

AOS (Animate On Scroll) Animation Basics

Introduction

AOS (Animate On Scroll) is a lightweight JavaScript library that allows you to animate elements as they scroll into view. It enhances user experience by adding smooth, scroll-triggered animations.

Installation

- **Via CDN:** Add CSS & JS links in your HTML.
- **Via NPM:** Install using `npm install aos --save`.

Basic Usage

1. Add **data-aos** attribute to any HTML element.

Example:

```
<div data-aos="fade-up">Content here</div>
```

2. Initialize AOS in JS:

```
<script>AOS.init();</script>
```

Common Animations (data-aos values)

- **fade**, fade-up, fade-down, fade-left, fade-right
- **zoom-in**, zoom-out
- **flip-left**, flip-right
- **slide-up**, slide-down, slide-left, slide-right

Extra Options (inside AOS.init)

- **duration:** Time in ms for animation (default 400)
- **delay:** Delay before animation starts
- **offset:** Distance in px from viewport to trigger animation
- **easing:** Animation curve (ease, ease-in, ease-out, etc.)
- **once:** true → animate only once, false → every scroll
- **mirror:** true → animate out when scrolling back

Example Code

```
<div data-aos="fade-up" data-aos-duration="1200" data-aos-delay="300">  
<h1>Hello AOS</h1>  
</div>
```

```
<script>
AOS.init({
duration: 1000,
once: true,
offset: 120
});
</script>
```

Best Practices

- Avoid overusing animations to keep UX smooth.
- Use reasonable durations (400-1200ms) for better user experience.
- Combine AOS with TailwindCSS or Bootstrap for modern UIs.