

# GSAP Full Learning Roadmap

## 1■■■ Basics – Core Methods

- ``gsap.to()``
- ``gsap.from()``
- ``gsap.fromTo()``
- ``gsap.set()`` (instant set, no animation)
- ■ Skills: move, fade, scale, rotate, change colors

## 2■■■ Animation Parameters

- ``duration``
- ``delay``
- ``repeat`` / ``repeat:-1`` (infinite loop)
- ``yoyo``
- ``stagger``
- ``ease`` (power, bounce, elastic, back, etc.)
- ``transformOrigin``
- ``backgroundColor``, ``color``

## 3■■■ Timelines

- ``gsap.timeline()`` → sequence animations
- ``tl.to()``, ``tl.from()``, ``tl.fromTo()``
- Control: ``pause()``, ``play()``, ``reverse()``, ``seek()``

## 4■■■ Easings (Motion Styles)

- Built-in: ``power1``, ``power2.inOut``, ``back``, ``bounce``, ``elastic``
- CustomEase (make your own curve)

## 5■■■ Staggers (Multiple Elements)

- Animate groups of elements with ``stagger``
- ``gsap.to('.box', {y:100, stagger:0.2})``

## 6■■■ Scroll Animations (ScrollTrigger)

- Animate when elements enter the viewport
- Pin sections
- Parallax effects
- ■ Most used in modern websites

## 7■■■ Advanced Controls

- ``gsap.utils`` (`random()`, `selector()`, `wrap()`)
- Callbacks (``onStart``, ``onComplete``)

- Labels in timelines
- `scrub` with ScrollTrigger

## 8■■■ Plugins

- ScrollTrigger (most popular)
- MotionPath
- Flip
- Draggable
- TextPlugin

## 9■■■ Real Projects

- Landing page hero animation
- Button hover & micro-interactions
- Scroll-triggered section reveals
- Complex storytelling animations