

Lesson 2 Demo 2

Logical Operators

Objective: To work with logical operators

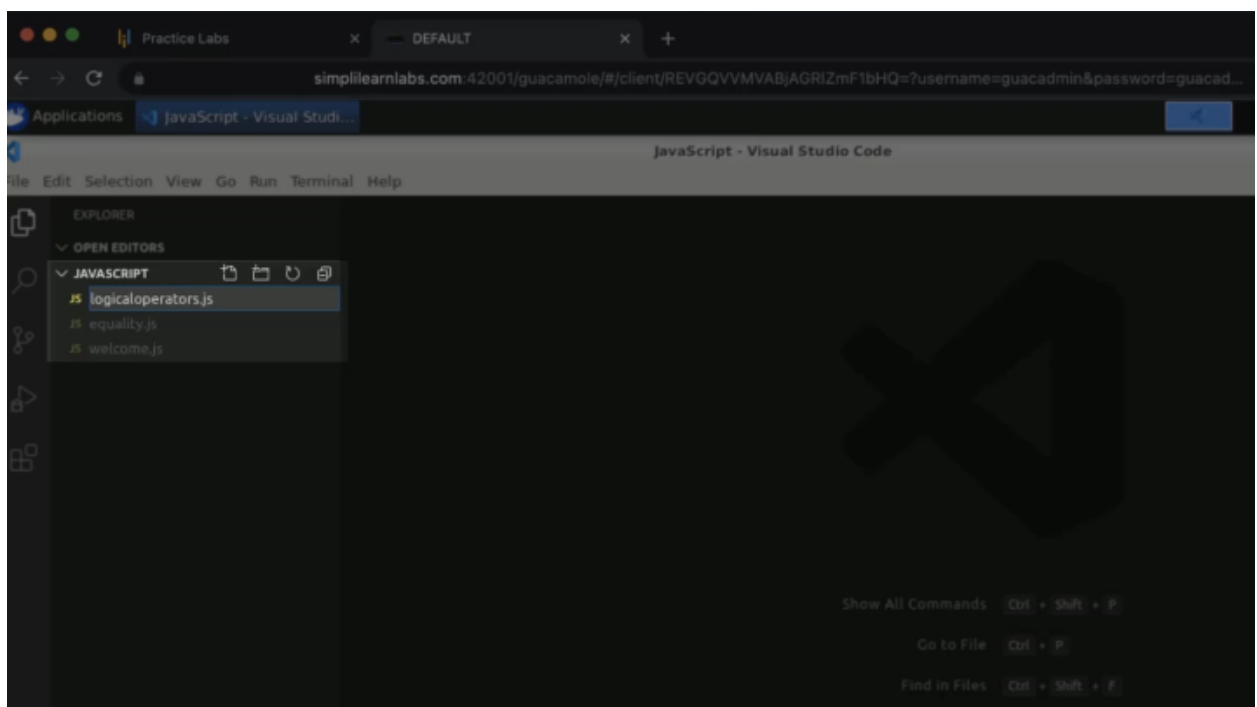
Prerequisites: None

Steps to be followed:

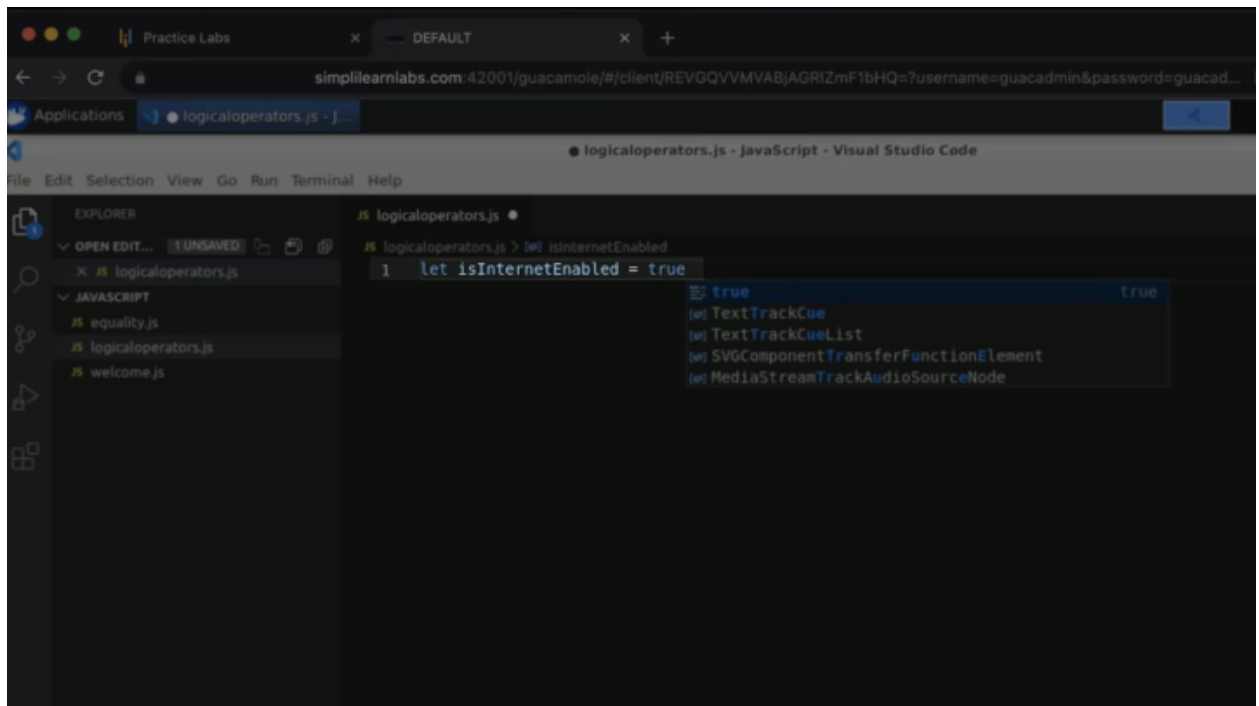
- Work with logical operators

Step 1: Work with logical operators

1.1 Create a new file named 'logicaloperator.js'.



1.2 Create a variable 'isInternetEnabled' with a value as true.

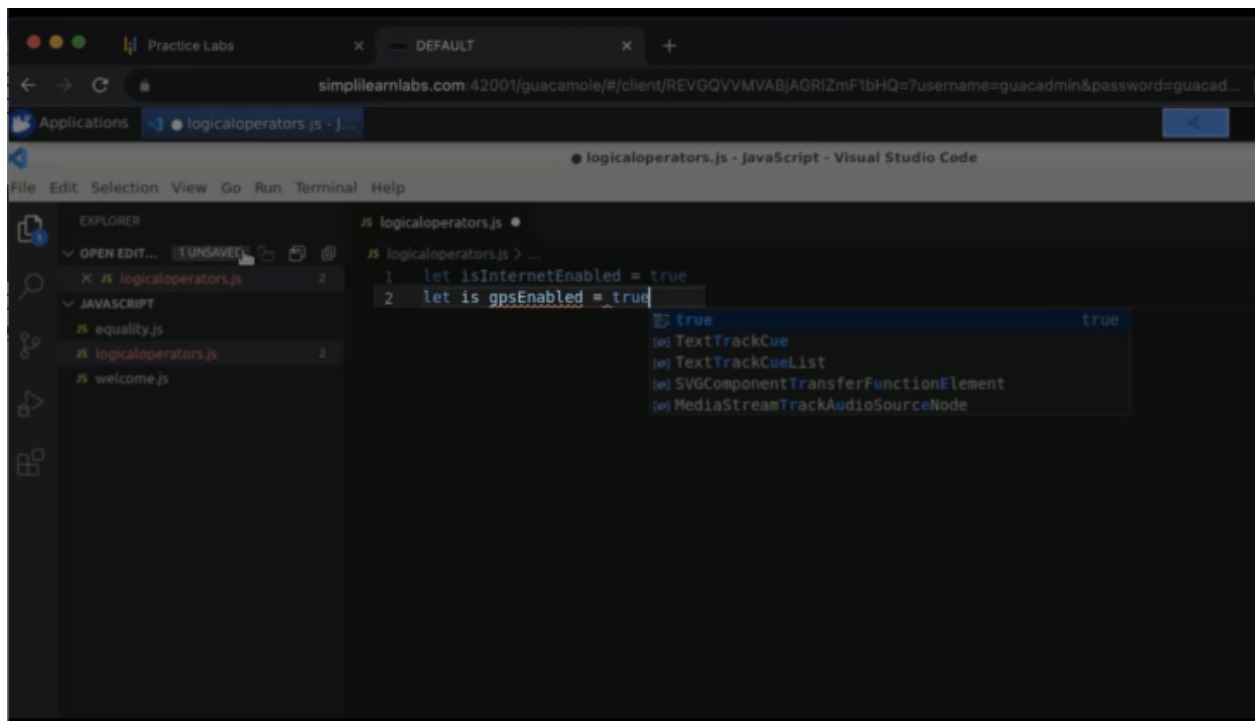


The screenshot shows the Visual Studio Code editor with the file 'logicaloperators.js' open. The Explorer panel on the left shows the file structure. The main editor area displays the following code:

```
1 let isInternetEnabled = true
```

A dropdown menu is visible next to the variable name, showing the value 'true' and several DOM-related objects like 'TextTrackCue', 'TextTrackCueList', etc.

1.3 Pass one more variable 'GpsEnabled' with a value as true.

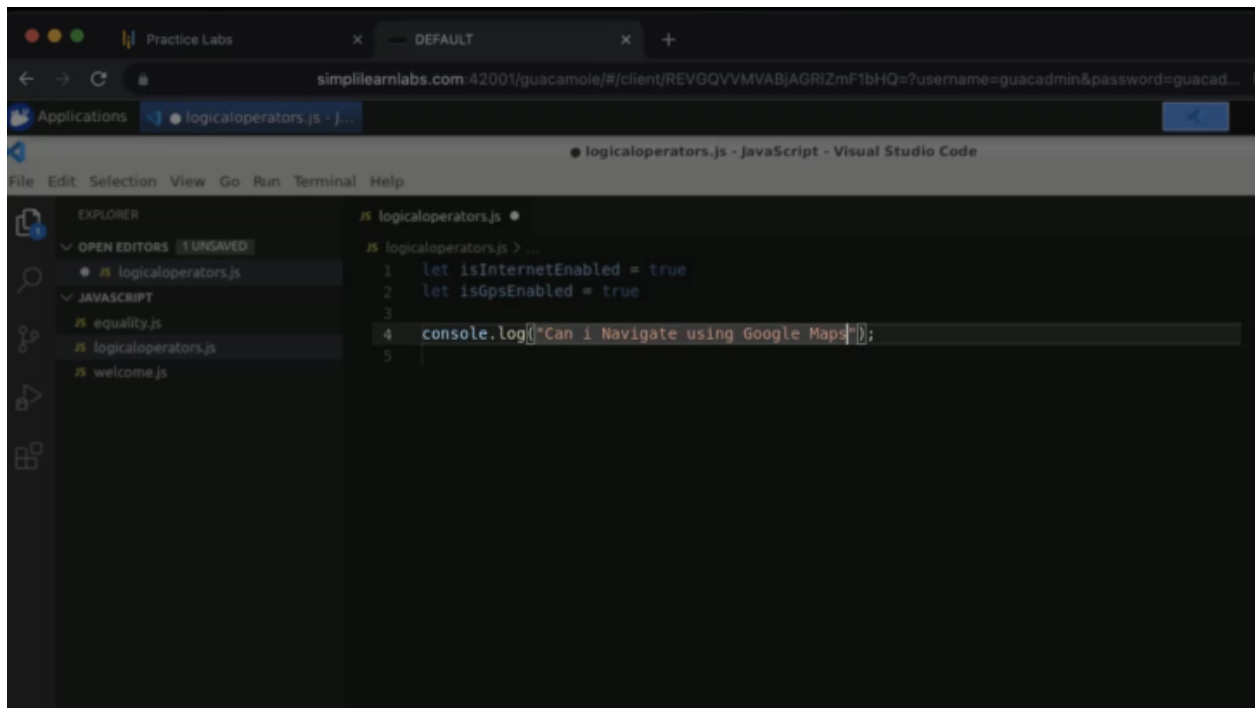


The screenshot shows the Visual Studio Code editor with the file 'logicaloperators.js' open. The Explorer panel on the left shows the file structure. The main editor area displays the following code:

```
1 let isInternetEnabled = true
2 let is gpsEnabled = true
```

A dropdown menu is visible next to the variable name, showing the value 'true' and several DOM-related objects like 'TextTrackCue', 'TextTrackCueList', etc.

1.4 Write a log statement.



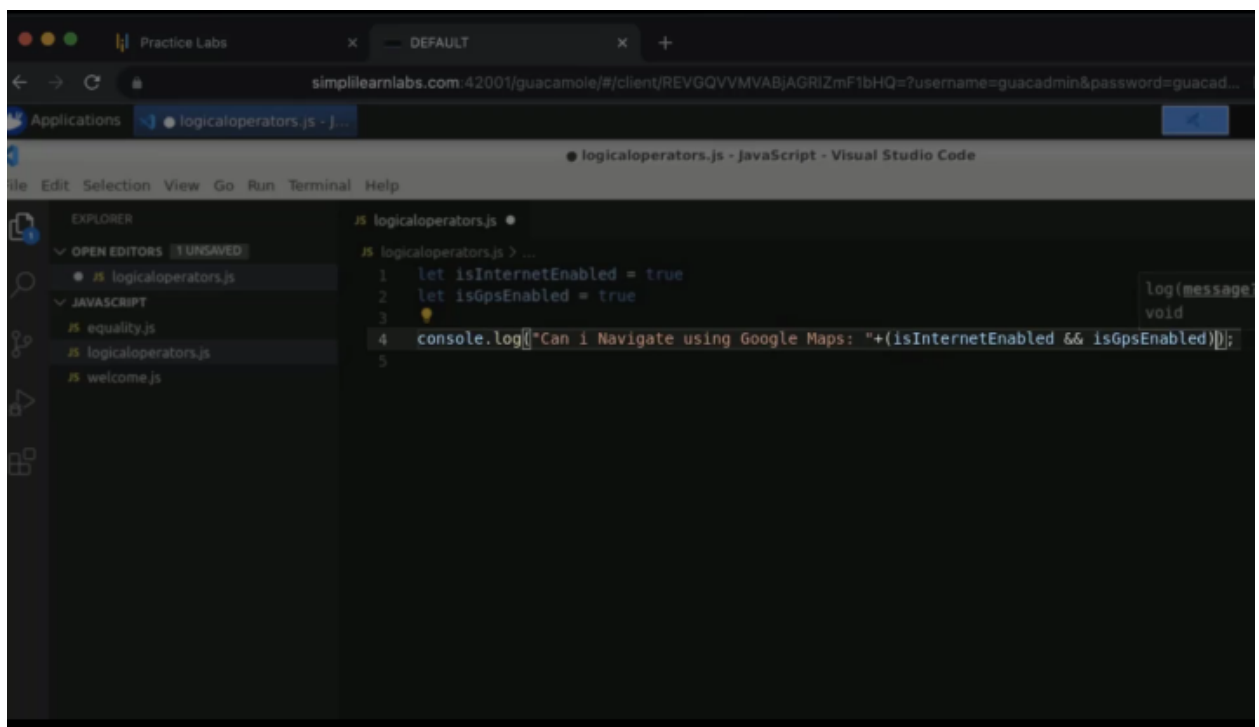
The screenshot shows the Visual Studio Code editor interface. The Explorer panel on the left shows the file structure with 'logicaloperators.js' selected. The main editor area displays the following JavaScript code:

```

1 let isInternetEnabled = true
2 let isGpsEnabled = true
3
4 console.log("Can i Navigate using Google Maps");
5

```

1.5 Ensure both of the flags are enabled.



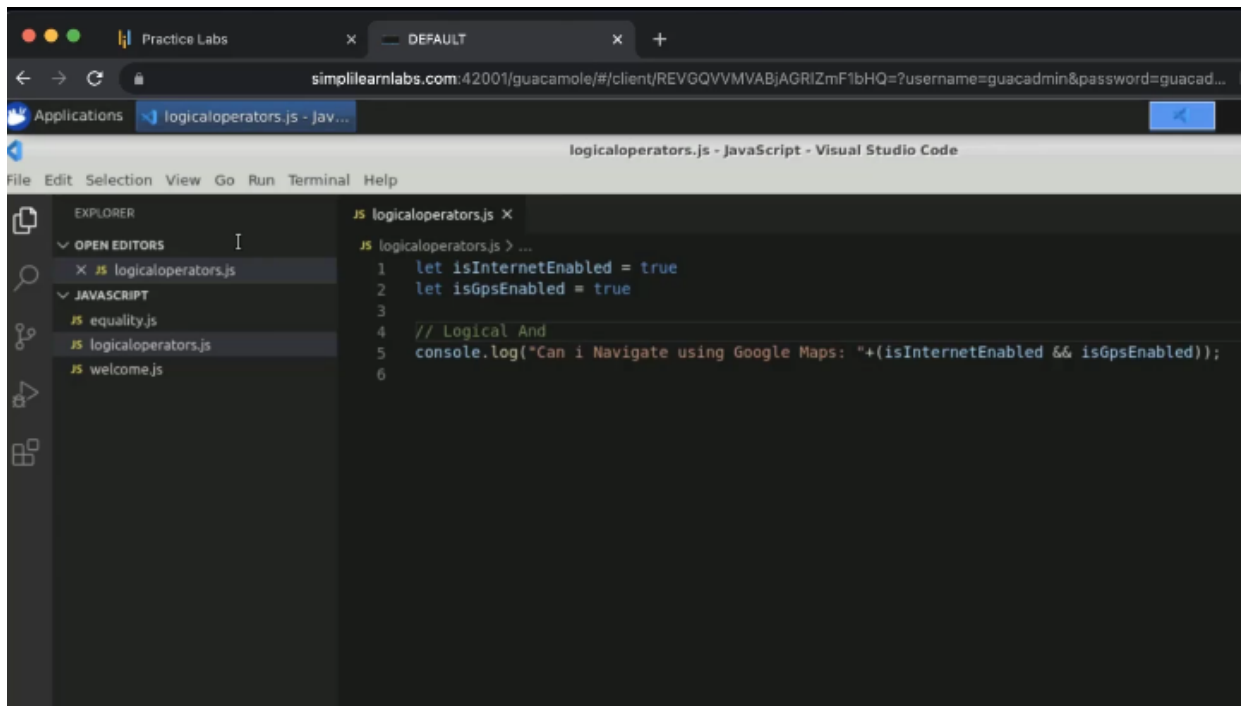
The screenshot shows the Visual Studio Code editor interface. The Explorer panel on the left shows the file structure with 'logicaloperators.js' selected. The main editor area displays the following JavaScript code:

```

1 let isInternetEnabled = true
2 let isGpsEnabled = true
3
4 console.log("Can i Navigate using Google Maps: "+(isInternetEnabled && isGpsEnabled));
5

```

1.6 This is known as 'Logical And'.



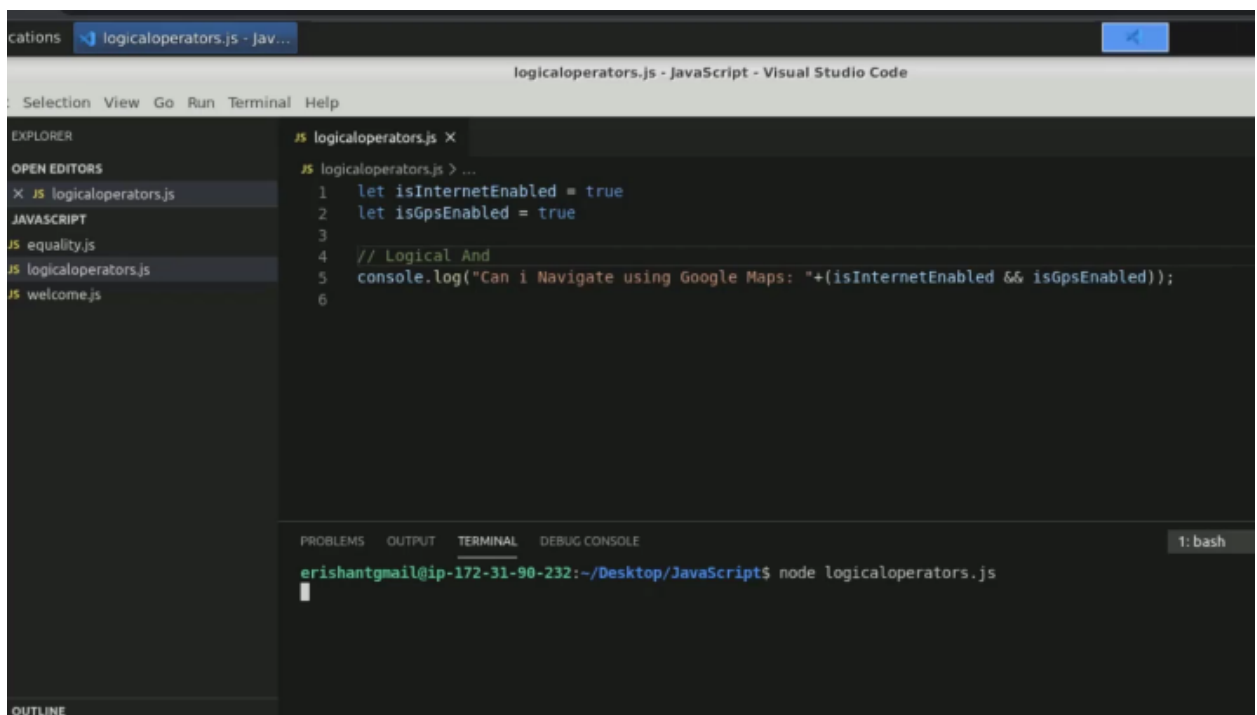
The screenshot shows the Visual Studio Code editor with the file `logicaloperators.js` open. The Explorer sidebar on the left shows the file structure with `logicaloperators.js` selected. The main editor area displays the following JavaScript code:

```

1  let isInternetEnabled = true
2  let isGpsEnabled = true
3
4  // Logical And
5  console.log("Can i Navigate using Google Maps: "+(isInternetEnabled && isGpsEnabled));
6

```

1.7 Open a new terminal and type node and then filename.



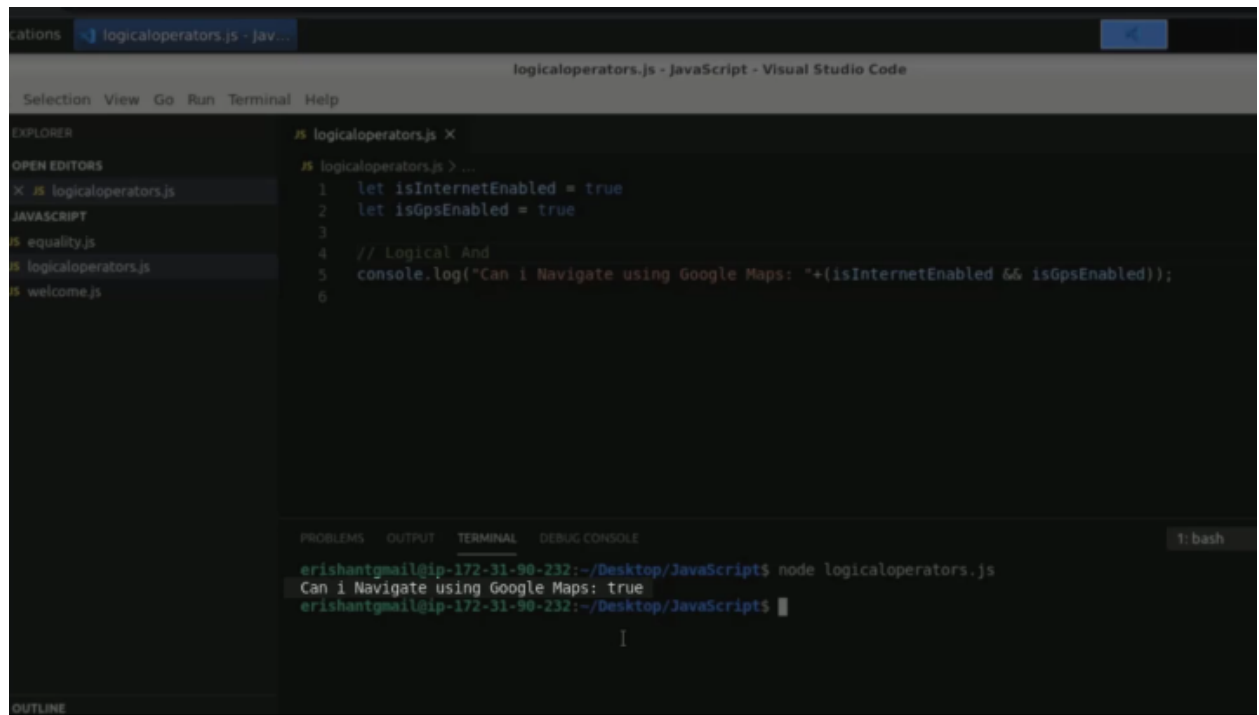
The screenshot shows the Visual Studio Code editor with the `logicaloperators.js` file open. A terminal window is open at the bottom, showing the command `node logicaloperators.js` being executed. The terminal output shows the result of the logical AND operation:

```

erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$ node logicaloperators.js
Can i Navigate using Google Maps: true

```

1.8 Hit enter to get the output.

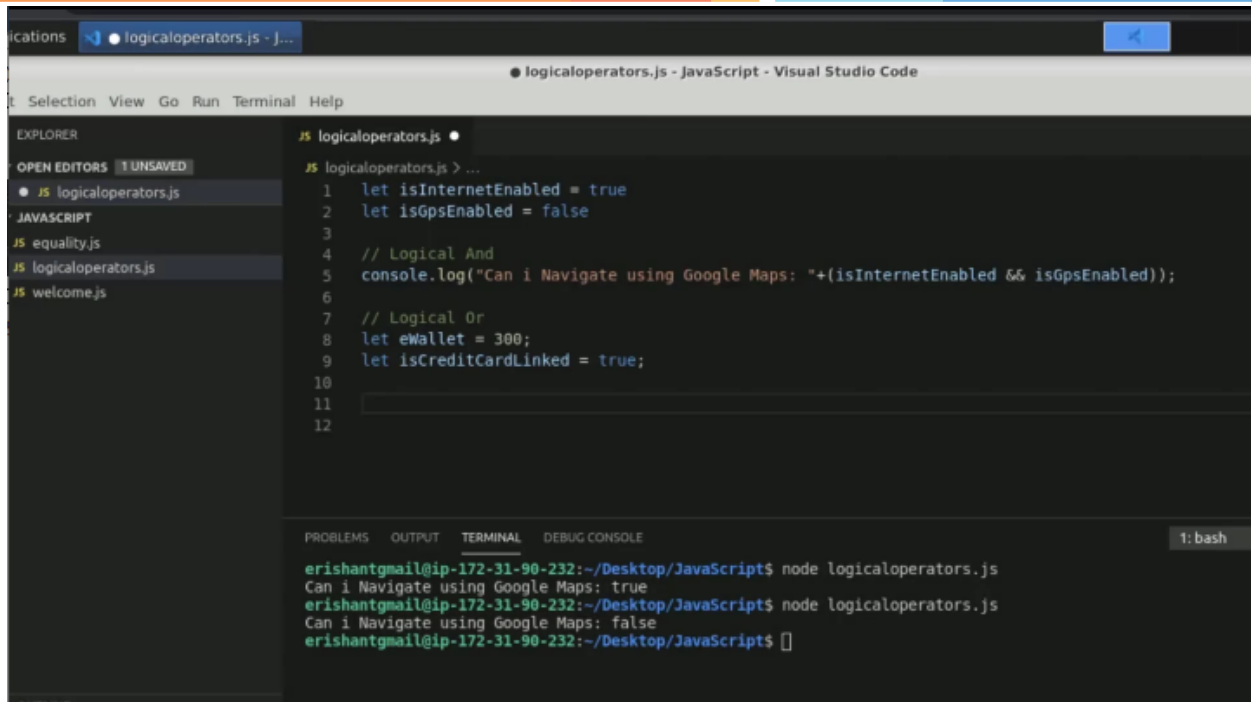


The screenshot shows the Visual Studio Code interface. The Explorer panel on the left shows a file named `logicaloperators.js` under the `JAVASCRIPT` folder. The main editor area displays the content of `logicaloperators.js`:

```
1 let isInternetEnabled = true
2 let isGpsEnabled = true
3
4 // Logical And
5 console.log("Can i Navigate using Google Maps: " + (isInternetEnabled && isGpsEnabled));
6
```

The bottom panel shows the TERMINAL output, where the command `node logicaloperators.js` has been executed, resulting in the output: `Can i Navigate using Google Maps: true`.

1.9 Create a variable 'eWallet' with a value of 300 and another variable 'isCreditCardLink' with a value of true.



The screenshot shows the Visual Studio Code editor with the file `logicaloperators.js` open. The code in the file is as follows:

```

1  let isInternetEnabled = true
2  let isGpsEnabled = false
3
4  // Logical And
5  console.log("Can i Navigate using Google Maps: "+(isInternetEnabled && isGpsEnabled));
6
7  // Logical Or
8  let eWallet = 300;
9  let isCreditCardLinked = true;
10
11
12

```

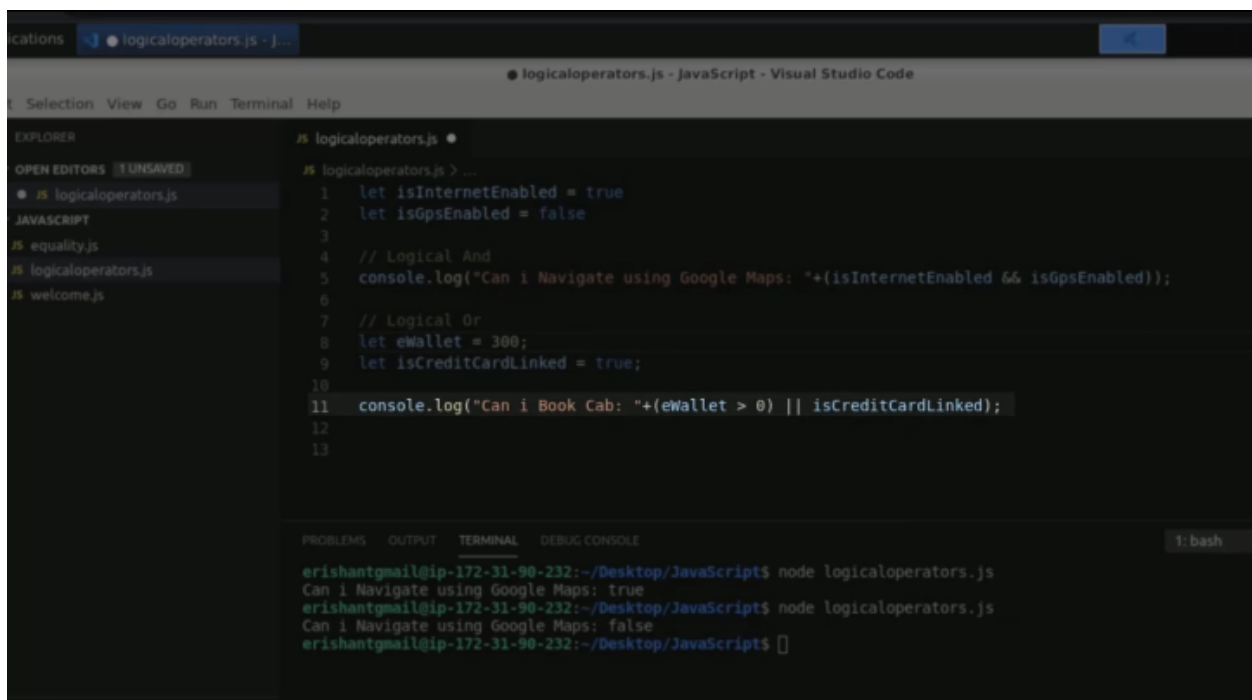
The terminal at the bottom shows the execution of the script:

```

erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$ node logicaloperators.js
Can i Navigate using Google Maps: true
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$ node logicaloperators.js
Can i Navigate using Google Maps: false
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$

```

1.10 Add a log statement with two conditions.



The screenshot shows the Visual Studio Code editor with the file `logicaloperators.js` open. The code in the file is as follows:

```

1  let isInternetEnabled = true
2  let isGpsEnabled = false
3
4  // Logical And
5  console.log("Can i Navigate using Google Maps: "+(isInternetEnabled && isGpsEnabled));
6
7  // Logical Or
8  let eWallet = 300;
9  let isCreditCardLinked = true;
10
11  console.log("Can i Book Cab: "+(eWallet > 0) || isCreditCardLinked);
12
13

```

The terminal at the bottom shows the execution of the script:

```

erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$ node logicaloperators.js
Can i Navigate using Google Maps: true
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$ node logicaloperators.js
Can i Navigate using Google Maps: false
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$

```

1.11 Run the program again.

```

logicaloperators.js
1  let isInternetEnabled = true
2  let isGpsEnabled = false
3
4  // Logical And
5  console.log("Can i Navigate using Google Maps: "+(isInternetEnabled && isGpsEnabled));
6
7  // Logical Or
8  let eWallet = 300;
9  let isCreditCardLinked = true;
10
11 console.log("Can i Book Cab: "+(eWallet > 0) || isCreditCardLinked);
12
13

```

```

erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$ node logicaloperators.js
Can i Navigate using Google Maps: true
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$ node logicaloperators.js
Can i Navigate using Google Maps: false
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$ node logicaloperators.js
Can i Navigate using Google Maps: false
Can i Book Cab: true
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$

```

- 1.12 Change the value 'true' to 'false' for the 'isCreditCardLinked' variable and the value of the 'eWallet' variable as '0' and run the program.

```

logicaloperators.js
1  let isInternetEnabled = true
2  let isGpsEnabled = false
3
4  // Logical And
5  console.log("Can i Navigate using Google Maps: "+(isInternetEnabled && isGpsEnabled));
6
7  // Logical Or
8  let eWallet = 0;
9  let isCreditCardLinked = false;
10
11 console.log("Can i Book Cab: "+(eWallet > 0) || isCreditCardLinked);
12
13

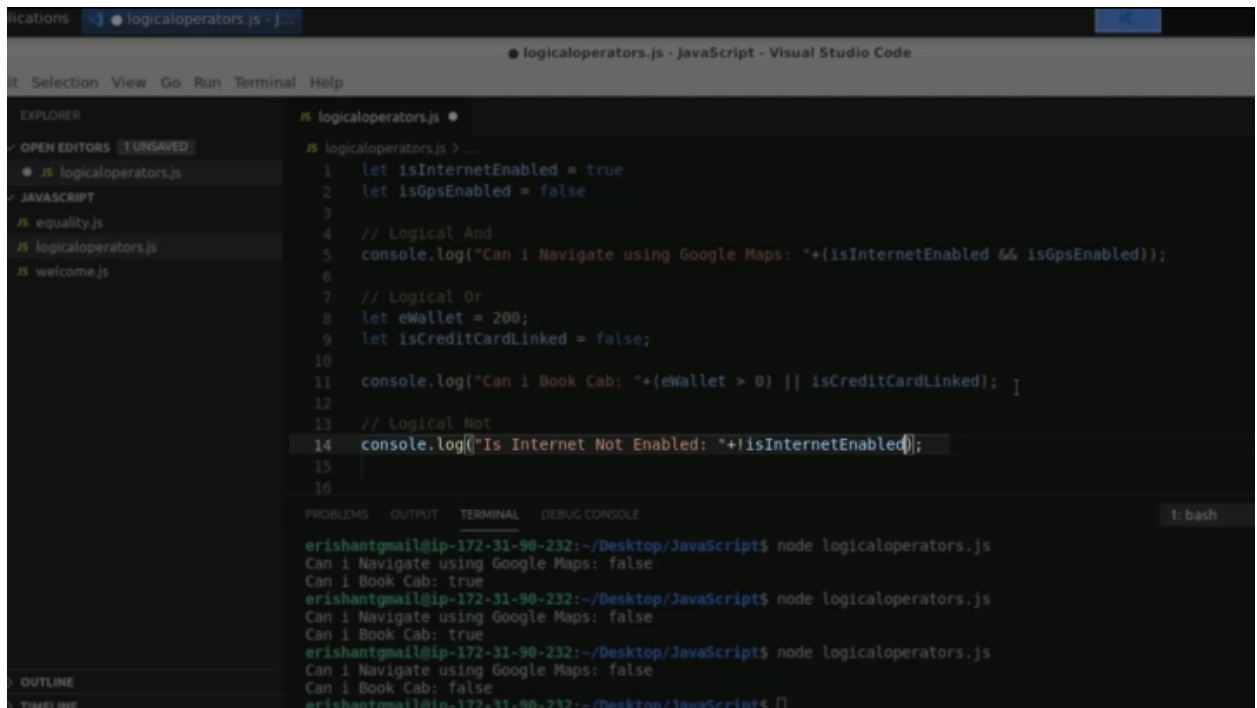
```

```

erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$ node logicaloperators.js
Can i Navigate using Google Maps: false
Can i Book Cab: true
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$ node logicaloperators.js
Can i Navigate using Google Maps: false
Can i Book Cab: true
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$ node logicaloperators.js
Can i Navigate using Google Maps: false
Can i Book Cab: false
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$

```

1.13 Pass a log statement for the Logical Not operator.



```

1  let isInternetEnabled = true
2  let isGpsEnabled = false
3
4  // Logical And
5  console.log("Can i Navigate using Google Maps: "+(isInternetEnabled && isGpsEnabled));
6
7  // Logical Or
8  let eWallet = 200;
9  let isCreditCardLinked = false;
10
11 console.log("Can i Book Cab: "+(eWallet > 0) || isCreditCardLinked);
12
13 // Logical Not
14 console.log("Is Internet Not Enabled: "+!isInternetEnabled);
15
16

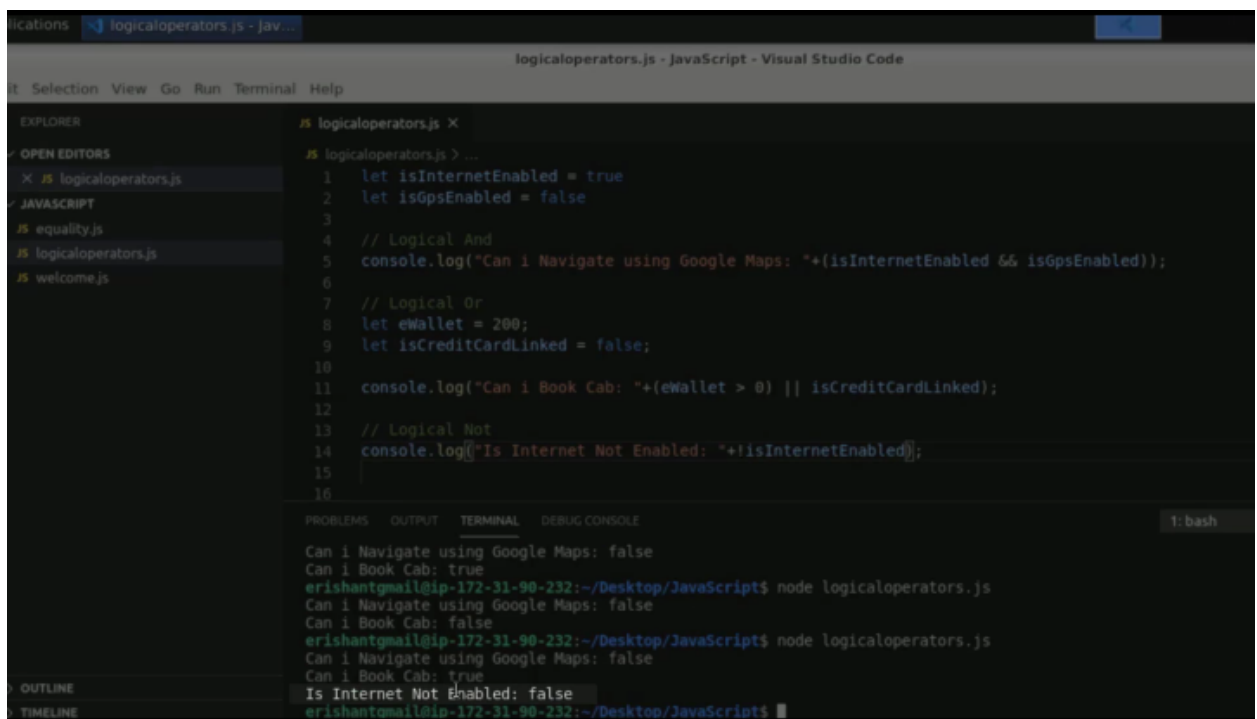
```

```

erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$ node logicaloperators.js
Can i Navigate using Google Maps: false
Can i Book Cab: true
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$ node logicaloperators.js
Can i Navigate using Google Maps: false
Can i Book Cab: true
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$ node logicaloperators.js
Can i Navigate using Google Maps: false
Can i Book Cab: false
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$

```

1.14 Run the code.



```

1  let isInternetEnabled = true
2  let isGpsEnabled = false
3
4  // Logical And
5  console.log("Can i Navigate using Google Maps: "+(isInternetEnabled && isGpsEnabled));
6
7  // Logical Or
8  let eWallet = 200;
9  let isCreditCardLinked = false;
10
11 console.log("Can i Book Cab: "+(eWallet > 0) || isCreditCardLinked);
12
13 // Logical Not
14 console.log("Is Internet Not Enabled: "+!isInternetEnabled);
15
16

```

```

Can i Navigate using Google Maps: false
Can i Book Cab: true
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$ node logicaloperators.js
Can i Navigate using Google Maps: false
Can i Book Cab: false
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$ node logicaloperators.js
Can i Navigate using Google Maps: false
Can i Book Cab: true
Is Internet Not Enabled: false
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$

```