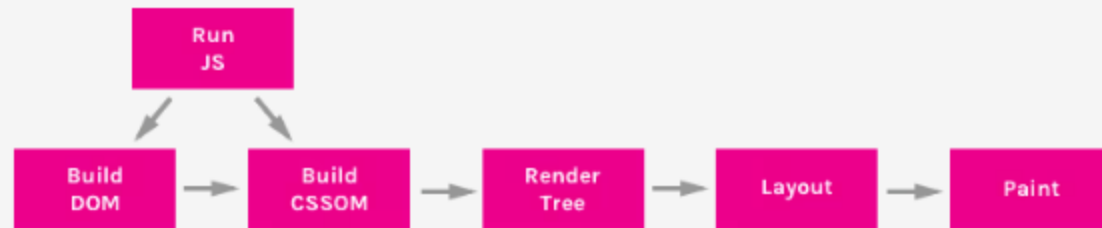


Understanding the Critical Rendering Path

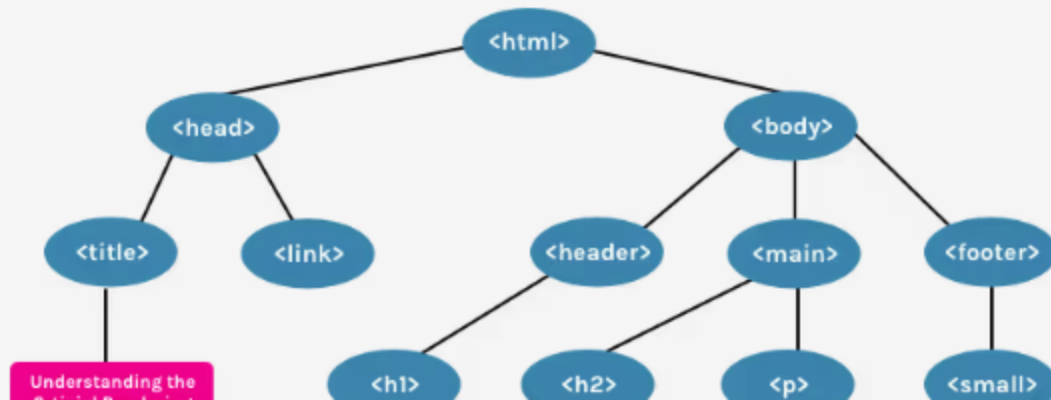
Minha Sohn

A Sequence of Critical Rendering Path (CRP)

1. Constructing the DOM Tree
2. Constructing the CSSOM Tree
3. Running JavaScript
4. Creating the Render Tree
5. Generating the Layout
6. Painting



```
<html>
<head>
  <title>Understanding the Critical Rendering Path</title>
  <link rel="stylesheet" href="style.css">
</head>
<body>
  <header>
    <h1>Understanding the Critical Rendering Path</h1>
  </header>
  <main>
    <h2>Introduction</h2>
    <p>Lorem ipsum dolor sit amet</p>
  </main>
  <footer>
    <small>Copyright 2017</small>
  </footer>
</body>
</html>
```



Constructing the CSSOM Tree

Render blocking resource

- Render Tree cannot be constructed without fully parsed CSS resources.

Script blocking

- JavaScript files must wait until the CSSOM has been constructed.

`<link rel="stylesheet">` tag

Running JavaScript

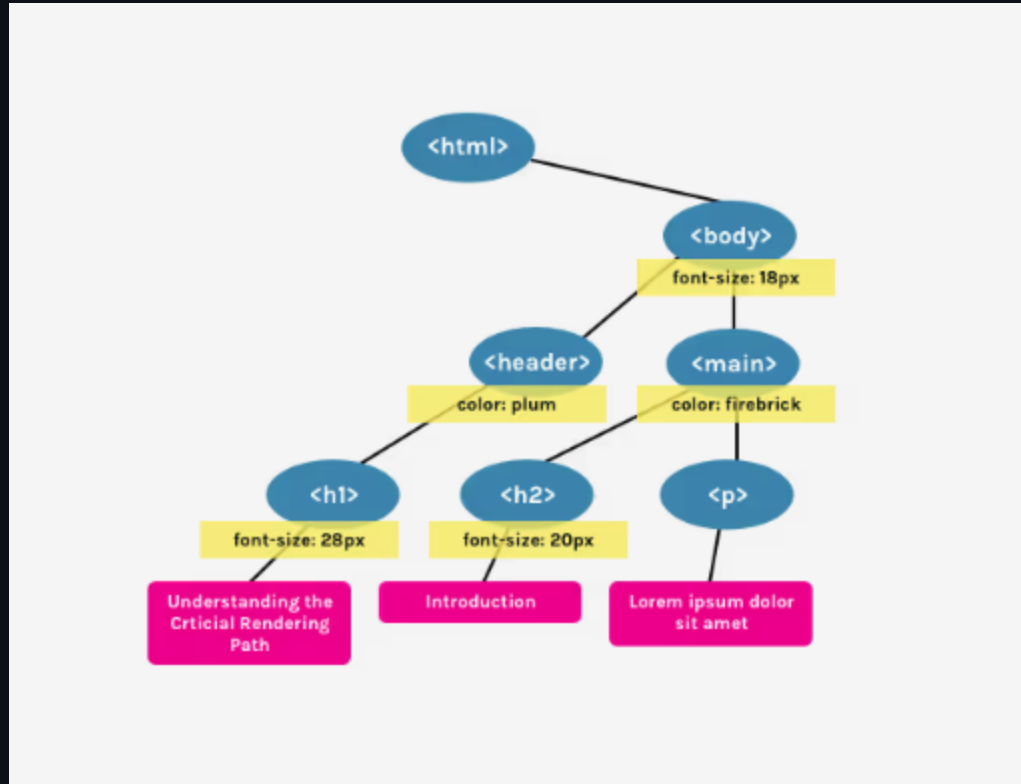
parser blocking resource

- parsing of the HTML document itself is blocked by JavaScript.

`<script>` tag

Creating the Render Tree

- A combination of both the DOM and CSSOM.
- A tree that represents what will be rendered on the page.



Generating the Layout and Painting

- Determines what the size of the viewport.

```
<meta name="viewport" content="width=device-width,initial-scale=1">
```

- If no tag is provided, the default viewport is 980px.
- In the painting step, the visible content of the page can be converted to **pixels** to be displayed on the screen.