Web Performance

Stuff

- Node
- Yarn (optional)
- Ngrok
- `git clone https://github.com/fvictorio/web-performance`

Critical Rendering Path (CRP)

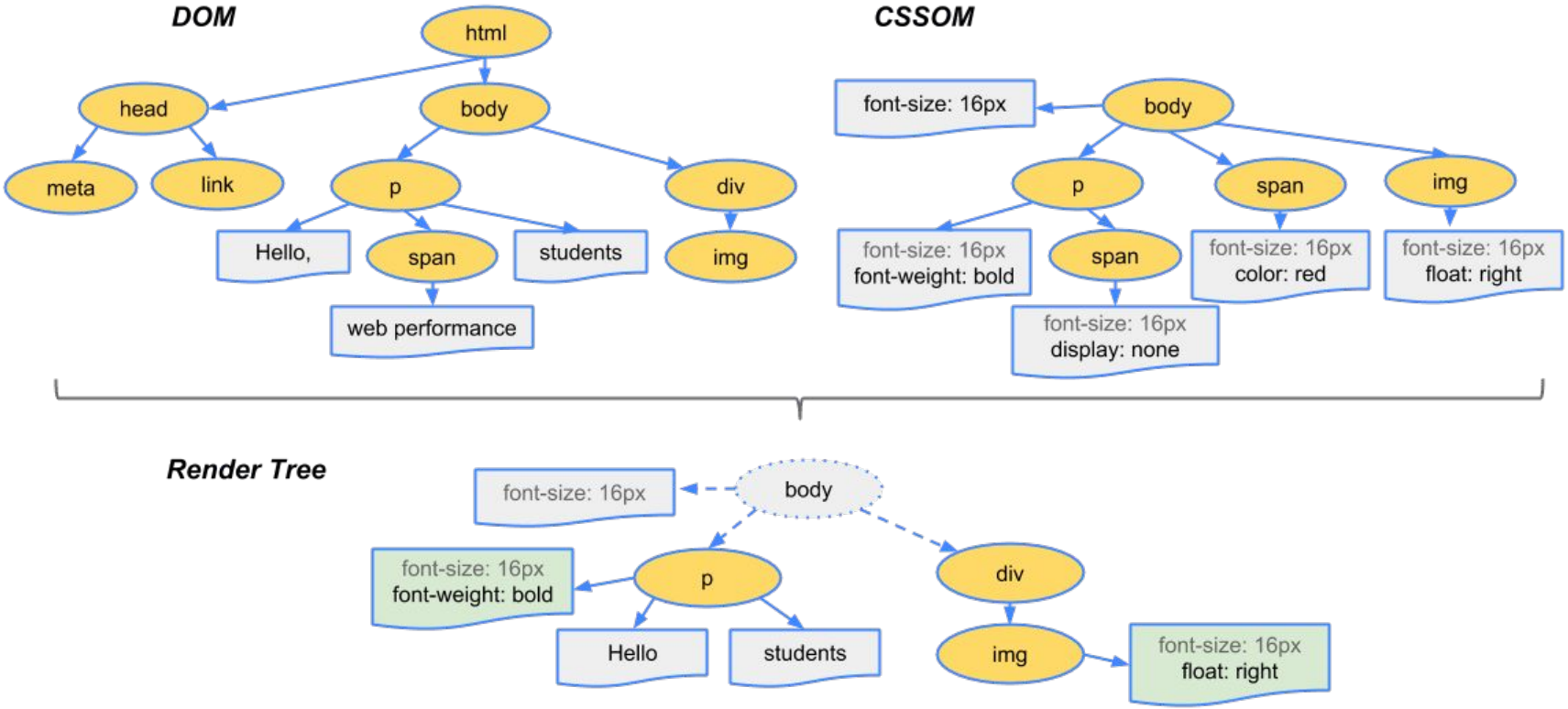
“a series of events that occur to make your webpage appear on a browser” (source)

Critical Rendering Path (CRP)

Steps (without JavaScript):

- HTML -> DOM
- CSS -> CSSOM
- DOM + CSSOM -> Render Tree
- Layout (position and size)
- Paint (render)

Critical Rendering Path (CRP)



DevTools: Performance tab

- Create a “Dev” profile (without extensions)
- Go to performance tab, disable Memory, enable Advanced paint instrumentation

Compression & Minification

Size reduction of JQuery using compression and/or minification

	jquery.js	jquery.min.js	**Saving**
Without compression	262 KB	84.9 KB	**32.4%**
With compression	78 KB	29.8 KB	**38.2%**
Saving	**29.7%**	**35.1%**	**11%**

HTTP Cache

- No cache (maxAge: 0)
- Cache (maxAge: ‘1d’)
- ETags (maxAge: ‘5s’, throttle network)

Image optimization

- Hover on Elements pane to see actual and natural size
- User `<picture>` element

Web Font Optimization

Some tips

- Subset large fonts (for example, just latin codepoints)
- Reduce the number of stylistic variants
- **Font requests are delayed until the render tree is constructed**. Use the Font Loading API or inline the font.

Resources

Learn

- Google Web Fundamentals: Performance
- Udacity: Website Performance Optimization

Tools

- PageSpeed Insigts
- Lighthouse
- WebPageTest