LESSON 10



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CSS Animations

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HTML & CSS

LESSON 10

Transitions, Transforms and Animations

transition, transform, @keyframes, animation properties and performance

Transitions

style.css

```css
.btn {
  background: hsl(185 81% 29%);
  transition: background 200ms ease, transform 200ms ease;
}
.btn:hover {
  background: hsl(185 81% 22%);
  transform: translateY(-2px);
}
```

- A transition animates a property smoothly when it changes, for example on hover. Name the …
- Small transitions on buttons and links make an interface feel polished.

01

Transforms

style.css

```
.card:hover { transform: scale(1.03); }
.icon       { transform: rotate(45deg); }
.badge      { transform: translate(-50%, -50%); }
.tilted     { transform: rotate(-3deg) scale(1.1); }
.flip       { transform: scaleX(-1); }     /* mirror an arrow for RTL */
```

- transform moves, scales, rotates and skews elements without affecting the layout around them.
- translate, scale and rotate can be combined in one line, and they are applied from right to …

02

Keyframe Animations

style.css

```
@keyframes fade-up {
  from { opacity: 0; transform: translateY(20px); }
  to   { opacity: 1; transform: translateY(0); }
}
.hero h1 {
  animation: fade-up 600ms ease-out both;
}
@keyframes spin { to { transform: rotate(1turn); } }
.loader { animation: spin 1s linear infinite; }
```

- For animations that run on their own, define steps with at-keyframes, then attach them with …
- Set the duration, the number of iterations, and the direction.

03

Easing and Timing

Easing	Feels like
`linear`	constant, mechanical
`ease-out`	arriving, natural
`ease-in`	leaving
`cubic-bezier()`	custom curve

- Easing controls speed over time. ease-out starts fast and slows down, which feels natural …
- Keep interface animations short, between one hundred and four hundred milliseconds. Use …

04

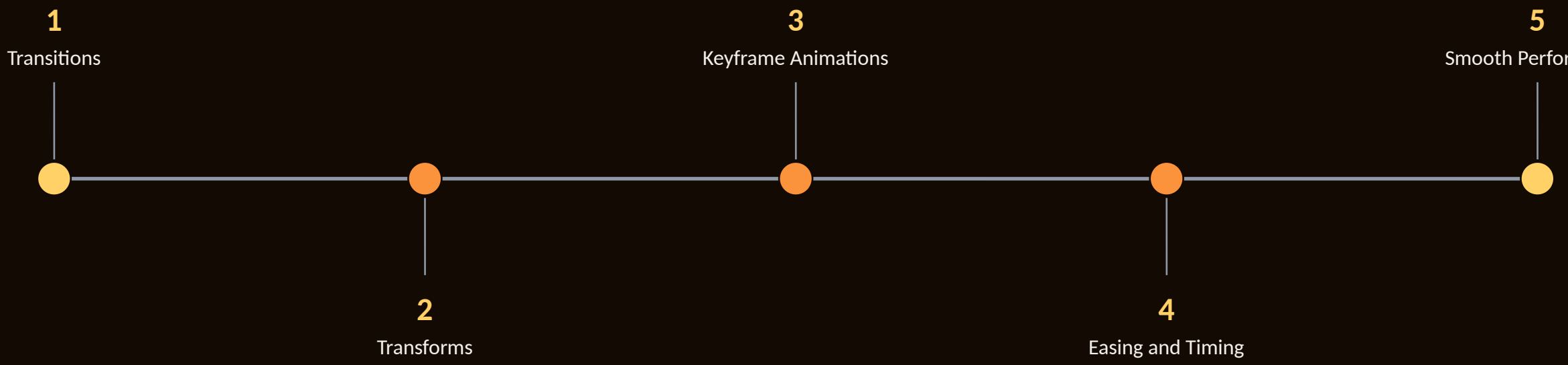
Smooth Performance



- Animate only transform and opacity. The browser can move them on the graphics card without …
- Animating width, height or top causes layout work on every frame. Respect users who prefer …

05

Lesson Map


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Transforms
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Easing and Timing
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Smooth Performance

Sources and Further Reading

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Thank you for watching

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