

## **DAY 4 → CSS Transitions and Animations**

### **1. Introduction:**

- **CSS Transitions and Animations allow for the creation of smooth and visually appealing effects on webpage elements.**
- **These effects can enhance user experience, add interactivity, and create engaging visual experiences.**

### **2. CSS Transitions:**

- **Transitions enable smooth property changes over a specified duration.**
- **Syntax: `transition: property duration timing-function delay;`**

- **Example:**

```
```css
.box {
  width: 100px;
  height: 100px;
  background-color: red;
  transition: width 1s ease-in-out;
}
.box:hover {
  width: 200px;
}
```
```

- **Description: In the example above, when hovering over the `.box` element, its width will transition smoothly from 100px to 200px over a 1-second duration with an ease-in-out timing function.**

### 3. CSS Animations:

- Animations provide more advanced control over property changes by defining keyframes.

- Syntax:

```
``css
@keyframes animation-name {
  0% { property: value; }
  50% { property: value; }
  100% { property: value; }
}
```

- Example:

```
``css
.circle {
  width: 100px;
  height: 100px;
  background-color: blue;
  animation-name: spin;
  animation-duration: 2s;
  animation-timing-function: linear;
  animation-iteration-count: infinite;
}
@keyframes spin {
  0% { transform: rotate(0deg); }
  100% { transform: rotate(360deg); }
}
```

- Description: The `.circle` element will continuously spin around its center due to the animation defined by the `spin`

**keyframes. It will rotate from 0 degrees to 360 degrees over a 2-second duration using a linear timing function.**

#### **4. Hands-on Project:**

- In the hands-on project, you will apply transitions and animations to webpage elements.**
- Examples of possible projects include:**
  - Creating a fading effect when hovering over an image.**
  - Adding a sliding animation to a navigation menu.**
  - Implementing a pulsating animation for a call-to-action button.**
- The project will allow you to explore and experiment with different transition and animation properties to enhance the user interface and create visually appealing interactions.**