**Module (CSS and CSS 3) -2**

1.What are the benefits of using CSS?

--->There are several benefits of using CSS when building web pages.By using CSS we can create visually appealing, well-structured, and easy-to-maintain web pages.

---> Separation of presentation and content:CSS allows us to separate the presentation of your web pages (i.e. layout, colors, and fonts) from the structure and content of your HTML.This makes it easy to change the design of your site without having to modify the underlying HTML code.

---> Reusability:With CSS, you can create styles that can be reused across multiple pages and entire sites.This means that you can make changes to the design of your site in one place and have those changes automatically applied to multiple pages.

---> Improved accessibility:By using CSS, you can ensure that your pages are more accessible to users with disabilities,by providing text alternatives for non-text elements and creating alternative styles for visually impaired users.

---> Better performance:Using CSS can help improve the performance of your web pages by reducing the size of your HTML code and allowing you to use faster-loading external stylesheets.

---> Media Queries:With media queries you can control the layout of your webpage by using rules that are only applicable when the conditions are met.This allows you to create responsive designs that work well across a wide range of devices and screen sizes.

---> Flexibility:CSS is a flexible language, that allow you to style and layout your pages in any way you want.We can create animations and hover effects, apply advanced CSS techniques, like Flexbox and Grid to easily create complex layouts.By using CSS we can create visually appealing, well-structured, and easy-to-maintain web pages.

2.What are the disadvantages of CSS?

---> While CSS is a powerful tool for styling web pages and offers many benefits, there are also a few potential disadvantages to be aware of:

--> Browser compatibility:Different web browsers may interpret and display CSS in different ways.This can require extra time and effort to ensure that your pages look the same across different browsers.

---> Learning curve:CSS can have a bit of a learning curve, especially for those who are new to web development.There are many different properties and values that can be used to style elements, and it can take some time to learn how to use them effectively.

---> Overuse of classes and selectors:When using CSS, it is easy to add classes to your HTML elements and selectors, but sometimes it can be overused and make the codebase harder to maintain and understand.

---> Maintenance:With a large codebase, it can be hard to track which styles are being applied to specific elements.it can be difficult to make changes to the design of a site without accidentally breaking other parts of the layout.

---> CSS only works on client-side, this means that if you have limited or no JavaScript it could cause issues.It also means that CSS won't be available on the server side.

---> As web technologies change, so does the way of writing CSS.New CSS specifications appear and others deprecate.It's important to stay up to date with the changes.

3.What is the difference between CSS2 and CSS3?

---> The biggest difference between CSS2 and CSS3 is that CSS3 is now split into different modules.Since each module makes its way through the W3C individually, there’s a wider range of browser support.Make sure you test your CSS3 pages in as many browsers and operating systems as possible to ensure compatibility. CSS2 still has browser extension issues. CSS3 has complete support for almost all recent web browsers. CSS3 has support to add animations to your modern websites.CSS3 has compatibility with external font styles through google fonts and typecast. It was not possible with earlier CSS1 and CSS2. The selectors in CSS3 has increased while CSS1 and CSS2 only had simple selectors. CSS1 AND CSS2 didn’t have provision to specifically design the web layout.

4.Name a few CSS style components.

--> At its most basic level, CSS consists of three components:

-> Selectors: CSS selectors are used to "find" (or select) the HTML elements you want to style.

-> Properties: These are human-readable identifiers that indicate which stylistic features you want to modify.

-> Values: Each property is assigned a value. This value indicates how to style the property.

5.What do you understand by CSS opacity?

---> The opacity property sets the opacity level for an element.

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.

6.How can the background color of an element be changed?

---> To add background color in HTML, use the CSS background-color property.

Set it to the color name or code you want and place it inside a style attribute.

Then add this style attribute to an HTML element, like a table, heading, div, or span tag.

7.How can image repetition of the backup be controlled?

---> Image repetition can be controled by using the background-repeat property that will help us to control the repetition of the image.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.

8.What is the use of the background-position property?

---> The background-position property in CSS is mainly used to sets the initial position for the background image.

ie., it is used to set an image at a certain position.

By default, a background-image is placed at the top-left corner of an element, and repeated both vertically and horizontally.

9.Which property controls the image scroll in the background?

--> The background-attachment property sets whether a background image scrolls with the rest of the page, or is fixed.

10.Why should background and color be used as separate properties?

---> There are two reasons behind this:It enhances the legibility of style sheets.The background property is a complex property in CSS, and if it is combined with color, the complexity will further increase. Color is an inherited property while the background is not. So this can make confusion further.

11.How to center block elements using CSS1?

---> By setting the properties margin-left and margin-right to auto and width to some explicit value: In this case, the left and right margins will each be four ems wide, since they equally split up the eight ems left over from.

12.How to maintain the CSS specifications?

---> The Specification specify how stylesheets can be included in your web document and how to target specific media e.g print or screen.The CSS Specification prior to CSS3 was a single Specification,CSS3 on the other hand is divided into Modules which are Independent Specifications that can be worked on by different author(s) at different paces,that's why we have Selector Level 3 Specification, CSS Color 4, CSS Backgrounds and so on.Some of these modules are revisions of CSS2.1, and some are newly created, but all fall under the banner of CSS3.The Specification should be your guide if you need to understand how a specific property or feature works behind the scene and how it works with other CSS properties.And if you are comfortable reading algorithms you won't get bored reading the CSS Specification.

13.What are the ways to integrate CSS as a web page?

---> CSS can be added to HTML documents in 3 ways:

->Inline:

by using the style attribute inside HTML elements.

An inline CSS is used to apply a unique style to a single HTML element.

An inline CSS uses the style attribute of an HTML element.

->Internal:

by using a <style> element in the <head> section.

An internal CSS is used to define a style for a single HTML page.

An internal CSS is defined in the <head> section of an HTML page, within a <style> element.

->External:

by using a <link> element to link to an external CSS file.

An external style sheet is used to define the style for many HTML pages.

To use an external style sheet, add a link to it in the <head> section of each HTML page.

14.What is embedded style sheets?

---> Embedded Stylesheet: It allows you to define styles for a particular HTML document as a whole in one place.This is done by embedding the <style></style> tags containing the CSS properties in the head of your document.Embedded style sheets are particularly useful for HTML documents that have unique style requirements from the rest of the documents in your project.However, if the styles need to be applied across multiple documents, you should link to an external style sheet instead of using individual embedded style sheets.

Syntax:The CSS syntax for embedded style sheets is exactly the same as other CSS code, apart from the fact that it is now wrapped within the <style></style> tags.

The <style> tag takes the ‘type’ attribute that defines the type of style sheet being used.

15.What are the external style sheets?

---> To apply a rule to multiple pages, an external style sheet is used.An external style sheet is a separate CSS file that can be accessed by creating a link within the head section of the webpage.Multiple webpages can use the same link to access the stylesheet.The link to an external style sheet is placed within the head section of the page.External style sheets have the following advantages over internal and inline styles: one change to the style sheet will change all linked page.we can create classes of styles that can then be used on many different HTML elements.consistent look and feel across multiple web pages.improved load times because the css file is downloaded once and applied to each relevant page as needed.

16.What are the advantages and disadvantages of using external style sheets?

---> The advantages of External Style Sheets are as follows :With the help of External Style Sheets, the styles of numerous documents can be organized from one single file.In External Style Sheets, Classes can be made for use on numerous HTML element types in many forms of the site.In complex contexts, Methods like selector and grouping can be implemented to apply styles.

The disadvantages of External Style Sheets are as follows :An extra download is essential to import style information for each file.The execution of the file may be deferred till the external style sheet is loaded.While implementing style sheets, we need to test Web pages with multiple browsers in order to check compatibility issues.

17.What is the meaning of the CSS selector?

Ans-> In CSS, selectors are used to target the HTML elements on our web pages that we want to style.There are a wide variety of CSS selectors available, allowing for fine-grained precision when selecting elements to style.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.

We can divide CSS selectors into five categories:

-> Simple selectors (select elements based on name, id, class)

-> Combinator selectors (select elements based on a specific relationship between them)

-> Pseudo-class selectors (select elements based on a certain state)

-> Pseudo-elements selectors (select and style a part of an element)

-> Attribute selectors (select elements based on an attribute or attribute value)

18.What are the media types allowed by CSS?

---> The @media rule, introduced in CSS2, made it possible to define different style rules for different media types.You could have one set of style rules for computer screens, one for printers, one for handheld devices, one for television-type devices, and so on.Media queries in CSS3 extended the CSS2 media types idea: Instead of looking for a type of device, they look at the capability of the device.

Media queries can be used to check many things, such as:

-> width and height of the viewport

-> width and height of the device

-> orientation (is the tablet/phone in landscape or portrait mode?)

-> resolution

Media Query Syntax:

@media not|only mediatype and (expressions) {

CSS-Code;

}

Following are the media types allowed by CSS:

-> all: Used for all media type devices

-> print: Used for printers

-> screen: Used for computer screens, tablets, smart-phones etc.

-> speech: Used for screenreaders that "reads" the page out loud

19.What is the rule set?

---> A rule or "rule set" is a statement that tells browsers how to render particular elements on an HTML page.A rule set consists of a selector followed by a declaration block.

-> Selector:The selector "selects" the elements on an HTML page that are affected by the rule set.The selector consists of everything up to (but not including) the first left curly bracket.

-> Declaration block:The declaration block is a container that consists of anything between (and including) the curly brackets.Whitespace inside a declaration block is ignored - so it can be used to lay out rules in any way you want.

-> Declaration:The declaration tells a browser how to draw any element on a page that is selected.A declaration consists of a property and a value, separated by a colon ":".

Although it is not essential to add a semicolon after a single declaration, it is recommended that you finish the last declaration in a block with a semicolon.

-> Property:The property is the aspect of that element that you are choosing to style.

There can only be one property within each declaration.

-> Value:The value is the exact style you wish to set for the property.