HYPER TEXT MARKUP LANGUAGE (HTML)

Class 09
SEO & Head Tag (Meta Data)

SEO (Search Engine Optimization)

What is SEO?

SEO (Search Engine Optimization) is the process of optimizing a website to rank higher in search engine results pages (SERPs), thereby increasing the visibility of the site to users searching for relevant topics. The ultimate goal is to drive organic (non-paid) traffic to your website.

Why is SEO Important?

Increased Visibility: Higher rankings lead to more exposure.

More Traffic: Organic search is often the primary source of website traffic.

Credibility & Trust: Higher-ranking websites are perceived as more trustworthy.

Cost-Effective: Unlike paid ads, organic traffic doesn't cost per click.

Core Web Vitals

What are Core Web Vitals?

Core Web Vitals are a set of performance metrics introduced by Google to measure the user experience on a website. They focus on three key aspects of page performance: loading, interactivity, and visual stability. Core Web Vitals are part of Google's Page Experience Update, and they play a role in search engine rankings.

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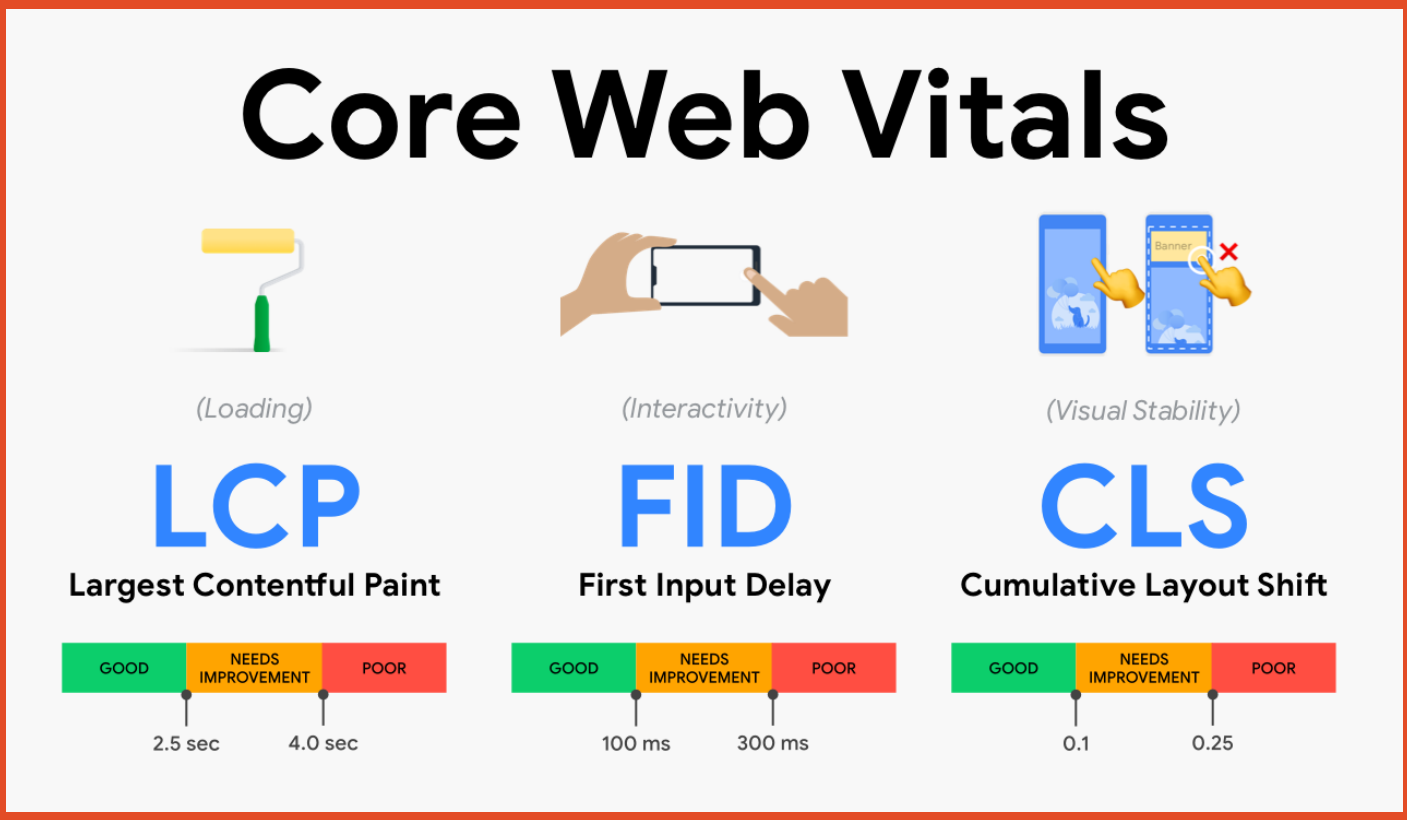

Why are Core Web Vitals Important?

Improved User Experience:

Pages that load quickly, respond smoothly, and are visually stable offer better experiences for visitors.

SEO Benefits:

Google uses Core Web Vitals as a ranking signal. A site with good scores may rank higher.

Higher Engagement and Conversions:

Faster and smoother pages reduce bounce rates and increase user interaction.

The Three Core Web Vitals Metrics

1. **Largest Contentful Paint (LCP): Measures Loading Performance**
   - **Definition**: The time it takes for the largest visible content (e.g., an image or text block) to load and appear on the screen.
   - **Good Score**: Less than **2.5 seconds**.
   - **Tips to Improve**:
     - Optimize images.
     - Minify CSS and JavaScript files.
     - Use faster hosting or a Content Delivery Network (CDN).

2. **First Input Delay (FID): Measures Interactivity**
    - **Definition**: The time it takes for the browser to respond to the first user interaction (e.g., clicking a button or link).
    - **Good Score**: Less than **100 milliseconds**.
    - **Tips to Improve**:
        - Minimize JavaScript execution.
        - Use browser caching.
        - Reduce third-party scripts.

3. **Cumulative Layout Shift (CLS): Measures Visual Stability**
    - **Definition**: Tracks how often and by how much visible content shifts unexpectedly during page load.
    - **Good Score**: Less than **0.1**.
    - **Tips to Improve**:
        - Reserve space for images and ads using dimensions (width and height).
        - Avoid inserting content above existing content (e.g., banners).
        - Use stable fonts and preloading for custom fonts.

Read docs about Core Web Vitals: *https://web.dev/explore/learn-core-web-vitals*

Head Section (Meta Data Section)

HTML <head> Section

The **`<head>`** section in an HTML document contains metadata and links to resources that are essential for the proper functioning of your web page. While the content inside the <head> section is not directly visible to the users, it plays a crucial role in defining the page's behavior, appearance, and interaction with external resources.

Purpose of the <head> Section

- Provides metadata about the HTML document.
- Links external resources like stylesheets, fonts, or scripts.
- Helps browsers, search engines, and social platforms understand and display your webpage correctly.

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Key Elements in the <head> Section

1. <title>

Defines the title of the webpage, displayed on the browser tab and in search engine results.

```
<title>My Web Page</title>
```

Why it matters:

- Helps users identify your page.
- Important for SEO (Search Engine Optimization).

2. <meta>

Used to provide metadata, such as character encoding, viewport settings, and descriptions.

Common <meta> tags:

⊕ **Character Set:** Specifies the character encoding (usually UTF-8).

```
<meta charset="UTF-8">
```

⊕ **Viewport Settings:** Makes your page responsive on different devices.

```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```

⊕ **Description:** Provides a summary of the page for search engines.

```
<meta name="description" content="A beginner's guide to HTML head section.">
```

⊕ **Keywords:** Specifies keywords related to the page's content (not as important for modern SEO).

```
<meta name="keywords" content="HTML, head, metadata, beginners">
```

⊕ **Author:** Specifies the author of the page.

```
<meta name="author" content="John Doe">
```

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3. <link>

Links external resources, such as stylesheets, icons, or fonts.

Common <link> uses:

- **CSS Stylesheet:** Links to an external stylesheet.

```
<link rel="stylesheet" href="styles.css">
```

- **Favicon:** Specifies the icon shown in the browser tab.

```
<link rel="icon" href="favicon.ico" type="image/x-icon">
```

- **Fonts:** Connects to web fonts (like Google Fonts).

```
<link href="https://fonts.googleapis.com/css2?family=Roboto&display=swap" rel="styleshe
```

4. <style>

Used to add internal CSS directly to the HTML document. Typically, external stylesheets are preferred, but this is useful for quick styling.

```
<style>
  body {
   background-color: black;
  }
</style>
```

5. <script>

Includes JavaScript in the page. Often placed at the bottom of the <body>, but sometimes necessary in the **<head>** (e.g., for critical scripts).

```
<script src="script.js"></script>
```

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Example of a Simple <head> Section

Here's how a basic **<head>** section might look for a beginner's webpage:

```
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <meta name="description" content="A beginner-friendly webpage about
    the HTML head section.">
  <title>My First Web Page</title>
  <link rel="stylesheet" href="styles.css">
  <link rel="icon" href="favicon.ico" type="image/x-icon">
</head>
```