

TR-102

MASTERING THE SEMANTIC WEB

DAY-9

❖ Overview of Web Development and SEO tools

➤ WAVE (Web Accessibility Evaluation Tool)

WAVE is a suite of evaluation tools that helps authors make their web content more accessible to individuals with disabilities. It is provided by WebAIM.

▪ Features:

- a. **Accessibility Checks:** Identifies accessibility issues in web content.
- b. **Visual Feedback:** Provides visual annotations directly on the webpage to indicate issues.
- c. **Detailed Reports:** Offers detailed information about the type and location of accessibility issues.
- d. **Integration:** Available as a browser extension for Chrome and Firefox.

▪ Usage:

- a. Install the WAVE extension from the browser's extension store.
- b. Navigate to the webpage you want to evaluate.
- c. Click on the WAVE icon in the browser toolbar to generate the report.

➤ W3C Validator

The W3C Markup Validation Service is a free tool provided by the World Wide Web Consortium (W3C) that checks the markup validity of web documents in HTML, XHTML, SMIL, etc.

▪ Features:

- a. **HTML Validation:** Ensures that the HTML code of a webpage conforms to W3C standards.
- b. **Error Detection:** Highlights errors and warnings in the HTML markup.
- c. **Direct Input, File Upload, and URL:** Validates web pages by directly entering the code, uploading a file, or providing a URL.

▪ Usage:

- a. Go to the [W3C Validator](#).

- b. Enter the URL, upload a file, or paste the HTML code of the page you want to validate.
- c. Click the "Check" button to see the validation results.

➤ **Axe DevTools**

Axe DevTools is a set of accessibility testing tools built by Deque Systems. It integrates into the development workflow to help identify and fix accessibility issues.

▪ **Features:**

- a. **Automated Testing:** Runs automated accessibility tests within the browser.
- b. **Detailed Reports:** Provides detailed information about accessibility issues and how to fix them.
- c. **Integration:** Available as a browser extension for Chrome and Firefox and can be integrated into development environments.

▪ **Usage:**

- a. Install the Axe DevTools extension from the browser's extension store.
- b. Open the webpage you want to test.
- c. Open the browser's developer tools (F12) and navigate to the Axe tab.
- d. Run the accessibility analysis to get the report.

➤ **Google Analytics**

Google Analytics is a web analytics service offered by Google that tracks and reports website traffic. It provides insights into user behavior and website performance.

▪ **Features:**

- a. **Traffic Analysis:** Monitors the number of visitors, page views, and session durations.
- b. **Audience Insights:** Provides demographic and geographic information about users.
- c. **Behavior Reports:** Analyzes how users interact with the site, including page views and bounce rates.
- d. **Conversion Tracking:** Measures the success of goals and conversions.

▪ **Usage:**

- a. Sign up for a Google Analytics account and add the tracking code to your website.
- b. Access the Google Analytics dashboard to view detailed reports and insights.

➤ **Google Search Console (formerly Webmaster Tools)**

Google Search Console is a free tool that helps webmasters monitor, maintain, and troubleshoot their site's presence in Google Search results.

- **Features:**

- a. **Performance Reports:** Tracks clicks, impressions, and average position in search results.
- b. **Index Coverage:** Shows which pages are indexed and identifies issues preventing indexing.
- c. **URL Inspection:** Provides detailed crawl, index, and serving information about individual pages.
- d. **Sitemaps:** Allows submission of sitemaps to help Google crawl your site.

- **Usage:**

- a. Verify your site ownership in Google Search Console.
- b. Use the dashboard to monitor and manage your site's search presence.

➤ **SEMrush**

SEMrush is a comprehensive SEO tool that provides insights into organic search, paid search, and competitive analysis.

- **Features:**

- a. **Keyword Research:** Identifies keywords and phrases to target for SEO and PPC campaigns.
- b. **Site Audit:** Analyzes your website for SEO issues and provides actionable recommendations.
- c. **Competitor Analysis:** Provides insights into competitors' strategies, including their top keywords and backlinks.
- d. **Backlink Analysis:** Tracks and analyzes backlinks to your site.

- **Usage:**

- a. Sign up for a SEMrush account.
- b. Use the various tools and reports available within SEMrush to analyze your site's SEO performance and develop strategies.

➤ **Wappalyzer**

Wappalyzer is a technology profiler that reveals the technologies used on websites. It detects a wide array of technologies including content management systems (CMS), eCommerce platforms, web frameworks, server software, analytics tools, and more.

- **Key Features:**

- a. **Technology Detection:** Identifies various web technologies such as CMS, eCommerce platforms, web frameworks, server software, programming languages, and analytics tools.

- b. **Browser Extension:** Available for Chrome, Firefox, and Edge, displaying technologies used by a website directly in the browser toolbar.
- c. **Website Analysis:** Allows users to analyze specific websites to understand their technology stack.
- d. **API Access:** Provides an API for integrating technology detection into applications and services, useful for developers and businesses needing automated technology profiling.
- e. **Reports and Dashboards:** Offers detailed reports and dashboards for deeper insights into the technologies used by websites.

▪ **Usage:**

a. **Browser Extension:**

- i. Install the Wappalyzer extension from the Chrome Web Store, Firefox Add-ons, or Edge Add-ons store.
- ii. Navigate to the website you want to analyze and click on the Wappalyzer icon in the browser toolbar to see a list of detected technologies.

b. **Website Analysis:**

- i. Go to the [Wappalyzer website](#).
- ii. Enter the URL of the website you want to analyze in the search bar and click "Analyze" to get a detailed report.

▪ **Benefits:**

- a. **Competitive Analysis:** Understand the technology stack of competitors.
- b. **Market Research:** Gain insights into technology adoption across different websites and sectors.
- c. **Lead Generation:** Identify potential leads by analyzing the technology stacks of websites.
- d. **Development and QA:** Ensure compatibility and optimize integrations with various technologies.
- e. **Technology Trend Analysis:** Track the adoption of new technologies and understand shifts in technology usage over time.