

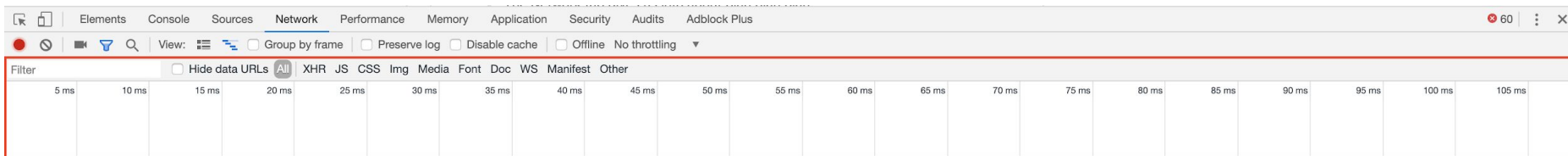
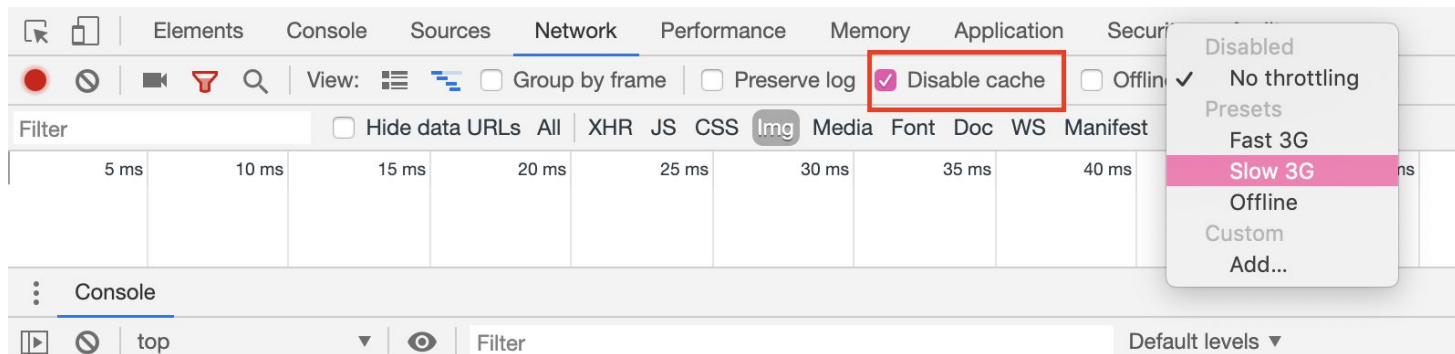
Web Performance (PWA)

The Coding Bootcamp

Class Objectives

- Articulate the meaning of web performance and how it effects their users.
- Explain how assets like JavaScript files and images impact the performance of a web page.
- Use Lighthouse to audit a sites various performance metrics.
- Use minification to lower JS file sizes.
- Use the compression npm package to enable gzip compression in their applications
- Use online image compression to compress image files while retaining image quality.
- Explain and implement lazy loading into their applications so images are only loaded as needed.

Welcome/Intro Web Performance



Demo Lighthouse



Audits

Identify and fix common problems that affect your site's



Device

☒ Mobile

☐ Desktop



Audits

☒ Performance

☒ Progressive Web App

☒ Best practices

☒ Accessibility

☒ SEO



Throttling

☒ Simulated Fast 3G, 4x CPU Slowdown

☐ Applied Fast 3G, 4x CPU Slowdown

☐ No throttling

☒ Clear storage

Run audits

Performance



Metrics

First Contentful Paint

2.2 s ✓

Speed Index

4.1 s ⓘ

Time to Interactive

10.4 s ⚠

[View Trace](#)

First Meaningful Paint measures when the primary content of a page is visible. [Learn more.](#)

First Meaningful Paint

3.5 s ⓘ

First CPU Idle

9.1 s ⚠

Estimated Input Latency

450 ms ⚠

Values are estimated and may vary.

Student Do: Lighthouse Audit (10 mins)

Lighthouse Audits

In this activity you will use Google Lighthouse to audit your second group project to find out performance metrics.

Instructions

- * We are going to utilize your second group project for these coming activities to check its performance metrics.
- * Navigate to the deployed URL of your project.
- * Open the Chrome Dev Tools **and** click the `Audits` tab.
- * Scroll down **and** click `Run Audits` **and** allow Lighthouse to run.
 - * Read through the provided report **and** be prepared to talk about the `Opportunities` portion of your audit!

JS Minification

 Pretty-print this minified file? [more...](#) 

```
1 /*
2  MIT License (c) copyright 2011-2013 original author or authors w/
3  window, bwt||window, bwt=18,function(r,0){function j(a){function d(a,t
4  a[d]||"data-node-uid")&&delete fa[d]}function l(a){try{return true"}
5  function(b){if(!bly||bly[66:bly[ly]]){var d=b.cloneNode(!0);f.$66f.close
6  a.length;for(var b=0;b<a.length;b++){this[b]=a[b]}}function Pia(){return"s
7  B=a,V=0,document,z=V.documentElement,y="parentNode",D=null,q="/checked"
8  x="/checked|selected"/,vn/msie/l.test(navigator.userAgent),fa(),V=0,Ja
9  "MsTransform","OTransform","msTransform","Transform",k;for(k=0;k<f.ter
10 b){var c=0;try{c=a.filters["DXImageTransform.Microsoft.Alpha"].opacity
11 this[0]:[]},last:function(){return A(this.length?this[this.length-1]:[]
12 X(b.className+" "+c)}}},removeClass:function(a){return this.each(function
13 function(a){b.appendChild(a)}}}),prepend:function(a){return this.each(f
14 b[a];return b[8]},function(a){return a}),before:function(a){return this
15 return this.each(function(b){b.parentNode.replaceChild(A.create(a)[0],b)
16 return this.each(function(a,b,c){for(var d in ele.hasOwnProperty(d)[66:c]
17 "px");null!=b66(c.style.top=0-f.top+b[1]+px)});if(!this[0])return[top:
18 var c=a.offsetLeft,a=a.offsetHeight;b66this.first().css(b);return[heigh
19 removeAttr:function(a){return this.each(function(b){x.test(a)?b[a]=!1:b.
20 empty:function(){return this.each(function(a){for(b=a.childNodes,g;g=a.f
21 A.augmentFunction(a,b){for(var c in a)a.hasOwnProperty(c)[66:(b)[C.prototype
22 a66a.nodeName66]==a.nodeType?a.cloneNode(!0)}:[]};A.doc=function(){var
23 function(a,b){return !6==a.compareDocumentPosition(b)[66];}a66"undefine
24 a[c];return b}function g(a){for(var b=0,c=a.length,c=1;b<c;b++)e[b]=a[b
25 this.attributes,null;Object.prototype.hasOwnProperty.call(n,C)[66:n(C).na
26 e(c)+"17c\\s+($)"}};case "=":return b.match(X.q("[^"]+"))?X.s1:"="+c,8a
27 "x");f=0;for(qm.length;f<q;f++)if(!k.apply(m[f],a))e[a.length]=1;if(!C
28 b[b.length]=a[c];return b}function l(a){return"object"==typeof a66isFir
29 if(!r.MooTools&&b66c[3])return g(dly[c[3]])return m[a,g]}function q(
30 ""+"/",f,fa=1,xtr,sourcef,wd,f7f,fa66=0,fz,fz55613wd1,3555561355
```

 Line 1, Column 1 

Questions?
