ENVIRONMENTS FOR JAVASCRIPT

Javascript must run in an environment. It cannot exist purely by itself.

Several options exist.

1) **Javascript may be run within a HTML webpage.** When doing so, the Javascript is included within <script></script> tags as the last part of the HTML code within the body, OR it may be linked to a script.js file.

2) **Javascript may be run within a browser console** as a testing environment.

The **JavaScript console** is a built-in, text-based interface in your web browser's developer tools that allows you to execute JavaScript code in real-time, view the output, log messages for debugging, and track errors.

Accessing the Console:
You can access the console directly in your browser:

- **Right-click** anywhere on a webpage and select **"Inspect"**.
- In the Developer Tools panel that opens, click the **"Console"** tab.
- Alternatively, use keyboard shortcuts:
    - **Chrome/Edge/Windows/Linux:** Ctrl + Shift + J
    - **Chrome/Edge/macOS:** Command + Option + J
    - **Firefox:** Ctrl + Shift + K (Windows/Linux) or Command + Option + K (macOS)

Once open, you will see a prompt (often a blue >) where you can type JavaScript commands and press Enter to run them immediately.

The console.log() Method:
The most common way to interact with the console programmatically is using the console.log() method. This function "prints" whatever you put inside the parentheses to the console for viewing. This is a crucial tool for a developer to see the values of variables and verify code execution flow during development.

Example:

```
console.log("Hello, world!");
```

Typing this into the console prompt and pressing Enter will output the message:

```
Hello, world!
```

3) **Javascript may be run locally on a Node.js runtime environment**.

To run JavaScript code in **Node.js**, you first need to ensure Node.js is installed, and then you can either:

open a terminal or command prompt and running the following command:
```
node <filename>.js
```

There are some other options available using Node.js but this is the simplest way.

4) It may be possible to **run Javascript code directly within an IDE**. One example of this is direct running of Javascript within VS Code. Other IDE's may also have such methods.