

HTML & CSS

1. What is responsive web design?

Responsive design is an approach to web page creation that makes use of flexible layouts, flexible images and cascading style sheet media queries. The goal of responsive design is to build web pages that detect the visitor's screen size and orientation and change the layout accordingly.

2. What is HTML?

HTML stands for HyperText Markup Language and it is the language of the internet. This standard text formatting language is used to create and display pages on the Internet. HTML documents include elements and tags that format it for proper display on pages.

3. If there isn't any text in between the HTML tags, what will happen?

If no text is present in between the tags, there would be nothing to format. As a result, nothing will show up on the screen. Some tags, such as those that don't have a closing tag, like the tag, don't need any text in between them.

4. What is the difference between HTML elements and tags?

HTML Tags are building blocks of HTML Page. HTML Elements are components that are used in HTML Page. HTML elements communicate to the browser to render text. When the elements are enclosed by brackets <>, they form HTML tags. For example, <h1>Heading 1</h1> is a HTML element but just <h1> is a starting tag and </h1> is a closing tag.

5. How to create a nested webpage in HTML?

The HTML iframe tag is used to display a nested webpage. In other words, it represents a webpage within a webpage. The HTML <iframe> tag defines an inline frame.

6. Is it possible to change the color of the bullet?

The color of the bullet is always the color of the first text of the list. So, if you want to change the color of the bullet, you must change the color of the text.

7. How many tags can be used to separate a section of texts?

Three tags are used to separate the texts.

-
 tag - Usually
 tag is used to separate the line of text. It breaks the current line and conveys the flow to the next line
- <p> tag - The <p> tag contains the text in the form of a new paragraph.
- <blockquote> tag - It is used to define a large quoted section. If you have a large quotation, then put the entire text within <blockquote>.....</blockquote> tag.
-

8. What are empty elements?

HTML elements with no content are called empty elements. For example:
, <hr> etc.

9. Does a <!DOCTYPE html> tag is a HTML tag?

No, the <!DOCTYPE html> declaration is not an HTML tag. There are many type of HTML e.g. HTML 4.01 Strict, HTML 4.01 Transitional, HTML 4.01 Frameset, XHTML 1.0 Strict, XHTML 1.0 Transitional etc. So, <!DOCTYPE html> is used to instruct the web browser about the HTML page.

10. Which type of video formats are supported by HTML5?

HTML 5 supports three types of video format:

- mp4

- WebM
- Ogg

11. What is the use of the required attribute in HTML5?

It forces a user to fill text on the text field or text area before submitting the form. It is used for form validation.

12. What are HTML Attributes?

Attributes are the properties that can be added to an HTML tag. These attributes change the way the tag behaves or is displayed. For example, a tag has an src attribute, which you use to add the source from which the image should be displayed.

13. Differentiate between an Ordered list and an Unordered list?

An unordered list uses tags and each element of the list is written between tags. The list items are displayed as bullets rather than numbers.

An ordered list uses tags and each element of the list is written between tags. The list items are displayed as numbers rather than bullet points.

14. How do you create links to different sections within the same HTML web page?

We use the <a> tag, along with referencing through the use of the # symbol, to create several links to different sections within the same web page.

15. What would happen if there is no text between the HTML tags?

There would be nothing to format if there is no text present between the tags. Therefore, nothing will appear on the screen.

Some tags, such as the tags without a closing tag like the tag, do not require any text between them.

16. What are the different types of headings in HTML?

There are six types of heading tags in HTML which are defined with the <h1> to <h6> tags. Each type of heading tag displays a different text size from another. <h1> is the largest heading tag and <h6> is the smallest.

17. What is the alt attribute in HTML?

The alt attribute is used for displaying a text in place of an image whenever the image cannot be loaded due to any technical issue.

18. How do you add CSS styling in HTML?

There are three ways to include the CSS with HTML:

- **Inline CSS:** It is used when less amount of styling is needed or in cases where only a single element has to be styled. To use inline styles add the style attribute in the relevant tag.
- **External Style Sheet:** This is used when the style is applied to many elements or HTML pages. Each page must link to the style sheet using the <link> tag:


```
<head>
  <link rel="stylesheet" type="text/css" href="mystyle.css" />
</head>
```
- **Internal Style Sheet:** It is used when a single HTML document has a unique style and several elements need to be styled to follow the format. Internal styles sheet is added in the head section of an HTML page, by using the <style> tag:


```
<head>
  <style type="text/css">
    hr {
```

```
        color: sienna;
    }
</style>
</head>
```

19. What hierarchy do the style sheets follow?

If a single selector includes three different style definitions, the definition that is closest to the actual tag takes precedence. Inline style takes priority over embedded style sheets, which takes priority over external style sheets.

20. How do you add JavaScript to an HTML webpage?

JavaScript is used for making HTML web pages more interactive, and user-friendly. It is a scripting language that allows us to interact with certain elements on the page, based on user input. As with CSS, there are three major ways of including JavaScript:

- **Inline:**

We can add JavaScript to your HTML elements directly whenever a certain event occurs. We can add the JavaScript code using attributes of the HTML tags that support it. Here is an example that shows an alert with a message when the user clicks on it:

```
<button onclick="alert('Click the Button!');">
Click!
</button>
```

- **Script block:**

We can define a script block anywhere on the HTML code, which will get executed as soon as the browser reaches that part of the document. This is why script blocks are usually added at the bottom of HTML documents.

```
<html>
<script>
var x = 1;
var y = 2;
var result = x + y;
alert("X + Y is equal to " + result);
</script>
</html>
```

- **External JavaScript file:**

We can also import the JavaScript code from a separate file and keep your HTML code clutter-free. This is especially useful if there is a large amount of scripting added to an HTML webpage.

```
<html>
<script src="my-script.js"></script>
</html>
```

21. What are void elements in HTML?

HTML elements which do not have closing tags or do not need to be closed are Void elements. For Example
, , <hr />, etc.

22. What is the 'class' attribute in HTML?

The class attribute is used to specify the class name for an HTML element. Multiple elements in HTML can have the same class value. Also, it is mainly used to associate the styles written in the stylesheet with the HTML elements.

23. What is the difference between the 'id' attribute and the 'class' attribute of HTML elements?

Multiple elements in HTML can have the same class value, whereas a value of id attribute of one element cannot be associated with another HTML element.

24. What are the various formatting tags in HTML?

HTML has various formatting tags:

- `` - makes text bold
- `<i>` - makes text italic
- `` - makes text italic but with added semantics importance
- `<big>` - increases the font size of the text by one unit
- `<small>` - decreases the font size of the text by one unit
- `<sub>` - makes the text a subscript
- `<sup>` - makes the text a superscript
- `` - displays as strike out text
- `` - marks the text as important

25. What is the significance of `<head>` and `<body>` tag in HTML?

`<head>` tag provides the information about the document. It should always be enclosed in the `<html>` tag. This tag contains the metadata about the webpage and the tags which are enclosed by head tag like `<link>`, `<meta>`, `<style>`, `<script>`, etc. are not displayed on the web page. Also, there can be only 1 `<head>` tag in the entire Html document and will always be before the `<body>` tag.

`<body>` tag defines the body of the HTML document. It should always be enclosed in the `<html>` tag. All the contents which needs to be displayed on the web page like images, text, audio, video, contents, using elements like `<p>`, ``, `<audio>`, `<heading>`, `<video>`, `<div>`, etc. will always be enclosed by the `<body>` tag. Also, there can be only 1 body element in an HTML document and will always be after the `<head>` tag.

26. How can we club two or more rows or columns into a single row or column in an HTML table?

HTML provides two table attributes “`rowspan`” and “`colspan`” to make a cell span to multiple rows and columns respectively.

27. Is it possible to change an inline element into a block level element?

Yes, it is possible using the “`display`” property with its value as “`block`”, to change the inline element into a block-level element.

28. What is the difference between “`display: none`” and “`visibility: hidden`”, when used as attributes to the HTML element?

When we use the attribute “`visibility: hidden`” for an HTML element then that element will be hidden from the webpage but still takes up space. Whereas, if we use the “`display: none`” attribute for an HTML element then the element will be hidden, and also it won't take up any space on the webpage.

29. Difference between link tag `<link>` and anchor tag `<a>`?

The anchor tag `<a>` is used to create a hyperlink to another webpage or to a certain part of the webpage and these links are clickable, whereas, link tag `<link>` defines a link between a document and an external resource and these are not clickable.

30. What are Semantic Elements?

Semantic elements are those which describe the particular meaning to the browser and the developer. Elements like `<form>`, `<table>`, `<article>`, `<figure>`, etc., are semantic elements.

31. How comments can be added in CSS?

We can add comments in CSS using `/*` and `*/`.

32. How to underline text in HTML?

To underline the text in HTML, we use the `<u>` tag.

33. How do you bold text in HTML?

The `` `` tag or `` `` tag are used to bold text in HTML.

34. What is an empty element?

An empty element is an HTML element that has no content. Example `
`.

35. How do you display a table in an HTML webpage?

The HTML `<table>` tag is used to display data in a tabular format. It is also used to manage the layout of the page, for example, header section, navigation bar, body content, footer section. Given below are the list of HTML tags used for displaying a table in an HTML webpage:

| Tag | Description |
|-------------------------------|---|
| <code><table></code> | It defines a table. |
| <code><tr></code> | It defines a row in a table. |
| <code><th></code> | It defines a header cell in a table. |
| <code><td></code> | It defines a cell in a table. |
| <code><caption></code> | It defines the table caption. |
| <code><colgroup></code> | It specifies a group of one or more columns in a table for formatting. |
| <code><col></code> | It is used with <code><colgroup></code> element to specify column properties for each column. |
| <code><tbody></code> | It is used to group the body content in a table. |
| <code><thead></code> | It is used to group the header content in a table. |
| <code><tfooter></code> | It is used to group the footer content in a table. |

36. Can a single text link point to two different web pages?

No. The `<a>` tag can accept only a single `href` attribute, and it can point to only a single web page.

37. Can several selectors with class names be grouped together?

You can define several selectors with the same style definition by separating them with commas. This same technique also works for selectors with class names.

38. What are Pseudo elements?

Pseudo-elements allows us to create items that do not normally exist in the document tree, for example `::after`.

- `::before`

- ::after
- ::first-letter
- ::first-line
- ::selection

In the below example, the color will appear only on the first line of the paragraph.

```
p::first-line {
    color: #ff0000;
    font-variant: small-caps;
}
```

39. What are Pseudo elements?

Pseudo-classes select regular elements but under certain conditions like when the user is hovering over the link.

- :link
- :visited
- :hover
- :active
- :focus

Example of the pseudo-class, In the below example, the color applies to the anchor tag when it's hovered.

```
/* mouse over link */
a:hover {
    color: #FF00FF;
}
```

40. What do you understand by the universal selector?

A universal selector is a selector that matches any element type's name instead of selecting elements of a particular type. The Universal Selector is the * in CSS, is used to select all items in an HTML file.

41. What is meant by RGB stream?

RGB represents colors in CSS. The three streams are namely Red, Green, and Blue. The intensity of colors is represented using numbers 0 to 256.

42. What was the purpose of developing CSS?

CSS was developed to define the visual appearances of websites. It allows developers to separate the structure and content of a website that was not possible before.

43. How can you target h3 and h2 with the same styling?

Multiple elements can be targeted by separating with a comma:

```
h2, h3 {color: red;}
```

44. How can you use CSS to control image repetition?

The background-repeat property is used to control the image. Example:

```
p {
    background-repeat: none;
}
```

45. Tell us about the property used for image scroll controlling?

The background-attachment property is used to set whether the background image is fixed or it scrolls with the rest of the page.

Example for a fixed background-image:

```
body {  
  background-image: url('url_of_image');  
  background-repeat: no-repeat;  
  background-attachment: fixed;  
}
```

46. What is the difference between inline, inline-block, and block?

- Block Elements are <div> and <p>. They usually start on a new line and can take space for an entire row or width.
- Inline elements are <a>, , , and tags. They don't start on a new line. However, they appear on the same line as the content and tags beside them.
- Inline block elements have padding and margins and set height and width values. Though, they are similar to inline elements.

47. Does margin-top or margin-bottom have an effect on inline elements?

No, margin-top or margin-bottom does not have an effect on the inline elements.

48. What is the purpose of opacity in CSS?

The opacity-level describes the transparency-level, where 1 is not transparent at all, 0.5 is 50% see-through, and 0 is completely transparent. Note: When using the opacity property to add transparency to the background of an element, all of its child elements become transparent as well.

49. What are the different ways to hide the element using CSS?

display: none, visibility: hidden, position: absolute

50. Why should we use float property in CSS?

The float property is used for positioning the HTML elements horizontally either towards the left or right of the container including text wrapping around it. All properties of elements used before it remain unchanged.

51. Define gradients in CSS.

A property of CSS that allows displaying smooth transformation between two or more specified colors. The types of gradients are linear and radial.

52. What are the position states in CSS?

The four-position states in CSS are relative, static, absolute, and fixed. The default position state is static.

53. What are the different types of Selectors in CSS?

A CSS selector is the part of a CSS ruleset that actually selects the content you want to style. Different types of selectors are listed below.

Universal Selector: The universal selector works like a wildcard character, selecting all elements on a page. In the given example, the provided styles will get applied to all the elements on the page.

```
* {  
  color: "green";  
  font-size: 20px;  
  line-height: 25px;  
}
```

Element Type Selector: This selector matches one or more HTML elements of the same name. In the given example, the provided styles will get applied to all the ul elements on the page.

```
ul {  
  line-style: none;
```

```
border: solid 1px #ccc;
}
```

ID Selector: This selector matches any HTML element that has an ID attribute with the same value as that of the selector. In the given example, the provided styles will get applied to all the elements having ID as a container on the page.

```
#container {
width: 960px;
margin: 0 auto;
}
```

```
<div id="container"></div>
```

Class Selector: The class selector also matches all elements on the page that have their class attribute set to the same value as the class. In the given example, the provided styles will get applied to all the elements having ID as the box on the page.

```
.box {
padding: 10px;
margin: 10px;
width: 240px;
}
```

```
<div class="box"></div>
```

Descendant Combinator: The descendant selector or, more accurately, the descendant combinator lets you combine two or more selectors so you can be more specific in your selection method.

```
#container .box {
float: left;
padding-bottom: 15px;
}
```

```
<div id="container">
  <div class="box"></div>

  <div class="box-2"></div>
</div>
```

```
<div class="box"></div>
```

This declaration block will apply to all elements that have a class of box that is inside an element with an ID of the container. It's worth noting that the .box element doesn't have to be an immediate child: there could be another element wrapping .box, and the styles would still apply.

Child Combinator: A selector that uses the child combinator is similar to a selector that uses a descendant combinator, except it only targets immediate child elements.

```
#container > .box {
float: left;
padding-bottom: 15px;
}
```

```
<div id="container">
  <div class="box"></div>

  <div>
    <div class="box"></div>
  </div>
```



```
</div>
```

The selector will match all elements that have a class of box and that are immediate children of the #container element. That means, unlike the descendant combinator, there can't be another element wrapping .box it has to be a direct child element.

General Sibling Combinator: A selector that uses a general sibling combinator to match elements based on sibling relationships. The selected elements are beside each other in the HTML.

```
h2 ~ p {  
    margin-bottom: 20px;  
}  
  
<h2>Title</h2>  
<p>Paragraph example.</p>  
<p>Paragraph example.</p>  
<p>Paragraph example.</p>  
<div class="box">  
    <p>Paragraph example.</p>  
</div>
```

In this example, all paragraph elements (<p>) will be styled with the specified rules, but only if they are siblings of <h2> elements. There could be other elements in between the <h2> and <p>, and the styles would still apply.

Adjacent Sibling Combinator: A selector that uses the adjacent sibling combinator uses the plus symbol (+), and is almost the same as the general sibling selector. The difference is that the targeted element must be an immediate sibling, not just a general sibling.

```
p + p {  
    text-indent: 1.Sem;  
    margin-bottom: 0;  
}  
  
<h2>Title</h2>  
<p>Paragraph example.</p>  
<p>Paragraph example.</p>  
<p>Paragraph example.</p>  
  
<div class="box">  
    <p>Paragraph example.</p>  
    <p>Paragraph example.</p>  
</div>
```

The above example will apply the specified styles only to paragraph elements that immediately follow other paragraph elements. This means the first paragraph element on a page would not receive these styles. Also, if another element appeared between two paragraphs, the second paragraph of the two wouldn't have the styles applied.

Attribute Selector: The attribute selector targets elements based on the presence and/or value of HTML attributes, and is declared using square brackets.

```
input [type="text"] {  
    background-color: #444;  
    width: 200px;  
}  
  
<input type="text">
```

- CSS Grid Layout is a two-dimensional system, meaning it can handle both columns and rows. Grid layout is intended for larger-scale layouts which aren't linear in design.
- Flexbox is largely a one-dimensional system (either in a column or a row). Flexbox layout is most appropriate to the components of an application
What does * { box-sizing: border-box; } do? What are its advantages?
- It makes every element in the document include the padding and border in the element's inner dimension for the height and width computation.
- In box-sizing: border-box, The height of an element is now calculated by the content's height + vertical padding + vertical border width.
- The width of an element is now calculated by the content's width + horizontal padding + horizontal border width

55. How does this property work overflow: hidden?

The overflow property in CSS is used for specifying whether the content has to be clipped or the scrollbars have to be added to the content area when the content size exceeds the specified container size where the content is enclosed. If the value of overflow is hidden, the content gets clipped post the size of the container thereby making the content invisible.

56. How will you align content inside the p tag at the exact center inside the div?

We can add the text-align: center property inside the parent div for aligning the contents horizontally. But it will not align the contents vertically. We can align the content vertically by making the parent element have relative positioning and the child element have absolute positioning. The child element should have the values of top, bottom, right, left as 0 to center it in the middle vertically. Then we need to set the margin as auto. It is assumed that both the child and mother elements will have height and width values. Consider we have a div element of height and width taking 20% of the screen size, and we have a paragraph element taking the height of 1.2em and width of 20%. If we want to align the paragraph element at the center (vertically and horizontally), we write the following styles:

```
div {
  position : relative; // Make position relative
  height : 20%;
  width : 20%;
  text-align : center; //Align to center horizontally
}
p {
  position : absolute; // Make position absolute
  top:0;           // Give values of top, bottom,left, right to 0
  bottom:0;
  left:0;
  right:0;
  margin : auto;   // Set margin as auto
  height : 1.2 em;
  width : 20%;
}
```

57. What is the advantage of collapsing white space?

In HTML, a blank sequence of whitespace characters is treated as a single space character, Because the browser collapses multiple spaces into a single space character and this helps a developer to indent lines of text without worrying about multiple spaces and maintain readability and understandability of HTML codes.

58. What is the difference between , tags and , <i> tags?

The effect on a normal webpage of the tags ``, `` and ``, `<i>` is the same. `` and `<i>` tags stands for bold and italic. These two tags only apply font styling and bold tag ``, just adds more ink to the text, these tags don't say anything about the text.

Whereas, `` and `` tags represent that the span of text is of strong importance or more importance and emphatic stress respectively than the rest of the text. These tags have semantic meaning.

59. What is the difference between padding and margin in HTML CSS?

In CSS, a margin is the space around an element's border, while padding is the space between an element's border and the element's content.

60. Which CSS property is used for defining the difference between two lines of the content?

The line-height CSS property sets the height of a line box. It's commonly used to set the distance between lines of text.

61. What is Grouping in CSS?

When more than one selector shares the same declaration, they may be grouped together via a comma-separated list; this allows you to reduce the size of the CSS (every bit and byte is important) and makes it more readable. The following snippet applies the same background to the first three heading elements.

```
h1, h2, h3 {background: red;}
```

62. How do active links differ from normal links?

Normal and active links have blue as their default color. Certain browsers are capable of detecting an active link when the mouse cursor hovers over that link. The other browsers detect the active link when the link has the focus. An active link is in the action of opening the resource that is being pointed to.

Normal link contains a pointer to another resource. Those links don't have a mouse cursor over it. A normal link becomes an active link when the user clicks on it.

63. How to align text in HTML?

HTML content is aligned on a page using the CSS text-align property. It sets the horizontal alignment of the content inside a block element or table-cell box. The text-align property works like vertical-align but in the horizontal direction. It works on text as well as on all other content inside the block element, such as images and buttons.

64. How to create multi-colored text on a web page?

We can use ` ` to create multi-colored text on a web page for the specific texts that you want to color.

65. What is the z-index in CSS?

The z-index helps specify the stack order of positioned elements that may overlap one another. The z-index default value is zero and can take on either a positive or negative number.

An element with a higher z-index is always stacked above than a lower index.

Z-Index can take the following values:

- Auto: Sets the stack order equal to its parents.
- Number: Orders the stack order.
- Initial: Sets this property to its default value (0).
- Inherit: Inherits this property from its parent element.

66. How do you control image repetition using CSS?

You can use the **background-repeat** property to control image. To control the repetition of an image in the background, use the background-repeat property. You can use no-repeat value for the background-repeat property if you do not want to repeat an image, in this case, the image will display only once.

67. What is the overflow property in CSS used for?

The overflow property specifies what should happen if content overflows an element's box. This property specifies whether to clip content or to add scrollbars when an element's content is too big to fit in a specified area. Below are the overflow options available in CSS –

- overflow: auto;
- overflow: none;
- overflow: scroll;
- overflow: visible;

68. What is the Use of Comments in HTML?

Comments are used in an HTML document to make important notes and help developers mention any modification to be incorporated afterward. They are not displayed in the browser when the code is executed. A comment is always written in between the ‘—’ symbol at the beginning and end of the angular brackets.

69. Why is the Embed Tag Used in HTML?

An Embed Tag is used for including a Video or Audio in an HTML Document. A source of audio or video file to be displayed on the webpage is defined within an Embed tag as:

<EMBED> Source </EMBED>.

70. How to insert an image in HTML?

 tag is used to add an image in a web page.

Images are not inserted into a web page basically they are linked to web pages. The tag helps to create a holding space for the referenced image.

The tag is normally empty, it has attributes only, and does not have a closing tag.

 tag has two required parameters:

- src – The path to the image
- alt – An alternate text for the image

71. How to set background image in HTML?

In order to add a background image on an HTML element you need to use two things:

1. the HTML style attribute and
2. the CSS background-image property:

<div style="background-image: url('img_boy.jpg');">

72. How to change font color using HTML tag?

 tag, is used to specify the text and color attribute is used to specify the color.

73. What is an image map?

Identified by the <map> tag, the image map can link an image to different web pages. It is one of the most asked questions in interviews these days.

74. Can you explain what a box element is in context of the box model?

A box element is a rectangular area on a page that is used to hold content. The box model defines the size, position, and other properties of box elements.

75. What are the main elements of the box model?

The main elements of the box model are the margin, border, padding, and content. The margin is the space outside of the border, and the border is the space between the margin and the padding. The padding is the space between the border and the content, and the content is the space inside of the padding.

76. What's the difference between margin, padding, and border in css?

The css box model refers to the design and layout of the boxes that make up the content of a web page. Margin is the space outside of the box, padding is the space inside the box, and border is the line around the box.

77. What do you understand about the display property?

The display property is used to control the visibility of an element. It can be used to hide elements from view, or to make them appear inline or as a block-level element.

78. Can you list the new input type attributes in HTML5?

| |
|---|
| tel - The input is of type telephone number |
| search - The input field is a search field |
| url - a URL |
| email - One or more email addresses |
| datetime - A date and/or time |
| date - A date |
| month - A month |
| week - A week |
| time - The input value is of type time |
| datetime - local A local date/time |
| number - A number. |
| range - A number in a given range. |
| color - A hexadecimal color, like #82345c |
| placeholder - Specifies a short hint that describes the expected value of an input field. |

79. What is the use of the <section> element within an HTML5 document?

The HTML <section> element represents a standalone section — which doesn't have a more specific semantic element to represent it — contained within an HTML document. Typically, but not always, sections have a heading.

```
<section>
```

```
<h1>Introduction</h1>
```

```
<p>People have been catching fish for food since before recorded history...</p>
```

```
</section>
```

As an example, a navigation menu should be wrapped in a <nav> element, but a list of search results and a map display and its controls don't have specific elements, and could be put inside a <section>.

80. Explain the uses of id attribute in HTML.

The id attribute is used to uniquely identify an HTML element on the page. Once an id has been specified using the id attribute, it can be referenced to using the value of the id. Using this, CSS styles can be applied to the particular element without affecting any other part of the HTML document. Similarly, JS code can be used to make changes to the Node of the element using the id only.

There are a few rules you must follow to have a valid document that uses the id attribute anywhere in the document:

- The ID must start with a letter (a-z or A-Z)

- All subsequent characters can be letters, numbers (0-9), hyphens (-), underscores (_), colons (:), and periods (.).
- Each ID must be unique within the document.