CSS & CSS3 ASSIGNMENT

Q1= What are the benefits of using CSS?

CSS handles the look and feel part of a web page. Using CSS, you can control the color of the text, the style of fonts, the spacing between paragraphs, how columns are sized and laid out, etc.

The following are the advantages of CSS −

> **CSS saves time** − You can write CSS once and then reuse the same sheet in multiple HTML pages. You can define a style for each HTML element and apply it to as many Web pages as you want.

> **Easy maintenance** − To make a global change, simply change the style, and all elements in all the web pages will be updated automatically.

> **Global web standards** − Now HTML attributes are being deprecated and it is being recommended to use CSS. So it's a good idea to start using CSS in all the HTML pages to make them compatible with future browsers.

> **Platform Independence** − The Script offer consistent platform independence and can support latest browsers as well.

Q2= What are the disadvantages of CSS?

- CSS, CSS 1 up to CSS3, result in creating of confusion among web browsers.
- With CSS, what works with one browser might not always work with another. The web developers need to test for compatibility, running the program across multiple browsers.
- There exists a scarcity of security.
- After making the changes we need to confirm the compatibility if they appear. The similar change affects on all the browsers.
- The programming language world is complicated for non-developers and beginners. Different levels of CSS i.e. CSS, CSS 2, CSS 3 are often quite confusing.

- Browser compatibility (some styles sheet are supported and some are not).
- CSS works differently on different browsers. IE and Opera supports CSS as different logic.
- There might be cross-browser issues while using CSS.
- There are multiple levels which creates confusion for non-developers and beginners.

Q3= What is the difference between CSS2 and CSS3?

S.No.	CSS 2	CSS 3
1	CSS is capable of positioning texts and objects.	On the other hand, CSS3 is capable of making the web page more attractive and takes less time to create. CSS3 is backward compatible with CSS.
2	Responsive designing is not supported in CSS	CSS3 is the latest version, hence it supports responsive design.
3	CSS cannot be split into modules.	Whereas CSS3 can be breakdown into modules.
4	Using CSS, we cannot build 3D animation and transformation.	But in CSS3 we can perform all kinds of animation and transformations as it supports animation and 3D transformations.
5	CSS is very slow as compared to CSS3	Whereas CSS3 is faster than CSS.
6	In CSS we have set of standard colors and it uses basic color schemes only.	Whereas CSS3 has a good collection of HSL RGBA, HSLA, and gradient colors.
7	In CSS we can only use single text blocks.	But in CSS3 we can use multi-column text blocks
8	CSS does not support media queries.	But CSS3 supports media queries
9	CSS codes are not supported by all types of modern browsers.	Being the latest version, CSS3 codes are supported by all modern browsers.

10	In CSS, designers have to manually develop rounded gradients and corners.	But CSS3 provides advanced codes for setting rounded gradients and corners
11	There is no special effect like shadowing text, text animation, etc. in CSS. The animation was coded in jQuery and JavaScript.	CSS3 has many advance features like text shadows, visual effects, and a wide range of font styles and colors.
12	In CSS, the user can add background colors to list items and lists, set images for the list items, etc.	Whereas CSS3 list has a special *display* property defined in it. Even list items also have counter reset properties.
13	CSS was developed in 1996.	CSS3 is the latest version of CSS and was released in 2005.
14	CSS is memory intensive.	CSS3 memory consumption is low as compared to CSS.

Q4= Name a few CSS style components

The components of CSS style are:

1)Selecter:HTML element name, id name, class name.

2)Property:It's like an attribute such as background color,font-size,position,text-align,color,border etc.

3)Values:which defines property or values allocate for properties.

Q5= What do you understand by CSS opacity?

The CSS opacity property is used to set the level of transparency of an element. Opacity is the opposite of transparency.

This property allows making an element fully transparent, half-transparent, or default.

0

The number ranges between 0 and 1. 0 makes the element fully transparent. 1 is the default value which makes the element fully opaque. A value between 0 and 1 gradually makes an element clear.

Q6= How can the background color of an element be changed?

You can change the background color of an HTML element using the background-color CSS property and giving it a value of a color.

Syntax: Selector{background-color: value};

Q7= How can image repetition of the backup be controlled?

The **background-repeat property** in CSS is used to repeat the background image both horizontally and vertically. It also decides whether the background image will be repeated or not.

background-repeat: repeat |repeat-x |repeat-y |no-repeat |initial |inherit;

Q8= What is the use of the background-position property?

The background-position property in CSS allows you to move a background image around within its container.

It has three different types of values:

- Length values (e.g. 100px 5px)
- Percentages (e.g. 100% 5%)
- Keywords (e.g. top right)

You can give background-position up to four values in modern browsers:

- If you declare **one value**, that value is the horizontal offset. The browser sets the vertical offset to center.
- When you declare **two values**, the first value is the horizontal offset and the second value is the vertical offset.

Q9= Which property controls the image scroll in the background?

The **background-position** property in CSS is used to specify the kind of attachment of the background image with respect to its container. It can be set to scroll or make it remain fixed. It can be applied to all HTML elements.
Syntax:
background-attachment:

scroll| fixed |local |initial |inherit;

scroll	The background image will scroll with the page. This is default
fixed	The background image will not scroll with the page
local	The background image will scroll with the element's contents
initial	Sets this property to its default value. Read about initial
inherit	Inherits this property from its parent element. Read about inherit

Q10= Why should background and color be used as separate properties?

The reasons for this are as follows:
- It increases the legibility of the style sheets. The background property is a complex property in CSS. If it is combined with color, the complexity will further increase.
- Color is inherited, but background isn't. This can further increase the confusion.

The major difference between **CSS background vs background-color** property is that the background property is shorthand of all background properties. On the other hand, the background-color property is the subset of the background property used to set the background color.

Q11= How to center block elements using CSS?

4 different ways to center an element using CSS:

1.Using Flex

```
.parent {
        display: flex;
        justify-content: center;
       align-items: center; }
```

2.Grid Property

```
.parent {

display: grid;

place-items: center;}
```

3. Margin property

```
.parent {
  display: grid;
}
.child {
  margin: auto;
}
```

4.Position Property

```
.parent {
  position: relative;
}
.child {
  position: absolute;
  top: 50%;
  left: 50%;
  transform: translate(-50%, -50%);
}
```

Q12= How to maintain the CSS specifications?

When more than one set of CSS rules apply to the same element, the browser will have to decide which specific set will be applied to the element. The rules the browser follows are collectively called **Specificity**

Specificity Rules include:

- CSS style applied by referencing external stylesheet has lowest precedence and is overridden by Internal and inline CSS.
- Internal CSS is overridden by inline CSS.
- Inline CSS has highest priority and overrides all other selectors.

Specificity Hierarchy :Every element selector has a position in the Hierarchy.

Inline style: Inline style has highest priority.

Identifiers(ID): ID have the second highest priority.
Classes, pseudo-classes and attributes: Classes, pseudo-classes and attributes are come next.

Elements and pseudo-elements: Elements and pseudo-elements have lowest priority.

Q13= What are the ways to integrate CSS as a web page?

3 ways to add CSS to HTML web page

1. **Inline CSS**
2. **Internal CSS**
3. **External CSS**

Inline CSS

An inline style may be used to apply a unique style for a single element.To use inline styles, add the style attribute to the relevant element. The style attribute can contain any CSS property.

Internal CSS

An internal style sheet may be used if one single HTML page has a unique style. The internal style is defined inside the <style> element, inside the head section.

External CSS

With an external style sheet, you can change the look of an entire website by changing just one file!

Each HTML page must include a reference to the external style sheet file inside the <link> element, inside the head section.

Q14= What are the external style sheets?

There are three ways to insert a CSS style for an HTML document:

1. Inline style: CSS styles are written inside the <style> tag of an element
2. Internal style sheet: CSS styles are written with the HTML in the same file under the <head> tag using the <style> element, and
3. External style sheet

   An **external style sheet** is a separate file with a .css extension with all CSS style definitions for the HTML page(s). You can reference this file in the <link> tag inside the <head> in the HTML.

Q15= What are the advantages and disadvantages of using external style sheets?

The advantages of External Style Sheets are:

1.Separation of content and presentation:
An external style sheet allows you to separate the content of your website (HTML) from the presentation (CSS). This makes it easier to maintain and update your website, as you only need to change the style sheet rather than making changes to the HTML of each individual page.

2.Reusable styles:
An external style sheet can be reused across multiple pages and websites, saving time and making it easier to maintain a consistent look and feel.

3.Improved performance:
An external style sheet is only loaded once, even if it is used on multiple pages. This can improve the performance of your website, as the browser does not need to download the same styles repeatedly.

The disadvantages of External Style Sheets are:

1.Additional HTTP request:

An external style sheet requires an additional HTTP request to load, which can slightly increase the time it takes for the page to render.

2.Limited control:

With an external style sheet, you have less control over the specific elements on a page, as the styles are applied globally to all elements that use the same class or ID.

3.Harder to override:

It can be harder to override the styles in an external style sheet, as they are applied globally. To override a style, you need to use more specific selectors or use the !important declaration, which can make your style sheet more complex and difficult to maintain.

Q16= What is the meaning of the CSS selector?

A CSS selector is the first part of a CSS Rule. It is a pattern of elements and other terms that tell the browser which HTML elements should be selected to have the CSS property values inside the rule applied to them. The element or elements which are selected by the selector are referred to as the *subject of the selector*.

CSS selectors can be grouped into the following categories based on the type of elements they can select.

Basic selectors

Universal selector

Selects all elements. Optionally, it may be restricted to a specific namespace or to all namespaces.

Syntax: * ns|* *|*

Example: * will match all the elements of the document.

Type selector

Selects all elements that have the given node name.

Syntax: elementname

Example: input will match any <input> element.

Class selector

Selects all elements that have the given class attribute.

Syntax: .classname

Example: .index will match any element that has class="index".

ID selector

Selects an element based on the value of its id attribute. There should be only one element with a given ID in a document.

Syntax: #idname

Example: #toc will match the element that has id="toc".

Attribute selector

Selects all elements that have the given attribute.

Syntax: [attr] [attr=value] [attr~=value] [attr|=value] [attr^=value] [attr$=value] [attr*=value
]

Example: [autoplay] will match all elements that have the autoplay attribute set (to any value).

Grouping selectors

Selector list

The , selector is a grouping method that selects all the matching nodes.

Syntax: A, B

Example: div, span will match both <span> and <div> elements.

Combinators

Descendant combinator

The " " (space) combinator selects nodes that are descendants of the first element.

Syntax: A B

Example: div span will match all <span> elements that are inside a <div> element.

Child combinator

The > combinator selects nodes that are direct children of the first element.

Syntax: A > B

Example: ul > li will match all <li> elements that are nested directly inside a <ul> element.

General sibling combinator

The ~ combinator selects siblings. This means that the second element follows the first (though not necessarily immediately), and both share the same parent.

Syntax: A ~ B

Example: p ~ span will match all <span> elements that follow a <p>, immediately or not.

Adjacent sibling combinator

The + combinator matches the second element only if it *immediately* follows the first element.

Syntax: A + B

Example: h2 + p will match the first <p> element that *immediately* follows an <h2> element.

Pseudo-classes and pseudo-elements

Pseudo classes

The : pseudo allow the selection of elements based on state information that is not contained in the document tree.

Example: a:visited will match all <a> elements that have been visited by the user.

Pseudo elements

The :: pseudo represent entities that are not included in HTML.

Example: p::first-line will match the first line of all <p> elements.

Q17= What are the media types allowed by CSS?

Sr.No.	Value & Description
1	**all** Suitable for all devices.
2	**aural** Intended for speech synthesizers.
3	**braille** Intended for braille tactile feedback devices.
4	**embossed** Intended for paged braille printers.
5	**handheld** Intended for handheld devices (typically small screen, monochrome, limited bandwidth).
6	**print** Intended for paged, opaque material and for documents viewed on screen in print preview mode. Please consult the section on paged media.
7	**projection** Intended for projected presentations, for example projectors or print to transparencies. Please consult the section on paged media.
8	**screen** Intended primarily for color computer screens.
9	**tty** Intended for media using a fixed-pitch character grid, such as teletypes, terminals, or portable devices with limited display capabilities.

10	**tv** Intended for television-type devices.

Q18= What is the rule set?

A **CSS ruleset** consists of an element selector and a properties declaration block.

```
div {
  color: red;
}
```

- A selector selects HTML elements. In other words, developers use CSS selectors in a stylesheet to select the HTML elements they which to style.
- A declaration block (`{...}`) groups one or more CSS declarations separated by semicolons (`;`).
- A CSS declaration consists of a CSS property name and value separated by a colon (`:`).
- It is best to use a semicolon after each declaration (including the last one) to prevent forgetting to add it in the future when adding more properties.