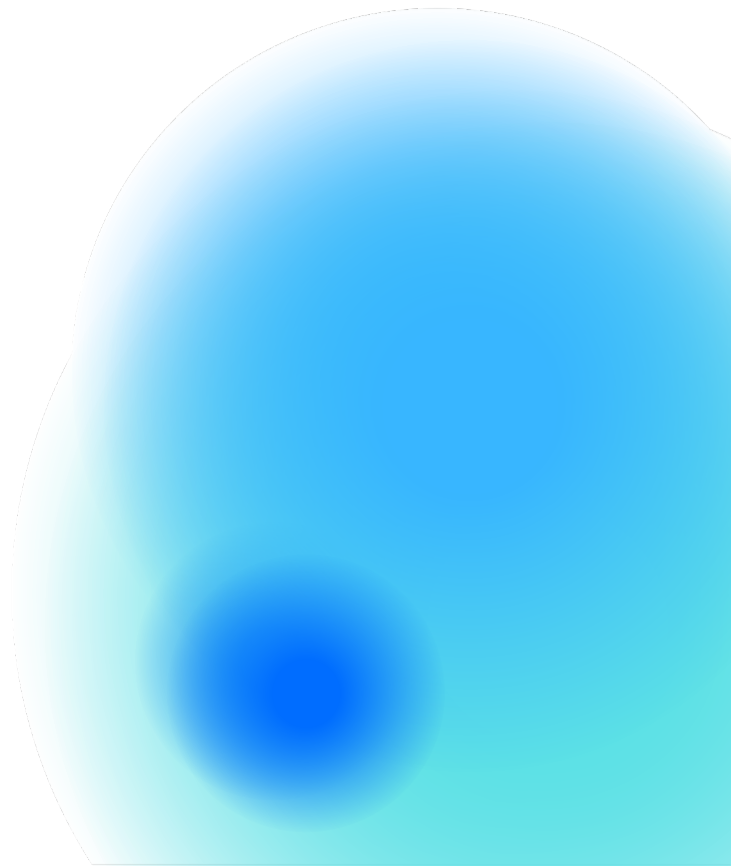# Javascript Introduction

Javascript

- JavaScript is a scripting language used to create and control dynamic website content.

- It's one of the core technologies of the web, alongside HTML and CSS.

- Enables interactivity, real-time updates, animations, and more.

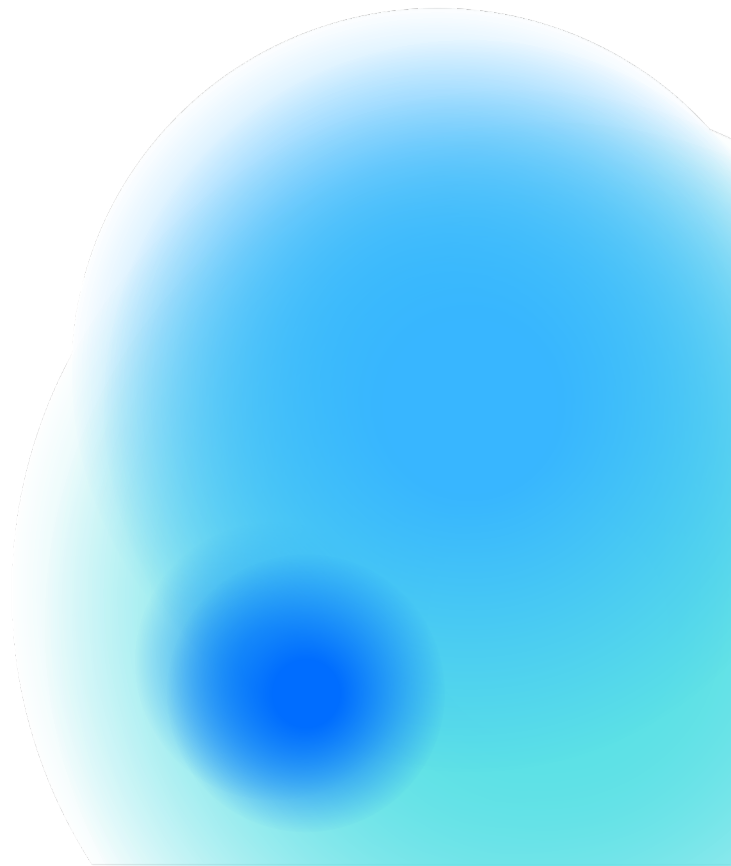**Why Learn JavaScript?**

- Client-side interactivity (buttons, forms, dynamic content)

- Backend development with Node.js

- Full-stack capabilities

- Huge community support

- High demand in job markett

Javascript

History of JavaScript

- Created in 1995 by **Brendan Eich**, originally called **Mocha**, then **LiveScript**, finally **JavaScript**

- Despite the name, it's not related to Java

- Over time of improvement it evolved into a powerful and essential web language

Where JavaScript Runs?

- In the browser (e.g., Chrome, Firefox, Safari)

- On servers using Node.js

- In mobile apps, desktop apps, and even IoT devices

Javascript

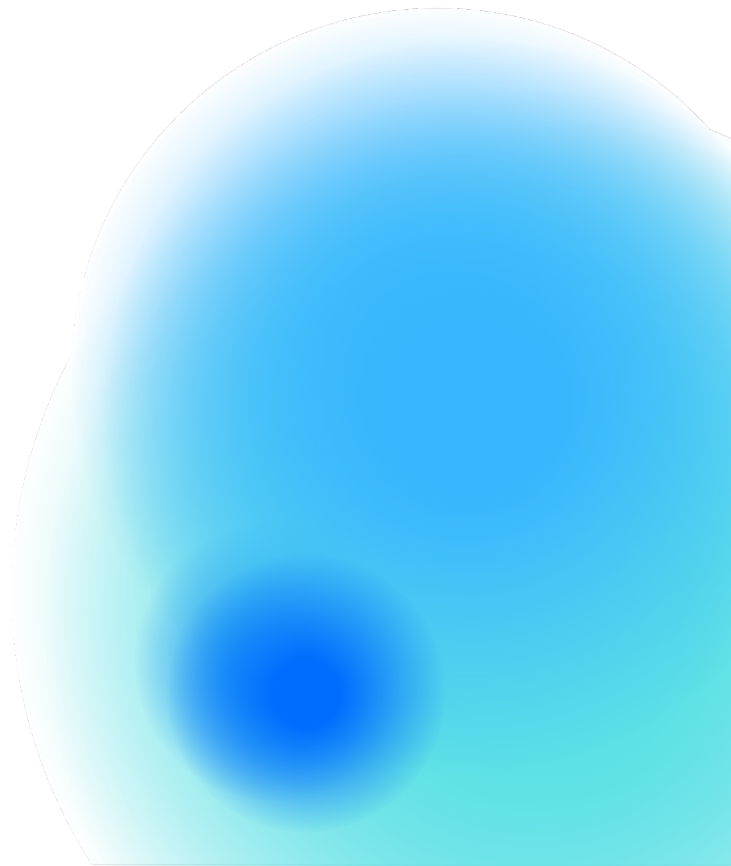**JavaScript in Action (Use Cases)**

- Form validation

- Interactive maps

- Real-time chats

- Auto-suggestions in search boxes

- Dynamically changing content on web pages/applications

- Online Gaming

Javascript

Tools & Ecosystem

- Browser (To run Javascript code)

- **Editors**: VS Code, Sublime Text or any text editor

- **Frameworks:** React, Angular, Vue, Svelte, Ember

- **Package Managers:** npm, yarn

Getting Started

- Create an HTML file

- Link a JavaScript file using **<script>** tag

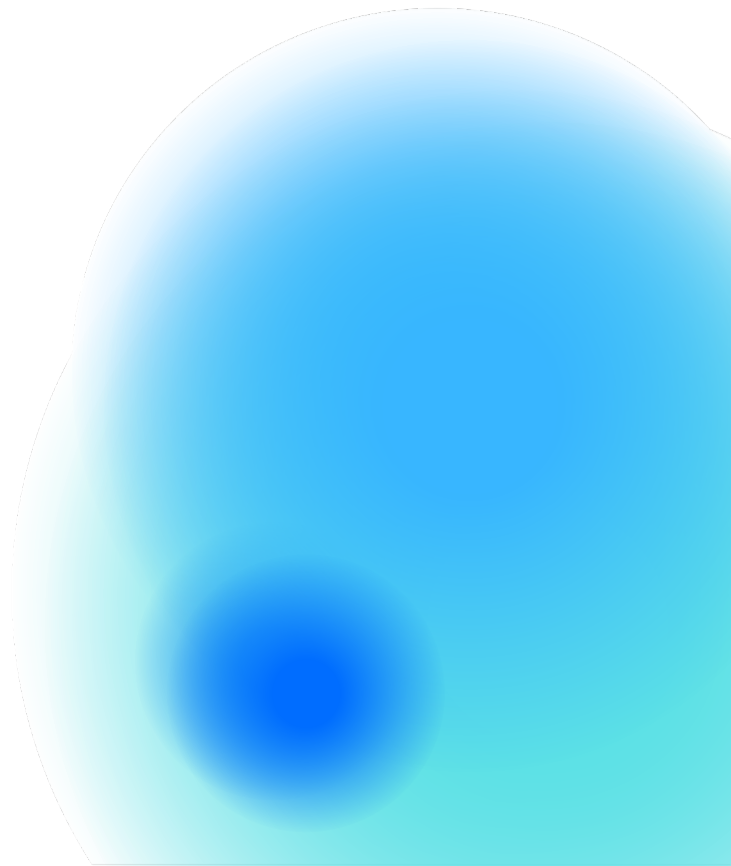- Use browser's developer tools to debug and test.

Javascript

Comments in Javascript

```
// Single line comment
/*
Multiline
comment
*/
```

Javascript Variables

Variables are containers for storing data and values.

JavaScript gives you three ways to declare variables

- let
- const
- var

Javascript

Variable Scope & Usecases

Keyword	Scope	Can Reassign	Hoisting	Use Case
var	Function	Yes	Yes	Older code (avoid in modern)
let	Block	Yes	No	Use when value may change
const	Block	No	No	Use when value is constant

Naming Rules

- Can include letters, numbers, $, and _

- Cannot start with a number

- Case-sensitive (Name and name are different)

- Use camelCase by convention: userName, totalScore

Example

```
var name = "Alice"; // Using var (not recommended in modern code)

let age = 25;          // Using let

const country = "USA";  // Using const
```

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THANK YOU

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