

# JavaScript for Web Applications

Web App Dev Guide · Module 4 of 8 · CHERIEDU Dev Series

## 1. JavaScript — Making Pages Interactive

JavaScript runs in the browser and makes web pages respond to user actions. Clicking a button, submitting a form, loading data without refreshing — all of this is JavaScript.

## 2. DOM Manipulation — Control Your Page

```
// Get elements
const btn = document.getElementById("submitBtn");
const output = document.querySelector(".result");

// Listen for a click
btn.addEventListener("click", () => {
  const name = document.getElementById("name").value;
  output.textContent = "Hello, " + name + "!";
  output.style.color = "#10b981";
});
```

## 3. Fetch API — Load Data Without Refresh

```
// Fetch data from an API
async function loadSchools() {
  const response = await fetch("/api/schools");
  const data = await response.json();
  data.forEach(school => {
    const li = document.createElement("li");
    li.textContent = school.name;
    document.getElementById("list").appendChild(li);
  });
}
loadSchools();
```

## 4. ES6+ Features You Must Know

Feature	Old Way	New Way (ES6+)
Variables	var x = 1	const x = 1 or let x = 1
Functions	function f() {}	const f = () => {}
String concat	"Hello " + name	`Hello \${name}`
Destructuring	const a = obj.a	const { a } = obj
Spread	arr.concat([4,5])	[...arr, 4, 5]

## 5. Form Validation with JavaScript

```
function validateForm(e) {
  e.preventDefault(); // stop page reload
  const email = document.getElementById("email").value;
  if (!email.includes("@")) {
    showError("Please enter a valid email");
    return;
  }
  submitToServer({ email });
}
```

### PROJECT

Add JavaScript to your CHERIEDU form: validate all fields, show error messages in red, show a success message on valid submit, and fetch a list of schools from a JSON file to populate the school dropdown.

