How the Web Works?

Understanding the fundamentals of web development is crucial for every JavaScript developer. Let's dive into this topic.

WE'LL COVER THE FOLLOWING

- Web Servers
- Web Clients
- Communications between Clients and Servers

Surfing the web is easy as pie. Let's say you want to read today's comic from the popular web site xkcd. You type the text `"xkcd.com"` in your browser's address bar and voila, the comic appears (assuming no network issues).

Let's try to understand what's going on behind the scene.

Web Servers

To be online, a web site has to be published on a server. This is a special kind of machine whose task is to listen and answer to the demands of clients. A server that publishes resources on the Web is logically called a *web server*.

More precisely, a web server machine runs a particular software program (also called a web server) able to publish web sites. The most popular ones are Apache, Microsoft IIS and nginx.

Web Clients

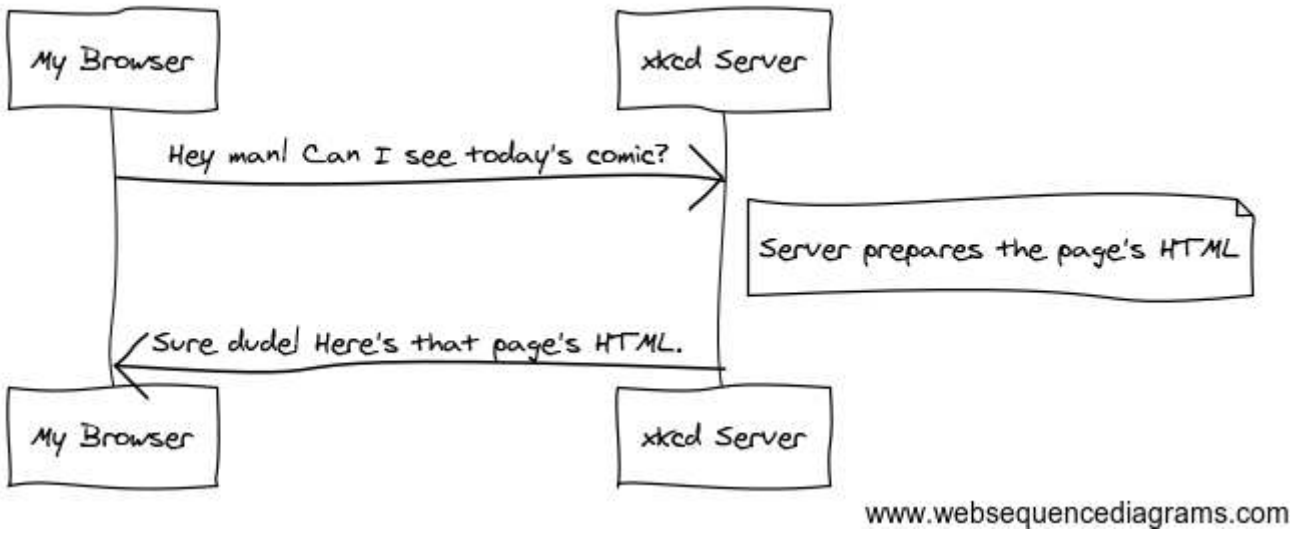
The machine asking a server for a resource is called a *web client*. Actually, the real client is a software program running on the machine. a well-known type of web client is the browser, a program specialized in displaying web pages.

Famous web browsers include Mozilla Firefox, Chrome, Safari and Opera.

Not all web clients are browsers, through. For example, search engines robots and mobile applications also contact servers and ask them for content.

Communications between Clients and Servers

Data exchanges on the Web follow a request/response paradigm.



- The exchange is started by the client, which sends a request to the server to access a particular web resource.
- The server prepares a result for the request.
- The server send backs this result to the client.

To understand each other, web clients and servers use a common protocol: HTTP.