The Portal People
integrated ebusiness

Lazy Loading in Web Development: A Beginners Guide

Knowledge Series

Table Of Contents

When you visit a website, it's often packed with images, videos, and other media. While these elements are great for making a site look attractive and engaging, they can slow things down. If every image or video loaded all at once, especially on a page with tons of content, it could take ages for everything to display, frustrating users.

That's where lazy loading comes in to save the day! But what is it, and why should you care? Let's dive into the basics.

What is Lazy Loading?

Lazy loading is a technique in web development that delays the loading of images, videos, or other media until they're actually needed. Instead of loading everything on a webpage as soon as you visit it, only the content you immediately see is loaded. As you scroll down the page, other elements are loaded just in time.

Imagine you're reading an article with a lot of images. Without lazy loading, the browser will try to load all of the images at once, even the ones you won't see until you scroll down. With lazy loading, it only loads the images that are in view.

Why Should You Use Lazy Loading?

Here's why lazy loading matters:

1. **Faster page load times**
   Your website loads quicker because only visible content is displayed first. Users don't have to wait ages for everything to appear, and faster websites mean happier users.
2. **Better performance on mobile devices**
   Many people browse websites on mobile phones, where speed and data usage are important. Lazy loading helps save bandwidth by not loading everything at once, which is especially useful for people with slower connections or limited data.
3. **Improved SEO rankings**
   Google values page speed and performance, so a faster site with lazy loading can boost your search engine rankings. It's a win-win: better user experience and better visibility in search results.
4. **Less strain on your server**
   Since fewer resources are being loaded upfront, lazy loading reduces the load on your web server, making it more efficient and scalable, especially when handling many users at once.

How Does Lazy Loading Work?

The concept behind lazy loading is simple, but the way it works depends on how a website is built. Here's a basic rundown:

Placeholder content
Initially, placeholder elements (like empty boxes or a blurred version of an image) are shown where images or videos will eventually load. This prevents awkward gaps in the layout while waiting for media to load.

Load on scroll or interaction
As the user scrolls down the page or interacts with certain elements (like clicking a "load more" button), the actual media files are fetched and loaded in real time. This creates the illusion that everything is already there but is actually being revealed as needed.

Implementing Lazy Loading

If you're a beginner, you don't need to be a coding wizard to implement lazy loading on a website. Many content management systems (CMS) like WordPress already have lazy loading features built in, or you can add a plugin. For those who enjoy a bit of code, here's how lazy loading is commonly applied:

HTML attribute:
The simplest way is by adding a loading="lazy" attribute to your image or iframe elements.

For example:

```
<img src="image.jpg" alt="example image" loading="lazy">
```

Checkout W3Schools for more info and practice.

JavaScript libraries:
For more complex sites, you might use JavaScript libraries like Lazysizes to handle lazy loading. These offer more flexibility and control over how and when content loads.

When Not to Use Lazy Loading

While lazy loading is fantastic, it's not always the best choice in every situation. For instance:

Above-the-fold content:
You don't want to lazy load images or content that appear at the top of the page (above the fold), as that's what users see first. Loading this content immediately gives a better experience.

Critical media:
If a video or image is crucial to the page's message or functionality, make sure it loads right away. You don't want users waiting for key content to appear.

Wrapping It Up

Lazy loading is a simple but powerful technique to boost website speed and improve user experience. By loading only what's necessary at the moment, you ensure that your visitors aren't left staring at a blank page, waiting for everything to load. It's a great tool to have in your web development kit, especially as users become more impatient with slow-loading sites.

So next time you're working on a website, give lazy loading a go and see the difference it makes. Your users (and your server) will thank you!

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