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Advanced CSS: Layout

1. Describe the differences between relative and absolute positioning.

Relative positioning is based off the position of the HTML element in the normal flow of the DOM; this is the default. Absolute positioning is based off the viewport unless there is a different positioning context given. So this would go against normal flow.

2. What is normal flow in the context of CSS?

A CSS stylesheet will be rendered top to bottom. With that being said, if a class, id, element, etc. was given two statements that contradicted one another, the later would be actually rendered in the viewport. For example:

```
p { color: white; }
```

```
p { color: blue; }
```

The last statement would be the color that is rendered in the viewport

3. Describe how block- level elements are different from inline elements. Be sure to describe the two different types of inline elements.

Block level elements always start on a new line and take up the full width available, as in it stretches as far right and left as it can go. Inline elements do not start on a new line and take up the space that is only necessary. Inline block is like inline where it will let other elements sit at its right and left, but it respects height and width like block but unlike inline.

4. In CSS, what does floating an element do? How do you float an element?

If the element is floated to the left the element 'floats' on the inside left of its parent element. Elements can also float right. Pretty much it allows other elements next to it on the same line. A good example is if an image or a div floated left will allow text to wrap around it.

Example:

```
img {float: left;}
```

5. In CSS positioning, the concept of a positioning context is important. What is it and how does it affect positioning? Provide an example of how positioning context might affect the positioning of an element.

Positioning context is where a parent element is given a relative position and the child element is given an absolute position. By default the child element's positioning should be off the viewport now that it's position is absolute, but since it's parent's position is relative the child's position context is off of the parent element. This is obviously very handy when one would want to position an element off the parent. It also makes it much easier to find a position for all elements.

6. Briefly describe the two ways to construct multi column layouts in CSS.

One way would be to have three divs with widths set to one third the size of the viewport or parent wrapper and then to float them all left. Another would be to position them off of their parent element with their position context absolute from the parent. The former column layout technique would work much better and also provide modularity.

7. Write the CSS and HTML to create a two- column layout using positioning and floating.

HTML:

```
<div class="wrapper">

    <div id="col1">column 1</div>

    <div id="col2">column 2</div>

</div>
```

CSS:

```
#col1 {

    float: left;

}

#col2 {

    float: left;

}
```

You wouldn't really need positioning to have two columns. You could, but it would be much less modular.

8. Briefly describe the differences between fixed, liquid, and hybrid layout strategies.

Fixed layout is a web page that will not respond to different viewport sizes. The content stays fixed. This is frowned upon in today's web site loving world. Liquid layout is exactly the opposite, the content moves in every different viewport size. Hybrid layout is a hybrid of fixed and fluid layout. Usually only certain elements will be fluid and others will be fixed until a certain viewport size is achieved then they will all change.

9. What is responsive design? Why is it important?

Responsive design is a guideline for making a website responsive to different viewport sizes. As the viewport shrinks or expands the web page will change along with it without compromising content and usability. It is super important because no device has the same screen size. The web site has to relay the same information on multiple platforms. The main goal is to have the user have the same experience on their desktop as they would their phone.

10. What are the advantages and disadvantages of using a CSS framework.

The advantage is you can have a decent looking website that is responsive up and running really, really fast. The downside is everybody used them, so the design is very played out and old. Other times frameworks will be hard to work with because they will not let a web developer change certain things.

11. Explain the role of CSS preprocessors in the web development workflow.

All preprocessors are ways to organized and reduce CSS code for large scale applications. They also come with a boatload of functionality that save time when trying to program.