General Questions

* **When building a new website or maintaining one, can you explain some techniques you have used to increase performance?** 
  + Reduce image size & combine images into CSS sprites to reduce roundtrips
  + Use a CDN that uses distributed server to deliver website & other web content depending on user’s location, & website content
  + Cache as much as possible to reduce load time
  + Reduce the number of HTTP request also use something like graphQL
  + Load javascript asynchronously, async loading can speed up page loads
  + Adopt cloud-based website monitoring, advantages of offloading your website monitoring to a cloud based host is cost, scalability, efficiency, to name a few
* **Can you describe some SEO best practices or techniques you have used lately?** 
  + Have a unique domain name to create a brand
  + Use semantic markup to improve ranking, semantic markup helps tell search engine robots what your content is all about, thereby making it easier to them to index it, which results in improved search engine ranking.
  + Submit a XML sitemap to speed up indexing, sitemap speeds up search engine indexing but also informs google quickly about any changes on your site
  + Use Optimized Robots.txt, so engine robots don’t crawl specific areas of website
  + Making website responsive, google will up your if your website is responsive
  + Optimize images for better ranking, optimizing images helps reduce bounce rate
* **Can you explain any common techniques or recent issues solved in regards to front-end security?** 
  + Injection flaws, it happens when you pass unfiltered data from a SQL server to the browser which can allow attackers to inject commands to these entities resulting in loss of data & hijacking clients browsers
  + Cross site scripting, an attacker gives your web application javascript tags on input, when the input is returned to the user the users browser will execute it. To prevent don’t return HTML tags to the client
* **If you have 5 different stylesheet, how would you best integrate them into the site?** 
  + Use a CSS preprocessor to nest them with @import statements in class names for each stylesheet & merge them into a built file
  + In production, minify the built file with CSS minifier
* **Can you describe the different between progressive enhancement & graceful degradation?** 
  + Progressive enhancement, is a way to implement a webpage where basic features which are supported by most environments are implemented first & then progressively enhance them for advanced environments
  + Graceful degradation is the opposite, the advanced features are freely implemented at any time & additional works are done to support the environment where the features don’t work well
* **How would you optimize a website assets/resources?** 
  + Minimize CSS & javascript using minifier archive them using gzip, use separated file server using CDN
* **Name 3 ways to decrease page load perceived or actual load time?** 
  + Use minifier & gzip to decrease the page size - actual
  + Show spinner or progress bar - perceive
  + Preload the page before actually loading it using libraries like InstantClick - both actual & perceived
* **If you jumped on a project & they used tabs & you used space what would you do?**
  + I would use tabs because it’s the convention used for projects
  + Introduce a linter or other script to ensure indentations are consistent
  + Use a tool like EditorConfig to configure editors team members are using automatically
* **Explain the important of standards & standards bodies?**
  + Standards describe how a thing does & should work. It is extremely important especially in software because the thing can be used by many people for different preposes
  + Standards bodies, in the same manner do a key role to form a standards & are essential in everywhere including both software & hardware
* **What is Flash of Unstyled Content? How do you avoid FOUC?**
  + It is caused when content is loaded before styles are applied to the content. It happens when style tags are placed after other content or applied asynchronously for example by script
  + To avoid FOUC the style should be placed in order that they can be loaded & applied in the same rendering process as HTML elements do. The easiest way is to place the in the head & avoid applying styles by script at the first load
* **Explain what ARIA & screenreader are & how to make a website accessible?**
  + They are for accessibility, to make a website accessible we should try to follow the usage of HTML elements for example “h1” for header & “section” for sections.
* **What does CORS stand for & what issue does it address?**
  + CORS stands for cross-origin resource sharing, there could be situations where some resources should be allowed from sources having different origin.
  + CORS is a standard to enable cross-site HTTP request for

1. AJAX API call

2. Web fonts

3. WebGL textures

4. Image/video frames to a canvas using drawImage

5. Stylesheets

6. Scripts

* **Traditionally, why has it been better to serve site assets from multiple domains?**
  + Browsers usually have limits on the number of concurrent downloads from a domain at a moment. So, serving assets from multiple domains can increase the concurrent level
* **What’s the process from the time you type in a websites URL to it finishing loading on your screen?**
  + What generally happens when you type in url is

1. You enter URL into web browser

2. The browsers looks up the IP address from the domain name via DNS

3. The browser sends a HTTP request to the server

4. The server sends back a HTTP response

5. The browser begins rendering the HTML

6. The browser sends requests for additional objects embedded in HTML like images, CSS, JavaScript & repeats steps 3-5

7. Once the page is loaded, the browser sends further async request as needed

* **What are HTTP methods? List all HTTP methods that you know, and explain them?** 
  + POST, GET, PUT, PATCH & DELETE are the HTTP methods
* **What is domain prefetching & how does it help with performance?** 
  + Prefetching is performance optimization tactic in which content that might be accessed by the user is downloaded in advance, the browser caches this content in the background making it instantly available if the user clicks on a link that uses the content