

Lesson 2 Demo 2

Logical Operators

Objective: To work with logical operators

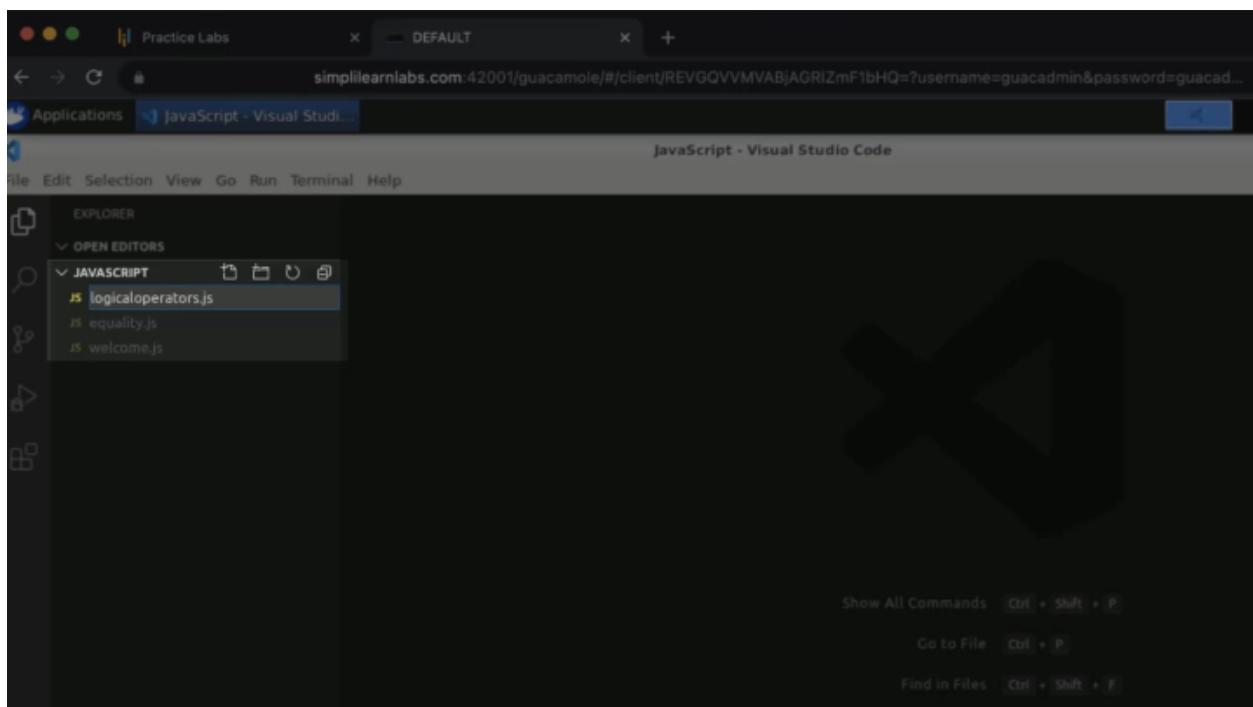
Prerequisites: None

Steps to be followed:

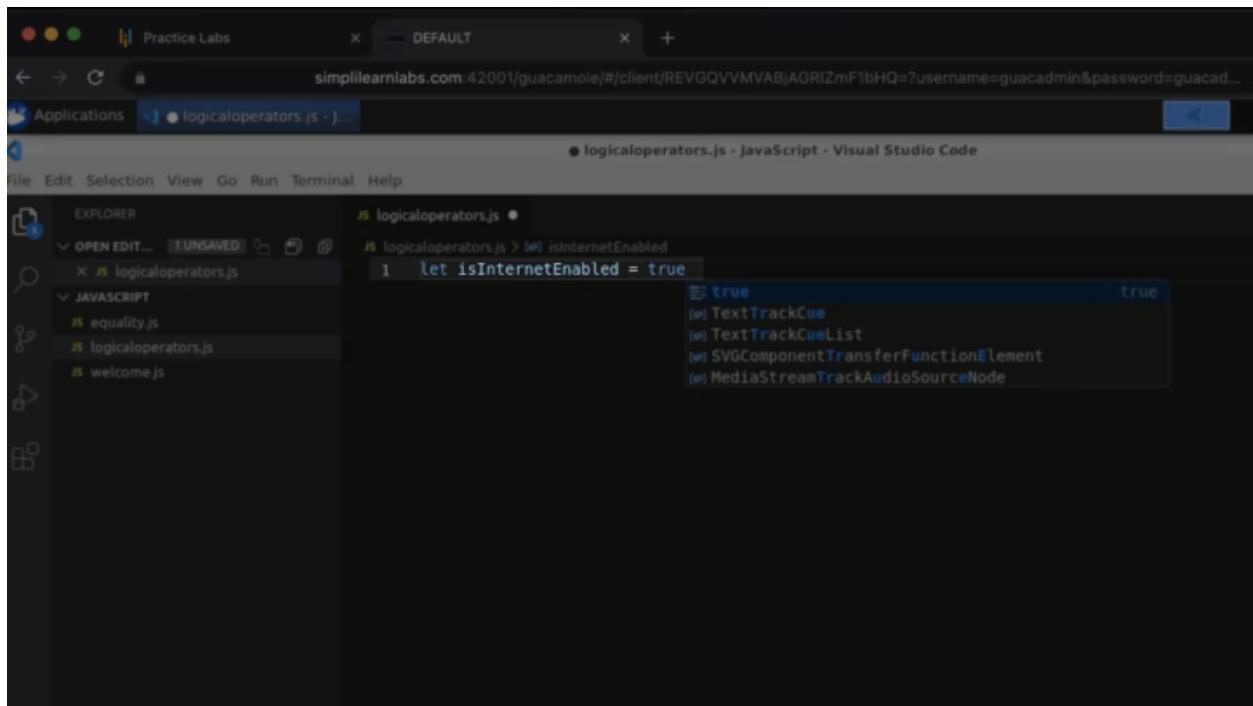
- Work with logical operators

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.



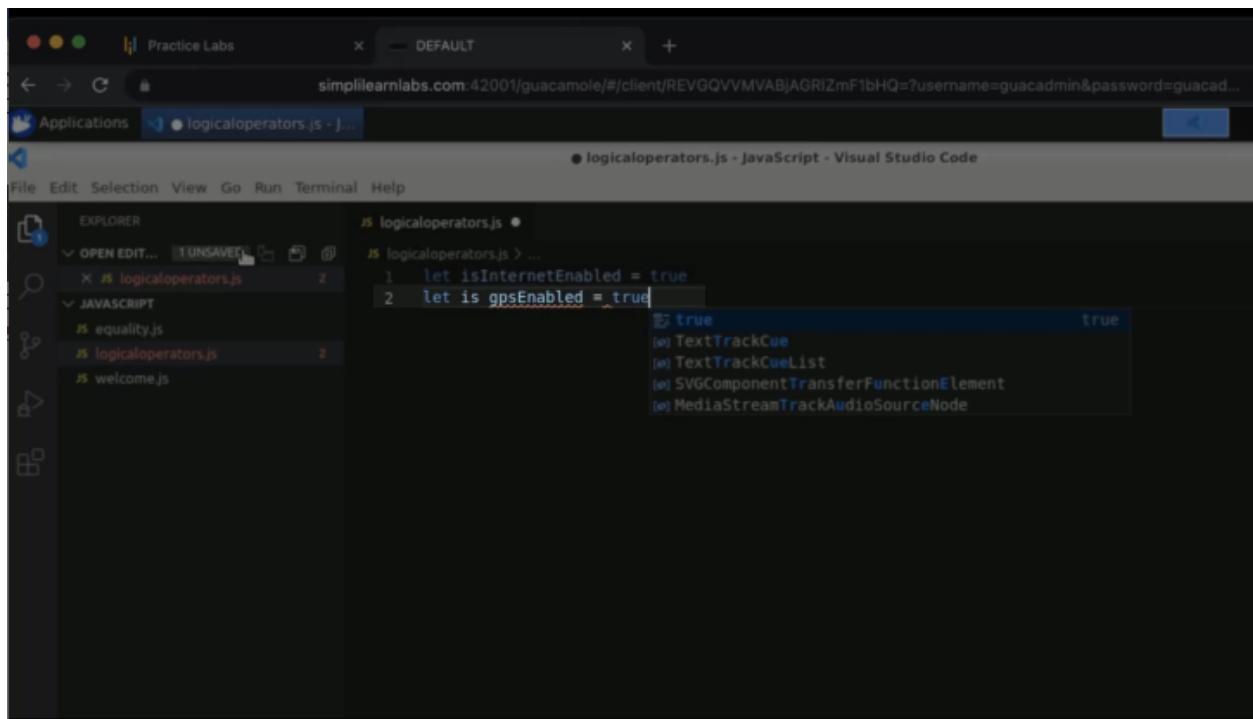
The screenshot shows a Visual Studio Code interface with a dark theme. The title bar says "logicaloperators.js - JavaScript - Visual Studio Code". The code editor has the following content:

```
1 let isInternetEnabled = true
```

A tooltip is displayed over the word "true", listing several options:

- true
- (e) TextTrackCue
- (e) TextTrackCueList
- (e) SVGComponentTransferFunctionElement
- (e) MediaStreamTrackAudioSourceNode

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



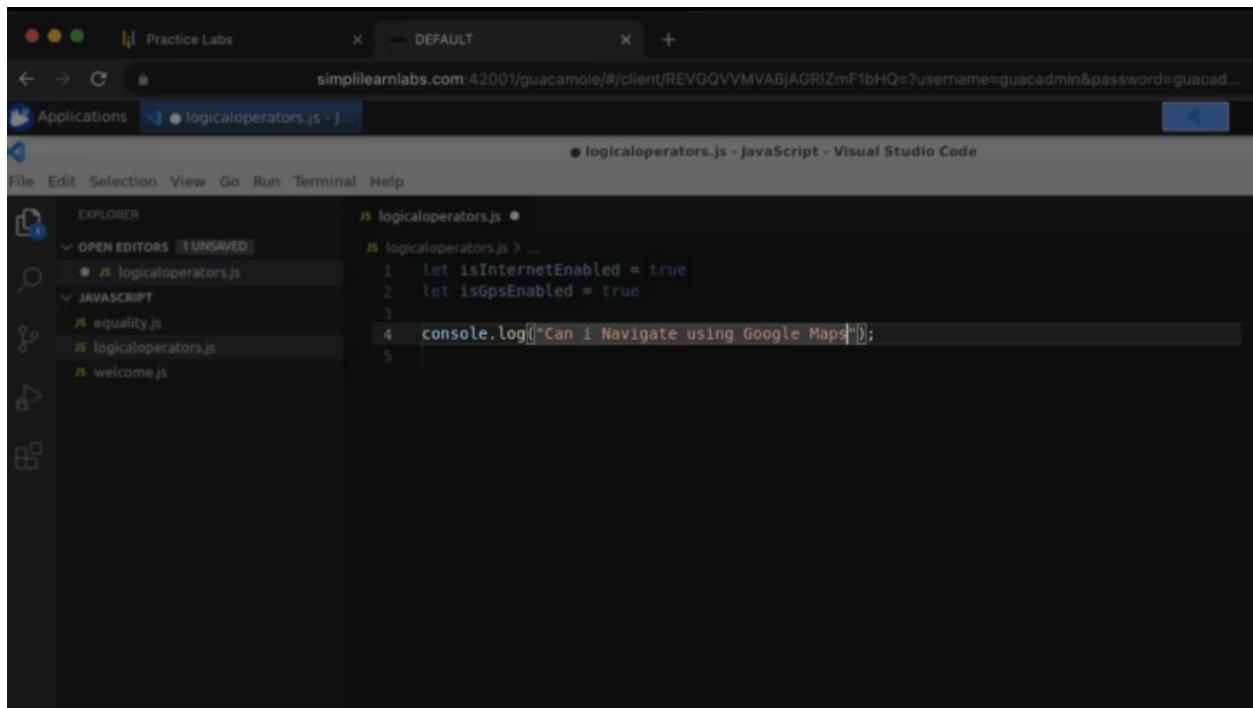
The screenshot shows a Visual Studio Code interface with a dark theme. The title bar says "logicaloperators.js - JavaScript - Visual Studio Code". The code editor has the following content:

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

A tooltip is displayed over the word "true", listing several options:

- true
- (e) TextTrackCue
- (e) TextTrackCueList
- (e) SVGComponentTransferFunctionElement
- (e) MediaStreamTrackAudioSourceNode

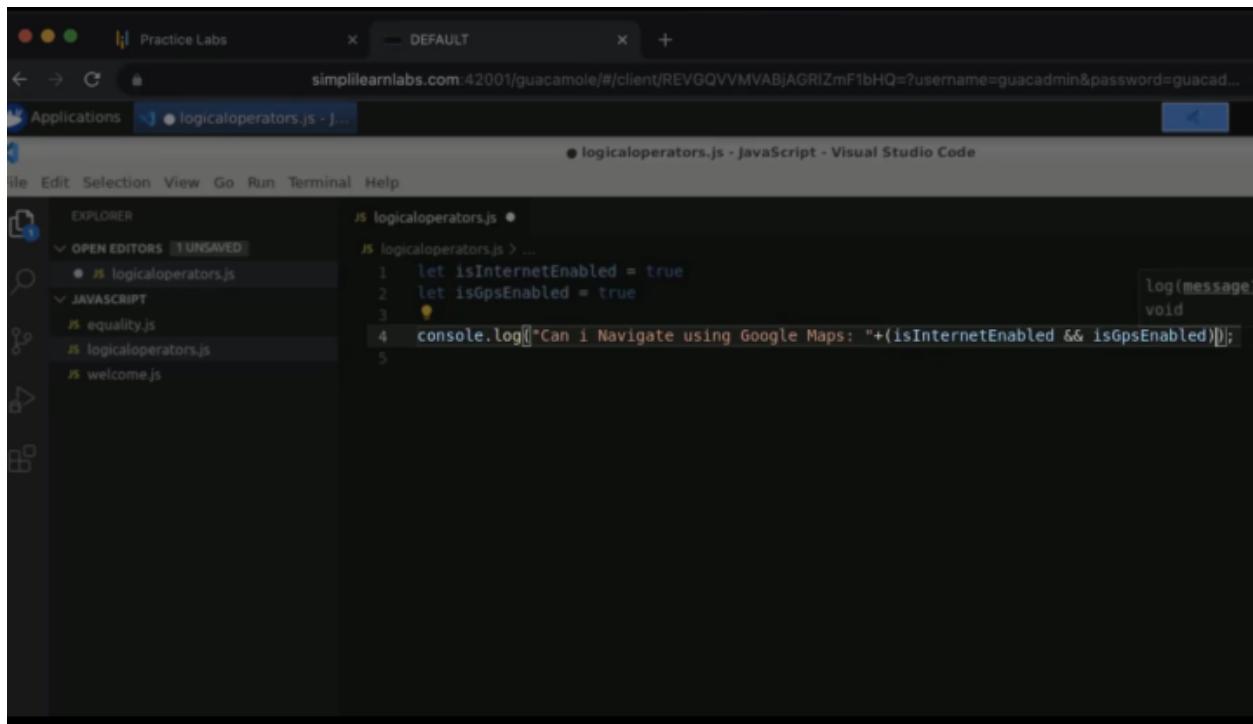
1.4 Write a log statement.



The screenshot shows a Visual Studio Code interface with a dark theme. The title bar includes the URL "simplilearnlabs.com:42001/guacamole/#/client/REVGQVMVABjAGRIZmF1bHQ=?username=guacadmin&password=guacad..." and the tab "logicaloperators.js - JavaScript". The left sidebar has sections for "EXPLORER", "OPEN EDITORS (1 UNSAVED)", and "JAVASCRIPT". The "JAVASCRIPT" section lists files: "equality.js", "logicaloperators.js", and "welcome.js". The main editor area contains the following code:

```
logicaloperators.js
1 let isInternetEnabled = true
2 let isGpsEnabled = true
3
4 console.log("Can I Navigate using Google Maps?");
```

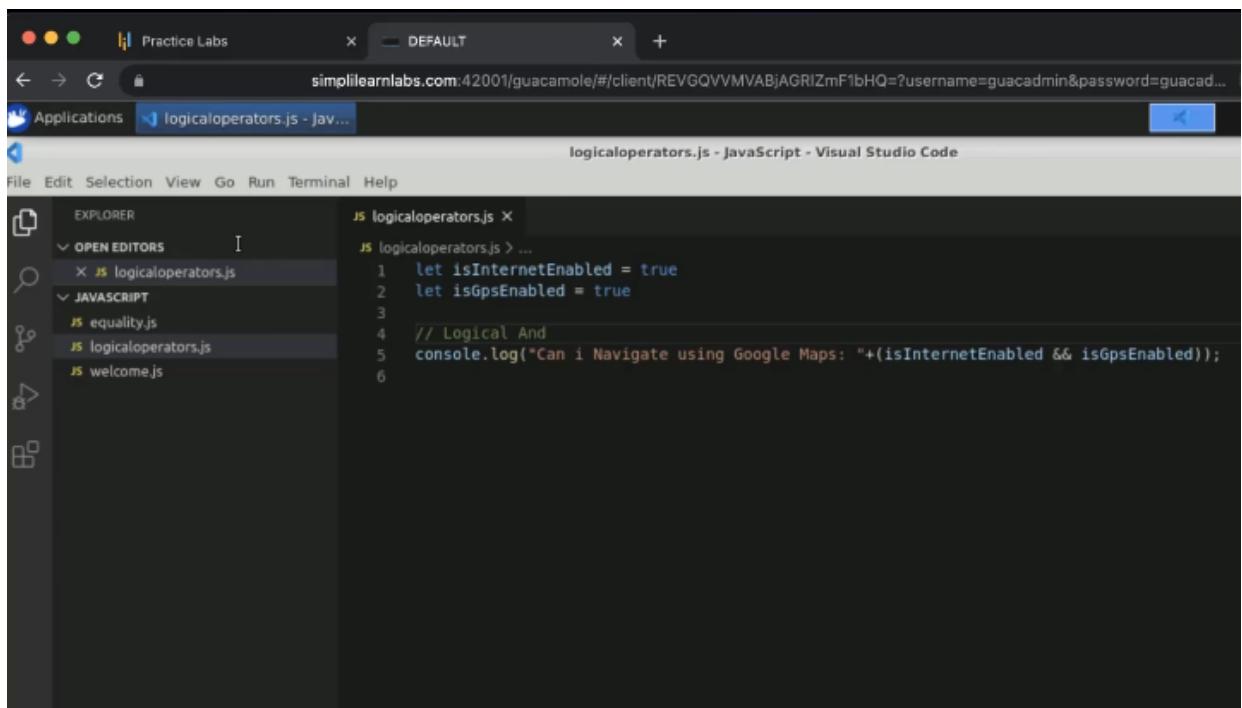
1.5 Ensure both of the flags are enabled.



The screenshot shows the same Visual Studio Code interface as the previous one. The code in the editor has been modified to include a logical AND operator (&&) in the log statement:

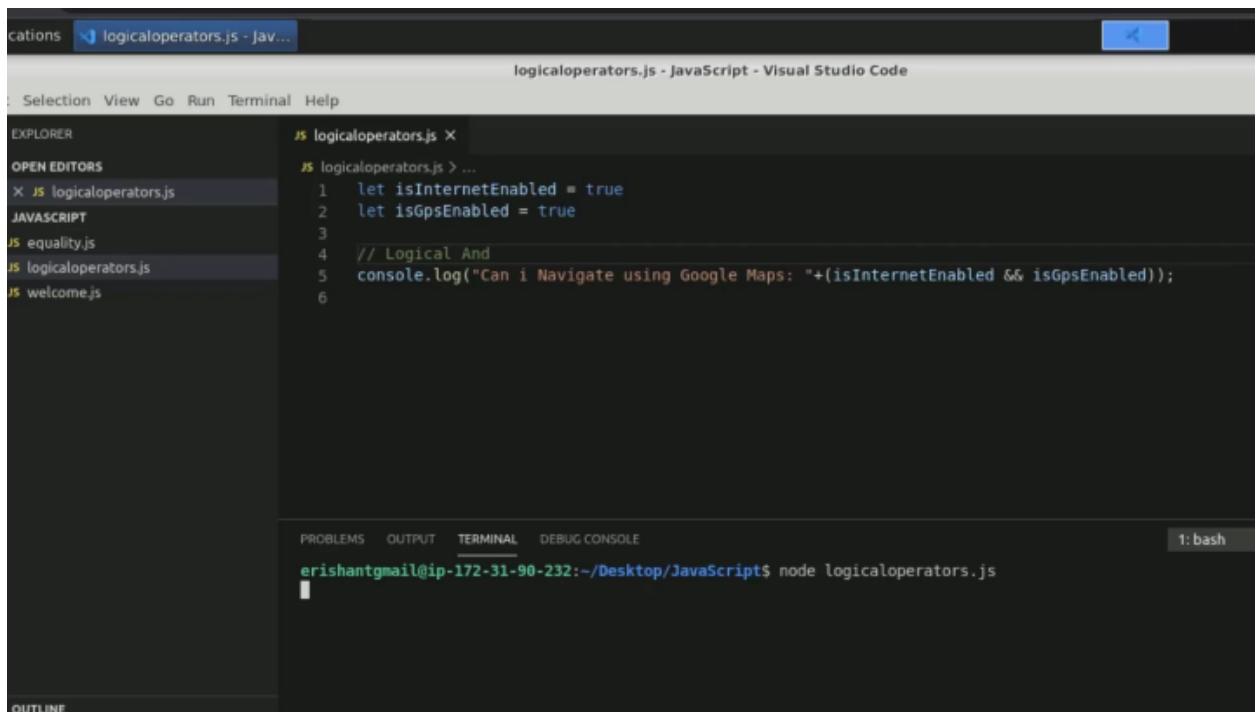
```
logicaloperators.js
1 let isInternetEnabled = true
2 let isGpsEnabled = true
3
4 console.log("Can I Navigate using Google Maps: "+(isInternetEnabled && isGpsEnabled));
```

1.6 This is known as 'Logical And'.



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

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



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

erishant@gmail.ip-172-31-90-232:~/Desktop/JavaScript\$ node logicaloperators.js

1.8 Hit enter to get the output.

```
logicaloperators.js - JavaScript - Visual Studio Code
Selection View Go Run Terminal Help
EXPLORER logicaloperators.js ...
OPEN EDITORS logicaloperators.js > ...
JAVASCRIPT equality.js logicaloperators.js welcome.js
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

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE
erishant@gmail@ip-172-31-90-232:~/Desktop/JavaScript$ node logicaloperators.js
Can i Navigate using Google Maps: true
erishant@gmail@ip-172-31-90-232:~/Desktop/JavaScript$
```

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 interface. The left sidebar shows files: equality.js, logicaloperators.js (selected), and welcome.js. The main editor shows the following code:

```

JS logicaloperators.js •
JS 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
12

```

The bottom right terminal window shows the command line output:

```

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

```

1.10 Add a log statement with two conditions.

The screenshot shows the Visual Studio Code interface. The left sidebar shows files: equality.js, logicaloperators.js (selected), and welcome.js. The main editor shows the following code:

```

JS logicaloperators.js •
JS 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

```

The bottom right terminal window shows the command line output:

```

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

```

1.11 Run the program again.

```

logicaloperators.js - JavaScript - Visual Studio Code

let Selection View Go Run Terminal Help

EXPLORER JS logicaloperators.js ×
OPEN EDITORS JS logicaloperators.js > ...
JAVASCRIPT equality.js
JS logicaloperators.js
JS welcome.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

```

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE

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

OUTLINE TIMELINE

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 - JavaScript - Visual Studio Code

let Selection View Go Run Terminal Help

EXPLORER JS logicaloperators.js ×
OPEN EDITORS JS logicaloperators.js > (e) eWallet
JAVASCRIPT equality.js
JS logicaloperators.js
JS welcome.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

```

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE

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

OUTLINE TIMELINE

1.13 Pass a log statement for the Logical Not operator.

The screenshot shows a Visual Studio Code interface with the following details:

- Title Bar:** logicaloperators.js - j...
- Header:** Selection View Go Run Terminal Help
- Left Sidebar (EXPLORER):** OPEN EDITORS (1 UNSAVED), JS logicaloperators.js (highlighted), JAVASCRIPT, JS equality.js, JS logicaloperators.js, JS welcome.js
- Central Area (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 = 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
```
- Bottom Navigation:** PROBLEMS, OUTPUT, TERMINAL (highlighted), DEBUG CONSOLE
- Terminal Output:**

```
erishant@gmail@ip-172-31-90-232:~/Desktop/JavaScript$ node logicaloperators.js
Can i Navigate using Google Maps: false
Can i Book Cab: true
erishant@gmail@ip-172-31-90-232:~/Desktop/JavaScript$ node logicaloperators.js
Can i Navigate using Google Maps: false
Can i Book Cab: true
erishant@gmail@ip-172-31-90-232:~/Desktop/JavaScript$ node logicaloperators.js
Can i Navigate using Google Maps: false
Can i Book Cab: false
erishant@gmail@ip-172-31-90-232:~/Desktop/JavaScript$
```
- Bottom Status Bar:** 1: bash

1.14 Run the code.

The screenshot shows a Visual Studio Code interface with the following details:

- Title Bar:** logicaloperators.js - Java...
- File Explorer (OPEN EDITORS):** logicaloperators.js (highlighted), equality.js, logicaloperators.js, welcome.js.
- Code Editor:** logicaloperators.js (Content):

```
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
```

- Terminal:** bash
- Output:** Can i Navigate using Google Maps: false
Can i Book Cab: true
erishant@gmail@ip-172-31-90-232:~/Desktop/JavaScript\$ node logicaloperators.js
Can i Navigate using Google Maps: false
Can i Book Cab: false
erishant@gmail@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
erishant@gmail@ip-172-31-90-232:~/Desktop/JavaScript\$

