

# Day 11



## JavaScript in the Browser:

### JavaScript in the Browser

When JavaScript runs inside a web browser, it can interact with the webpage (HTML) and the user. Browsers like Chrome, Firefox, Edge, etc., have a built-in JavaScript Engine that reads and executes JavaScript code.

Example:

- Chrome → uses V8 Engine
- Firefox → uses SpiderMonkey

## JavaScript Script Tag:

**<script> tag:**

Way 1: giving source “.js” address

```
index.html > html > body > script
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8">
5   <meta name="viewport" content="width=device-width, initial-scale=1.0">
6   <title>Document</title>
7 </head>
8 <body>
9   <script src = "App.js"></script>
10 </body>
11 </html>
```

Way 2: writing JS code inside the <script> tag

```
index.html > html
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8">
5   <meta name="viewport" content="width=device-width, initial-scale=1.0">
6   <title>Document</title>
7 </head>
8 <body>
9   <script>
10     console.log("Aditya Kumar");
11   </script>
12 </body>
13 </html>
```

## JavaScript Console Object:

### What is the Console Object in JavaScript?

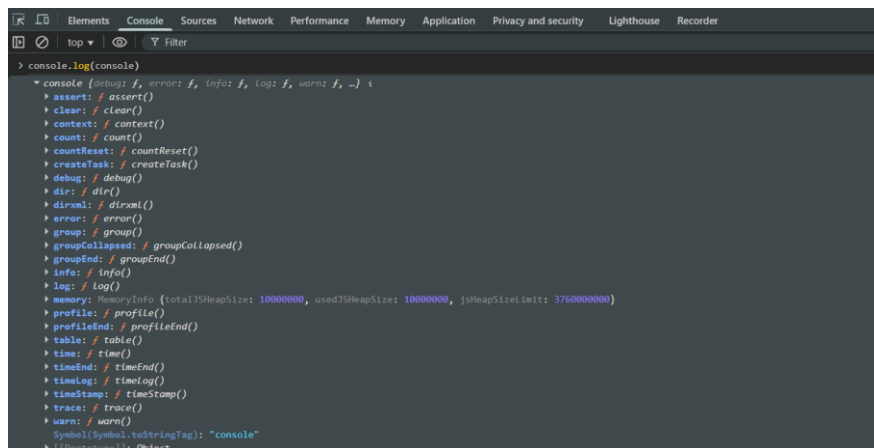
The console object is a built-in object in JavaScript that helps display messages, debug code, and check values while running your program — usually through the browser's developer console.

You can open it by pressing: F12 → then click on the Console tab.

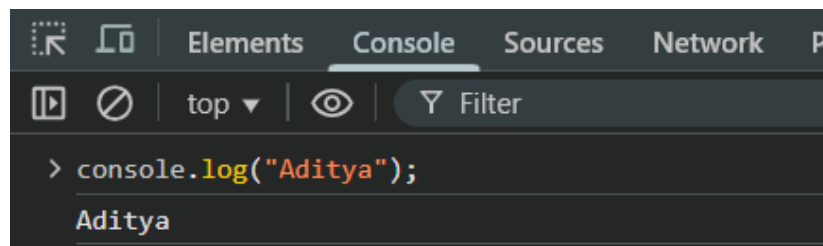
### Common methods:

- `log()` → print messages
- `error()` → show errors
- `warn()` → show warnings
- `table()` → display data in table form
- `clear()` → clear console
- `time()` / `timeEnd()` → measure time

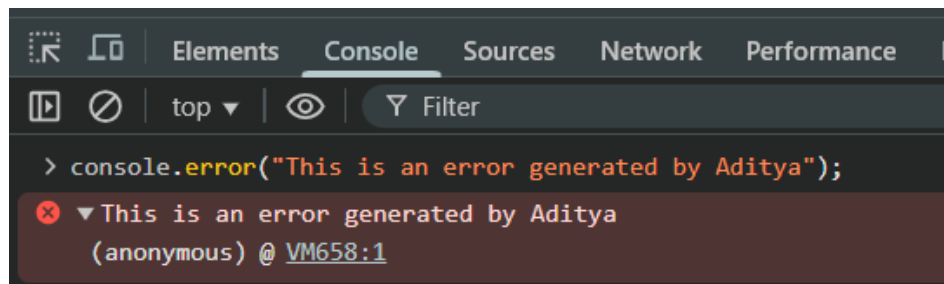
Example: to list all the available methods, we can use `console.log(console)`



Example: `console.log()`



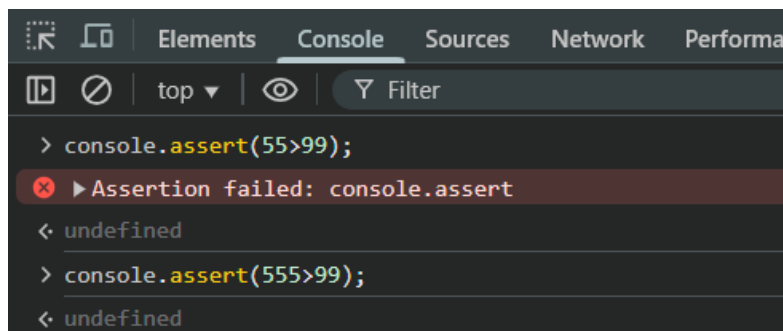
Example: console.error()



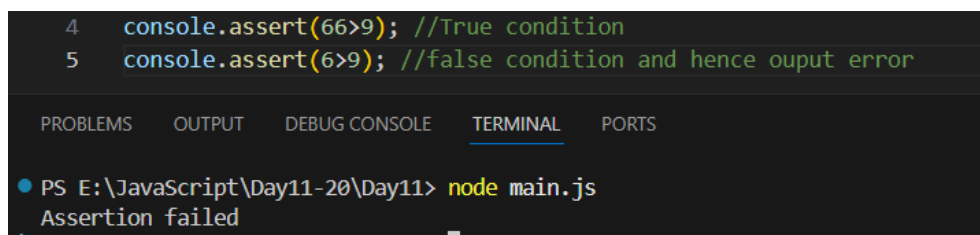
Also, in IDE:



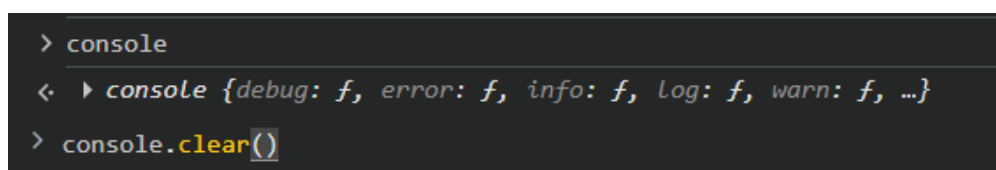
Example: console.assert()

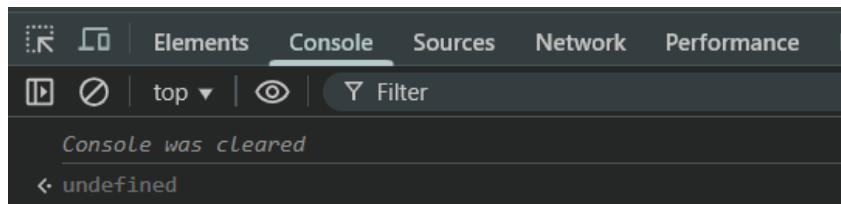


Also,



Example: console.clear()

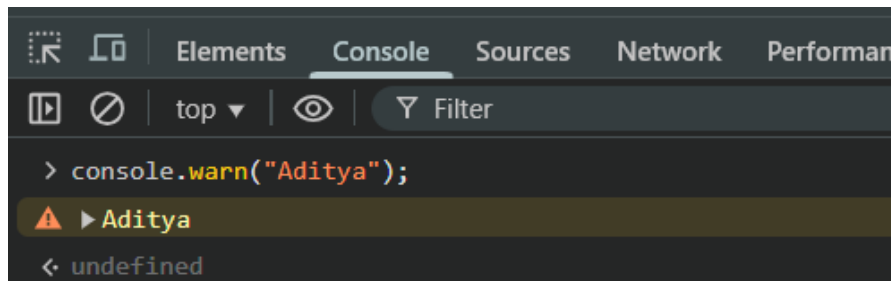




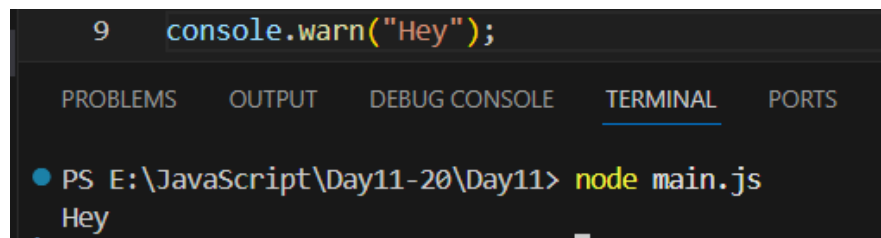
Example: Console.table()



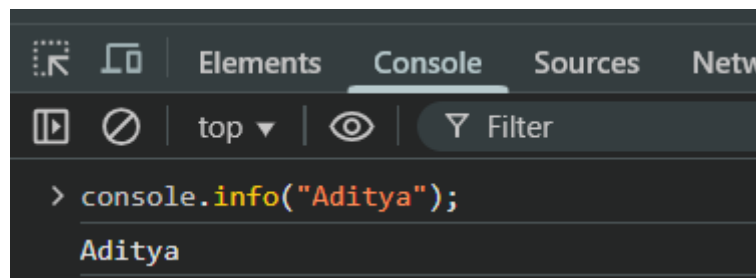
Example: console.warn()



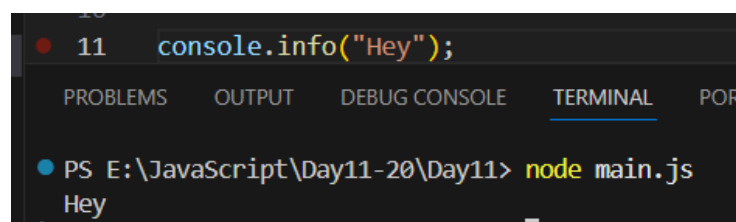
Also,



Example: console.info()



Also,



Example: console.time() and console.timeEnd()

The screenshot shows a web browser's developer console with the 'Console' tab selected. The console contains the following log entries:

```
> console.time("a");  
< undefined  
> console.timeEnd("a");  
a: 8087.218994140625 ms  
< undefined
```

Example: printing the time taken in execution of for loop

The screenshot shows a code editor with the following JavaScript code:

```
13 console.time("Loop");  
14  
15 for(let i = 0; i<5; i++){  
16     console.log(i);  
17 }  
18 console.timeEnd("Loop");
```

Below the code editor is a terminal window with the following output:

```
PS E:\JavaScript\Day11-20\Day11> node main.js  
0  
1  
2  
3  
4  
Loop: 12.989ms
```

--The End--