Step 1: Install tools (once per project)

```
npm install gsap @studio-freight/lenis
```

Step 2: Enable ScrollTrigger

```
import { gsap } from "gsap";
import { ScrollTrigger } from "gsap/ScrollTrigger";
gsap.registerPlugin(ScrollTrigger);
```

Step 3: Setup Lenis (ONLY ONCE → main.jsx)

- Create Lenis instance
- Sync it with GSAP ticker
- Disable GSAP lag smoothing

```
const lenis = new Lenis({ lerp: 0.08 });
lenis.on("scroll", ScrollTrigger.update);
gsap.ticker.add((time) => {
  lenis.raf(time * 1000);
});
gsap.ticker.lagSmoothing(0);
```

Step 4: Structure page for scrolling

- Use real height (min-height: 100vh)
- Create clear sections

```
<section className="hero" />
<section className="parallax" />
<section className="content" />
```

Step 5: Add parallax animation (inside component)

```
useLayoutEffect(() => {
  const ctx = gsap.context(() => {
    gsap.to(".parallax-bg", {
      backgroundPosition: "50% 100%",
      ease: "none",
      scrollTrigger: {
        trigger: ".parallax-bg",
        start: "top bottom",
        end: "bottom top",
        scrub: true,
```

```
      },
    });
  });

  return () => ctx.revert();
}, []);
```

Step 6: CSS rules that matter

```
.section {
  min-height: 100vh;
}
html {
  scroll-behavior: auto; /* Lenis controls scroll */
}
```

Step 7: ALWAYS do cleanup

- Wrap animations in gsap.context()
- Call ctx.revert() on unmount