**📐 Using `<template>` and Shadow DOM**

**🧱 HTML Template Example:**

```html

<template id="card-template">

<style>

.card { border: 1px solid #ccc; padding: 10px; border-radius: 5px; }

</style>

<div class="card">

<h2>Title</h2>

<p>Content goes here...</p>

</div>

</template>

```

**🧩 Shadow DOM Custom Component:**

```html

<custom-card></custom-card>

<script>

class CustomCard extends HTMLElement {

constructor() {

super();

const shadow = this.attachShadow({ mode: 'open' });

const template = document.getElementById('card-template');

const clone = template.content.cloneNode(true);

shadow.appendChild(clone);

}

}

customElements.define('custom-card', CustomCard);

</script>

Here are \*\*well-organized notes\*\* on \*\*Advanced CSS\*\* topics, complete with examples:

**🎨 Advanced CSS Notes**

**🔁 1. Transitions for Smooth Style Changes**

CSS transitions allow you to smoothly animate property changes (like color, size, position) over a duration.

**✅ Basic Example:**

```html

<style>

.button {

background-color: blue;

color: white;

padding: 10px 20px;

transition: background-color 0.3s ease, transform 0.3s ease;

}

.button:hover {

background-color: green;

transform: scale(1.1);

}

</style>

<button class="button">Hover Me</button>

**📝 Key Properties:**

\* `transition-property`: what to animate

\* `transition-duration`: how long

\* `transition-timing-function`: easing effect

\* `transition-delay`: wait time before starting