

M2R5 Web Designing & Publishing

Introduction to Web Design

Topic Reference | How the World Wide Web Works | September 11, 2026

Topic Summary

Topic: How the World Wide Web Works

Book: (M2-R5) Web Designing & Publishing

How the World Wide Web Works

Learn the basic mechanics of the World Wide Web, including how browsers request and display web pages from servers.

Key Points:

The World Wide Web, often simply called the Web, is a global system of interconnected computer networks that uses the internet's standard communication protocols. It allows users to access a vast amount of information and resources. Understanding how it works is fundamental to web design.

The Basic Process:

1. **User Action:** A user types a URL (Uniform Resource Locator) into a web browser (e.g., Chrome, Firefox) or clicks on a hyperlink.
2. **DNS Resolution:** The browser contacts a DNS (Domain Name System) server to translate the human-readable domain name (e.g., `www.example.com`) into an IP address (e.g., `192.0.2.1`), which is the server's numerical address.
3. **HTTP Request:** The browser then sends an HTTP (Hypertext Transfer Protocol) request to the web server located at that IP address. This request asks for the specific web page or resource.
4. **Server Processing:** The web server receives the request, locates the requested file (e.g., an HTML document, an image), and prepares a response.
5. **HTTP Response:** The server sends an HTTP response back to the browser. This response includes the requested web page's content (HTML, CSS, JavaScript, images, etc.) and status codes (e.g., 200 OK, 404 Not Found).
6. **Browser Rendering:** The browser receives the response and interprets the HTML, CSS, and JavaScript code. It then renders (displays) the web page on the user's screen, presenting the content, layout, and styling as intended.

This entire process happens in a matter of milliseconds, making the Web a powerful and seemingly instantaneous source of information.

Exam Tip:

Familiarize yourself with the steps involved in accessing a web page and the roles of DNS, HTTP, browsers, and servers.