Kai Allison   
It161  
Professor Sara   
11/25/2024  
Web Development Foundations   
  
**1) What are clients?**   
 Clients are the devices that request and render web content like browsers, mobile apps, screen readers and content aggregators.   
  
**2) When we type in a URL, the request does not typically go first to the web server. Where does it go?**  
The URL typically goes to a Domain Name Server (DNS). The DNS then translates the URL to an IP address which the browser then uses the IP address to locate the hosts server and sends request for the content.

**3) [True or False] In response to a web request, all required files are sent at the same time.**  
 True

**4) [Critical Thinking] Why is it important to understand DNS when helping a client change hosting companies?**  
It’s important to understand DNS when helping clients because not only do DNS caching take up to 24 hours hence why it’s recommended to change hosting companies over the weekend but if the site isn’t properly registered with a DNS no one can find it. On top of that, multi-name sites need to point to proper IP, and you need to be aware of who site ownership is assigned to make any changes.   
  
**5) What does the author mean when he says HTTP is a stateless protocol?**When he says HTTP is a stateless protocol, he means that once a request is sent and received it’s then discarded and forgotten by the browser and web server. This means that none of the requests is remembered and storing persistent data for browsing sessions must be handled through other means, i.e. JavaScript, cookies, etc.

**6) [Critical Thinking] What is the purpose of a subdomain?**  
The purpose of a subdomain is to allow servers to identify unique sites or unique areas of content. Since //www is a standard subdomain, the server typically looks in that area of root sites to find content.

**7) Which rendering engine is based on WebKit and used under the hood to develop Chrome?**  
Blink

**8) [Critical Thinking] Why are web standards important to web developers?**Web standards are important to web developers because not only does it ensure consistency across supporting browsers making user experience consistent. Plus, web standards continue to evolve with the times so keeping up with web standards can help to improve your web design.

**9) [Critical Thinking] What is the LAMP stack?**  
Lamp stack stands for Linux, Apache, MySQL, and PHP (Also known as Perl or Python) and is the most commonly used web stack on web servers because all the components are open source  
Linux = Operating system  
Apache = Web server  
MySQL = Database Server  
PHP = Programming Language

**10) [Critical Thinking] Why is it important to know what stack is being used by your host?**  
Because web stacks are groups of software that work in conjunction with each other to build and process web sites. Meaning if you create a site and the stack don’t work together the site wont work.

**11) [True or False] According to our author, front end design is commonly associated with the server.**  
False. Front end design refers to the user interface

**12) What are the three languages the author associates with front end design?**  
HTML, CSS, AND JAVASCRIPT

**13) [Critical Thinking] Why was HTML5 created?**  
HTML5 was created due to the number of developers and designers known as WHATWG who were unhappy with the direction XHTML but were recognized and adopted by the W3C and WHATWG & W3C worked together in creating HTML5

**14) [Critical Thinking] What does the <head> of an HTML document contain?**  
The <head> of an HTML file contains all the non-visual elements of a page that make the page look and operate the way you want it to. i.e Meta tags that might contain keywords/page descriptions.

**15) [Critical Thinking] What does the term cascade mean?**  
The term cascade refers to how the styles are applied to pages i.e External styles, Embedded styles, Inline styles. Based on the order of your cascading files, the styles can override each other when conflict arise

**16) What’s the benefit of using a separate file to store your CSS?**  
The benefit of using a separate file to store your CSS is being able to have the website on one file and the presentation separate and easy to find. If anything were to go wrong with the CSS file the website itself would not be affected operational wise.

**17) In CSS, what separates a property from a value?**  
The property and value in CSS is separated by semicolons ( Property: Value; )

**18) [Critical Thinking] What is the purpose of JavaScript?**  
JavaScript has many purposes such as allowing designers to create interactive elements, opening new windows or giving users feedback, and can update, sort, and present data directly in the browser at that moment meaning the website doesn’t have to be refreshed for the changes to appear i.e photo gallery’s on a website

**19) Which 2 types of graphics support transparencies?**  
PNG & GIFs support transparencies

**20) Which type of image scales without any loss in quality?**SVG files