CSS

Interview Questions & Answers

1. **What is CSS?**

   o CSS stands for Cascading Style Sheets and is used to style and layout web pages.

2. **What are the different types of CSS?**

   o Inline, Internal, and External.

3. **What is the difference between padding and margin?**

   o Padding is the space inside an element, between the content and the border; margin is the space outside an element, between it and other elements.

4. **What is the box model in CSS?**

   o The box model includes margins, borders, padding, and the actual content area, defining the space an element takes up.

5. **How can you center a div vertically and horizontally?**

   o display: flex; align-items: center; justify-content: center; is one way, or margin: auto; for certain use cases.

6. **Explain the difference between inline, block, and inline-block elements.**

   o inline doesn't start on a new line; block starts on a new line and takes up full width; inline-block acts like inline but respects width/height.

7. **What is specificity in CSS?**

   o Specificity is the order in which styles are applied, based on selector types.

8. **What are pseudo-classes?**

   o Pseudo-classes are keywords added to selectors that specify a special state of the selected elements, e.g., :hover.

9. **What is the difference between position: relative and position: absolute?**

   o relative positions the element based on its normal flow; absolute positions it relative to its closest positioned ancestor.

10. **What is the z-index property?**

- z-index controls the stacking order of elements that overlap each other.

11. How does CSS inheritance work?

- Certain CSS properties are inherited from parent to child elements (e.g., color and font-family).

12. What is a CSS reset?

- A CSS reset removes browser-specific styles to create a consistent base.

13. What is Flexbox?

- Flexbox is a CSS layout model designed for flexible and responsive layouts.

14. What is Grid in CSS?

- CSS Grid is a layout system for creating complex layouts on a grid basis.

15. Explain @media queries.

- @media queries allow CSS to apply styles based on device characteristics like width.

16. What are CSS variables?

- CSS variables are custom properties for reusing values, declared with --name syntax.

17. What is calc() in CSS?

- calc() performs calculations for dynamic CSS property values, like width: calc(100% - 50px);.

18. What is the difference between em and rem units?

- em is relative to the parent element's font size; rem is relative to the root font size.

19. Explain @font-face.

- @font-face allows custom fonts to be loaded on a webpage.

20. What are CSS animations?

- CSS animations allow element styles to change over time with keyframes.

21. What is a CSS preprocessor?

- A CSS preprocessor like SASS or LESS adds features to CSS, such as variables, nesting, and mixins.

22. Explain CSS Grid vs. Flexbox.

- Flexbox is ideal for 1D layouts; Grid is for 2D layouts with rows and columns.

23. What are pseudo-elements?

- Pseudo-elements style parts of an element, like ::before and ::after.

24. What is a combinator selector?

- Combinators select elements based on relationships, such as >, +, and ~.

25. What is !important in CSS?

- !important overrides all other specificity rules but should be used sparingly.

26. How do you make text responsive in CSS?

- Use units like vw, vh, or relative units like em or rem.

27. What is a CSS grid area?

- A CSS grid area is a rectangular section of the grid defined by grid lines.

28. Explain display: none vs visibility: hidden.

- display: none removes the element from the layout; visibility: hidden hides it but retains space.

29. What is a descendant selector?

- A selector that matches all elements that are descendants of a specified element (e.g., div p).

30. What are CSS counters?

- CSS counters are used for custom numbering, like auto-incrementing list items.

31. Explain overflow.

- Controls how content is handled when it overflows its box (e.g., hidden, scroll, auto).

32. What is white-space in CSS?

- white-space controls how whitespace inside an element is handled.

33. What is object-fit?

- object-fit specifies how content (e.g., images) should fit within a container.

34. Explain line-height.

- line-height controls the vertical spacing of lines of text.

35. What is the clip-path property?

- clip-path creates a clipping region to display only part of an element.

36. What are transitions in CSS?

- Transitions allow property changes to occur smoothly over a duration.

37. How do you use the min-width and max-width properties?

- min-width and max-width restrict the width of an element within specified limits.

38. Explain vh, vw, vmin, and vmax units.

- Viewport-based units, where vh is 1% of viewport height, etc.

39. What are CSS keyframes?

- Keyframes define specific points in an animation.

40. Explain overflow-x and overflow-y.

- Control overflow on individual horizontal (x) or vertical (y) axes.

41. What is the float property?

- o float allows elements to be taken out of normal flow and align left or right.

42. What is clear in CSS?

- o clear is used with float to control wrapping around floated elements.

43. What is a CSS sprite?

- o A single image that contains multiple smaller images for use in UI.

44. Explain CSS custom properties.

- o Custom properties are reusable variables in CSS (--property-name).

45. What is backface-visibility?

- o Controls whether the back face of an element is visible when rotated.

46. Explain CSS units like px, %, and pt.

- o px is pixels, % is relative to parent, and pt is point (often used in print).

47. What is aspect-ratio in CSS?

- o Controls the aspect ratio of an element's width to its height.

48. What does justify-content do?

- o Aligns items along the main axis in flex or grid layouts.

49. What is align-items in Flexbox?

- o Aligns items along the cross-axis in a flex container.

50. Explain filter in CSS.

- o filter applies visual effects like blur or brightness.

51. What is CSS specificity hierarchy?

- o Inline styles > IDs > Classes > Tags.

52. Explain CSS shorthand for properties.

      o Shorthand combines multiple properties, like margin: 10px 15px;.

53. What is column-gap in Grid?

      o Specifies the space between columns.

54. How does nth-child work?

      o Selects specific elements in a pattern based on index.

55. What is text-shadow?

      o Adds shadow effects to text.

56. How do you create rounded corners in CSS?

      o Use border-radius property.

57. What is the opacity property?

      o Sets the transparency level of an element.

58. Explain visibility vs opacity.

      o visibility hides elements; opacity makes them transparent but interactive.

59. What is word-break?

      o Controls word wrapping within an element.

60. What does float: left do?

      o Moves an element to the left and allows text or elements to wrap around it.

61. Explain transform property.

      o transform applies 2D or 3D transformations like rotate or scale.

62. What is CSS nesting?

      o Placing selectors within others (e.g., SASS syntax).

63. What are CSS frameworks?

      o Libraries for faster CSS development (e.g., Bootstrap).

64. Explain justify-items in Grid.

      o Aligns items along the inline (row) axis.

65. What is isolation in CSS?

- o Controls stacking context, useful in z-index issues.

66. What are @keyframes?

- o Defines the sequence for CSS animations.

67. What is the CSS :not() selector?

- It selects elements that do not match a certain selector (e.g., div:not(.exclude)).

68. What does @import do in CSS?

- @import is used to import other CSS files into a stylesheet.

69. What is the background-size property?

- It sets the size of the background image, like cover or contain.

70. Explain min-height and max-height.

- They set minimum and maximum height constraints on an element.

71. What does display: table do?

- It allows an element to behave like a <table>, useful for layouts.

72. What is the purpose of the backdrop-filter property?

- It applies graphical effects (like blur) to the area behind an element.

73. Explain CSS transitions vs animations.

- Transitions are simpler and need only two states; animations can have multiple keyframes.

74. What is a CSS polyfill?

- It's a workaround that allows you to use newer CSS features in older browsers.

75. How does transform-origin work?

- It sets the point around which a transform (like rotate) occurs.

76. What are ch and ex units in CSS?

- ch is the width of the 0 character, and ex is the height of x in the font.

77. **What is the user-select property?**

- It controls if users can select text in an element (e.g., none, text).

78. **How do you create a sticky header?**

- Use position: sticky; along with a top value to make it stick on scroll.

79. **What does the pointer-events property do?**

- It controls if an element can respond to pointer events like clicks.

80. **What is box-shadow in CSS?**

- It applies a shadow effect to an element's box.

81. **What is a linear gradient in CSS?**

- A smooth transition between two or more colors along a line.

82. **How does :first-of-type differ from :first-child?**

- :first-of-type selects the first element of its type, while :first-child selects the first child regardless of type.

83. **What is the resize property?**

- It allows or restricts the ability to resize an element, like a textarea.

84. **What is display: grid?**

- It enables the grid layout model, dividing the container into rows and columns.

85. **How does @supports work?**

- @supports is a feature query to apply styles only if the browser supports a feature.

86. **What is the difference between :nth-child and :nth-of-type?**

- :nth-child counts all children; :nth-of-type only counts elements of a specific type.

87. **What are the different background properties in CSS?**

- background-color, background-image, background-position, background-size, etc.

88. **What does writing-mode control?**

- It sets the text orientation (e.g., horizontal, vertical).

89. **What is will-change used for in CSS?**

- It hints to the browser about expected changes, helping with performance.

90. **How does the :focus pseudo-class work?**

- It applies styles when an element is focused, like on click or tab navigation.

91. **What is overflow-wrap?**

- It specifies if lines should break within words to prevent overflow.

92. **What is -webkit- prefix?**

- It's a vendor prefix for CSS properties specific to WebKit browsers like Chrome and Safari.

93. **How can you optimize CSS performance?**

- Use fewer complex selectors, reduce unnecessary reflows, use CSS shorthand, and limit the use of @import.

94. **What is mix-blend-mode?**

- It defines how an element's content blends with its background.

95. **Explain the CSS content property.**

- Used in pseudo-elements like ::before and ::after to insert content.

96. **What is CSS scroll-snap?**

- It allows smooth scrolling that "snaps" elements into place.

97. **What does filter: blur(); do?**

- Applies a blur effect to an element.

98. **Explain the :hover pseudo-class.**

- It applies styles when the user hovers over an element.

99. **What is float used for in CSS?**

- To wrap text around an element and align elements side-by-side.

100.   **How does display: flex help with layout?** - It provides a flexible
layout structure to align and distribute items within a container.