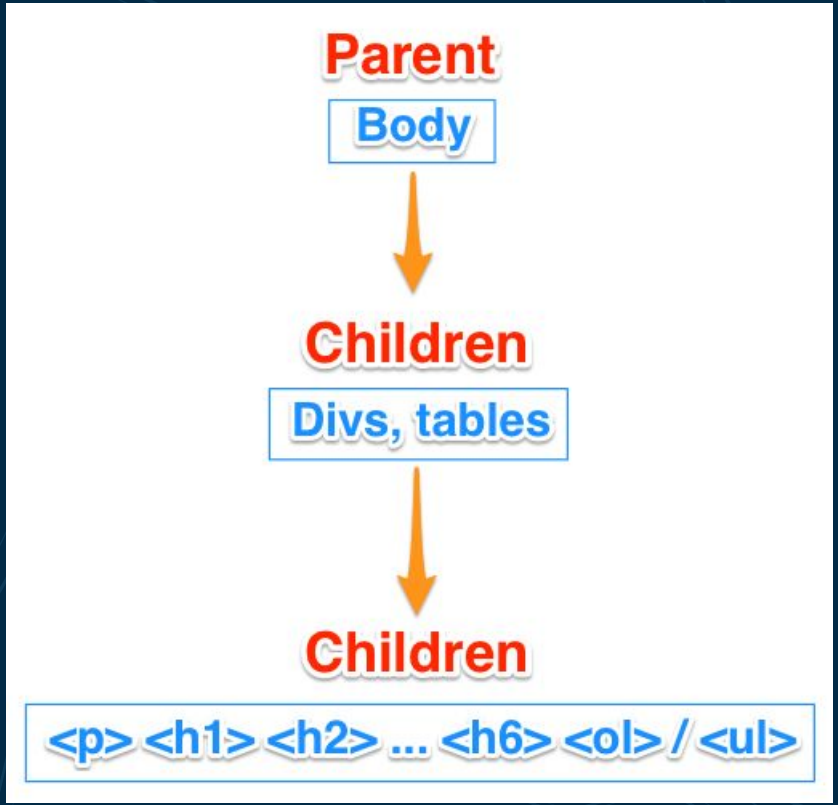
<Semester IV>

</Web Development for Designers/>

Week 3

Parent-Child Elements in HTML

Parent is the element which contains another element, child is the contained element. A child element can also have nested elements inside it, making it a parent element to its nested elements. Very often child elements behavior or appearance is influenced by their parent settings. All elements in an HTML document can be both parents and children, except for the *body* which can only be a parent. Sibling elements are two elements who share the same parent (eg. two <p> inside a <section> or the list items in an ordered or unordered list)



Parent-Child Elements in HTML

Float Property in CSS

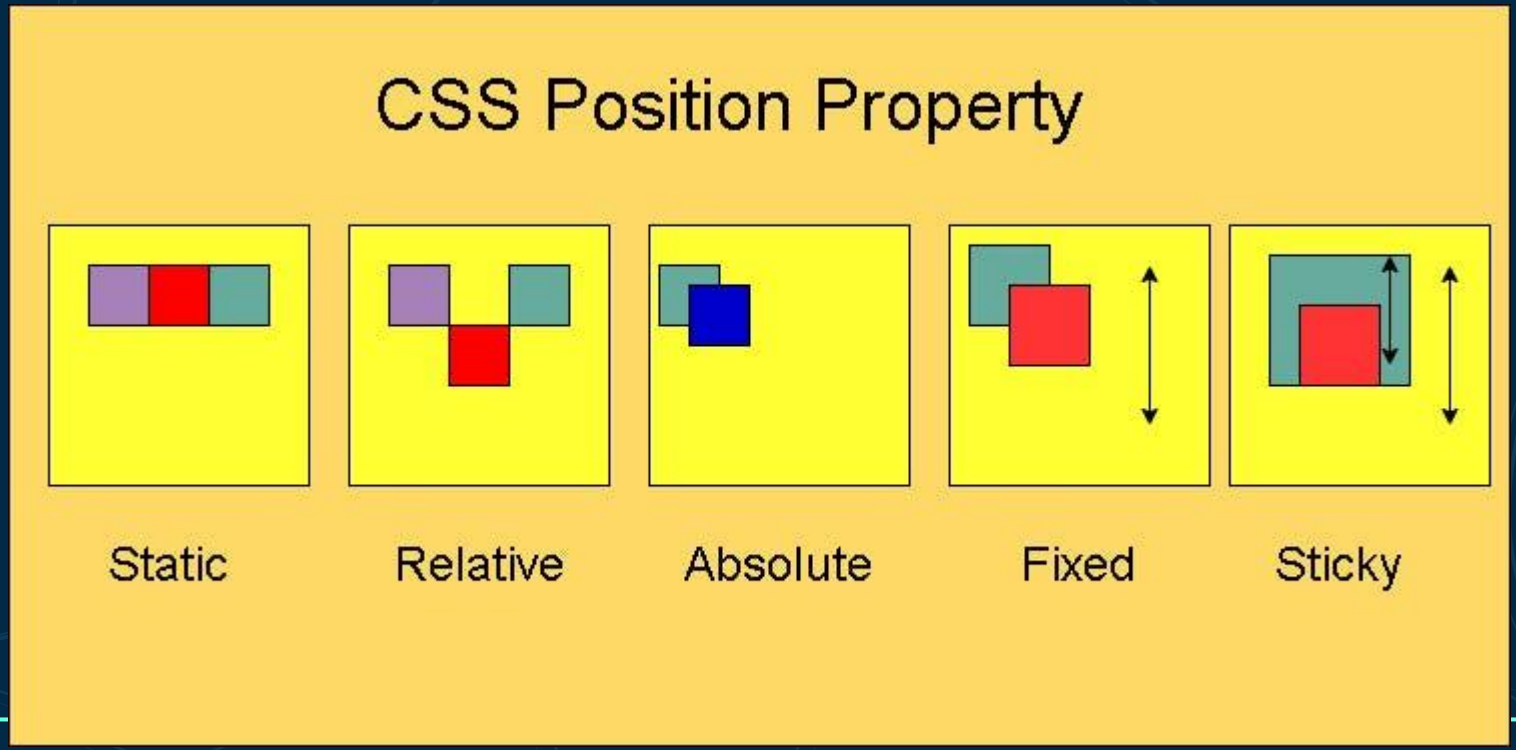
The float CSS property places an element on the left or right side of its container, allowing text and inline elements to wrap around it. The element is removed from the normal flow of the page, though still remaining a part of the flow. Possible values:
float: left; The element must float on the left side of its containing block.
float: right; The element must float on the right side of its containing block.
float: none; The element must not float.
float: inline-start;
float: inline-end;

Eg. Normally div elements will be displayed on top of each other. However, if you use float: left, then the elements will float next to each other.

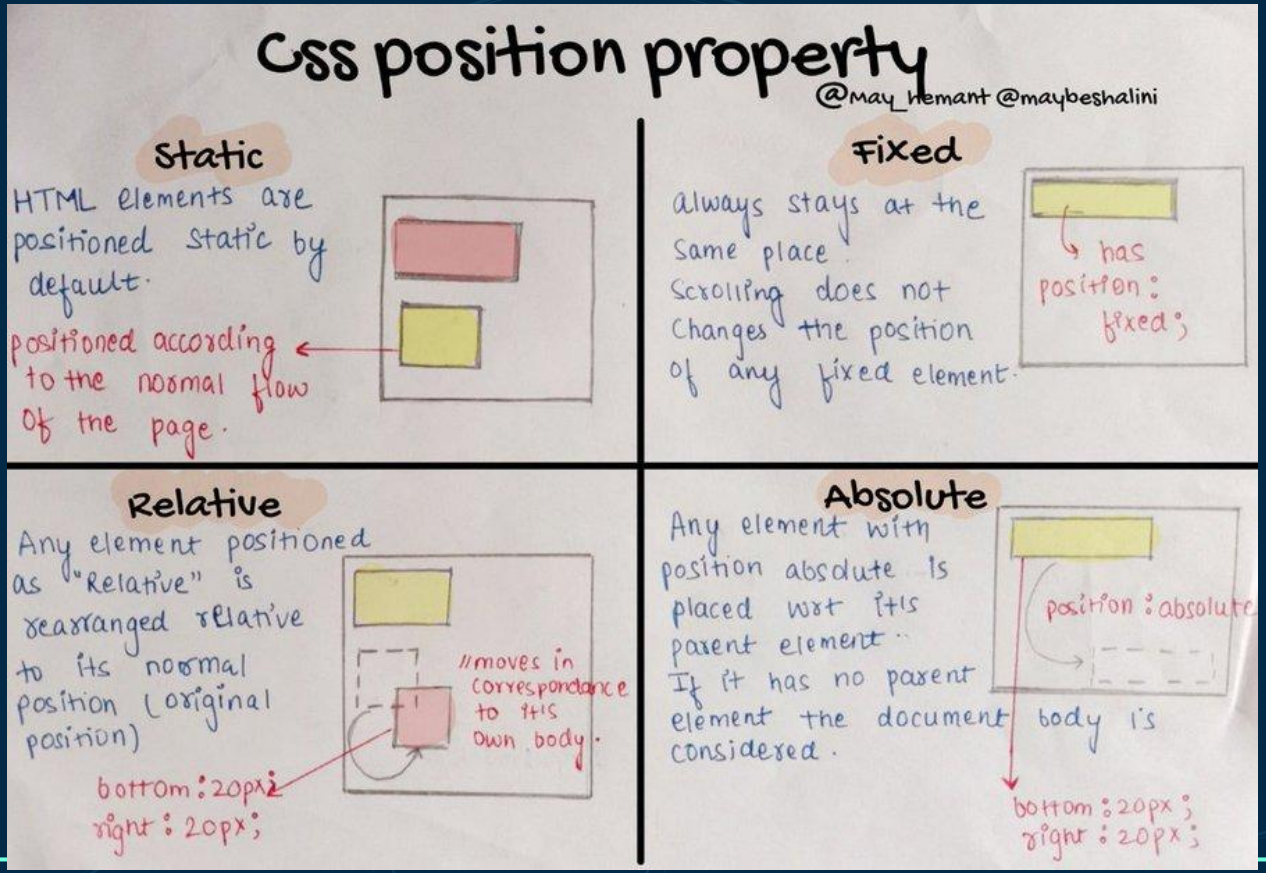
Float Property in CSS

Position Property in CSS

The position CSS property dictates how an element is positioned. The top, right, bottom, and left properties determine the final location of the elements.



Position Property in CSS



Position Property in CSS

Columns in CSS

The CSS multi-column layout module lets you divide content across multiple columns. You can define the preferred number and width of columns, the gap size between columns, and the visual appearance of the optional column dividing lines (known as column rules).

My brother is a fresh computer engineering graduate and he is currently finishing his internship in front-end development. He learned about both CSS grid and flexbox, but I noticed a pattern that I see a lot on the web. He can't decide when to use grid or flexbox. For example, he used CSS grid to layout a website header and mentioned that the process wasn't smooth as he played with grid-column and tried to fine-tune it until it looks like the design. To be honest, I don't like that, and I also researched about a resource that he can use to learn the differences between grid and flexbox, with examples on both.

Column Properties in CSS

Property	Description
column-count	Specifies the number of columns an element should be divided into
column-fill	Specifies how to fill columns
column-gap	Specifies the gap between the columns
column-rule	A shorthand property for setting all the column-rule-* properties
column-rule-color	Specifies the color of the rule between columns
column-rule-style	Specifies the style of the rule between columns
column-rule-width	Specifies the width of the rule between columns
column-span	Specifies how many columns an element should span across
column-width	Specifies a suggested, optimal width for the columns
columns	A shorthand property for setting column-width and column-count

Inline vs Block Elements in HTML

- Every HTML element has a default display value, depending on what type of element it is.
- **The two most common display values are block and inline.**
- A block-level element always starts on a new line, and the browsers automatically add some space (a margin) before and after the element. A block-level element always takes up the full width available (stretches out to the left and right as far as it can).
- Two commonly used block elements are: <p> and .
- An inline element does not start on a new line.
- An inline element only takes up as much width as necessary.

CSS Display Property

The CSS display property specifies an element's display behaviour (the type of rendering box). It defines how an element is rendered in the layout, determining its positioning and interaction within the document's flow and structure.It controls the box type generated by an element, affecting its positioning and behavior within the document flow. Let's dive into the key values:

Different Values of the display property: CSS Display Property - GeeksforGeeks

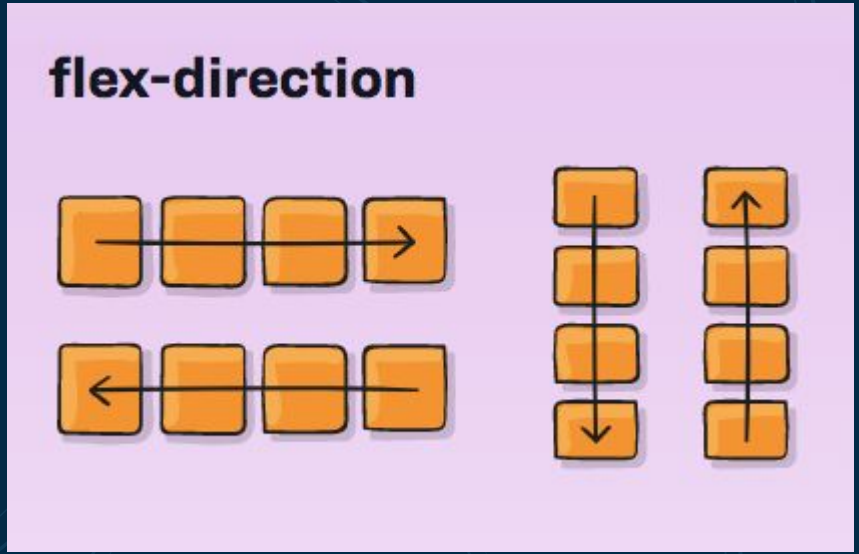
Important values of the display property: block (this is the default), inline, block-inline, none, grid and flexbox. The last 2 values introduce powerful layout options. Flexbox (display: flex) enables flexible, one-dimensional layouts, while CSS Grid (display: grid) provides two-dimensional grid-based layouts.

CSS Flexbox

Flexbox is short for the Flexible Box Layout module. Flexbox is a layout method for arranging items in rows OR columns. It is a one-dimensional layout model for distributing space between items and includes numerous alignment capabilities.

Flexbox makes it easier to design a flexible responsive layout structure, without using float or positioning. A flexbox always consists of:

- a Flex Container - the parent (container) element
- Flex Items - the items inside the container

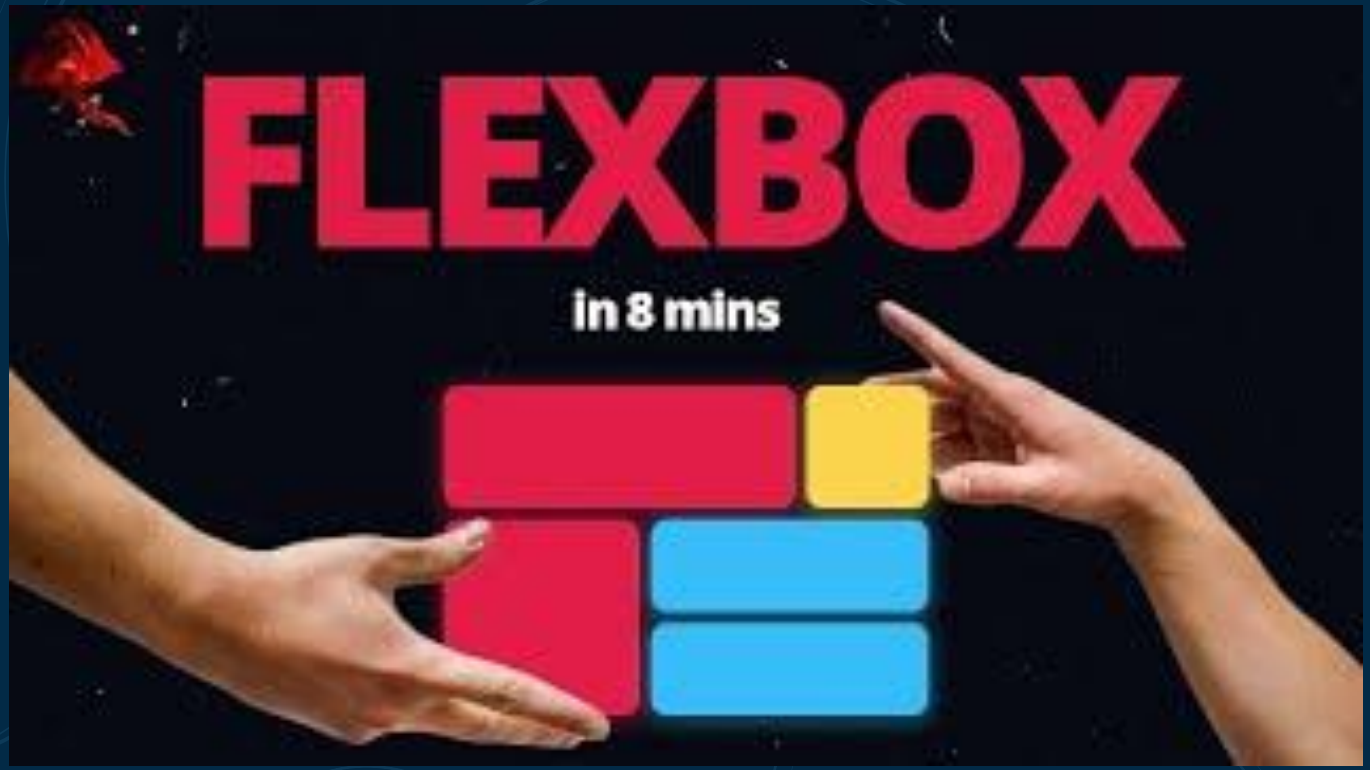


Flex Box Chart

Property	Value(s)
#1 display	flex
#2 flex-direction	row||column||column-reverse||row-reverse
#3 justify-content	flex-start || flex-end || center || space-between || space-around || space-evenly
#4 align-items	flex-start || flex-end || center || stretch || baseline
#5 align-content	flex-start || flex-end || center || stretch||space-between||space-around
#6 align-self	auto || flex-start || flex-end || center || baseline || stretch
#7 Order	/* Any positive Value */
#8 flex-grow	/* Any positive Value */
#9 flex-shrink	/* Any positive Value */
#10flex-wrap	nowrap || wrap || wrap-reverse

/ Joy Shaheb

CSS Flexbox

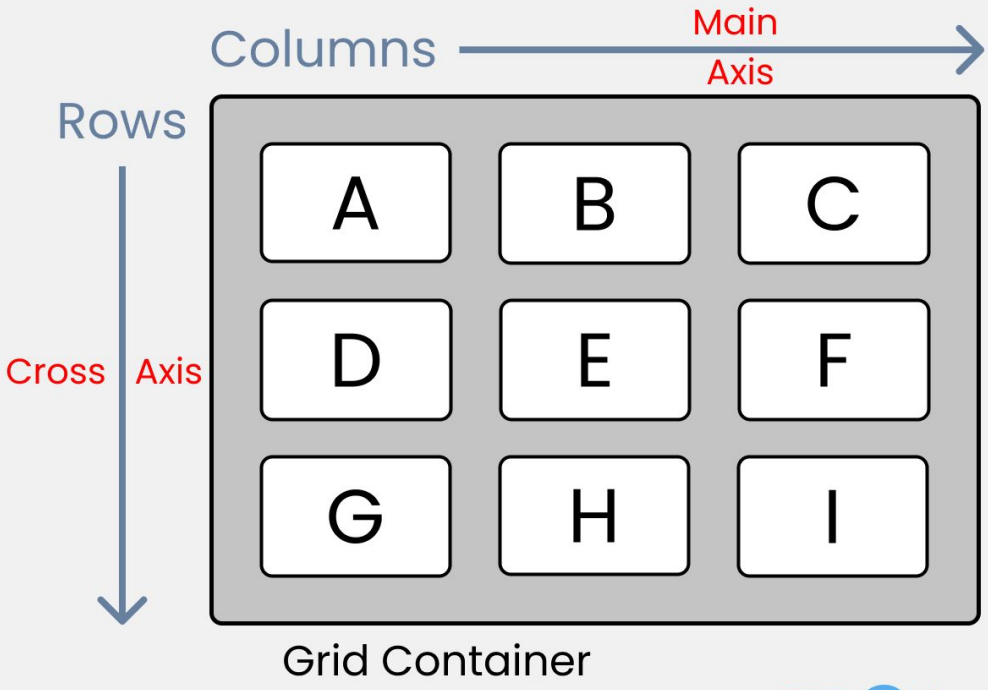


CSS Grid

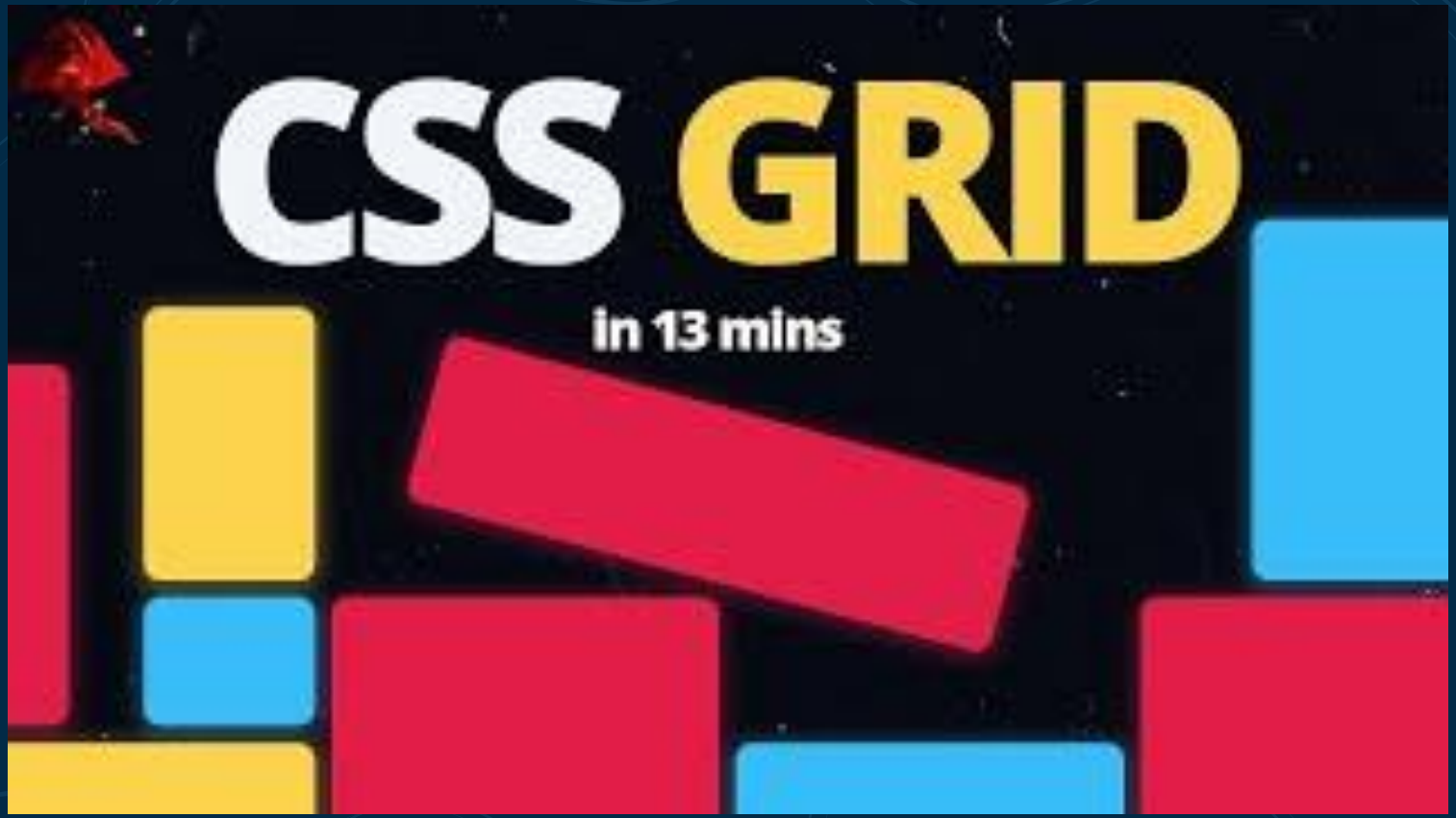
- The Grid Layout Module offers a grid-based layout system, with rows and columns.
- The Grid Layout Module makes it easier to design a responsive layout structure, without using float or positioning.
- Like tables, grid layout enables an author to align elements into columns and rows. However, many more layouts are either possible or easier with CSS grid than they were with tables.
- The CSS Grid Layout should be used for two-dimensional layout, with rows AND columns.
- An HTML element becomes a grid container when its display property is set to grid or inline-grid.

```
Syntax: .container {
  display: grid;
}
```

Grid Architecture



/Joy Shaheb


CSS GRID
in 13 mins

Homework: Try float, position, columns, flexbox and grid layouts to position elements on your webpage as you want.

W3Schools HTML Tutorial

HTML: HyperText Markup Language | MDN

Reference

1. Parent and child elements in CSS – codemahal
2. float - CSS: Cascading Style Sheets | MDN
3. position - CSS: Cascading Style Sheets | MDN
4. columns - CSS: Cascading Style Sheets | MDN
5. CSS Multiple Columns - W3Schools
6. HTML Block and Inline Elements - W3Schools
7. CSS z-index property - W3Schools
8. CSS Display Property - GeeksforGeeks
9. Flexbox - CSS: Cascading Style Sheets | MDN
10. CSS Grid Layout Module - W3Schools

Fonts & colors used

This presentation has been made using the following fonts:

Blinker
(https://fonts.google.com/specimen/Blinker)

Inconsolata
(https://fonts.google.com/specimen/Inconsolata)