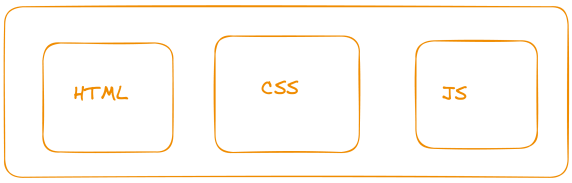
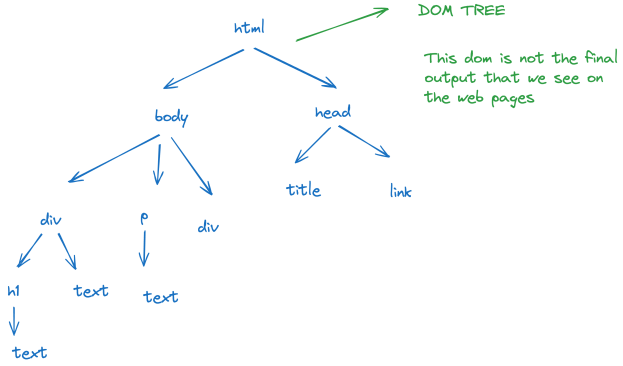
 → HTML Elements

This tag we write in our code.



BROWSER - CRP (critical rendering path)

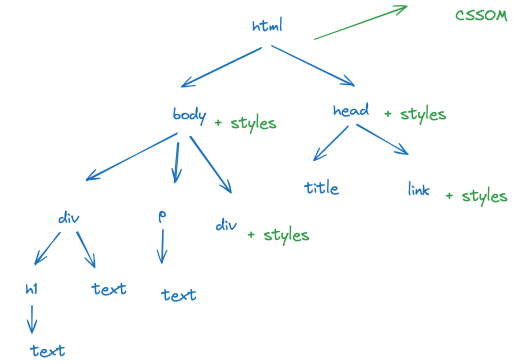
1. Parse HTML
To parse the HTML, browser first of all tokenizes our HTML.
Browser creates html elements with these tokens and then connect them in a tree like structure.

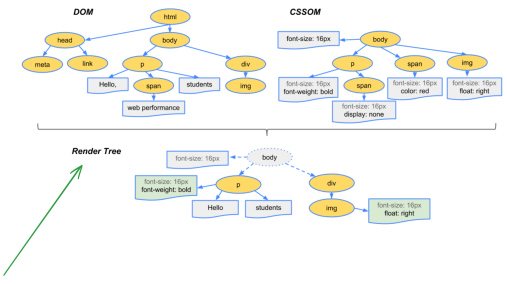


2. CSS Parsing
-> Browser parses CSS in a similar fashion, tokenize it and create a tree like structure called as CSSOM

Browser executes an internal algorithm called as SELECTOR MATCHING.

SELECTOR MATCHING decides the final set of styles which will be applied to any element





Final tree created by combination of DOM and CSSOM

Render tree only contains those HTML elements / nodes which are finally going to be rendered.

4. Layout (Reflow stage)

Browser uses the render tree and then starts calculating measurements and actual final position on the page where the elements need to come.

5. Painting step

Composting -> it is a technique to separate parts of a page into layers, paint them separately, and composite as a page in separate thread (compositor thread).