1. Block-level elements create a new block formatting context and start on a new line. They consume the entire width available irrespective of their sufficiency. for example div or p (paragraph).

Inline elements do not start on a new line and only take up as much width as necessary. They are often used within block-level elements to style or format specific parts of the content for example a, strong

Inline-block elements behave like inline elements but allow you to set a specific width and height. They don't start on a new line and can appear next to other inline elements. Inline elements occupy only the width that is sufficient. For example <br> and <img>

1. DOCTYPE in HTML is an instruction to the web browser about how to interpret and render the web page. and is written to ensure that the web page is displayed and interpreted correctly by web browsers.
2. The CSS (Cascading Style Sheets) box model is defining how elements on a web page are structured in terms of their content, padding, border, and margin. these four components define the space around and within the Element. Margins define the space outside the border of an element. and Padding defines the space between the content of an element and its border and is used to provide internal spacing within an element.
3. responsive web design is made to ensure that websites look and function well on a wide range of devices, from desktop computers and laptops to smartphones and tablets. Principles of Responsive Web Design are: Using relative units like percentages for defining widths and height. Using CSS to ensure that images and media can scale to fit different screen sizes.
4. Using relative units (em, rem) for font sizes, allowing text to scale with the screen size and more.
5. The most common css length: pixels: provide a fixed and absolute size that doesn't change regardless of the screen size. Often used for setting precise dimensions and for images.

Percentage: units are relative to the element's size. elements can scale proportionally based on the size of their container.

Width and Height: are relative to the size of the browser's viewport Useful for creating designs that scale with the size of the viewport

1. position and display offer various options that determine the positioning and layout of elements.

position defines the positioning method for an element within its containing element or the viewport. It has several values, the main ones are: static, relative and absolute.

display property determines how an element is Looks in terms of its box type . main uses are blocks, inline and inline-bock

1. Read about flexbox and explain the following properties: justify-content, align-items, align-self, align-content, flex-grow, flex-wrap.

justify-content property controls the alignment of flex items along the main axis

align-items: determines how flex items are aligned along the cross axis

flex-grow: specifies how flex items grow relative to one another within the flex container when there is extra space available.

align-self: is used to override the align-items property for individual flex items within a flex container.

align-content: property controls the alignment of multiple rows of flex items when there's extra space available on the cross axis.

flex-wrap: determines whether flex items should wrap to the next line when there's insufficient space along the main axis.

<!DOCTYPE html>

<html>

<head>

<style>

.flex-container {

display: flex;

justify-content: center;

align-items: center;

.flex-item {

padding: 10px;

margin: 5px;

flex-grow: 1;

1. Classes are used to group multiple HTML elements together so that they can share the same behavior. They are meant to be reusable and can be applied to multiple elements on a web page. in contrast, id is used to uniquely identify a single HTML element on a web page. Each ID should be unique within the entire HTML document, and an element should only have one ID.
2. span Element is often used for applying styles or scripting to a specific portion of text or inline content within a larger block of text. It's commonly used for inline styling or marking up individual words. it doesn't create a line break and only takes up as much width as its content needs. Div Element is a block-level HTML element that creates a block-level container and in contrast to span starts on a new line and extends to the full width of its parent container. it is used to group and structure larger sections of content on a web page.
3. header: a container that represents introduction content. it mostly has the name of the site, logo, and navigation menu.

main: represents the main content of the document.

footer: the footer content of a document or a section.mostly contains information about the author, copyright, and related links.

1. ::before and ::after allows to insert content onto an html page without it needing to be in it. the settings will be defined after or before specific content.
2. CSS: Style Sheet used to define the presentation and layout of a webpage written in HTML. SCSS is a preprocessor scripting language that is a superset of CSS. It provides additional features and functionalities that are not available in regular CSS.