

VUE.js

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 **Vue.js**  Search

[Docs](#)  [API](#) [Playground](#) [Ecosystem](#)  [About](#)  [Sponsor](#) [Experts](#) **NEW**      

The **Progressive** JavaScript Framework

An approachable, performant and versatile framework for building web user interfaces.

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Approachable

Builds on top of standard HTML, CSS and JavaScript with intuitive API and world-class documentation.

Performant

Truly reactive, compiler-optimized rendering system that rarely requires manual optimization.

Versatile

A rich, incrementally adoptable ecosystem that scales between a library and a full-featured framework.

Irene Ioannidou

VUE.js

What is it?

Progressive Component-based JavaScript Framework for UI

VUE.js

Component-based

Apps are made up of reusable pieces (components).

VUE.js

Reactive data binding

UI updates automatically when data changes.

VUE.js

Progressive

You can use it just for parts of a web page, or for full apps.

VUE.js

Ecosystem

Works well with Vue Router (navigation), Pinia/Vuex (state management), and Vue CLI / Vite (project setup).

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How to run?

1. Directly in the
Browser (Simple
Way)

2. With a Build Tool
(Node.js)

VUE.js

How to run?

1. Directly in the Browser (Simple Way)

```
<script src="https://cdn.jsdelivr.net/npm/vue@3"></script>
```


VUE.js

How to run?

2. With a Build Tool (Node.js)

```
npm create vite@latest my-vue-app -- --template vue  
cd my-vue-app  
npm install
```

VUE.js

How it runs

1. `const { createApp } = Vue;`  `const createApp = Vue.createApp;`

When you load Vue from a `<script>` tag (CDN), a **global Vue object** becomes available.

Destructuring: pulls out the `createApp` function from the Vue object, so you can use it directly.

2. `createApp` -> makes a new Vue application instance.

`.mount("#app")` -> tells Vue “take control of the element with `id=app` and render stuff there.”

VUE.js

How it runs

3. In Vue, when you declare variables inside `data()` (or `ref()` in composition API), Vue makes them reactive.

```
data() {  
  return {  
    color: "" // <-- reactive variable  
  }  
}
```

4. When color changes → Vue automatically updates the DOM where it's used.

* No need for **`document.querySelector`** or **`innerText`** manually (like in VanillaJS).

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Example

```
<div id="app">
  <h1>Your favorite color: {{ color || "unknown" }}</h1>
  <input v-model="color" placeholder="Type your favorite color" />
</div>

<script>
const { createApp } = Vue;

createApp({
  data() {
    return {
      color: "" // variable "color"
    }
  }
}).mount("#app");
</script>
```

color is the **reactive variable** inside Vue's data.

|| is **fallback text** if the variable is empty

Binding (v-model="color") **links the input** box to **color**.

Interpolation ({{ color || "unknown" }}) **displays** the **value** of color in the **DOM**.

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Summary

```
<h1>Your favorite color: {{ color || "unknown" }}</h1>  
<input v-model="color" placeholder="Type your favorite color" />
```

- **Reactive variable** color lives in Vue's data.
- **Binding** (v-model="color") links the input box to color.
- **Interpolation** ({{ color || "unknown" }}) displays the value of color in the DOM.
- When the user types → color updates → interpolation re-renders → page updates.

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Summary

Reactive variable: special variable Vue watches (like color).

Interpolation ({{ }}): shows the variable in the page.

Binding (v-model): keeps inputs and variables in sync.

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EXTRA

```
<p v-if="color === 'blue'">
```

Blue is the color of the sky! ☁

```
</p>
```

VUE.js

EXTRA

== (loose equality)

Compares values after converting types if needed.

"5" == 5 →  **true** (string "5" is converted to number).

0 == false →  **true** (number 0 is treated as false).

=== (strict equality)

Compares value AND type.

"5" === 5 →  **false** (string is not the same type as number).

0 === false →  **false** (different types).

"blue" === "blue" →  **true** (same type and value).