# 📘 Lecture: How to Use Icons in HTML

## 🔹 1. What Are Icons?

Icons are small graphical symbols used in websites and apps to visually represent actions, features, or content — such as a trash bin for delete, a heart for like, or a magnifying glass for search.

## 🔹 2. Methods to Use Icons in HTML

### ✅ Method 1: Using Unicode Characters

HTML allows inserting special characters using Unicode:

<p>&#128640; This is a rocket icon</p>

Pros:  
- No external libraries required  
- Very fast

Cons:  
- Limited icons  
- Not very customizable

### ✅ Method 2: Using Image Icons (PNG/SVG)

<img src="icon.png" alt="icon" width="24" height="24">

Pros:  
- Full design control

Cons:  
- Less scalable  
- Performance issues if used excessively

### ✅ Method 3: Using Font Awesome (Icon Font Library)

➤ Step 1: Add CDN in your HTML <head> tag

<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/6.5.0/css/all.min.css">

➤ Step 2: Use icons like this

<i class="fas fa-home"></i> Home  
<i class="fas fa-trash"></i> Delete

Pros:  
- Easy to scale  
- Style with CSS  
- Huge library

Cons:  
- External dependency

### ✅ Method 4: Using SVG Icons (Modern & Preferred)

Option 1: Inline SVG

<svg width="24" height="24" fill="currentColor">  
 <use xlink:href="#icon-search"></use>  
</svg>

Option 2: External SVG (Like from Heroicons)

<svg xmlns="http://www.w3.org/2000/svg" class="h-6 w-6" fill="none" stroke="currentColor" viewBox="0 0 24 24">  
 <path stroke-linecap="round" stroke-linejoin="round" stroke-width="2" d="M5 13l4 4L19 7" />  
</svg>

Pros:  
- Lightweight  
- Customizable  
- Best for modern apps

Cons:  
- Slightly more complex syntax

## 🎨 Styling Icons with CSS

You can style icons using normal CSS:

i {  
 color: red;  
 font-size: 20px;  
 margin-right: 8px;  
}

## 🛠 Use Case Examples

🏠 Navbar Example:

<nav>  
 <a href="#"><i class="fas fa-home"></i> Home</a>  
 <a href="#"><i class="fas fa-info-circle"></i> About</a>  
 <a href="#"><i class="fas fa-phone"></i> Contact</a>  
</nav>

🛒 Product Card:

<div class="product">  
 <h2>Product Name</h2>  
 <button><i class="fas fa-cart-plus"></i> Add to Cart</button>  
</div>

## 🔚 Summary

Method | Customizable | Lightweight | Best For  
---------------|--------------|-------------|------------------------  
Unicode | ❌ | ✅ | Simple icons only  
Image (PNG/SVG)| ✅ | ❌ | Custom graphics  
Icon Fonts | ✅ | ✅ | UI, Web apps, fast dev  
SVG (inline) | ✅✅ | ✅✅ | Modern scalable design

## ✍️ Final Tip

If you're using frameworks like React, use libraries like react-icons, Heroicons, or Material Icons.