

1.You type [www.w3schools.com](http://www.w3schools.com) into the address bar of your browser.

2.The browser checks the cache for a DNS record to find the corresponding IP address of [www.w3schools.com](http://www.w3schools.com)

DNS is a database that maintains the name of the website (URL) and the particular IP address it links to. Every single URL on the internet has a unique IP address assigned to it. For example, [www.w3schools.com](http://www.w3schools.com) has an IP address <http://66.29.212.110>.

3.If the requested URL is not in the cache,ISP's DNS server initiates a DNS query to find the IP address.

In this situation, we would call the ISP's DNS server a DNS recursor whose responsibility is to find the proper IP address of the intended domain name by asking other DNS servers on the internet for an answer.

4.The browser initiates a TCP connection with the server

Once the browser receives the correct IP address, it will build a connection with the server that matches the IP address to transfer information. Browsers use internet protocols to build such connections. To transfer data packets between your computer (client) and the server, it is important to have a TCP connection established.

5.The browser sends an HTTP request to the webserver

Once the TCP connection is established, it is time to start transferring data. The browser will send a GET request asking [www.w3schools.com](http://www.w3schools.com) web page.

6.The server handles the request and sends back a response

The server contains a webserver that receives the request from the browser and passes it to a request handler to read and generate a response. Then it will assemble a response in a particular format.

7.The server sends out an HTTP response

The server response contains the web page you requested as well as the status code, compression type, how to cache the page, any cookies to set, privacy information.

8.The browser displays the HTML content

The browser displays the HTML content in phases. First, it will render the bare bone HTML skeleton. Then it will check the HTML tags and send out GET requests for additional elements on the web page, such as images, CSS stylesheets, JavaScript files. These static files are cached by the browser, so it doesn't have to fetch them again the next time you visit the page. In the end, you'll see [www.w3schools.com](http://www.w3schools.com) appearing on your browser.

