 seconds and clearInterval() to stop the execution after 10 seconds.

#### Approach:

1. Used built-in global objects (\_filename, \_dirname).
2. Implemented setInterval() for periodic message display.
3. Used setTimeout() to clear the interval automatically.



The screenshot shows the Visual Studio Code interface. The left sidebar has icons for Explorer, Search, Find, Open, and Refresh. The main area shows a file tree with 'DAY17CODINGSOLUTIONNOD...' expanded, showing 'hello-node.js' and 'package.json'. The code editor window contains the following JavaScript code:

```
// Challenge 1 solution
console.log("Node.js version:", process.version);
console.log("Current file name:", __filename);
console.log("Current directory:", __dirname);

const welcome = () => {
  const now = new Date();
  console.log(`[${now.toLocaleTimeString()}] Welcome to Node.js!`);
};

const intervalId = setInterval(welcome, 3000);

// Bonus: stop after 10 seconds
setTimeout(() => {
  clearInterval(intervalId);
  console.log("Stopped welcome messages after 10 seconds.");
}, 10000);
```

The bottom right panel is the Terminal tab, showing the command line output:

```
PS D:\Wipro Training\OlympusAssignments\Day17CodingSolutionNodeJSBasics> node hello-node.js
Node.js version: v24.13.0
Current file name: D:\Wipro Training\OlympusAssignments\Day17CodingSolutionNodeJSBasics\hello-node.js
Current directory: D:\Wipro Training\OlympusAssignments\Day17CodingSolutionNodeJSBasics
[8:59:49 pm] Welcome to Node.js!
[8:59:52 pm] Welcome to Node.js!
[8:59:55 pm] Welcome to Node.js!
Stopped welcome messages after 10 seconds.
PS D:\Wipro Training\OlympusAssignments\Day17CodingSolutionNodeJSBasics>
```

## Challenge 2: Colorful Banner App

This challenge prints a colorful banner on the terminal using the figlet and chalk libraries. It demonstrates how to install and use external npm packages and how to create a custom npm start script.

## Approach:

1. Imported figlet to generate stylized ASCII text.
  2. Used chalk to apply colors to terminal output.
  3. Configured an npm start script in package.json to execute index.js.

## Challenge 3: CLI Greeting App

This challenge takes a user's name as a command-line argument and greets the user along with the current date and time. It uses the process.argv array to capture input and the moment library to format timestamps.

### Approach:

1. Retrieved user input using process.argv.
2. Formatted date and time using moment().
3. Provided a fallback using JavaScript's built-in Date object if moment was not available.

The screenshot shows the VS Code interface with the following details:

- File Explorer:** Shows files in the 'DAY17CO...' folder: 'greet.js' (selected), 'hello-node.js', 'index.js', 'package-lock.json', and 'package.json'.
- Code Editor:** Displays the 'greet.js' code:

```
JS greet.js > ...
JS greet.js > ...
14
15     let dateTimeStr;
16     if (moment) {
17         // Format similar to example: "Fri Nov 7 2025, 10:45 AM"
18         dateTimeStr = moment().format("ddd MMM D YYYY, h:mm A");
19     } else {
20         // Fallback using built-in API if moment not installed
21         const now = new Date();
22         dateTimeStr = now.toLocaleString(undefined, {
23             weekday: 'short',
24             month: 'short',
25             day: 'numeric',
26             year: 'numeric',
27             hour: 'numeric',
28             minute: '2-digit',
29             hour12: true
30         });
31     }
32
33     console.log(`Hello, ${name}! Today is ${dateTimeStr}.`);
```
- Terminal:** Shows the command being run and its output:

```
PS D:\Wipro Training\OlympusAssignments\Day17CodingSolutionNodeJSBasics> npm run greet -- Reethu
>>
> day17codingsolutionnodejsbasics@1.0.0 greet
> node greet.js Reethu

Hello, Reethu! Today is Thu, 5 Feb, 2026, 9:21 pm.
PS D:\Wipro Training\OlympusAssignments\Day17CodingSolutionNodeJSBasics>
```

## Conclusion

All three challenges successfully demonstrate the fundamentals of Node.js, including working with global objects, timers, npm packages, and command-line interaction. This assignment provided practical experience in executing and managing Node.js scripts.