

## Lesson 01 Demo 01

### Writing and Executing JavaScript Program Using Node

**Objective:** To demonstrate the process of writing and executing a JavaScript program using Node.js

**Tools Required:** Visual Studio Code and Node.js

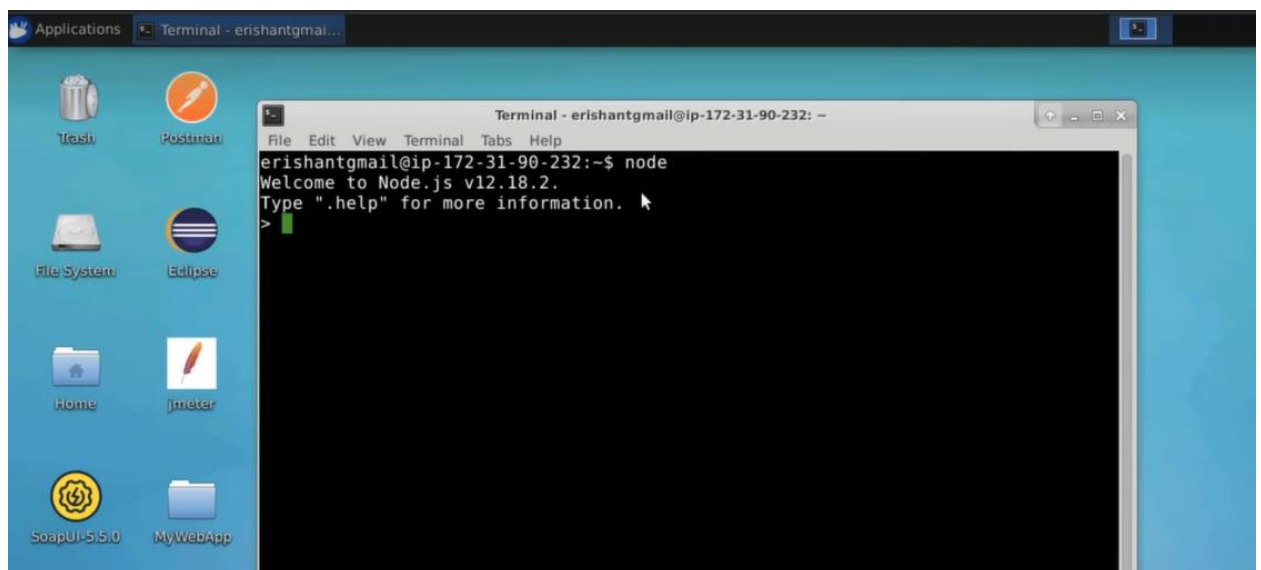
**Prerequisites:** None

#### Steps to be followed:

1. Create a JavaScript directory
2. Execute the JavaScript program using Node.js

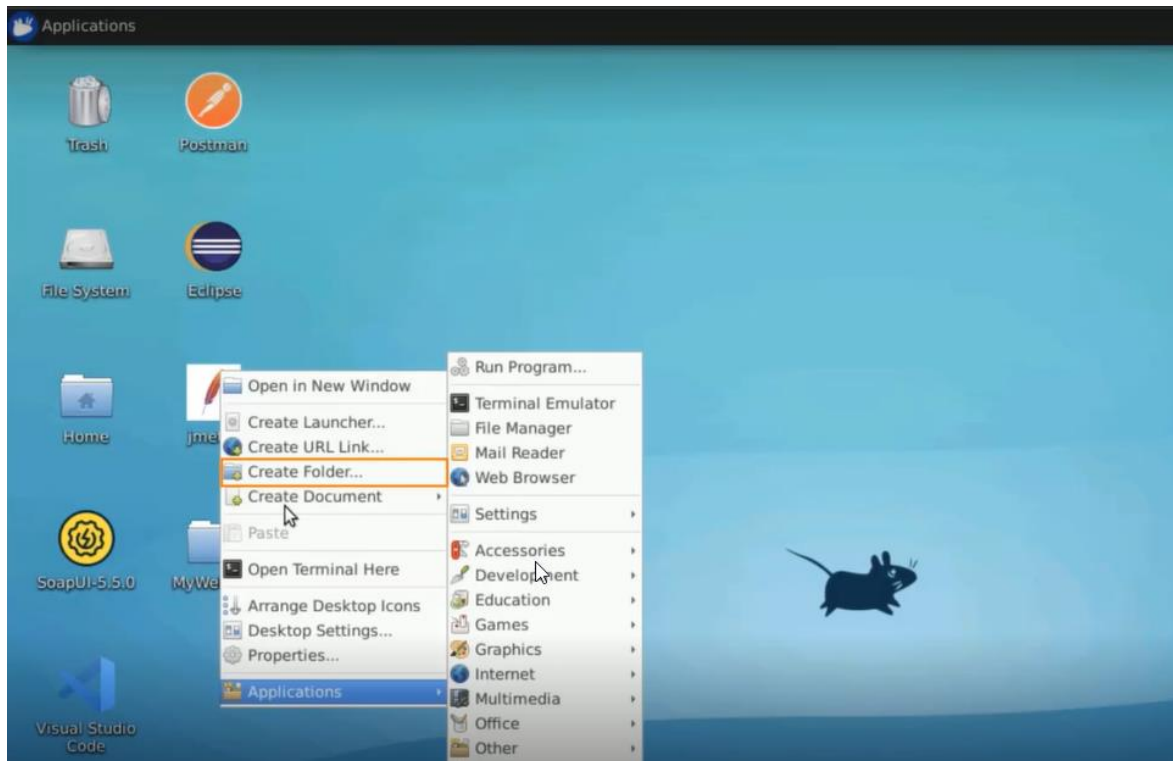
#### Step 1: Create a JavaScript directory

- 1.1 Open the terminal and type **node** to verify if Node.js is installed



**Note:** If Node.js is not installed, proceed with the installation. Follow the official documentation specific to your operating system.

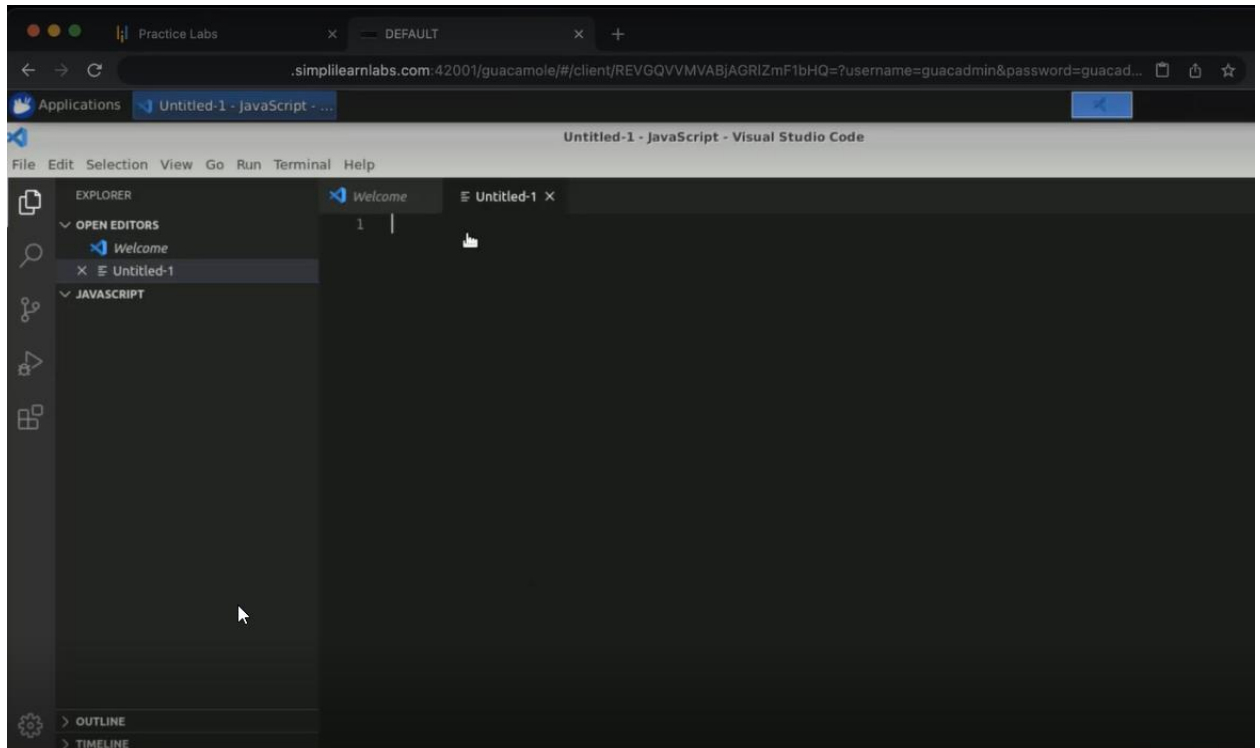
## 1.2 Create a new folder and name it **JavaScript**



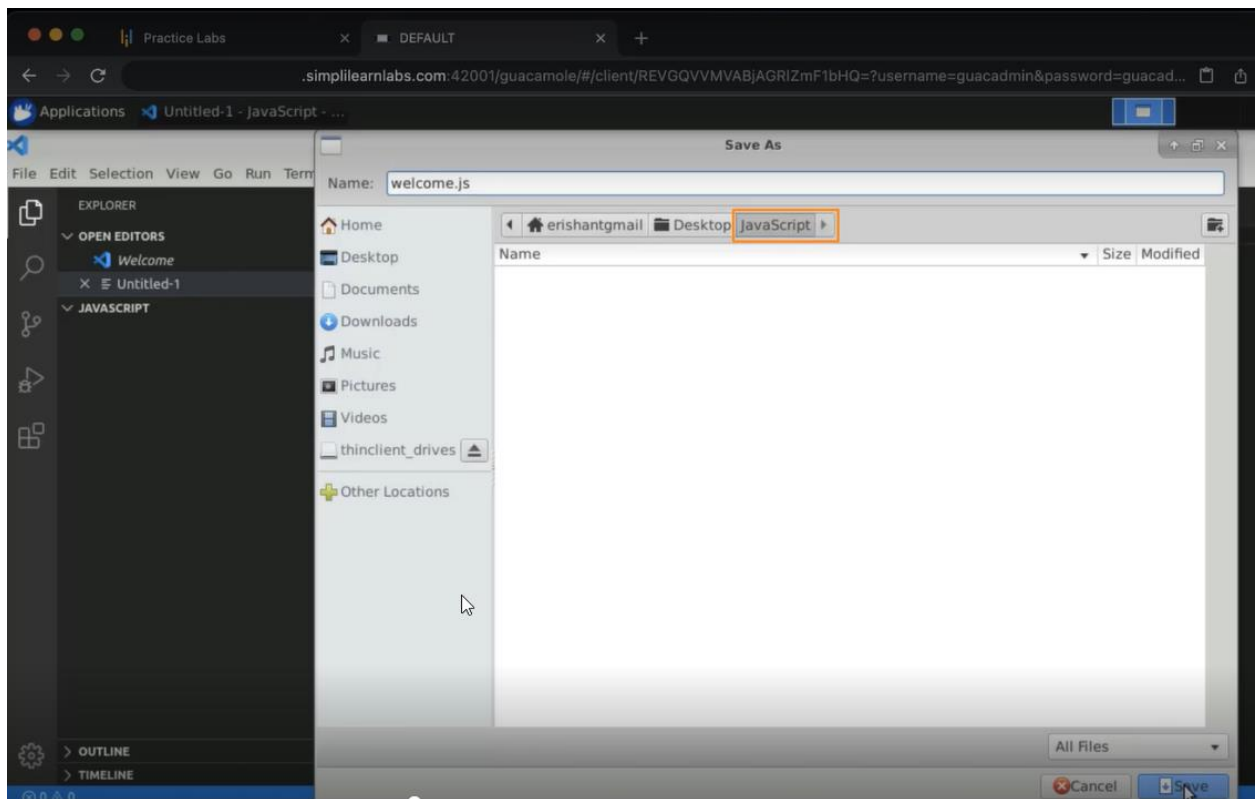
This directory will be used to store the JavaScript programs.

## Step 2: Execute the JavaScript program using Node.js

### 2.1 Open Visual Studio Code and create a new file



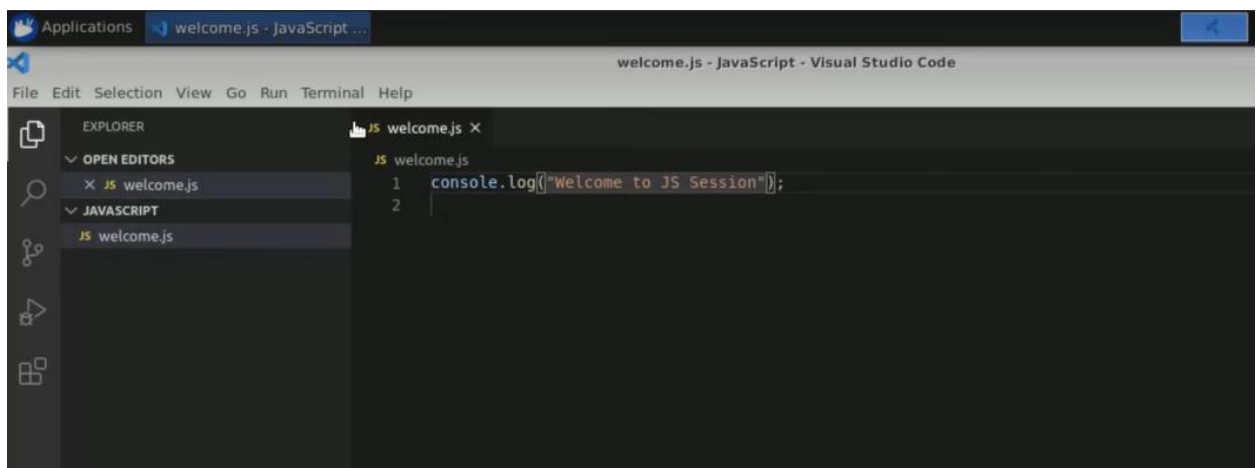
## 2.2 Save the file as **welcome.js** inside the **JavaScript** directory



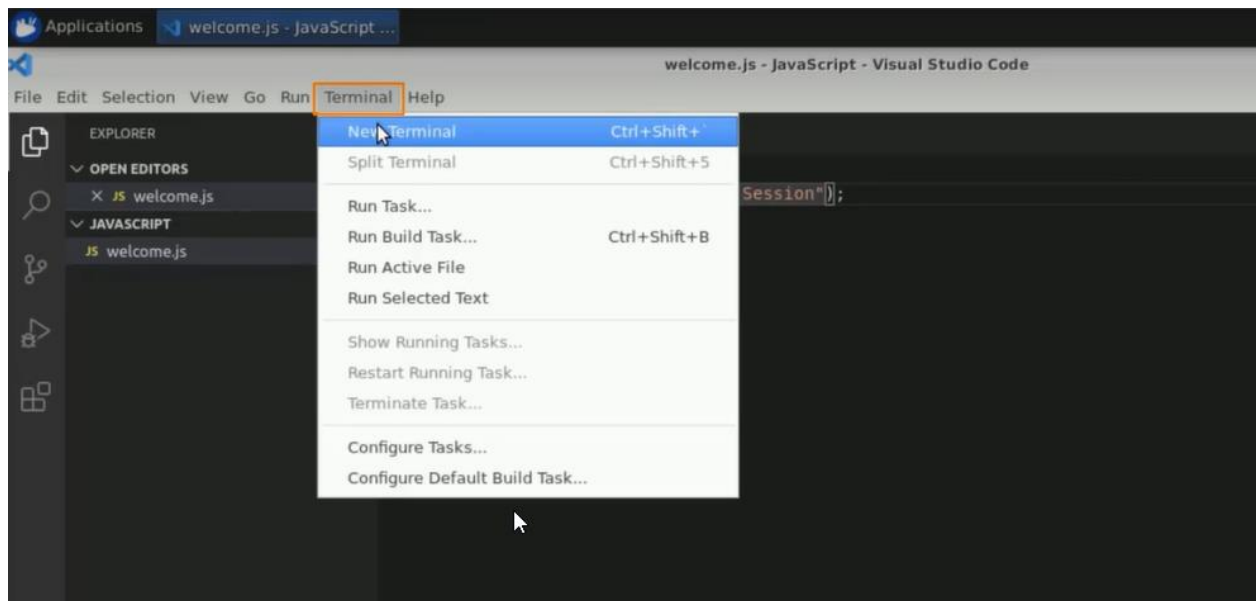
Note: The file extension should be in **.js** format to indicate that it is a JavaScript file.

## 2.3 In the **welcome.js** file, write the following code:

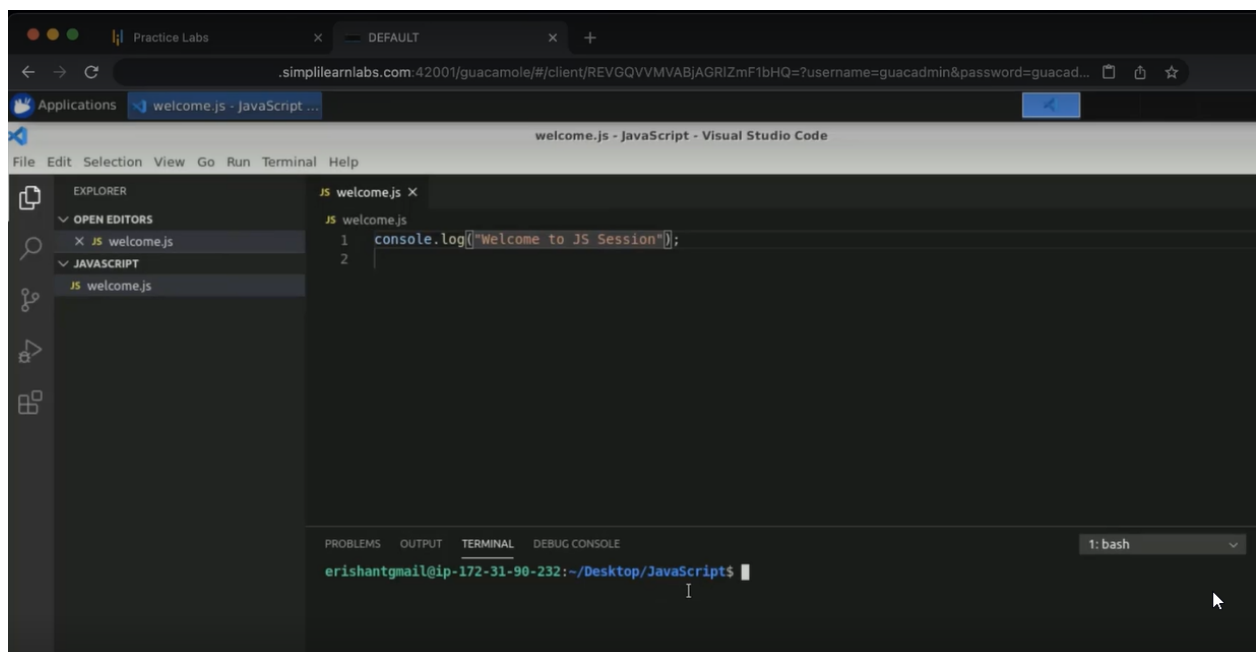
**`console.log("Welcome to JS Session");`**



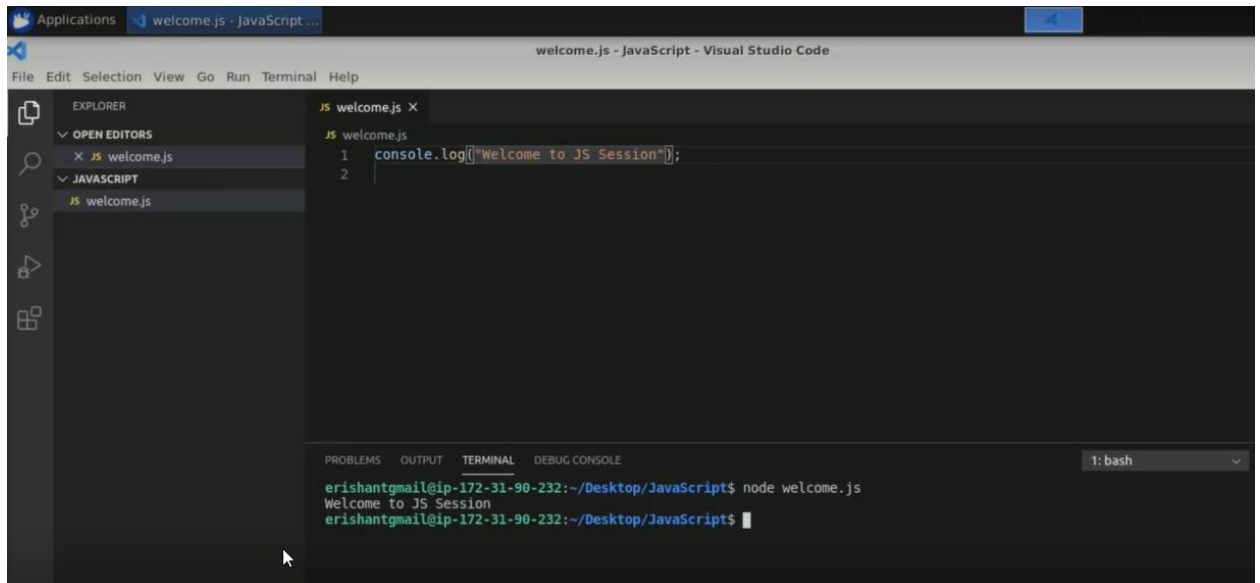
## 2.4 Open a **New Terminal** window in Visual Studio Code



Ensure that the terminal is navigated to the directory where you saved the `welcome.js` file (i.e., the **JavaScript** directory)



2.5 In the terminal, type the following command and press **Enter**:  
**node welcome.js**



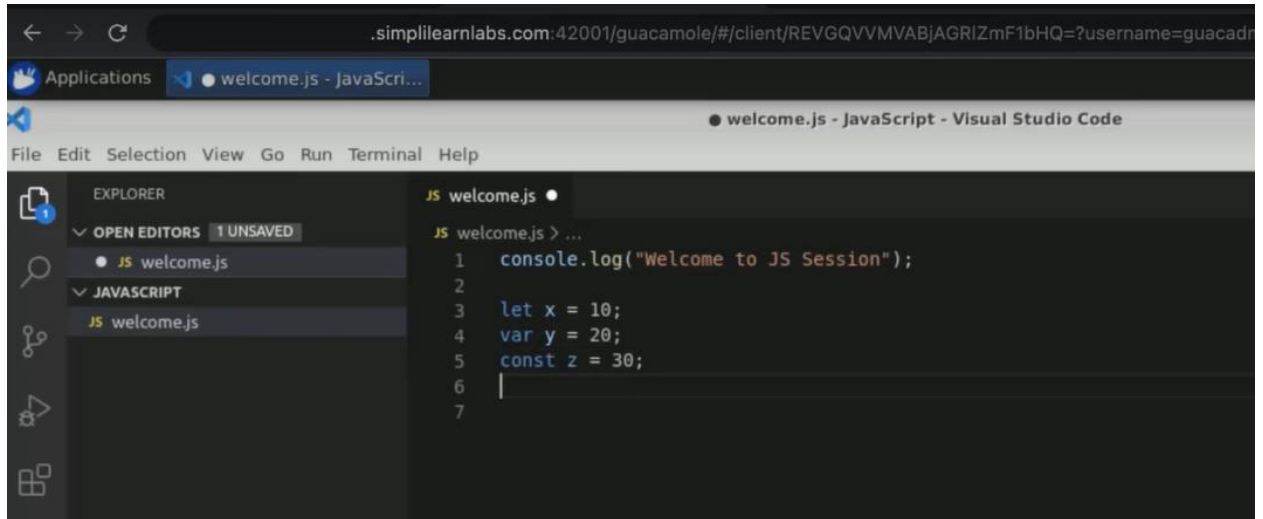
The screenshot shows the Visual Studio Code interface. The Explorer sidebar on the left shows a file named 'welcome.js' under the 'JAVASCRIPT' folder. The main editor window displays the contents of 'welcome.js', which contains two lines of code: `1 console.log("Welcome to JS Session");` and `2`. At the bottom, the TERMINAL panel is active, showing the command `node welcome.js` being executed. The output of the command is `Welcome to JS Session`.

```
Applications welcome.js - JavaScript ...  
welcome.js - JavaScript - Visual Studio Code  
File Edit Selection View Go Run Terminal Help  
EXPLORER  
  OPEN EDITORS  
    JS welcome.js  
  JAVASCRIPT  
    JS welcome.js  
JS welcome.js  
1 console.log("Welcome to JS Session");  
2  
PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE  
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$ node welcome.js  
Welcome to JS Session  
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$
```

You should see the output **Welcome to JS Session** displayed in the terminal.

2.6 In the **welcome.js** file, create some variables and a constant:

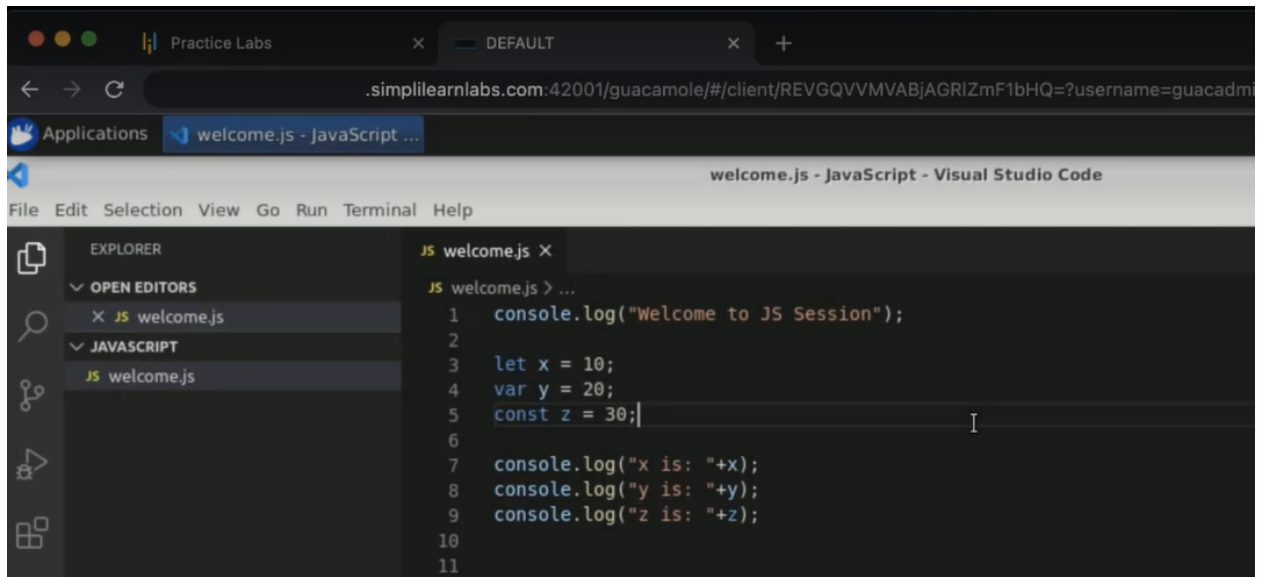
```
let x = 10;
var y = 20;
const z = 30;
```



```
JS welcome.js
1 console.log("Welcome to JS Session");
2
3 let x = 10;
4 var y = 20;
5 const z = 30;
6
7
```

2.7 Add code to log the values of the variables and constant:

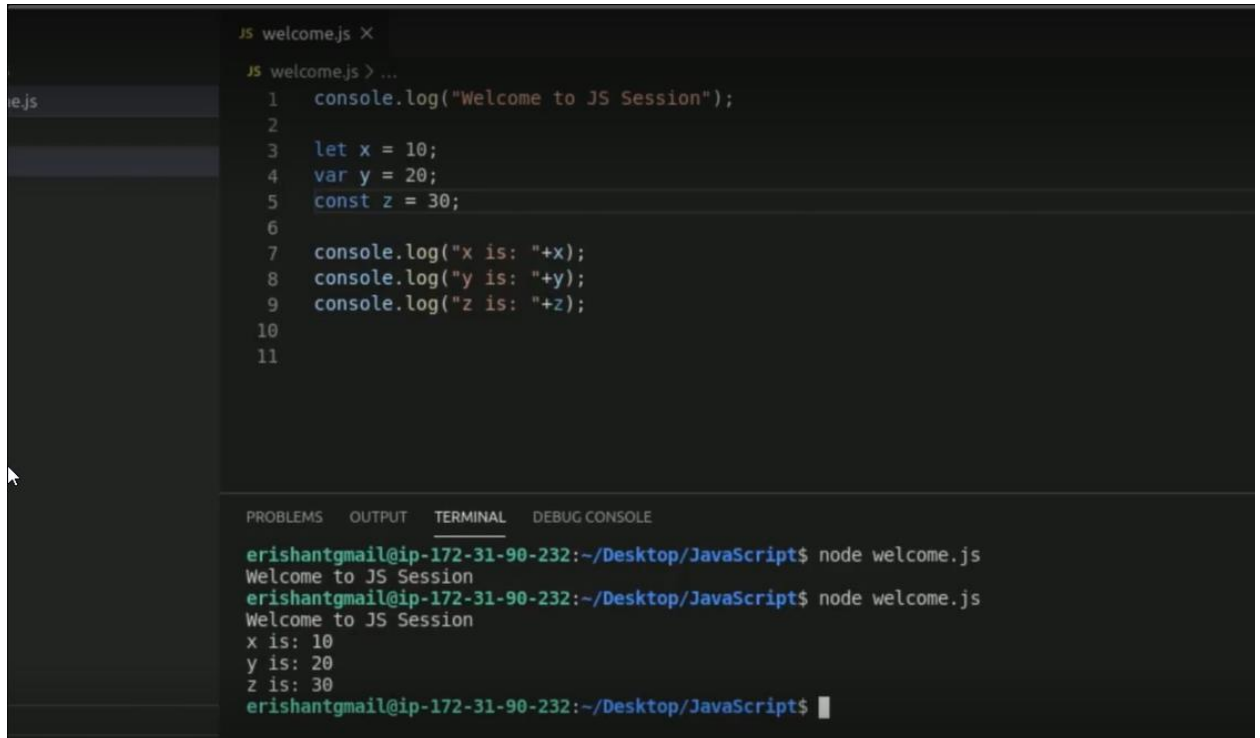
```
console.log("x is:" + x);
console.log("y is:" + y);
console.log("z is:" + z);
```



```
JS welcome.js
1 console.log("Welcome to JS Session");
2
3 let x = 10;
4 var y = 20;
5 const z = 30;
6
7 console.log("x is: " + x);
8 console.log("y is: " + y);
9 console.log("z is: " + z);
10
11
```

2.8 In the terminal, execute the JavaScript program again using the command:

**node welcome.js**



The screenshot shows a code editor with a file named `welcome.js` containing the following JavaScript code:

```
1 console.log("Welcome to JS Session");
2
3 let x = 10;
4 var y = 20;
5 const z = 30;
6
7 console.log("x is: "+x);
8 console.log("y is: "+y);
9 console.log("z is: "+z);
10
11
```

Below the code editor is a terminal window with tabs for PROBLEMS, OUTPUT, TERMINAL, and DEBUG CONSOLE. The terminal shows the command `node welcome.js` being executed twice. The first execution shows the output "Welcome to JS Session". The second execution shows the output "Welcome to JS Session", "x is: 10", "y is: 20", and "z is: 30".

```
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$ node welcome.js
Welcome to JS Session
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$ node welcome.js
Welcome to JS Session
x is: 10
y is: 20
z is: 30
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$
```

You should see the values of x, y, and z displayed in the terminal as **x is: 10**, **y is: 20**, and **z is: 30**, respectively.



2.9 In the **welcome.js** file, add code to check the data types of the variables and run the program

```
JS welcome.js X
JS welcome.js > ...
1 console.log("Welcome to JS Session");
2
3 let x = 10;
4 var y = 20;
5 const z = 30;
6
7 console.log("x is: "+x+" and data type is: "+typeof x);
8 console.log("y is: "+y+" and data type is: "+typeof x);
9 console.log("z is: "+z+" and data type is: "+typeof x);
10
11
```

```
JS welcome.js X
JS welcome.js > ...
1 console.log("Welcome to JS Session");
2
3 let x = 10;
4 var y = 20;
5 const z = 30;
6
7 console.log("x is: "+x+" and data type is: "+typeof x);
8 console.log("y is: "+y+" and data type is: "+typeof x);
9 console.log("z is: "+z+" and data type is: "+typeof x);
10
11
```

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE

```
Welcome to JS Session
x is: 10
y is: 20
z is: 30
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$ node welcome.js
Welcome to JS Session
x is: 10 and data type is: number
y is: 20 and data type is: number
z is: 30 and data type is: number
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$
```

You should see the data types x, y, and z displayed in the terminal.

By following the above steps, you have successfully created and executed a JavaScript program to display the data type of newly created variables.