ScopeTreasure Courses

JAVASCRIPT COURSES · LESSON 3.1 · CODE SCOPE SERIES

JavaScript Kya Hai? + First Script

What JavaScript is and why every page needs it: the third layer of the web, the script tag, console.log, and your first click that answers back.

Introduction

Open the ChaiPoint page from the video. The page looks complete — but click the button and nothing happens. Fill the form and it stays silent. The page is **dead**, because it has no JavaScript yet. HTML and CSS can build a page and dress it, but only JavaScript can make it **answer back**.

Think of a web page as three layers. HTML is the **skeleton** — the structure. CSS is the **clothes** — colours and style. JavaScript is the **living layer** — it responds when a user clicks, types, or submits. In this lesson you will run your first script, print your first success with `console.log`, and make a button answer your click with an `alert`.

(Roman Urdu: HTML dhancha hai, CSS kapray hain, aur JavaScript woh zinda hissa hai jo click par jawab deta hai.)

Key points

- **JavaScript makes pages respond:** without it, a button click does nothing and a form gives no warning. With it, a page can change colour, count clicks, open a menu, and warn about an empty form field.

  (Roman Urdu: JavaScript ke baghair page khamosh rehta hai — click ho ya form, koi jawab nahi milta.)
- **Three layers, three jobs:** HTML = **structure**, CSS = **style**, JavaScript = **behaviour**. They work together on every real website.
- **The browser runs JavaScript:** every browser has a JavaScript **engine** inside it. Chrome's engine is called **V8**. The engine reads your code and runs it, line by line.
- **Node.js runs JavaScript outside the browser:** the same language can also run on a computer or server with **Node.js**. That is a later story — for now, the browser is our home.
- **Link your script file like this:** `<script src="script.js"></script>` — and put it as the **last thing before** `</body>`.

  (Roman Urdu: Script ki line hamesha body ke aakhir mein lagao, taake page pehle ban jaye.)
- **Why last?** The script often looks for page elements. If the script runs before the page exists, it finds nothing and fails. Page first, script second.
- **`console.log()` is your first success tool:** it prints a message in the browser **Console** (open it with F12). Users do not see it — it is for you, the developer, to check your code.
- **`alert()` answers the user:** `alert("Hello!")` shows a small popup box. Your first click → alert moment is proof that your code is alive.

Code examples

Example 1 — Your first script, linked the right way

```
<!DOCTYPE html>
<html>
<head>
  <title>ChaiPoint</title>
</head>
<body>
  <h1>Welcome to ChaiPoint</h1>

  <script src="script.js"></script>
</body>
</html>
```

What it does: This is a small page with one heading. The `script` tag sits just before `</body>`, so the heading already exists when the browser loads `script.js`. The file name in `src` must match your real JavaScript file exactly.

What you will see: the page shows the heading "Welcome to ChaiPoint". Nothing else is visible yet — the magic happens in the next example, inside the Console.

Example 2 — console.log: your first success

```
console.log("JavaScript is alive!");
console.log(250 + 50);
```

What it does: Save these two lines as `script.js` and open the page from Example 1. The first line prints a text message. The second line does real maths first — `250 + 50` becomes `300` — and then prints the result.

What you will see: in the Console (press F12) you see exactly two lines: `JavaScript is alive!` and then `300`. If you see these, your script file is linked correctly and running.

Example 3 — First click: the button answers back

```
<!DOCTYPE html>
<html>
<head>
  <title>ChaiPoint</title>
</head>
<body>
  <h1>Welcome to ChaiPoint</h1>
  <button id="orderBtn">Order Chai</button>

  <script>
    document.getElementById("orderBtn").onclick = function () {
      alert("Your chai is coming!");
      document.querySelector("h1").textContent = "Order received!";
    };
  </script>
</body>
</html>
```

What it does: The script finds the button by its `id` and gives it a job for the click. When you click, two things happen: an `alert` popup answers back, and the heading's text changes because `textContent` replaces the text inside the `h1`. Changing page text like this is called working with the **DOM** — the full DOM lesson is 3.13; today, just enjoy that it works.

What you will see: you click "Order Chai" and a popup says `Your chai is coming!` — click OK on the popup, and the heading now reads "Order received!" instead of "Welcome to ChaiPoint".

Quick recap

- HTML = skeleton, CSS = clothes, **JavaScript = the living layer** that responds to the user.
- Put `<script src="script.js"></script>` **last, before** `</body>`, so the page exists before the script looks for it.
- `console.log` prints for the developer in the Console; `alert` pops up a message for the user.

Common mistakes

1. **Script in the head, too early** — the script runs before the button exists, so the click does nothing and the Console shows an error. Fix: move the `script` tag to just before `</body>`.
2. **Wrong file name in `src`** — `src="scripts.js"` when the file is really `script.js` means the browser loads nothing, silently. Fix: copy the file name exactly, letter by letter.
3. **Looking for console.log on the page** — `console.log` never prints on the page itself. Fix: press F12 and open the Console tab to see your messages.

Practice

1. Make a page with your name in an `h1` and a button under it. Link a `script.js` file the correct way, and use `console.log` to print your name and your city on two lines. Check the Console.
2. Add a click to your button: on click, show an `alert` with a welcome message, and change the `h1` text with `textContent` to a new message of your choice.

Practice quiz

1. What job does each of the three layers do?

- HTML = behaviour, CSS = structure, JavaScript = style
- HTML = structure, CSS = style, JavaScript = behaviour
- HTML = style, CSS = behaviour, JavaScript = structure
- All three do the same job

Answer: HTML = structure, CSS = style, JavaScript = behaviour

2. Where should the script tag go, and why?

- In the head, so it loads first
- Last, just before </body>, so the page exists before the script looks for its elements
- Anywhere, it makes no difference
- After </html>

Answer: Last, just before </body>, so the page exists before the script looks for its elements

3. Who sees console.log, and who sees alert?

- Both are seen by the user on the page
- console.log prints for the developer in the Console (F12), alert pops a message box for the user
- console.log pops a box, alert prints in the Console
- Neither is ever seen by anyone

Answer: console.log prints for the developer in the Console (F12), alert pops a message box for the user

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Watch the video lesson: https://youtu.be/og8DK2ZKTaw

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