ZoomRx - Pre-induction

CSS

Wherever possible, provide examples

1. In how many ways can a CSS be integrated as a web page and tell the order in which the style will be added?

There are three ways how CSS can be applied to a web page. They are

- Inline styling
- Internal styling
- External styling
  - ➔ Inline styling has more specificity than any other styling and in internal-external styling, if the specificity is equal, the style which is declared last will be applied to the particular element.
  - ➔ Also the style applied to an element will be applied to its child elements too. These styling rules are called "Cascading in CSS".

2. What is a CSS selector?

CSS selector is used to select the elements that we want to style.

It is primarily divided into 5 categories:

- Simple selectors - selects elements by the tag name, class name, id name
  - **h1**{ color:red};
  - **.class** {color:blue};
  - **#id** { color : yellow};
- Combinator selectors - select elements based on the relationship between two or more selectors
  - **div>p**{ font-size: 20px};
  - **div .class>h1**{ font-size: 30px};
- Pseudo-class selectors - select elements based on its state
  - **a:hover** {text-decoration:none};
  - **a:visited** {color:green};
- Pseudo-class selectors - select part of an element
  - **div::before** {content : "$"};
  - **div::selection** {background-color: red};
- Attribute selectors - select elements based on the attributes and attribute values
  - **input[type="text"]**{ width: 100px};
  - **a[target]**{color:blue};

3. What is the CSS Box Model and what are its elements?

The CSS Box Model is just a box that wraps around each element. It consists of

- Content-area - space where the content of the element is placed

- Padding - space between content and the border of the element
- Border - space around the padding of the element
- Margin - clears the space around the element

4. What are pseudo classes and what are they used for?

Pseudo-classes define the state of an HTML element. They are used as selectors for the elements in certain states. Some of its examples are

- a:link - unvisited link
- a:visited -visited link
- a:hover - when hovered on an element
- a:active - active link
- li:nth-child() - nth child
- li:first-child - first child
- li:last-child - last child

5. What is the use of the "important" keyword?

We use "important" keyword in CSS to override the styles no matter how strong the specificity is.

```
p{
  background-color: red;
}
div *{
   background-color: blue;
}
```

In the above example, if we want the paragraph to have the background-color red no matter where it resides, we can use !important keyword. Or else the background-color will be overridden by the style of selector **"div *"** which has higher specificity.

```
p{
  background-color: red !important;
}
```

6. Define the float property of CSS?

The CSS float property specifies where the element should float overriding the default flow of HTML. The property has values like

- float :none - default position
- float :left - floats to the left
- float :right -floats to the right
- clear : left/right/both - the element next to the float element will flow around and hence clear property will fix this.

7. Difference between display none and visibility hidden?

- display :none will hide the element completely leaving no space like the element doesn't exist.
- visibility :hidden will hide the element leaving the space that element would occupy.

8. What are position properties in CSS?

Position property is used to position the element overriding the default document flow along with the properties like left, right, top and bottom. The values of position property are

- static - default positioning according to the document flow
- relative - relative to the element's normal position
- absolute - relative to the element's first non-static ancestor element(body is relative by default)
- fixed - relative to the browser window
- sticky - the element sticks to the given position till the parent element leaves the screen

9. How did the Z index function do?

- Z-index property specifies the stack order number. The element with greater stack order number will be on top of the element of lower stack order.
- Z-index works only for positioned elements(relative, absolute, fixed, sticky) and also for flex items.
- If two elements are given the same z-index value, then the element which is placed last in the HTML code will be at the top.

10. List out the CSS measurement unit?

- 1px - one device pixel (dot) of the display
- em - relative to the font size of the element
- ch - relative to the width of the '0'
- vw - relative to 1% of the width of the viewport
- vh - relative to 1% of the height of the viewport
- rem - relative to the font size of the root element
- % - relative to the parent element
- vmin - relative to 1% of the viewport dimensions(vw or vh, whichever is smaller)
- vmax - relative to 1% of the viewport dimensions(vw or vh, whichever is larger)

11. What is CSS specificity?

- CSS specificity is the algorithm used by the browsers to determine which style to be applied when there is more than one CSS declaration for an element.
- Each selector has a specificity weight as defined by the CSS. The order is as follows:
    - Inline styles
    - ID selectors
    - Classes, Pseudo-classes, Attribute selectors
    - Elements, Pseudo-elements

Specificity calculation:
Let each level in the order has the specificity weight as 1000,100,10,1 respectively. The following three selectors point to the same element.

div>p.class{ } - 1+1+10 =12
#id{ } - 10
.class #id{ } - 10 + 100 = 110

Hence , the selector **".class #id"** has more specificity than the others and the styles defined inside its declaration is only applied.

12. Differentiate between inline and block elements?

Inline elements	Block elements
Inline elements are aligned horizontally and it just takes the width of the content.	Block elements are aligned vertically and it takes the whole width of the parent element by default.
The next inline element doesn't start in a new line.	The next block element starts in a new line.
Width and height cannot be specified to the inline elements.	Width and height can be specified to the block elements.

13. How is the concept of inheritance applied in CSS?

- In CSS, the child parent will naturally inherit some of the properties from the parent element. This is called "CSS Inheritance".
- The css properties which are inherited by default are font-* properties and color property.
- Other properties can also be inherited from the parent by using the property value - inherit.

```
#parent{
  padding: 20px;
}

#child{
  padding: inherit;
}
```

14. How could you apply css rules specific to a media?

We can apply css rules specific to media by using media queries. We can specify which style to be applied to which screen thus making a responsive layout.

```
@ media only screen and (max-width:768px){
   .class{
     color:red;
   }
}
```

15. What do you know about the transition?

- CSS transition is used to change the property values smoothly over a time duration.
- transition is a shorthand for the following properties:
    - transition-property - the property for which the transition effect should be applied(width,height,transform etc)
    - transition-duration - duration of the transition
    - transition-delay - delay for the transition
    - transition-timing -function - specifies the speed-curve of transition