

# Investigation a Website on a Browser

There are four steps in which a website is loaded:

1. The request of a website
2. The website and all the data included are requested and downloaded
3. The browser built the website by using resources such as HTML, CSS, and JS
4. The website is created

I requested a webpage by typing the URL into the google chrome browser: <https://linkin.bio/curiositycanada> (A travel blog for Canada). Basically, a document has been requested; however, it is usually a HTML document, which is located at a web server. Through using the HTTPS (HyperText Transfer Protocol Secure) the communication between the web browser and web server is encrypted and secure. This is to prevent an unauthorized third party from eavesdropping on communications by reading the network traffic.

After the google chrome have requested the webpage to the web server, the web server deliver an HTML file. The next step is parsing, when the browser read the file and search for further resources for example CSS and JS. If those examples are included, the browser request separately for those files. Because of that, the loading time depends how many resources the browser must request for downloading the webpage. The curiositycanada webpage only include CSS (layout of the webpage), thus, it didn't take so much time to downloading it.

Following the downloading, the browser begins with building the webpage by combining the downloaded files. For the building the browser uses the instruction of the "Document Object Folder" (DOM). The DOM include the HTML file and describe building instruction. The browser needs another folder for building the webpage, namely, "Cascading Style Sheets Object Map" (CSSOM). This folder includes the CSS file which google chrome needs to build the curiositycanada webpage.

The final step of building the webpage is that the browser combines the DOM and CSSOM, which is called "render tree" and is responsible for the painting of the webpage. On this sequence the browser knows what should be displayed (DOM), how it should be displayed (CSSOM) and how to paint it by using the combination of DOM and CSSOM (render tree). The browser needs to understand how big the screen should be as well as the size and position of the elements. Google Chrome calculate the positions of the elements by using all the knowledge of the webpage and transform the files to the curiositycanada webpage. In this period the webpage should be fully functional. If there are one error, it will destroy the full webpage or produce many problems (WPjournalist, 2019; Curiosity Canada, 2022).

I have learnt that it is very important which resources should be used for the performance and the speed of loading the page. Nowadays, the organisation and the webpage speed decisive of the success of a webpage. Moreover, understanding the content of a web page's function on a browser and how everything is built makes it easier to modify the web page.

## References

Curiosity Canada (2022) Curiosity Canada. Available from: <https://linkin.bio/curiositycanada>

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