



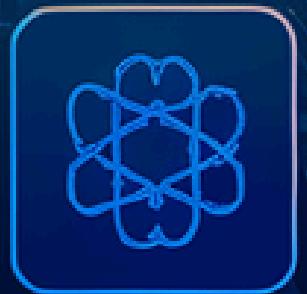
WELCOME TO MERN FULLSTACK DEVELOPMENT WITH GENAI



MongoDB



Express

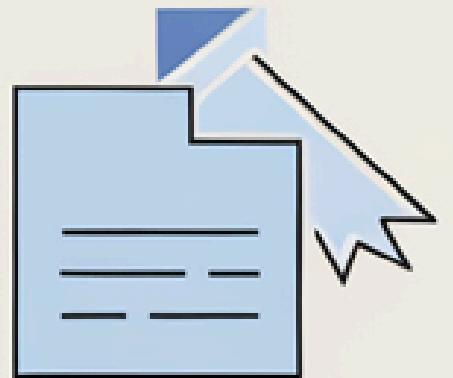


Mern Stack)

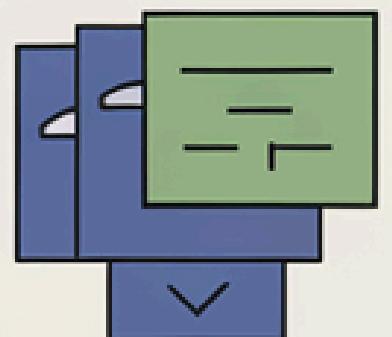


Node





Design &
Styling



Font &
Colors

What is

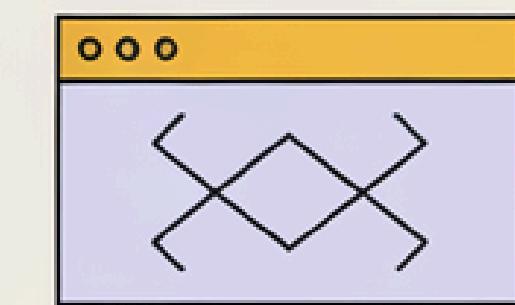
CSS

Cascading Style Sheets

Controls the Look and Feel of Web Pages



Layout &
Positioning



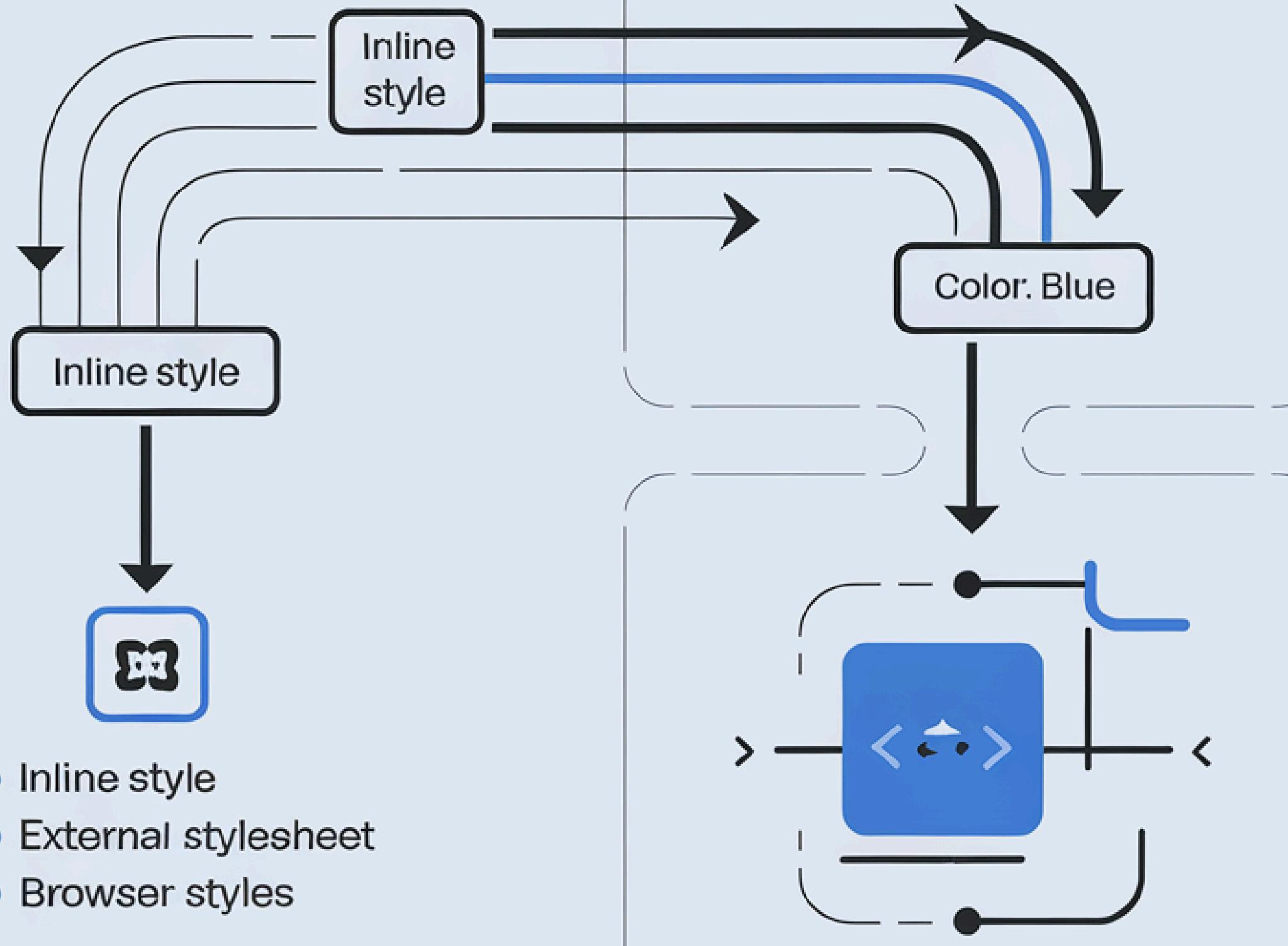
Represent,
Design



CASCADING

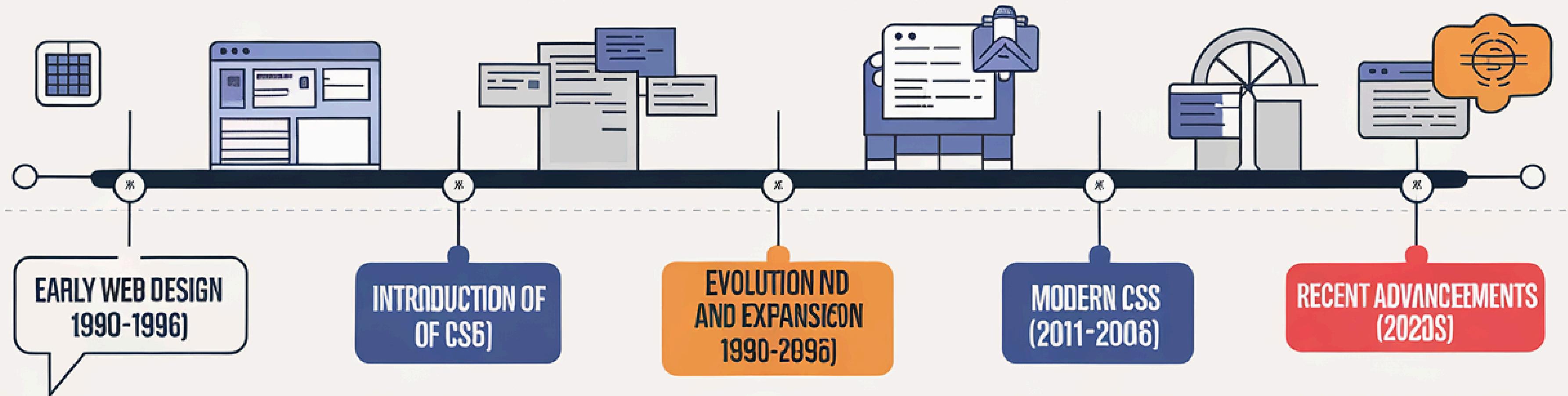
STYLE

SHEET



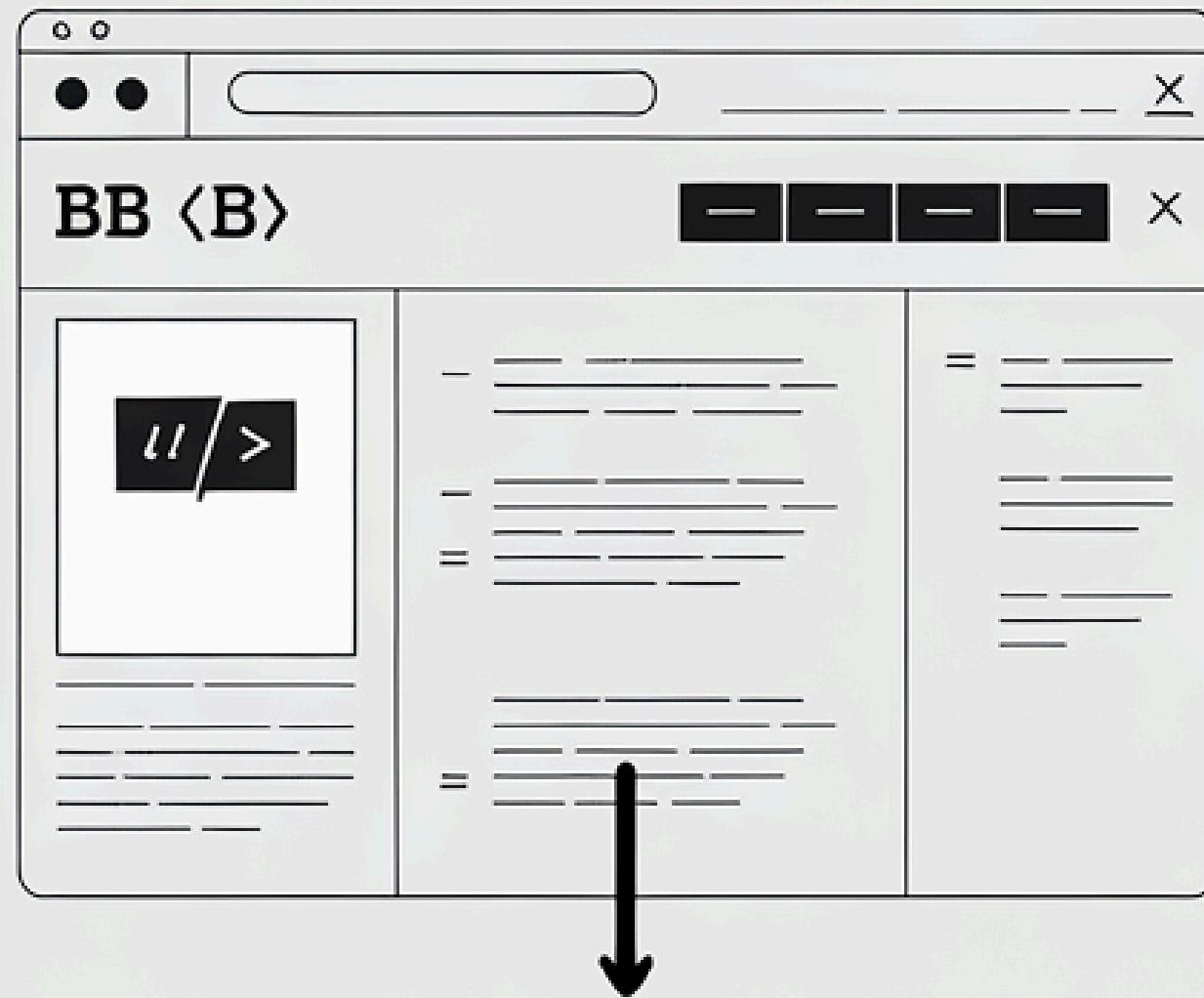


THE HISTORY OF CSS



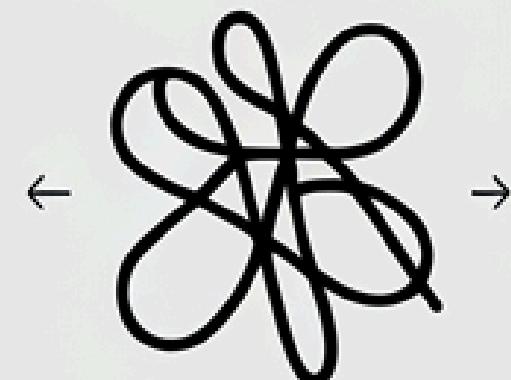


EARLY WEB DESIGN (1990 - 1996)



LIMITED COVER
LAYOUT & STYLE

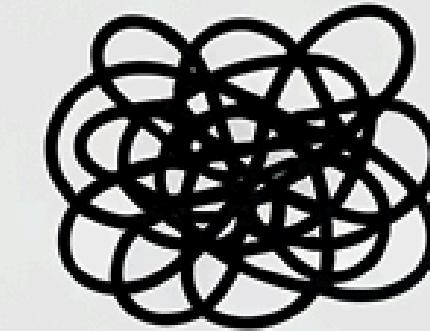
LIMITED CONTROL
OVER T & STYLE



HTML ERA (1990s)

Early web pages were and fond fmifru htrini siman contre for in. welle dt wally sctoolst tfidilliz tyeey ard ireznnis gems.

THE NEED FOR



CSS

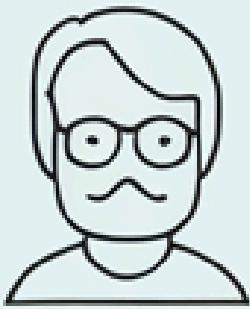
Exungatim enurke
aroui aetgs.





Introduction of CSS (1996)

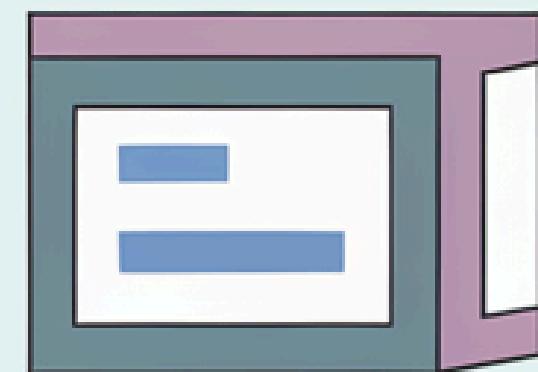
CSS1: The Beginning of Web Styling



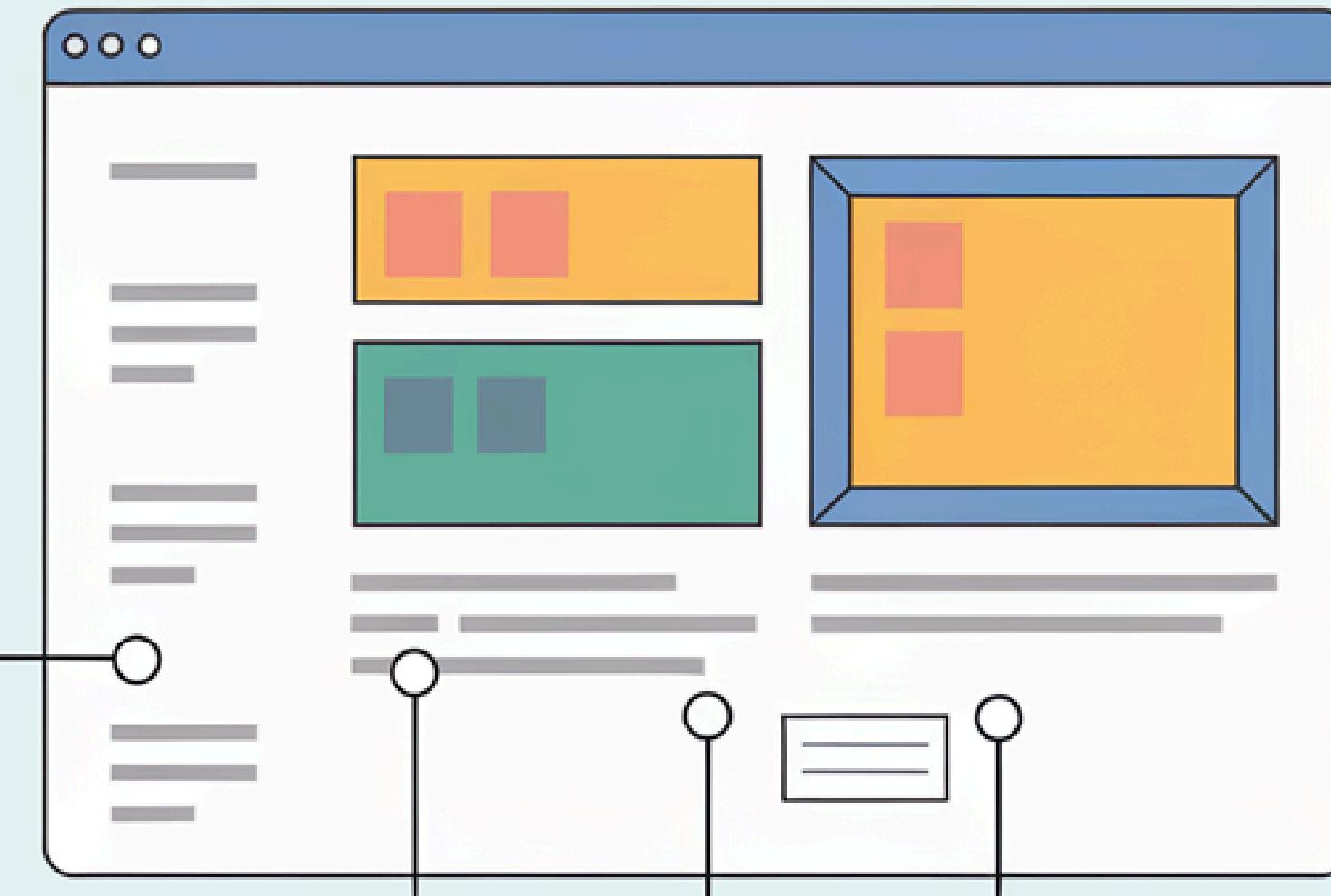
Håkon Wium
1994



W3C Published in
1994



CSS1 level defines to style page
font colors, in styling each app.



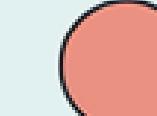
Styling



Fonts



Margins



Margins



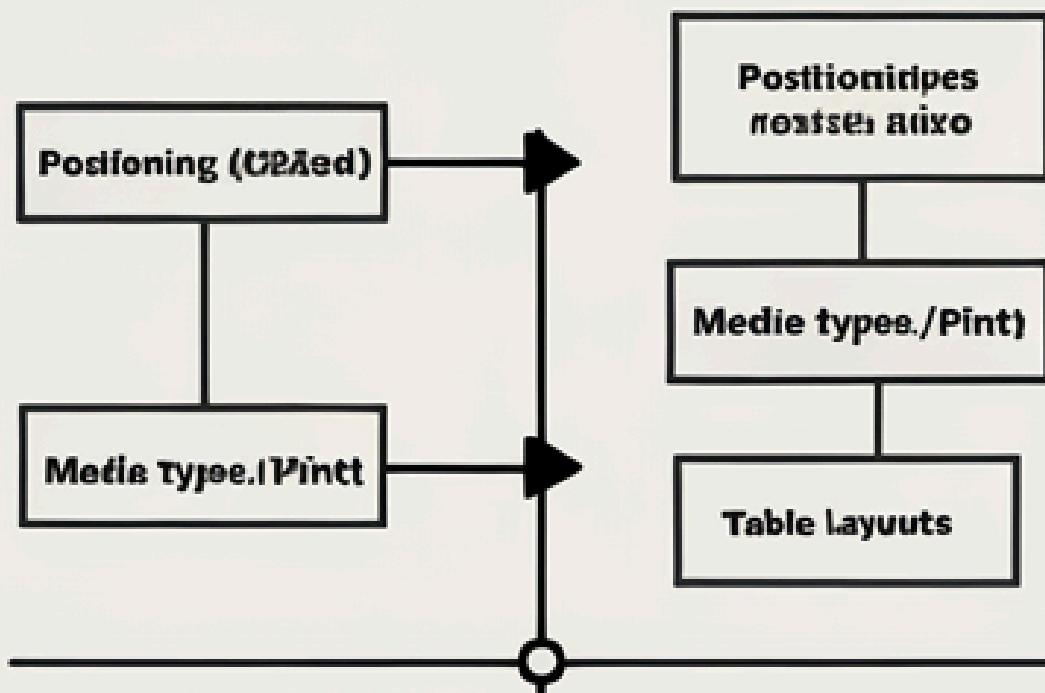
Borders





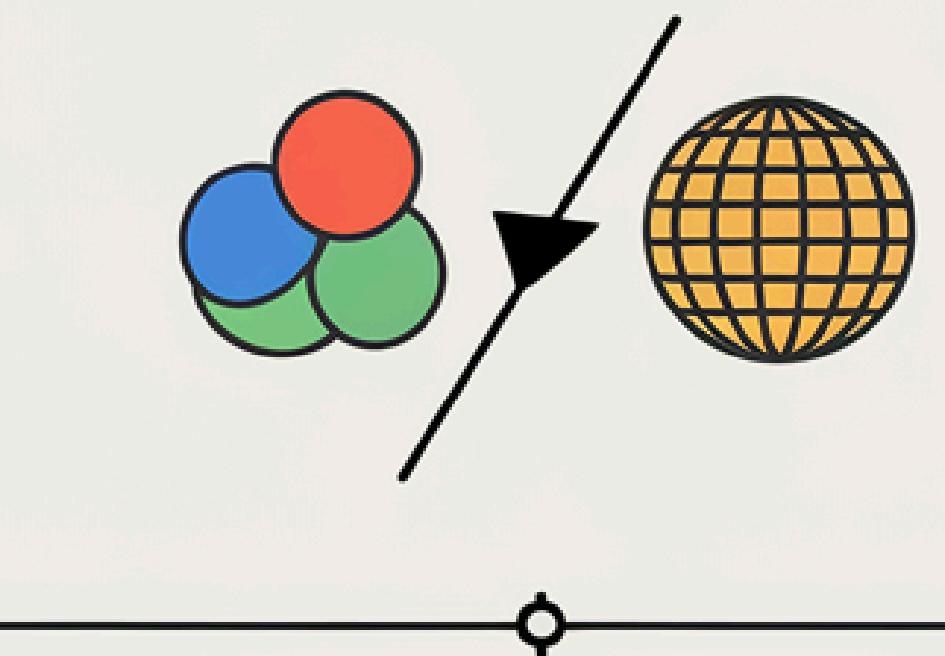
CSS EVOLUTION AND EXPANSION

1998 - 200s



BROWSER WARS

(Late 1990s - Early 2000s)



BROWSER WARS

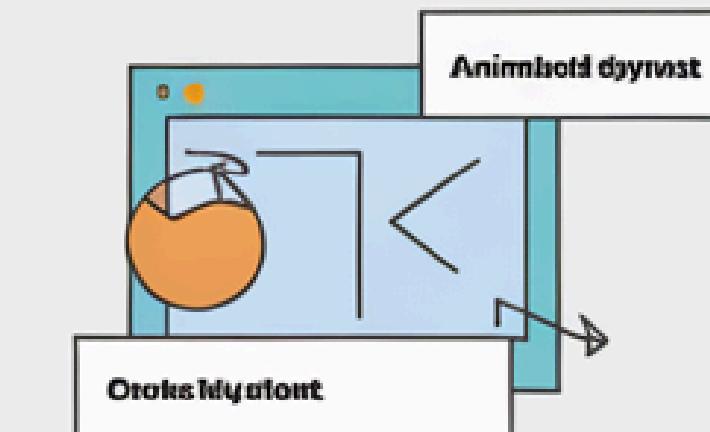
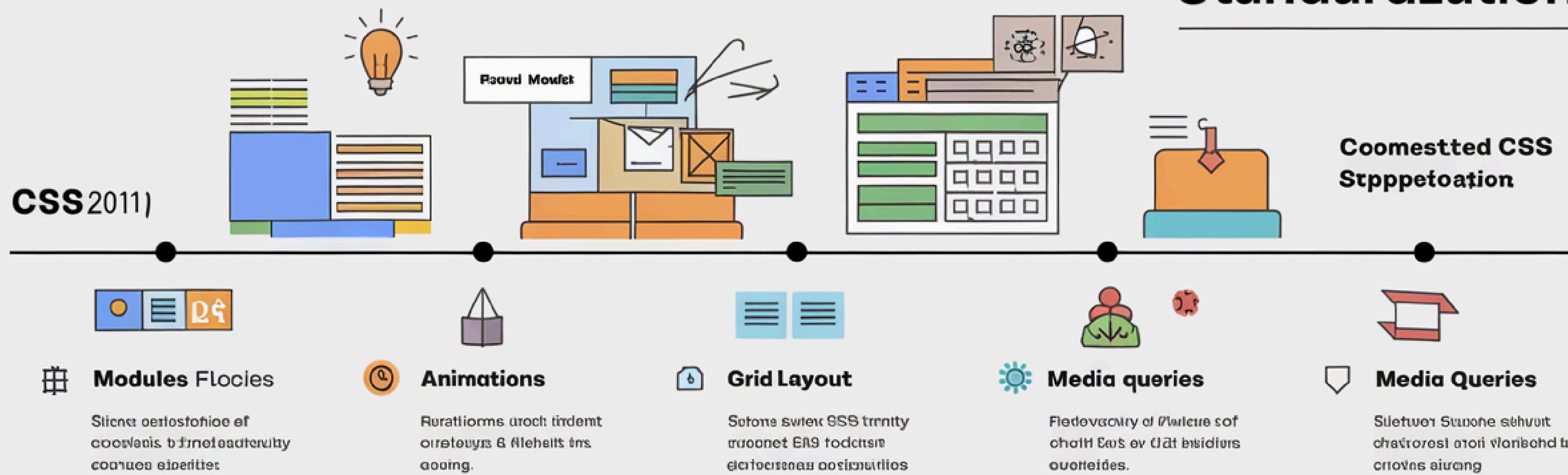


CSS 2.1 (1904)





CSS3: (2011 - Present) Revolutionizing Web Design



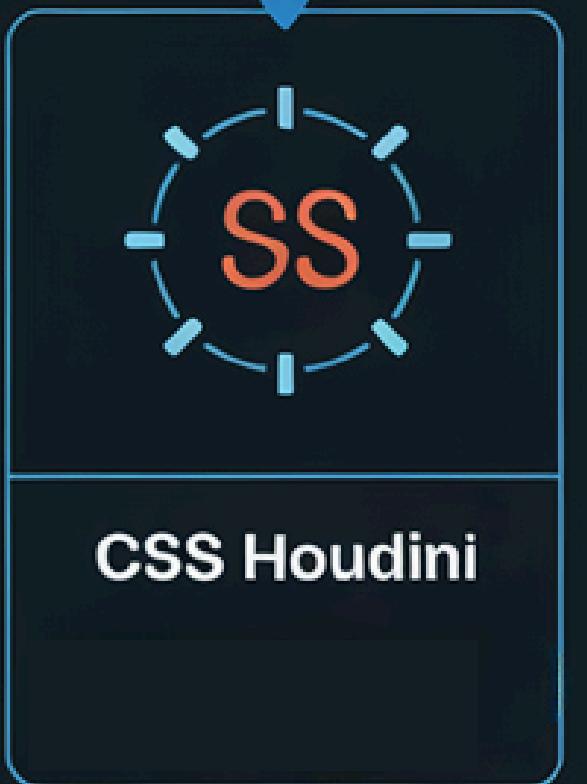
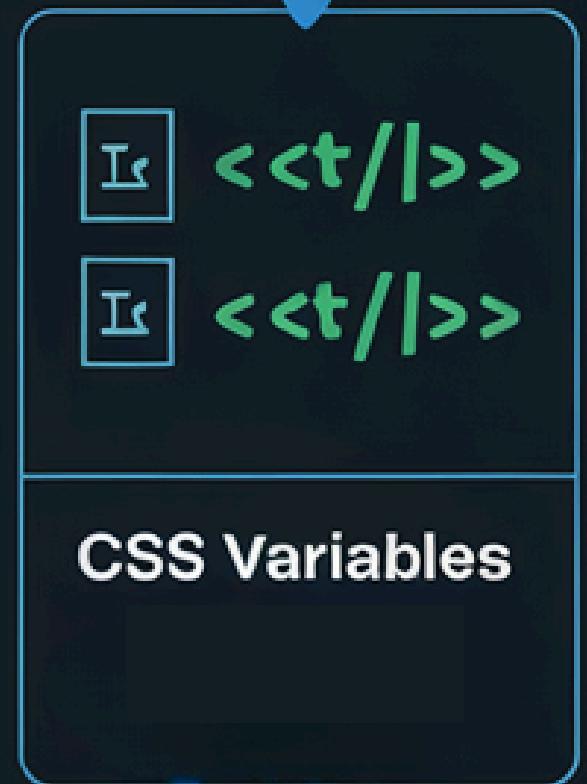
Browser Standardization

Coordinated CSS
Specification



Recent Advancements in CSS

2020s



CSS SYNTAX

EXPLAINED

CSS Syntax:

The diagram illustrates the three components of CSS syntax: Selector, Property, and Value. The word "CSS Syntax:" is written in large, bold, black letters. Below it, the word "Selector" is aligned with the "(h1)" label, "Property" is aligned with the "(font-size)" label, and "Value" is aligned with the "24px" label. Vertical arrows point from each label to its corresponding part in the word "Syntax".

(h1)

Selector (H1)

(font-size)

Property

24px

Value

Ways to Use CSS in HTML



Inline CSS

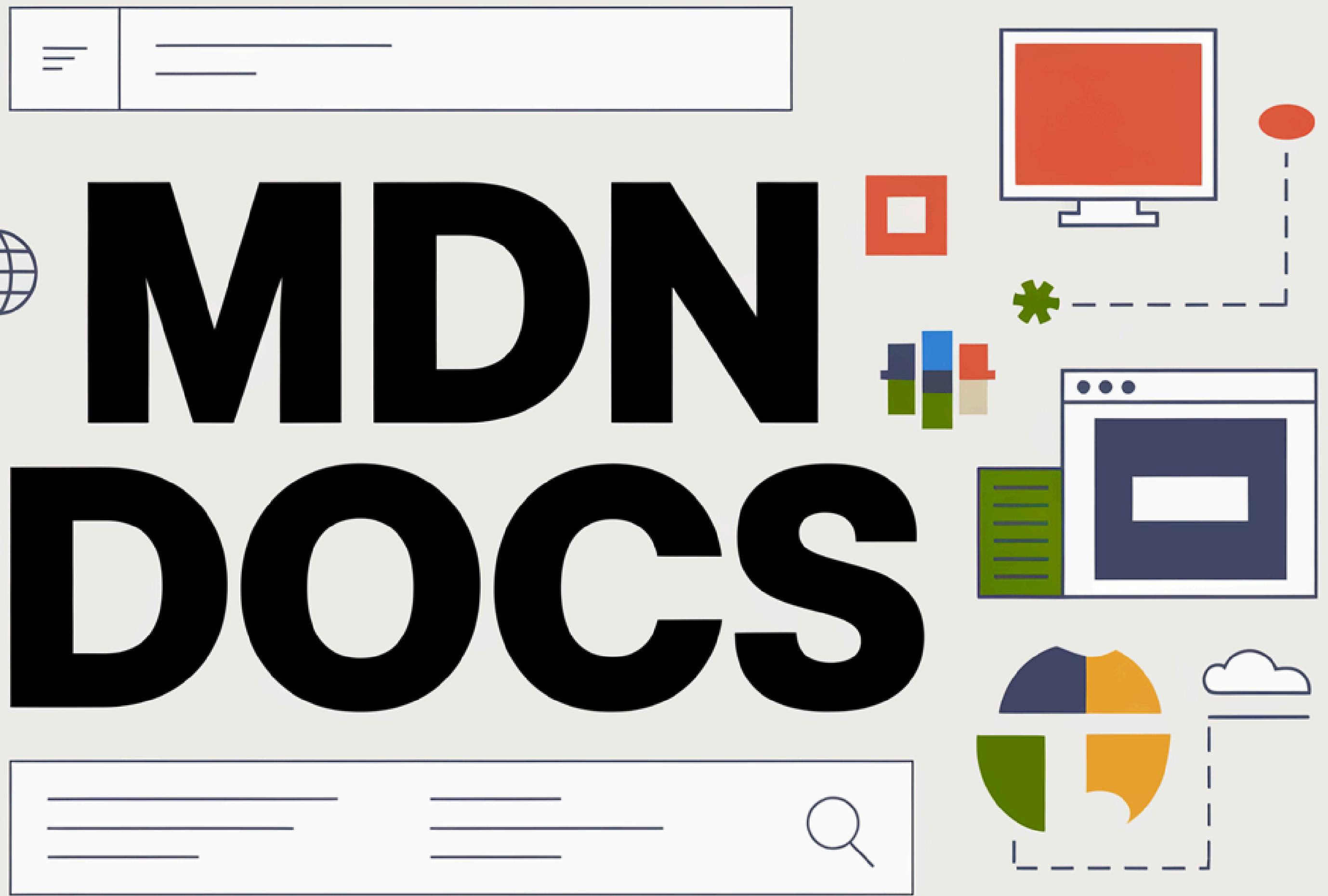
Applied directly in the HTML element

Internal CSS

(color: blue)

External CSS:

HTML document



CSS PROPERTIES



CSS Selector

A CSS selector is a pattern that selects HTML elements to apply specific styles, forming part of a CSS rule set alongside the styling rules.



CSS class selector
(Highlight)



CSS Styles

- Highlight -
color: red;

» DIFFERENT STYLES »

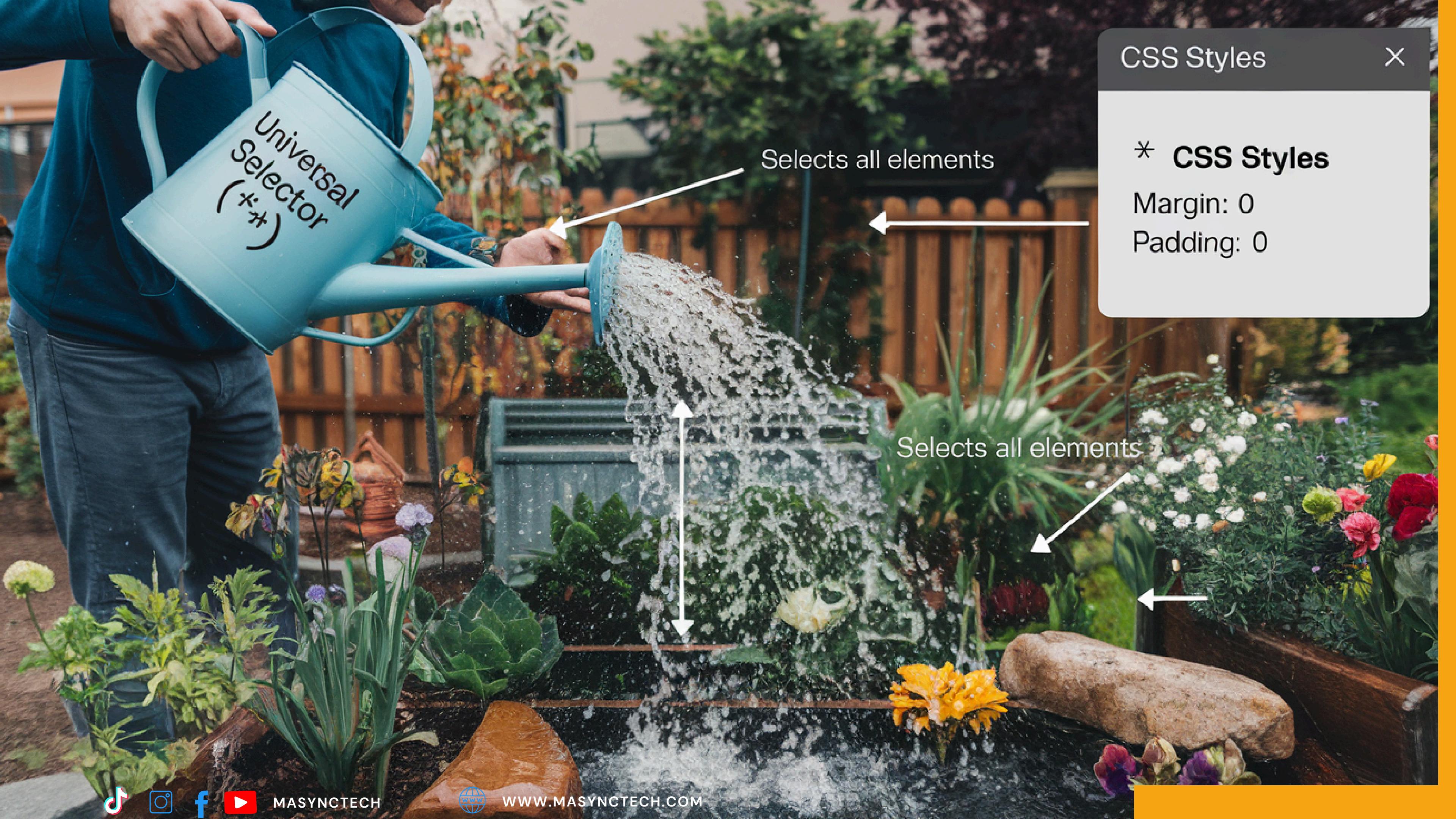


Universal Selector (*)

Selects all elements in
a document.



**UNIVERSAL
SELECTOR***
SELECTS ALL ELEMENTS
IN A DOCUMENT.

A photograph of a person watering a garden with a blue watering can. The watering can has the text "Universal Selector (* *)" written on its side. A stream of water is being sprayed onto a variety of plants and flowers in a garden bed. In the background, there is a wooden fence and some more foliage.

CSS Styles

X

* **CSS Styles**

Margin: 0

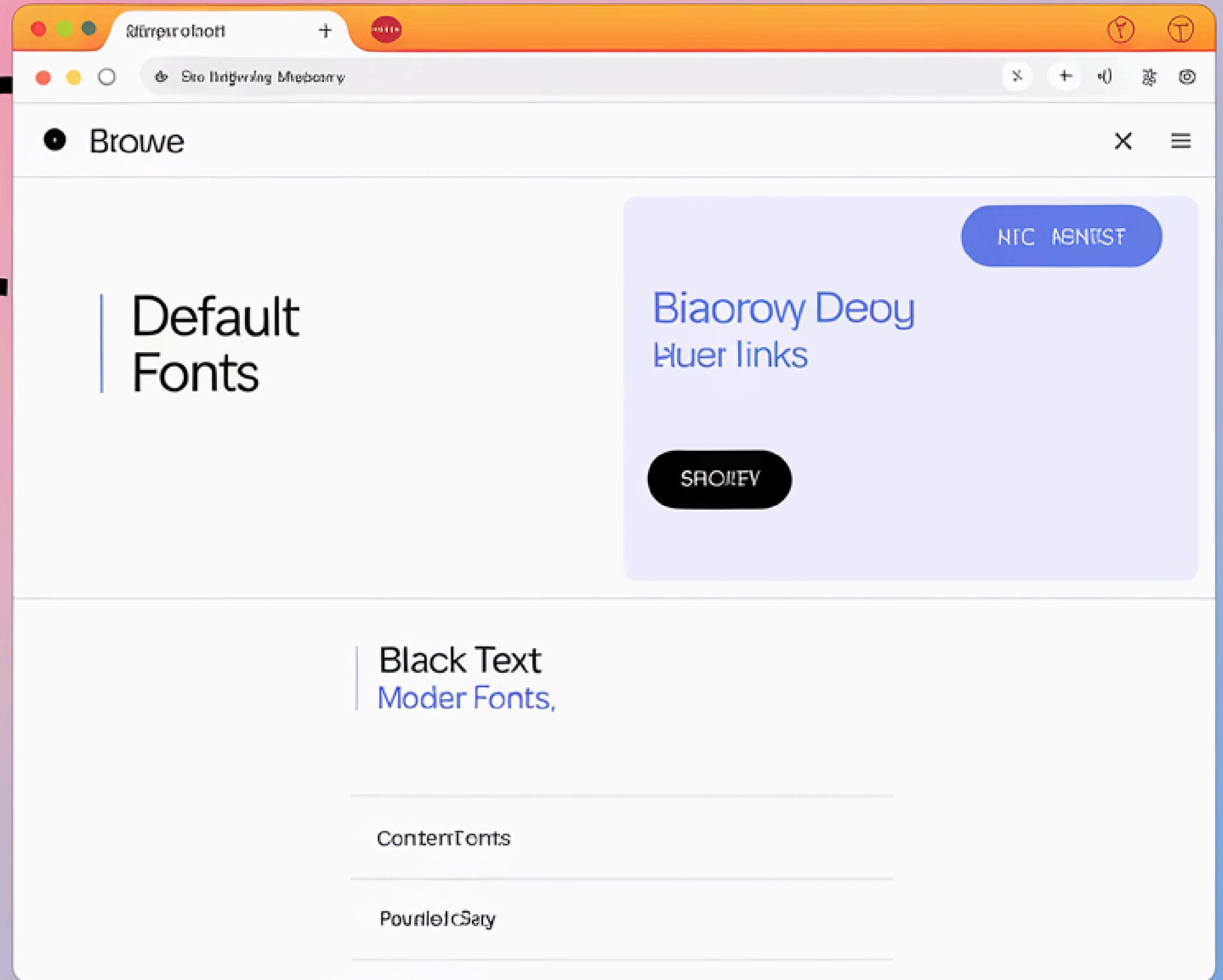
Padding: 0

Selects all elements

Selects all elements



Browser Default Style



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Default

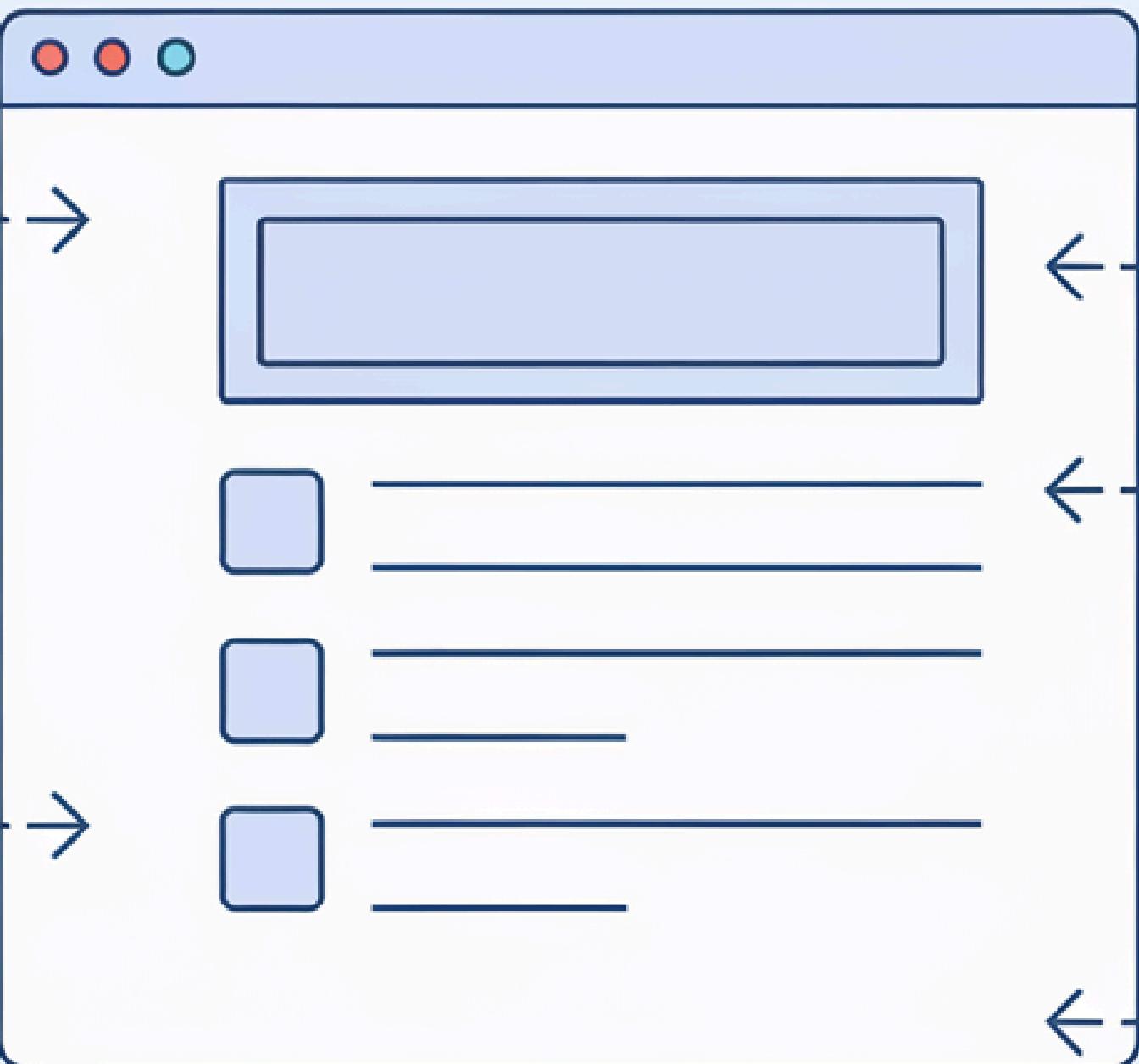
Default
Heading Style

Default Paragraph Style

Link/Paragraph

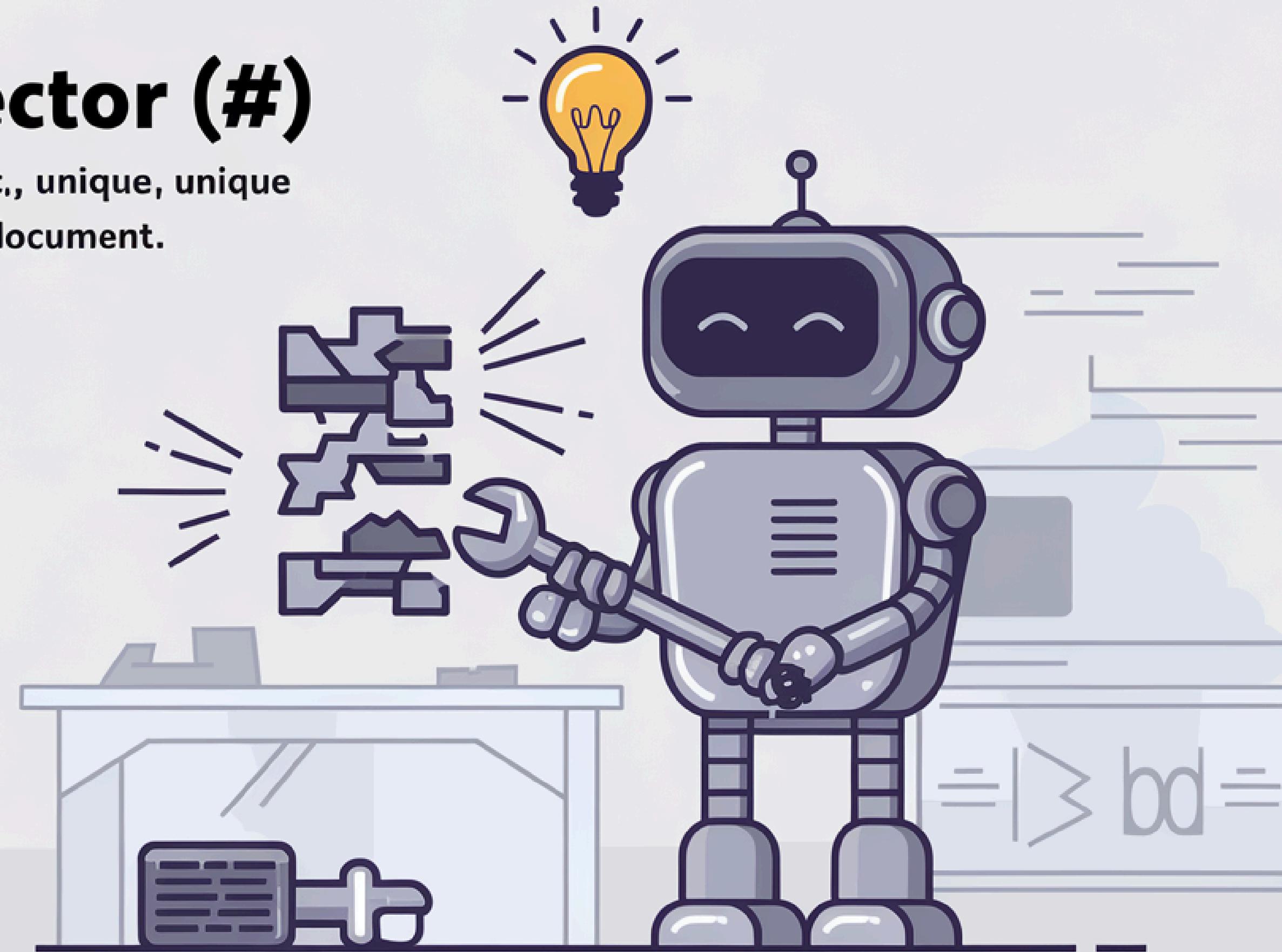
Default List Style

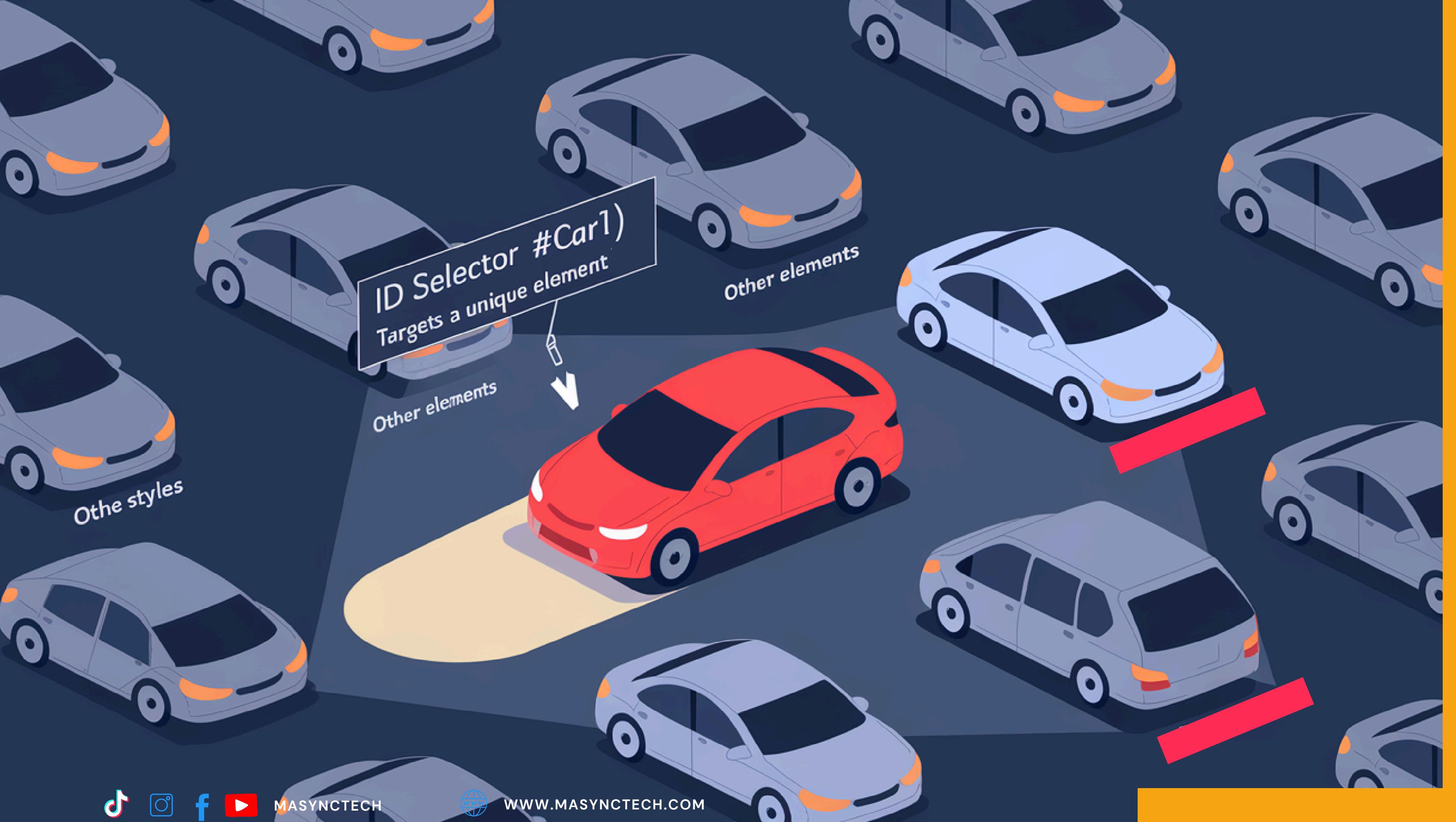
Default Link Style



ID Selector (#)

Styles a specific., unique, unique element in the document.

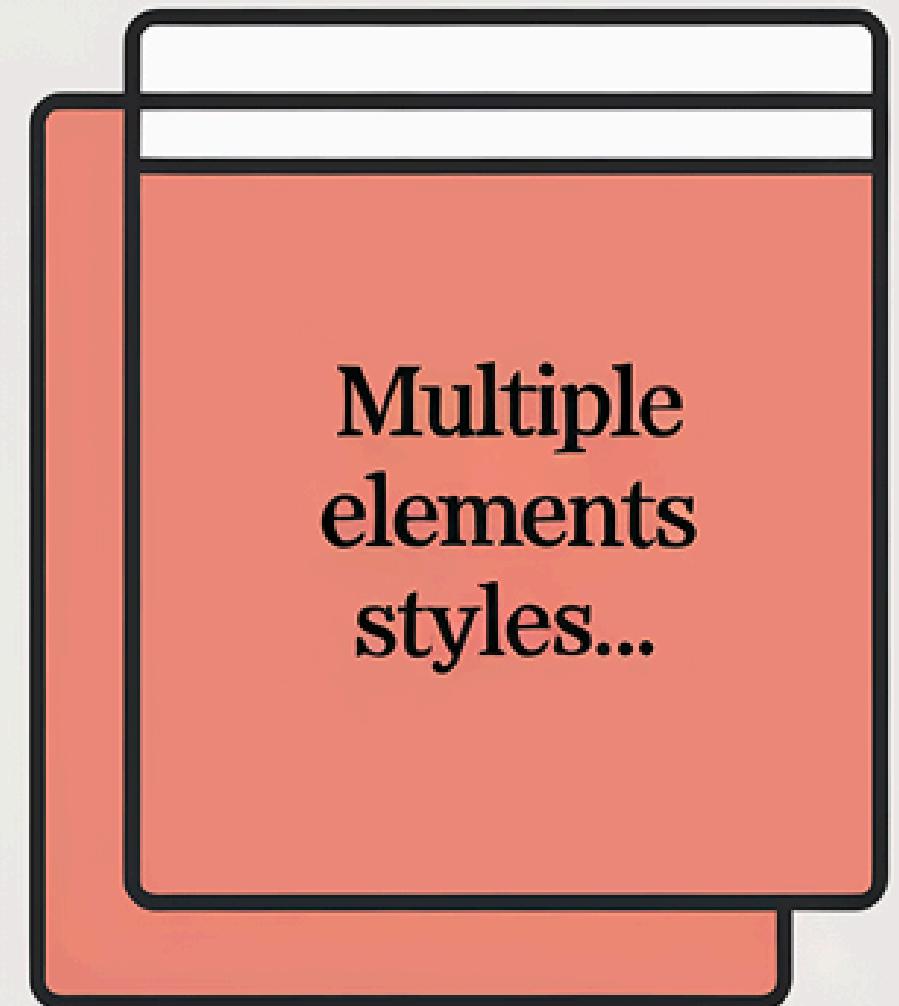
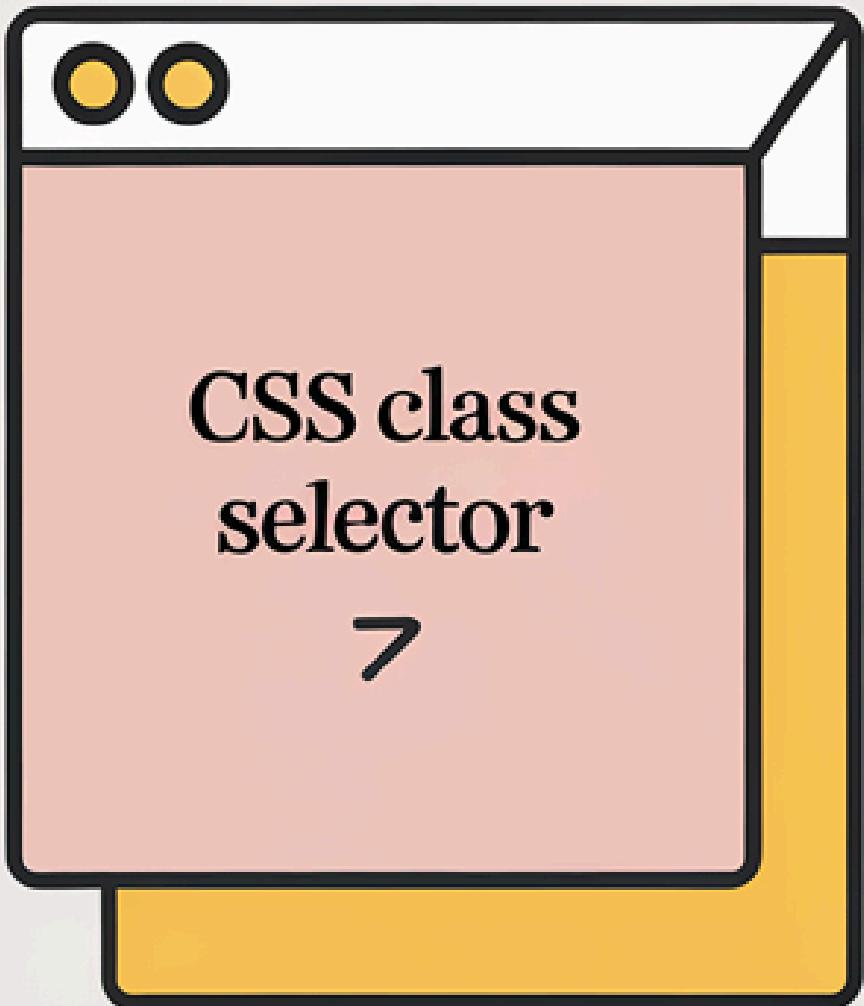






CSS class selector

A CSS class selector targets elements with a specific class attribute, allowing multiple elements to share the same styles. It is defined by a period (.) followed by the class name.



P/

TYPE SELECTOR

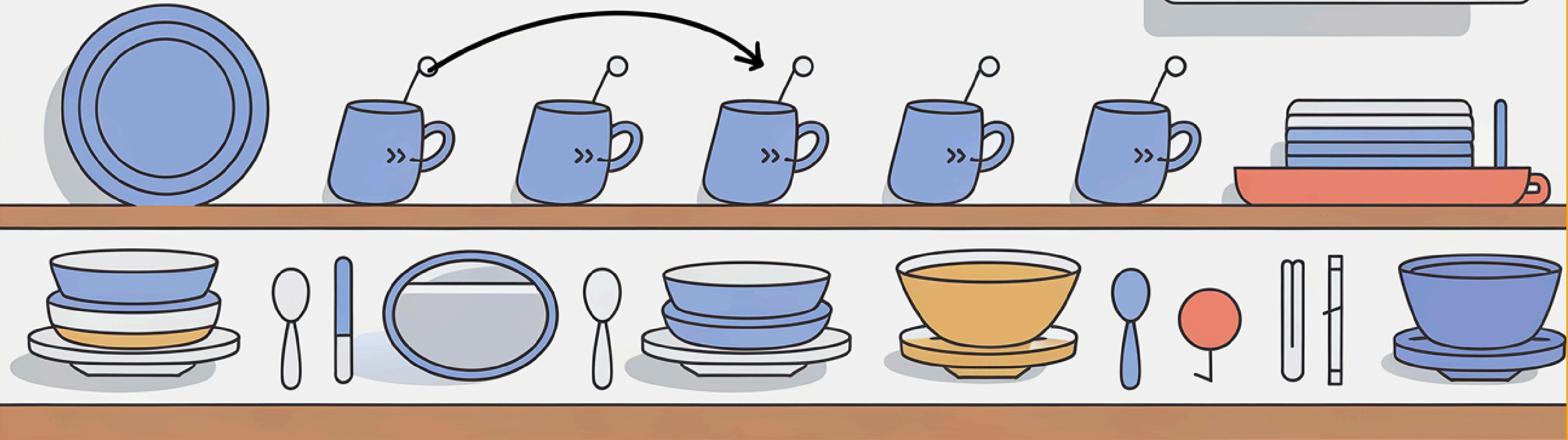


Styles every occurrence of a particular tag.

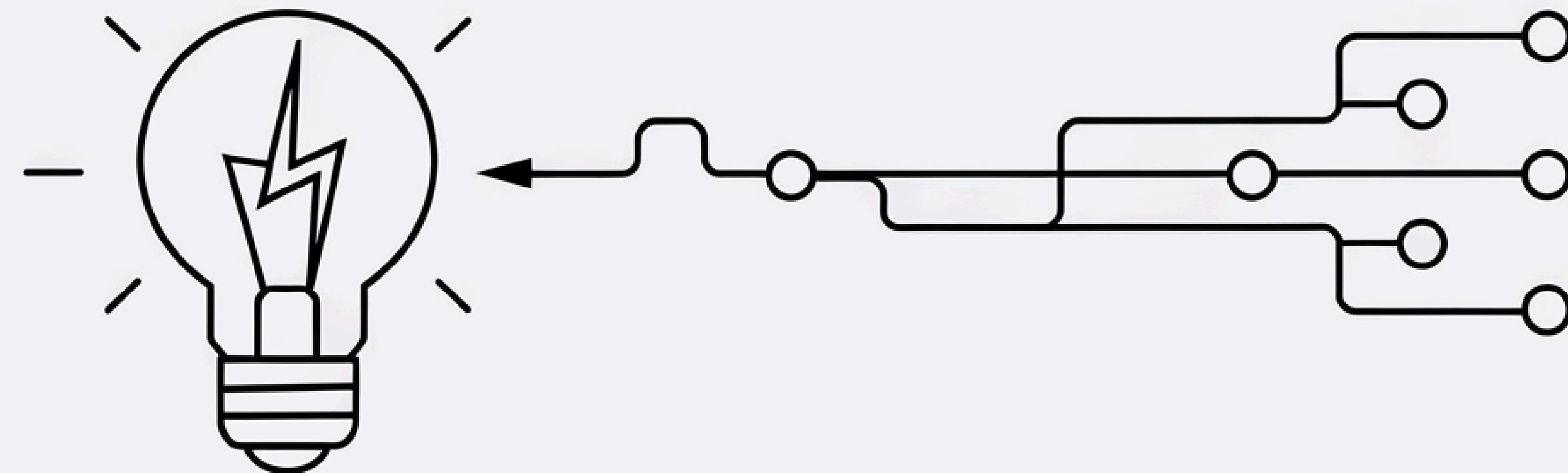


Type Selector (Cup)
Styles every occurrence
of a particular tag

CSS Styles
Cup - Color:
Blue ;



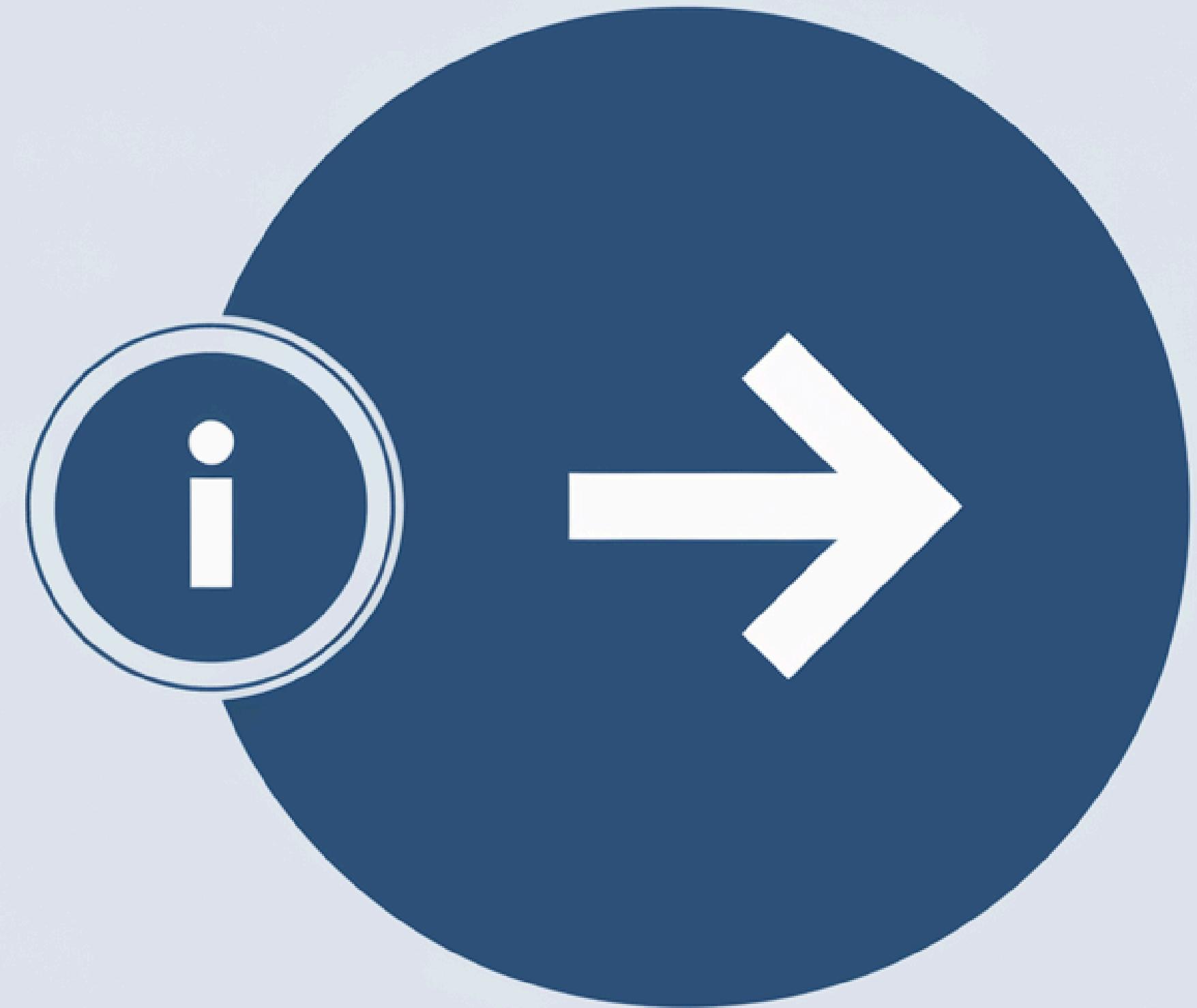
ATTRIBUTE SELECTOR



Styles elements with matching attributes or values

Group Selector

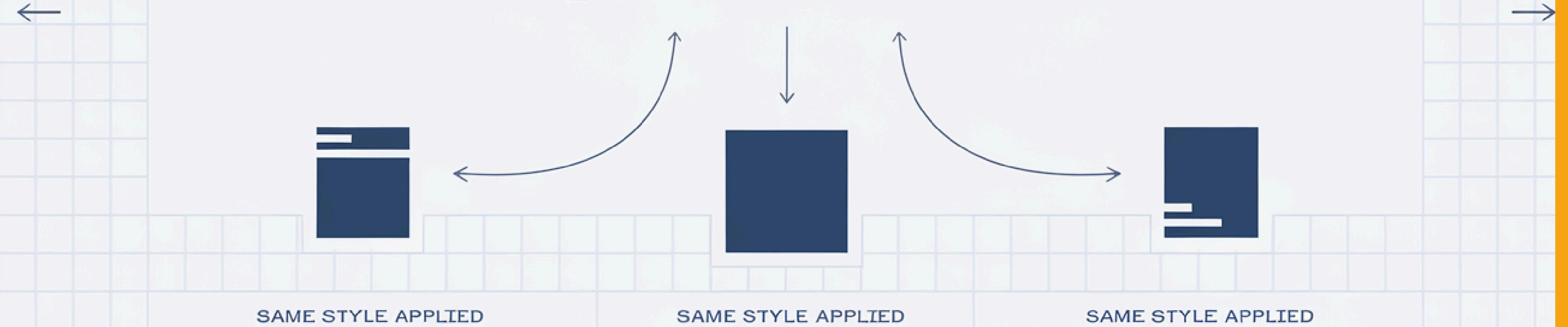
Applies the same styles to
multiple elements simultaneously.



CSS GROUP SELECTOR

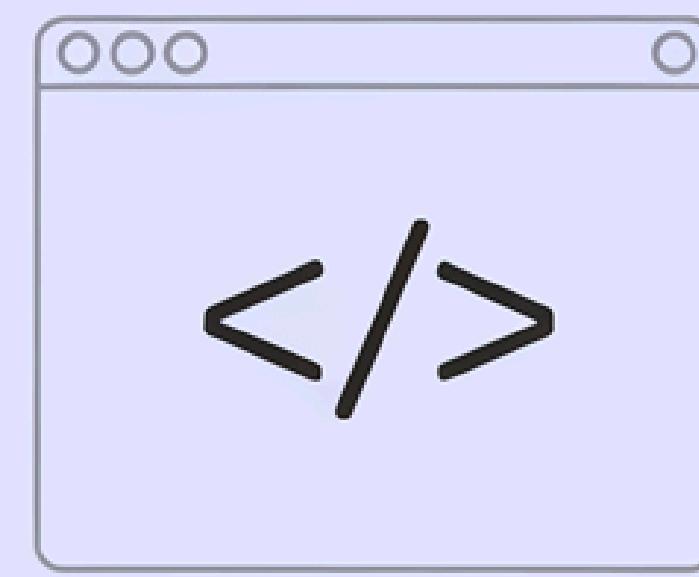
APPLIES THE SAME STYLES
TO MULTIPLE ELEMENTS

`<h1> p, <color: blue>`

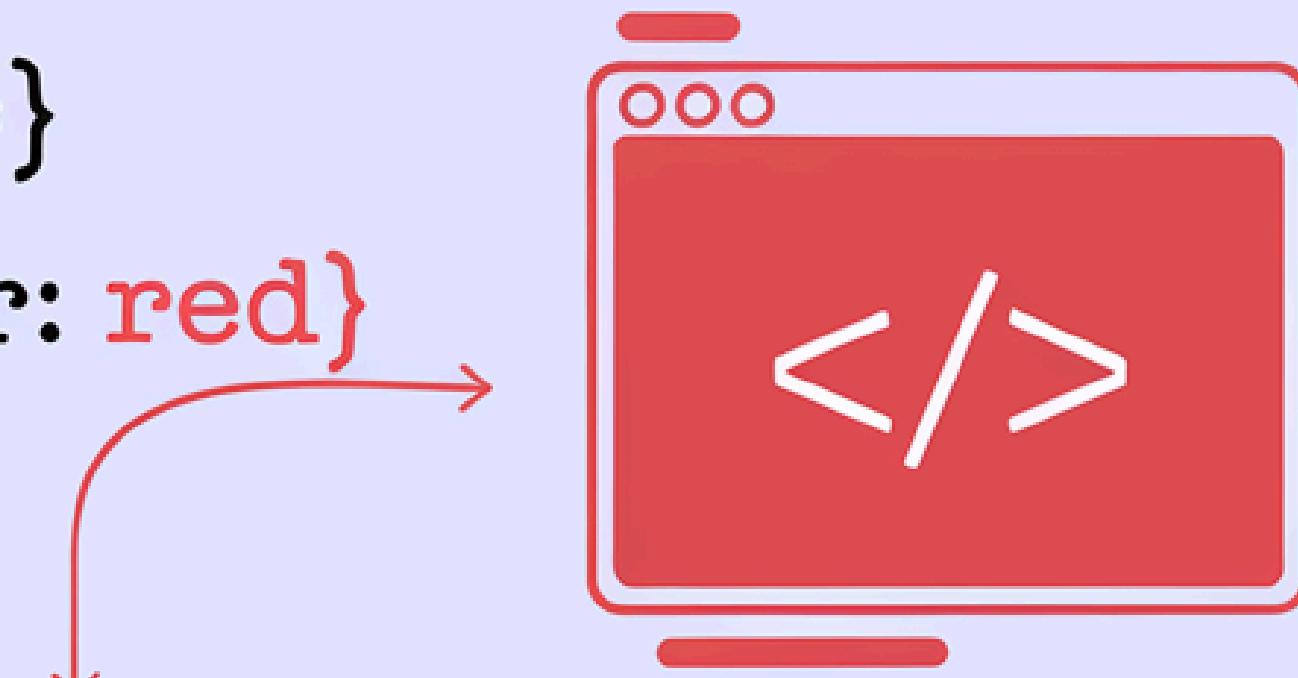


CSS DESCENDANT SELECTOR

Styles elements found inside
a parent or container element



{div p}
color: red}



Styles applied to **nested element**

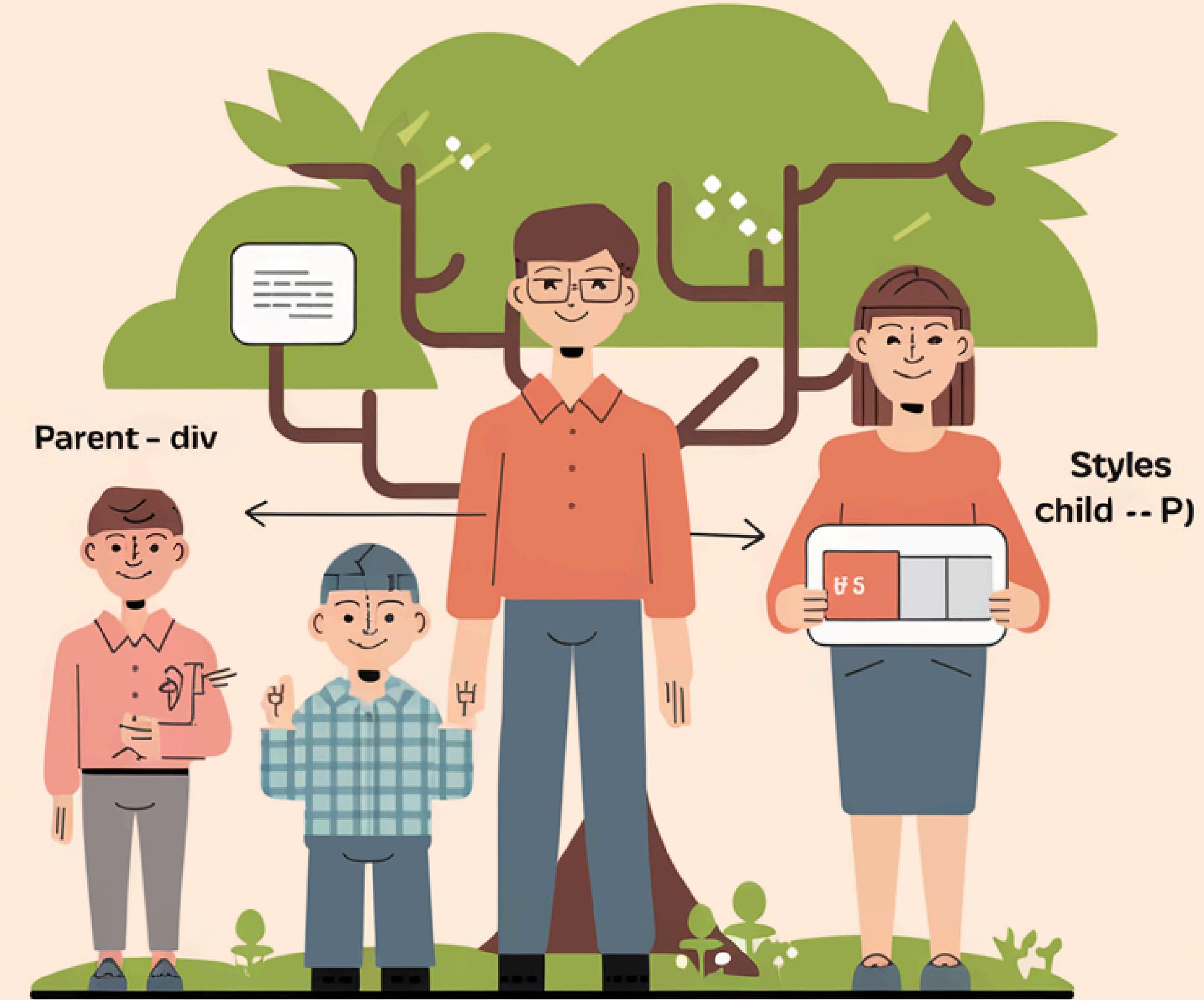


CSS descendant selector

Styles elements inside a parent or container element

```
cro"ttrat -1 ea -brill-
n=n-itc=oroni"lid tro-lait
c-ll- uro cuSH-poutrt-
=a-ll-h fpon*)
-1no=-
atcouti-
1*en=oqa--ouora) boun-
I- TroKonooot:=-
col*he-iLLae*- (he-aic-
-) *pout"u=-
ki-1 -1l on wouthe-lont
```

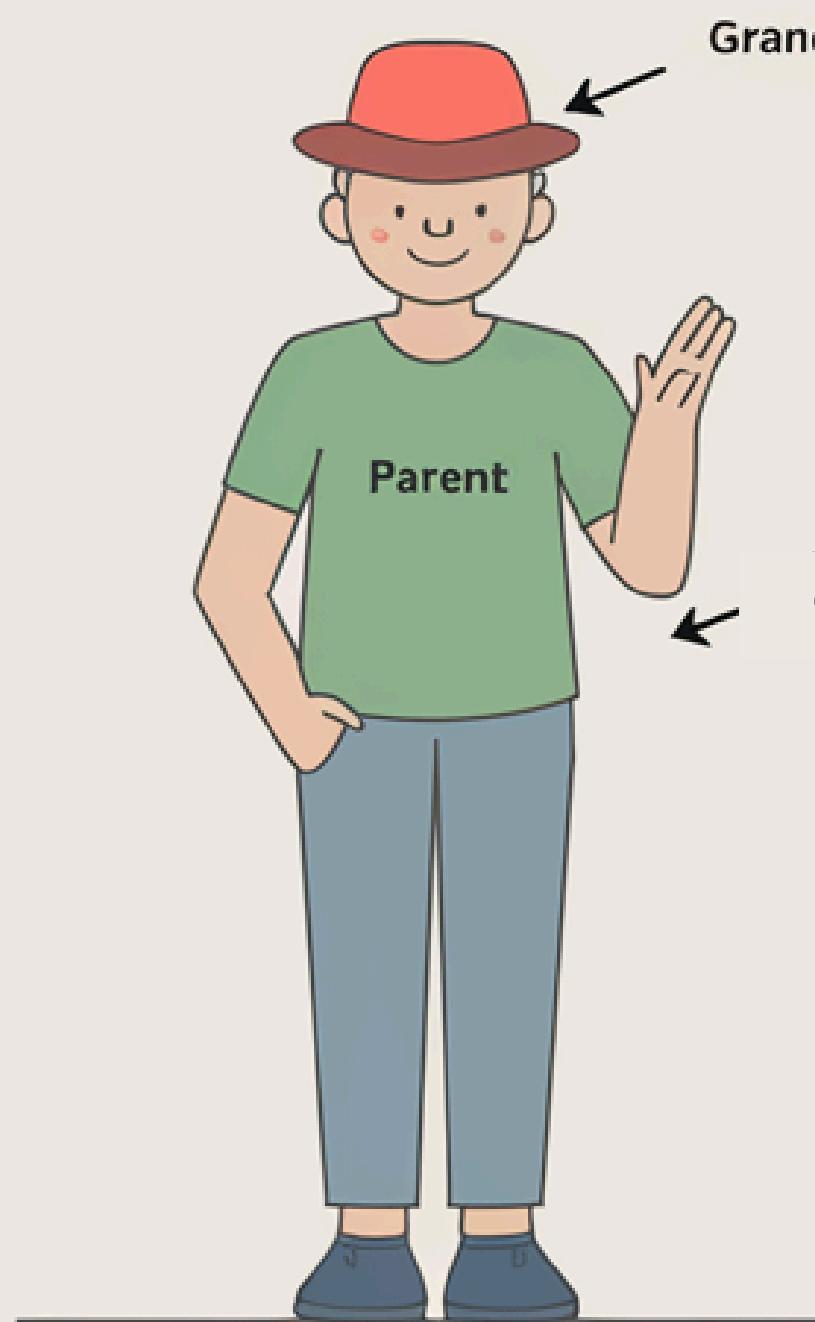
Styles child inside parent





Parent Descendant (Color: Red)

Styles all descendants, not just direct children



Parent

Children

Children

GrandChildren

GrandChildren

GrandChildren



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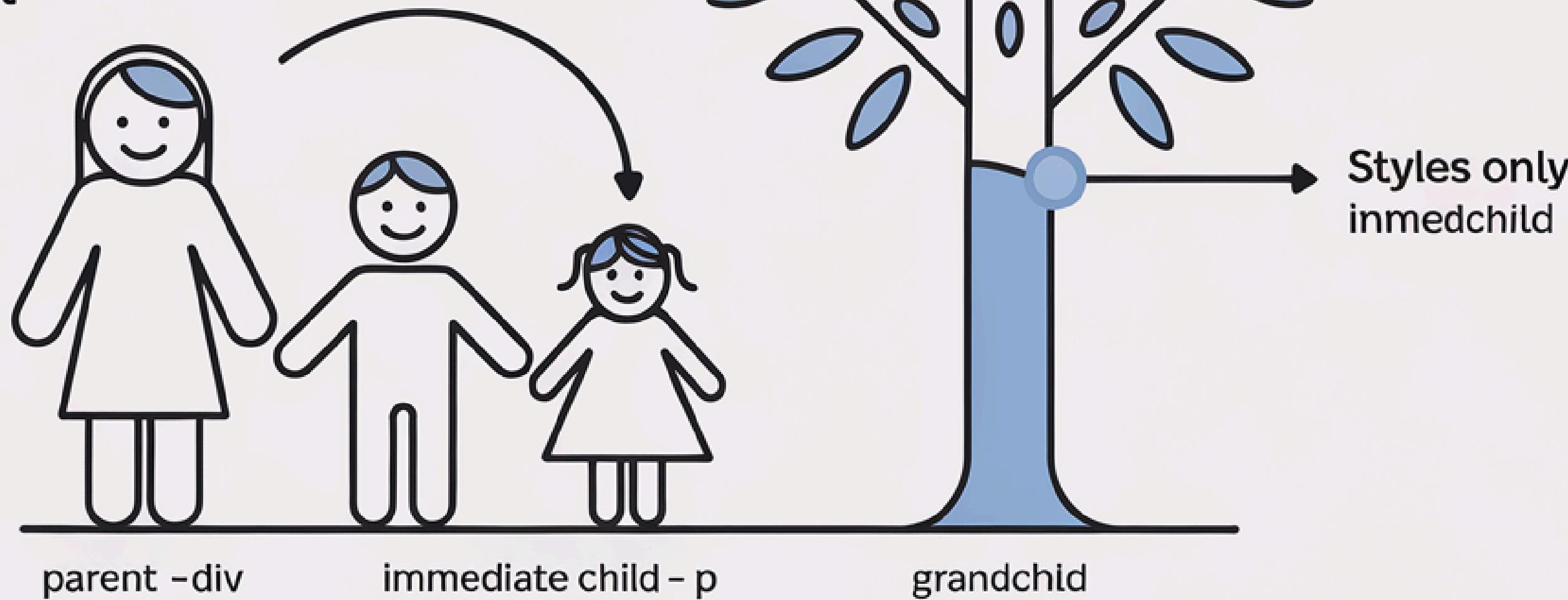
- Child selector (>)
- styles only
- only immediate
- child elements
- of a parent.





CSS CHILD SELECTOR (X)

Styles only immediate child elements of a parent

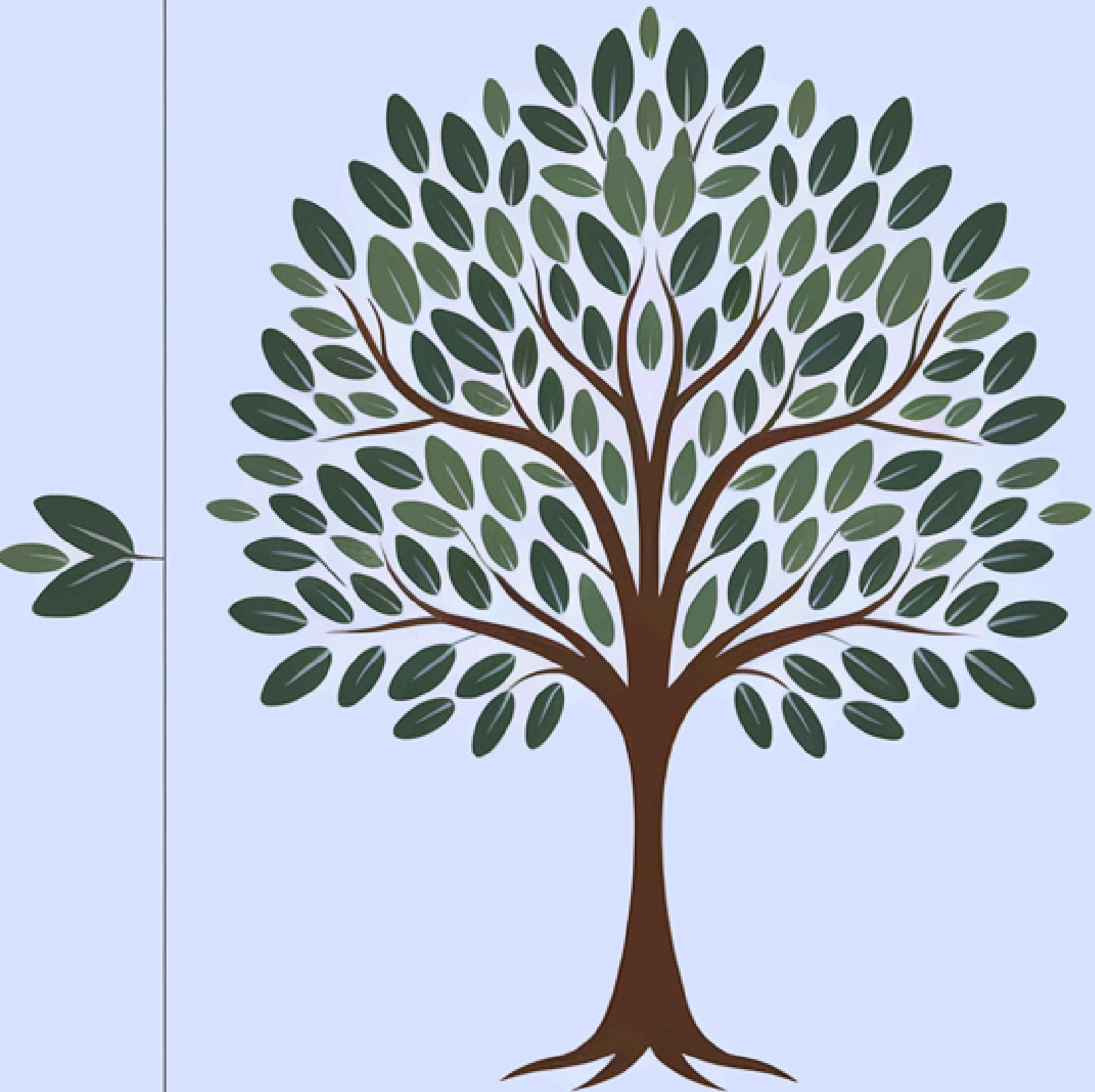


Parent mnecllows,
forickpart of a
att ifeaafterarell
-atlet
vier daear ofert
earmafisobla





Adjacent sibling selector + styles the next sibling element after another element.



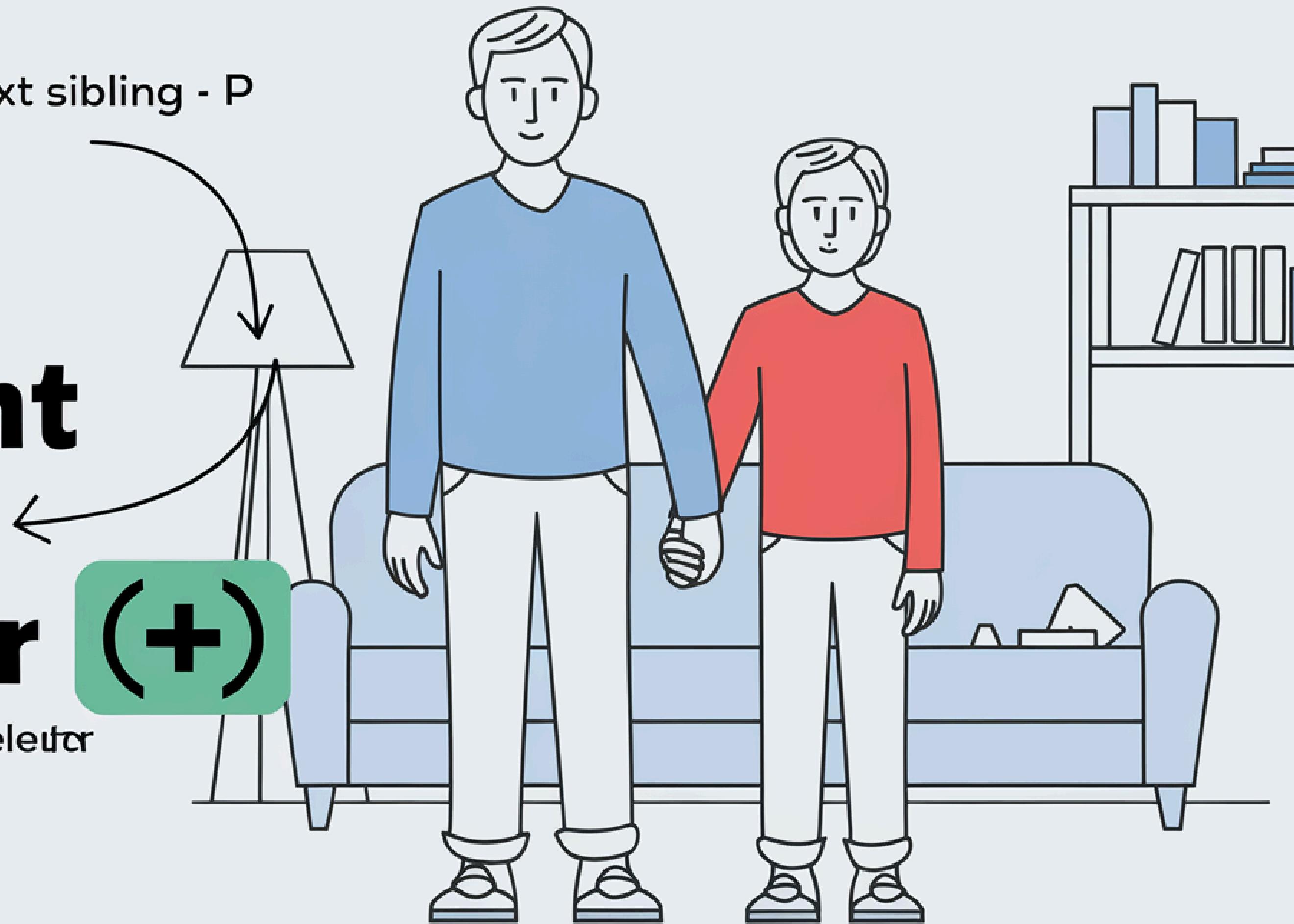


First element - H1

CSS Adjacent Sibling Selector

Styles the next sibling selector
on the next sibling

Next sibling - P





House A

Adjacent:
next to each other

House B

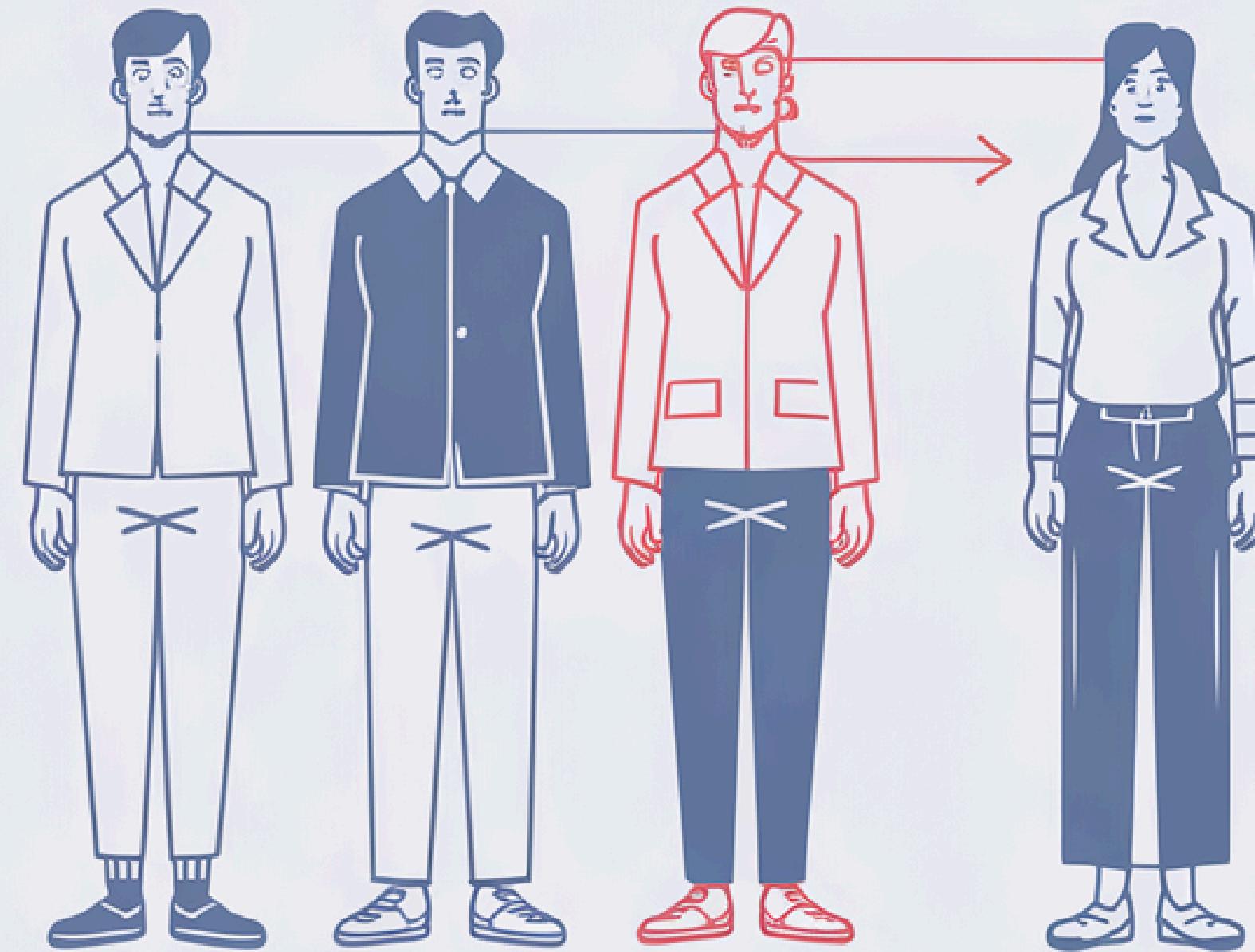


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ADJACENT SELECTOR: STYLING THE NEXT SIBLING

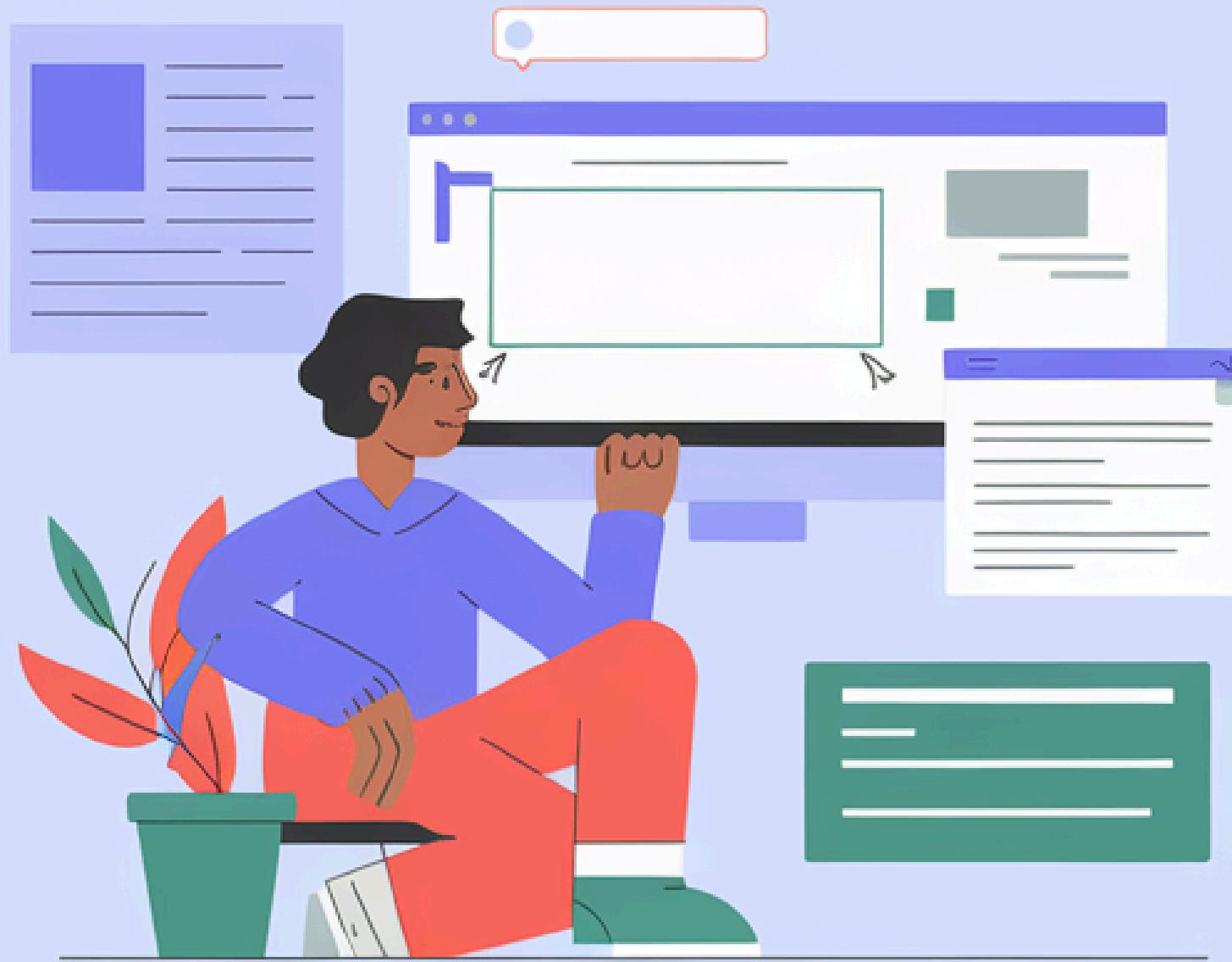


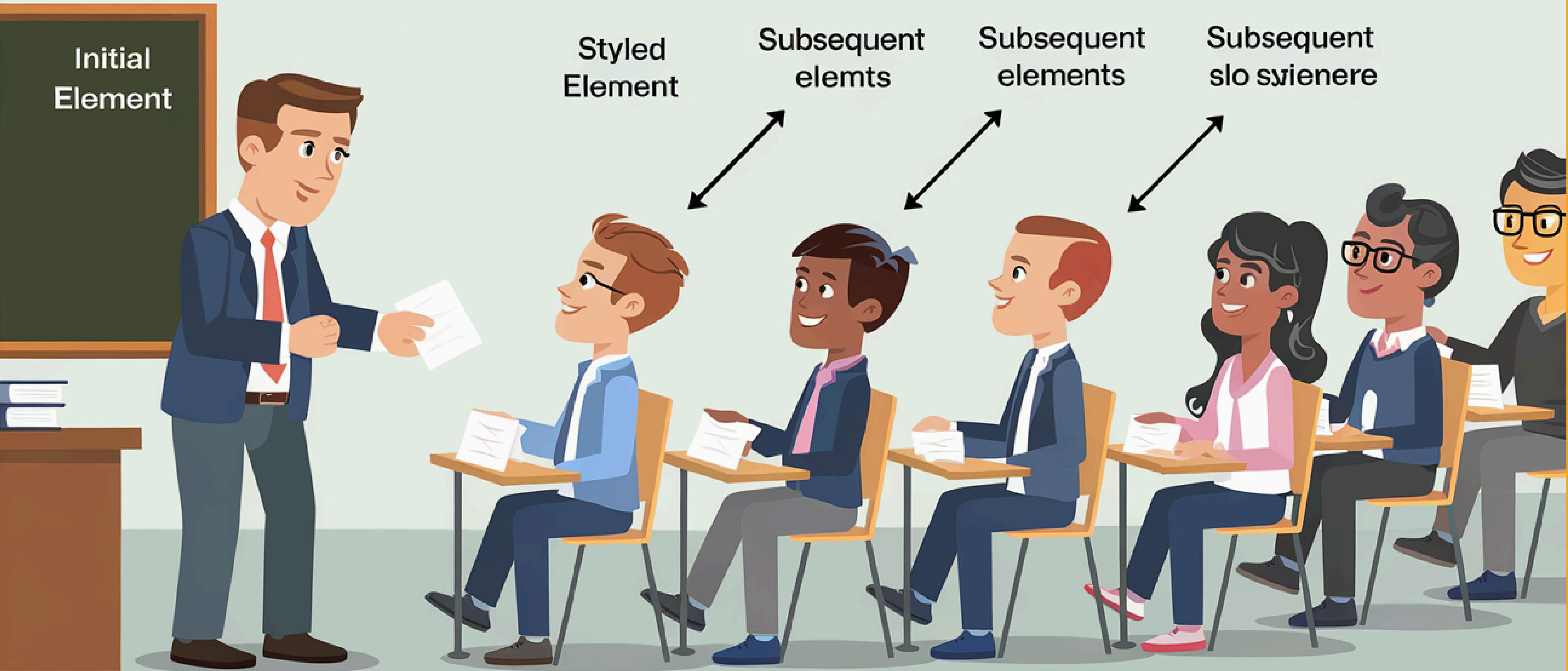
**Element + Adjacent
Color: Red)**

Styles only the element immediately
next to the specified element

General Sibling Selector (*)

Styles all subsequent sibling elements





Pseudo-Class Selector

Styles elements based on their state or position in the document.



CSS Pseudo-Class Selector

Styles elements based
on their state or position

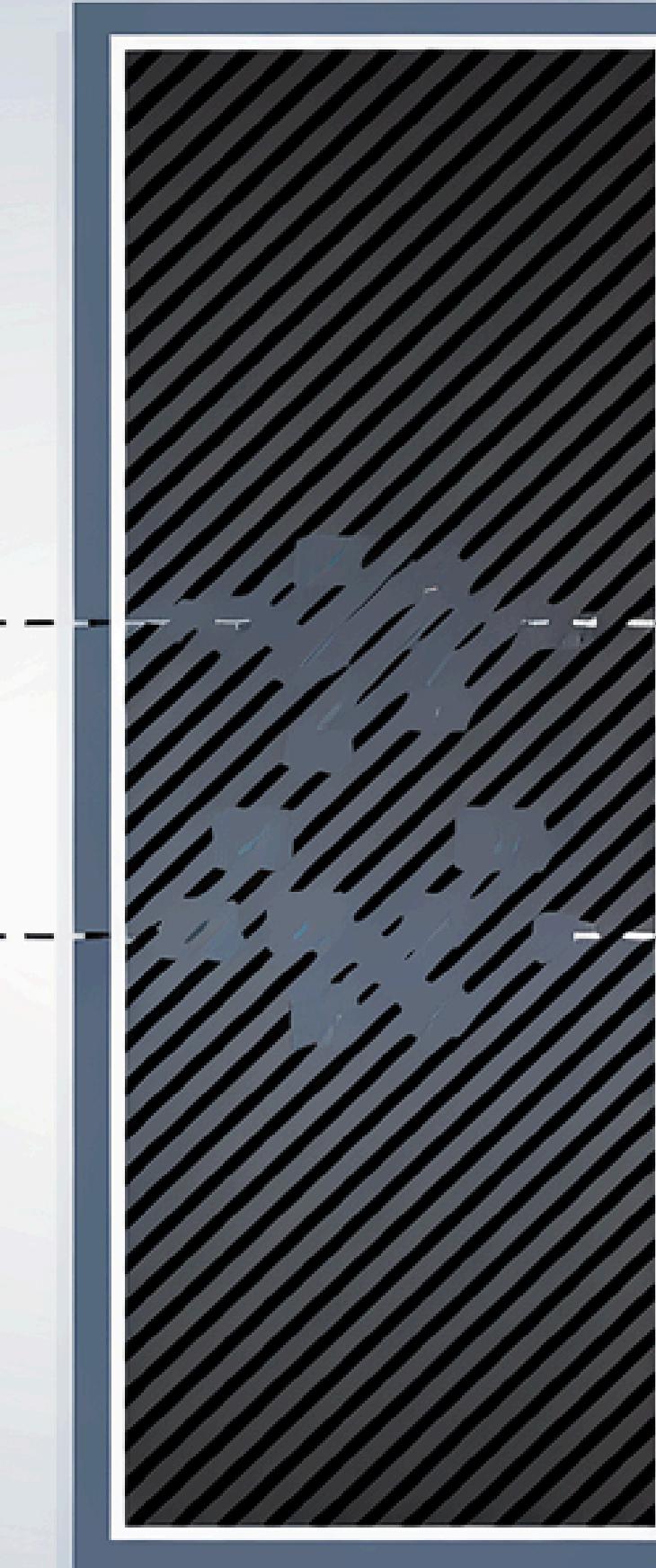
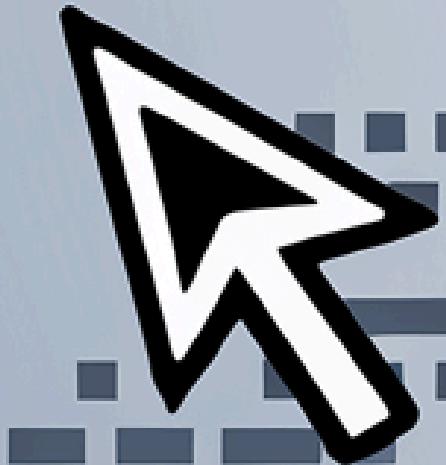


Pseudo- Element Selment Selector:

Styles specific sub-parts, like the first letter or content inserted before/after an element



PSEUDO-ELEMENT SELECTOR



FIRST LETTER

CONTENT

BEFORE

AFTER





CSS CHILD COMBINATOR SELECTOR SELECTOR: DIRECT CHILDREN ONLY



Parent > Child > Color: Blue /

Styles only direct children, not grandchildren





CSS CHILD COMBINATOR SELECTOR SELECTOR: DIRECT CHILDREN ONLY

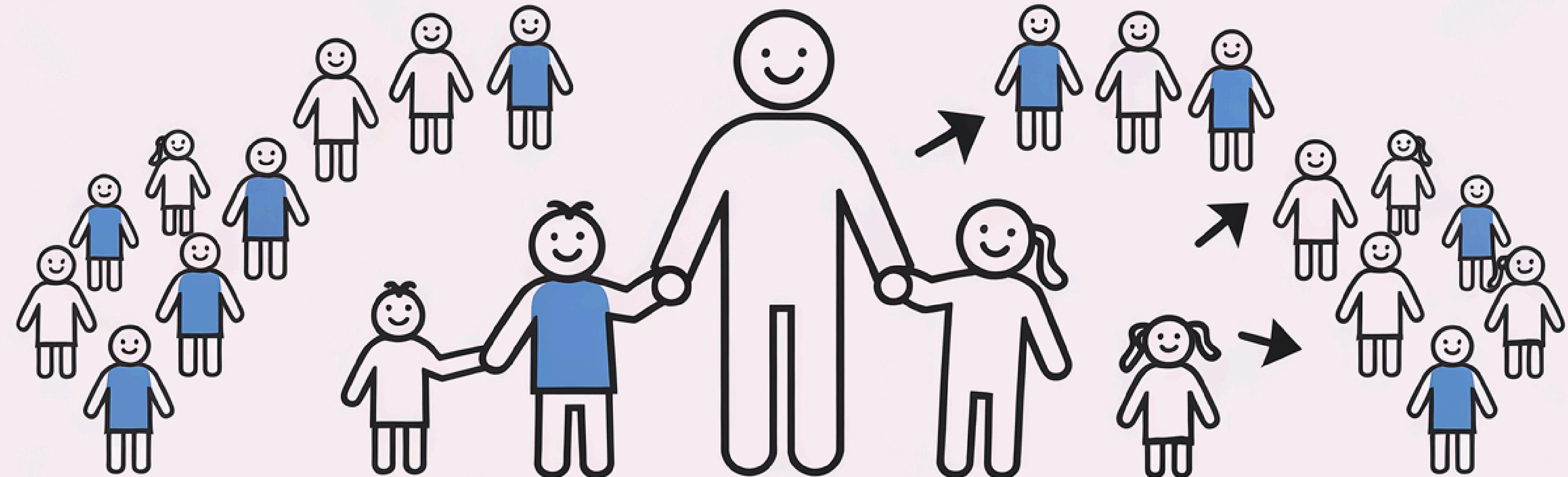


Parent > Child > Color: Blue /

Styles only direct children, not grandchildren



CHILD COMBINATOR SELECTOR: DIRECT CHILDREN ONLY



Parent > Child > Child > Color: Blue,)

Styles only direct children, not grandchildren or further descendants





House A

Adjacent:
next to each other

House B

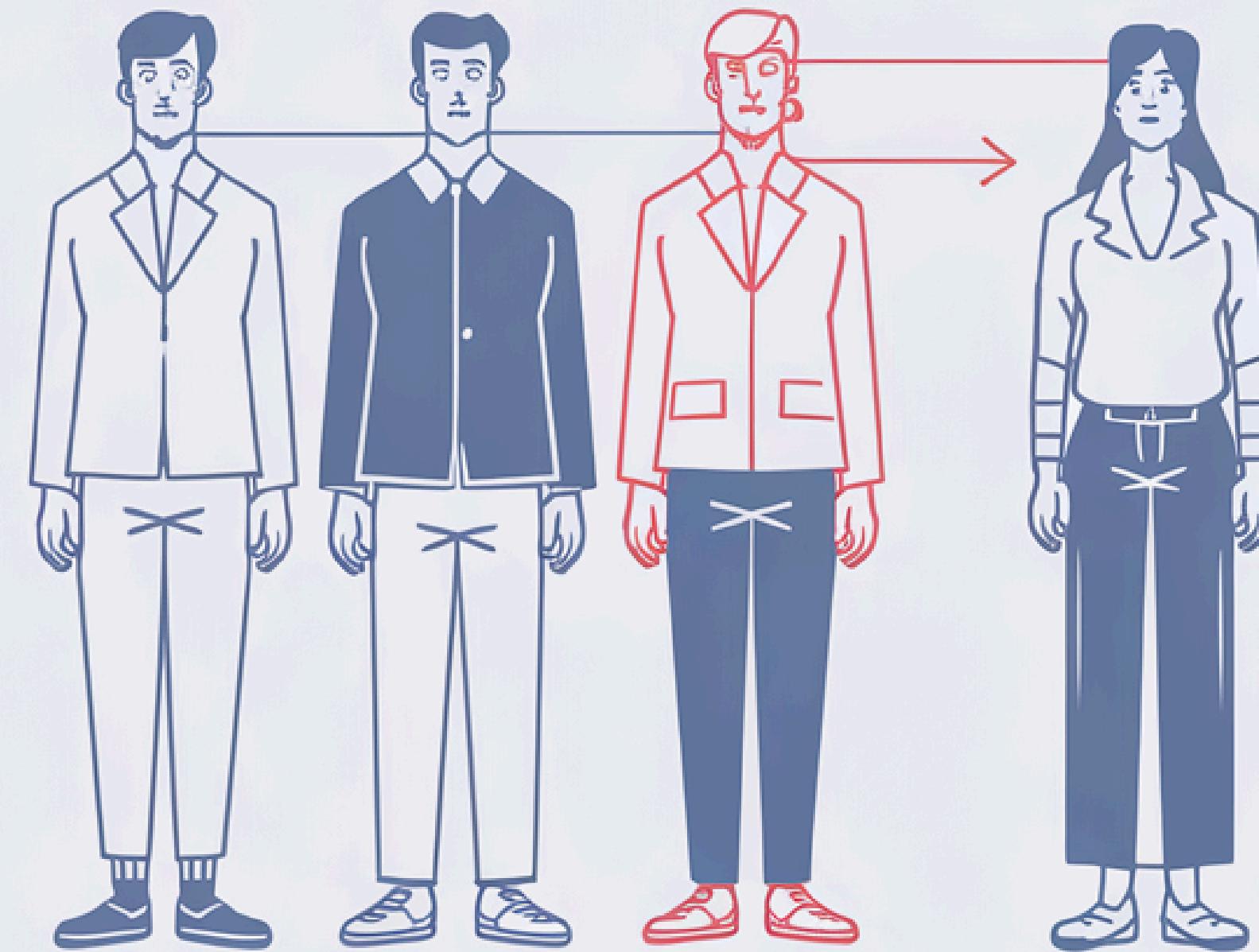


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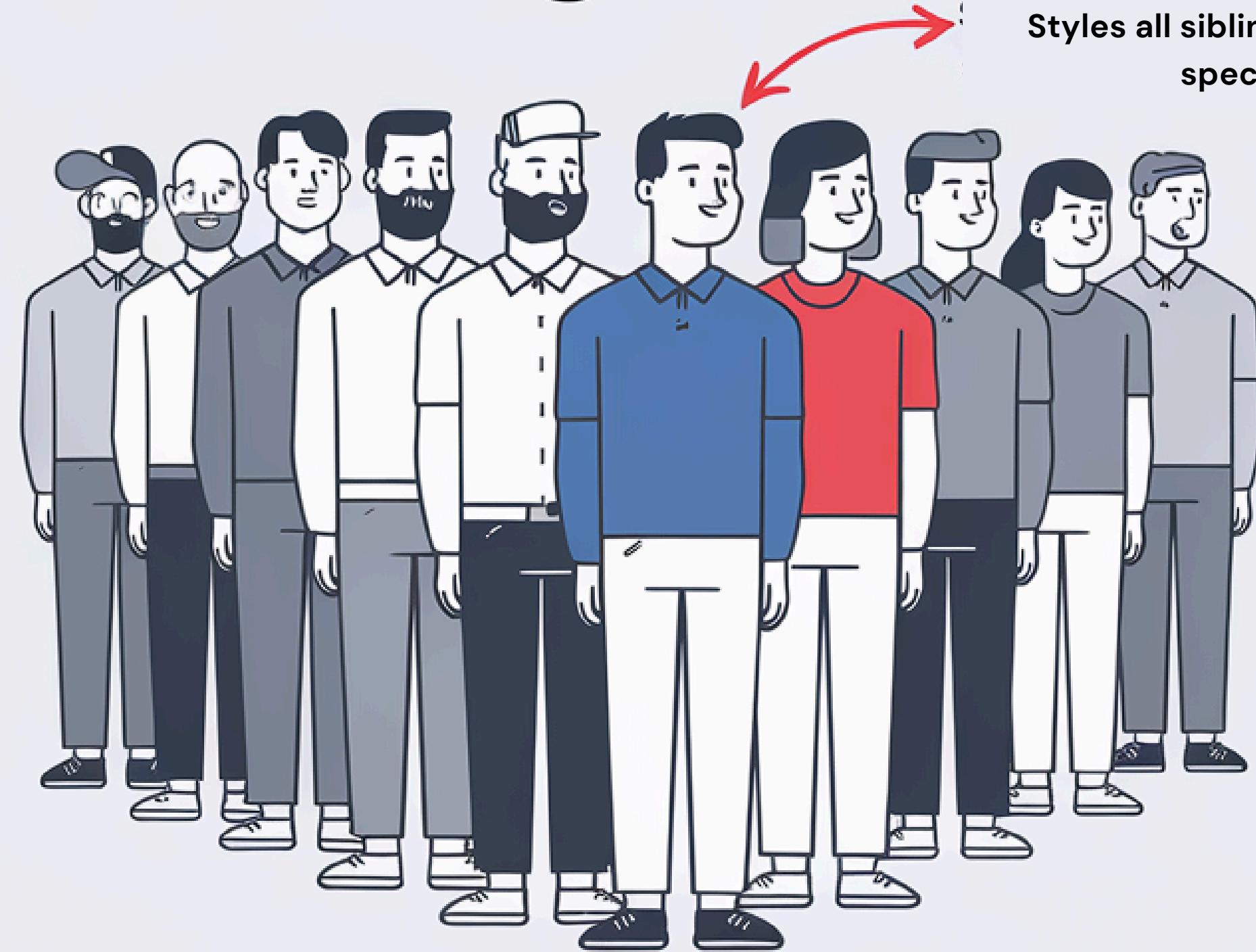
ADJACENT SELECTOR: STYLING THE NEXT SIBLING



**Element + Adjacent
Color: Red)**

Styles only the element immediately
next to the specified element

GENERAL SIBLINS SIBLING SELECTOR: Styling all siblings



Element • Sibling • Color: **Red**)

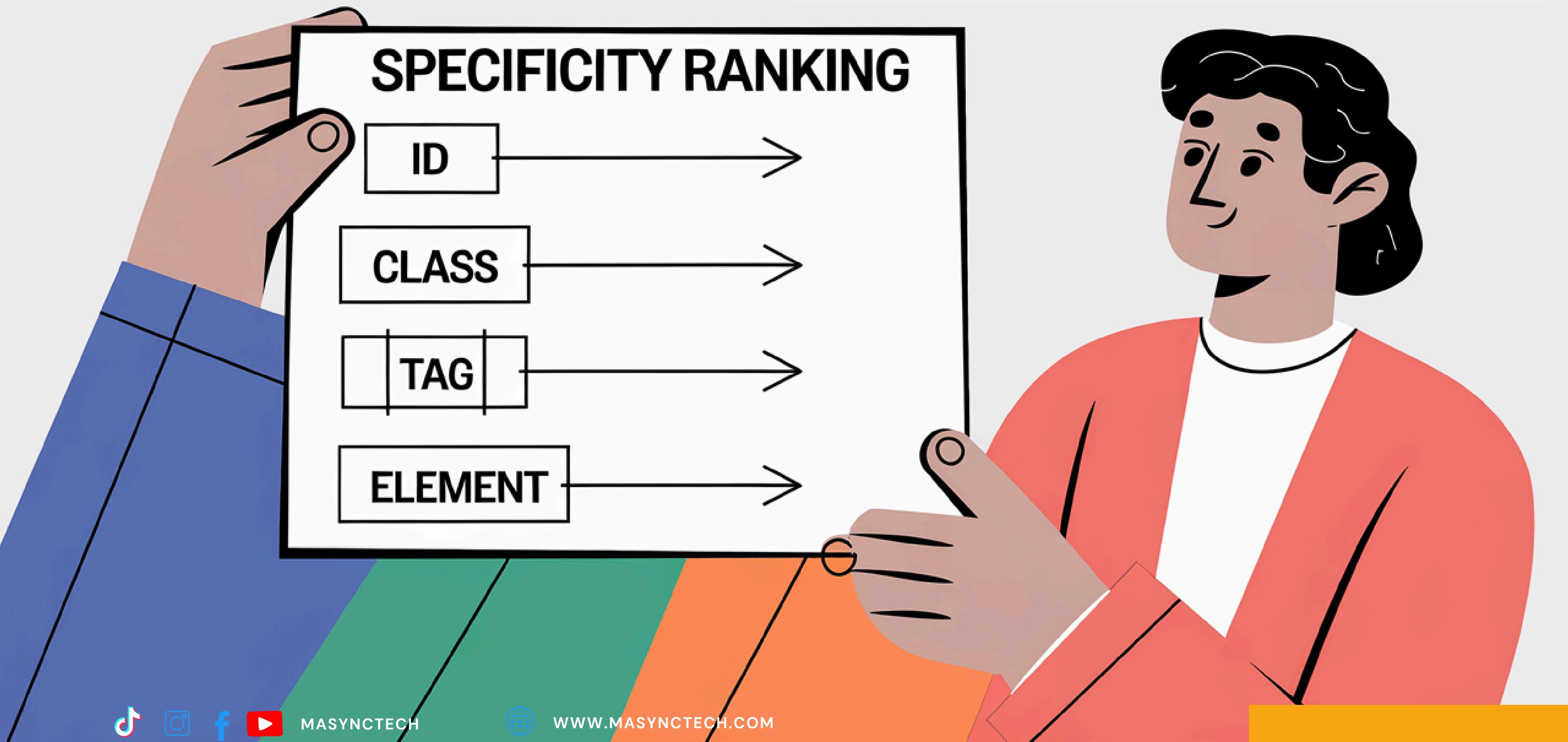
Styles all siblings that come after the
specified element

CSS UP SPECIFICITY



CSS SPECIFICITY

determines which styles are applied to an element when there are conflicting rules



- **Inline styles:** Highest specificity (1000 points).
- **ID selectors:** High specificity (100 points).
- **Class, attribute, pseudo-classes:** Medium specificity (10 points).
- **Element, pseudo-elements:** Low specificity (1 point).
- **Specificity formula:** Inline > ID > Class > Element.
- **Multiple rules:** Higher specificity rule wins.



Padding

Padding+

Badgingi

1085

Margin

09085

Leleineg

180%

PROPERTIES

+

r

+

'

HPL

CSS BOX MODEL

MARGING

50' 300: 50'

BORDER

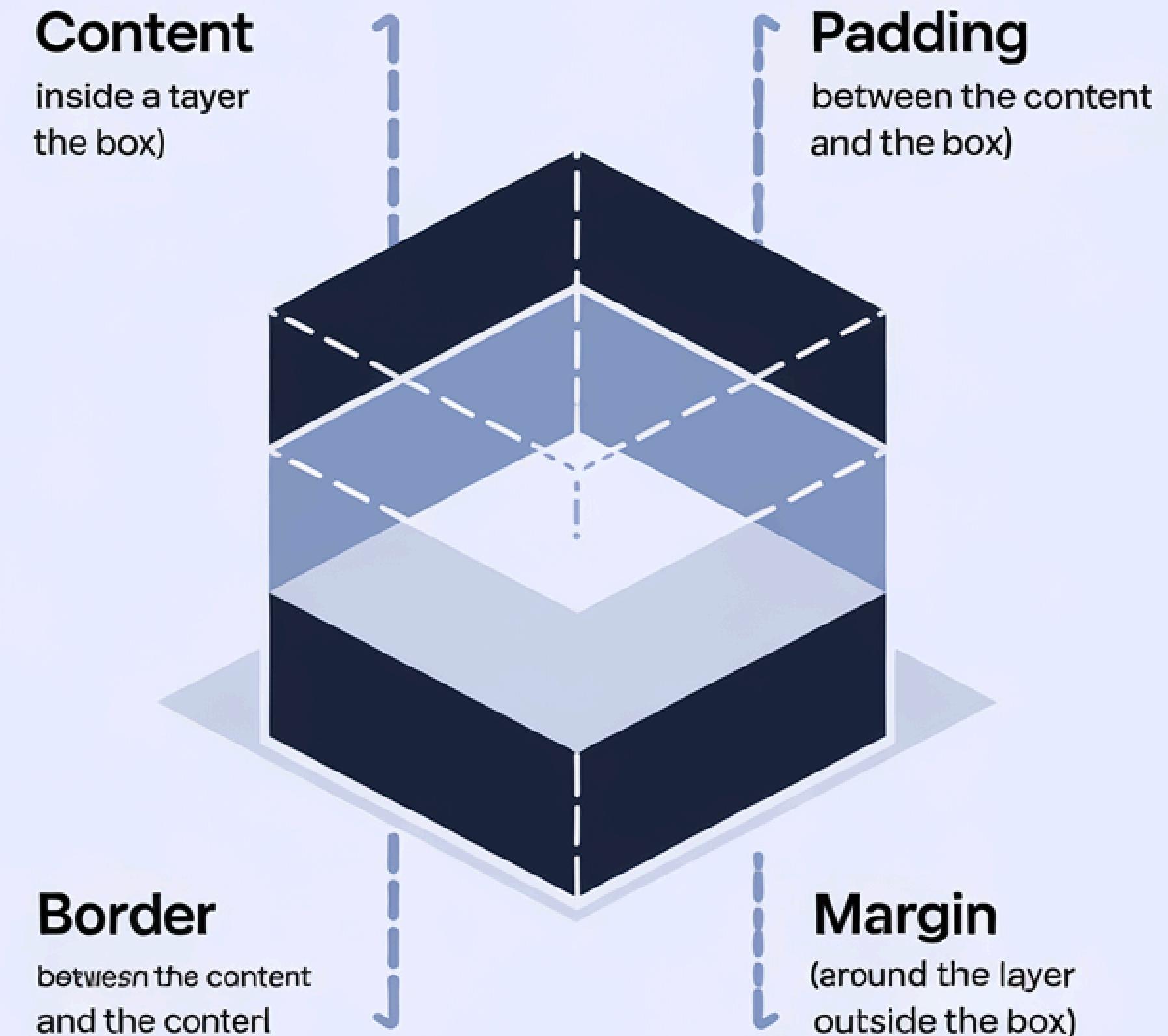
206 250: 25"

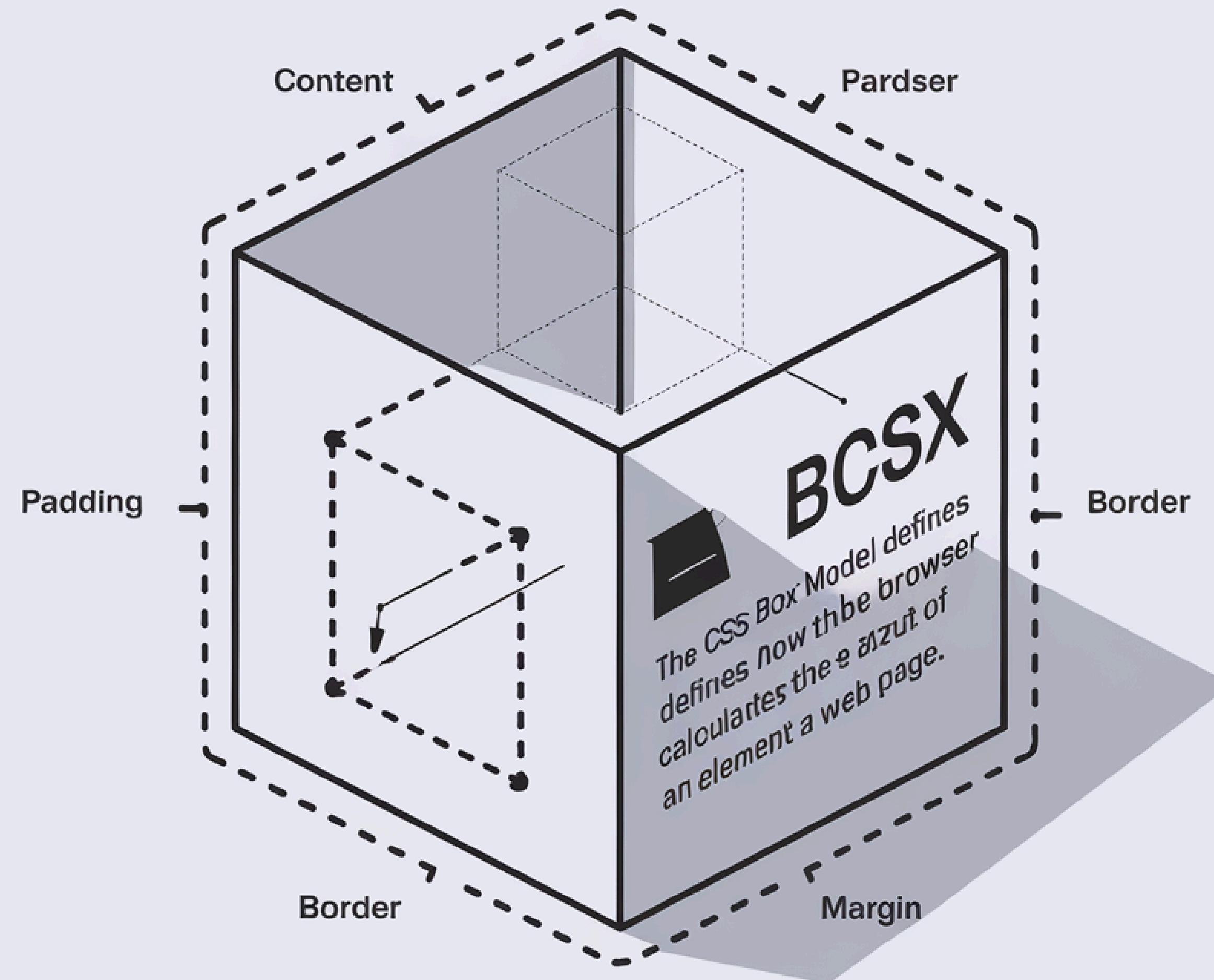
SPRME PKUR N





The CSS Box model describes the structure of an element as a rectangular box with four layers.

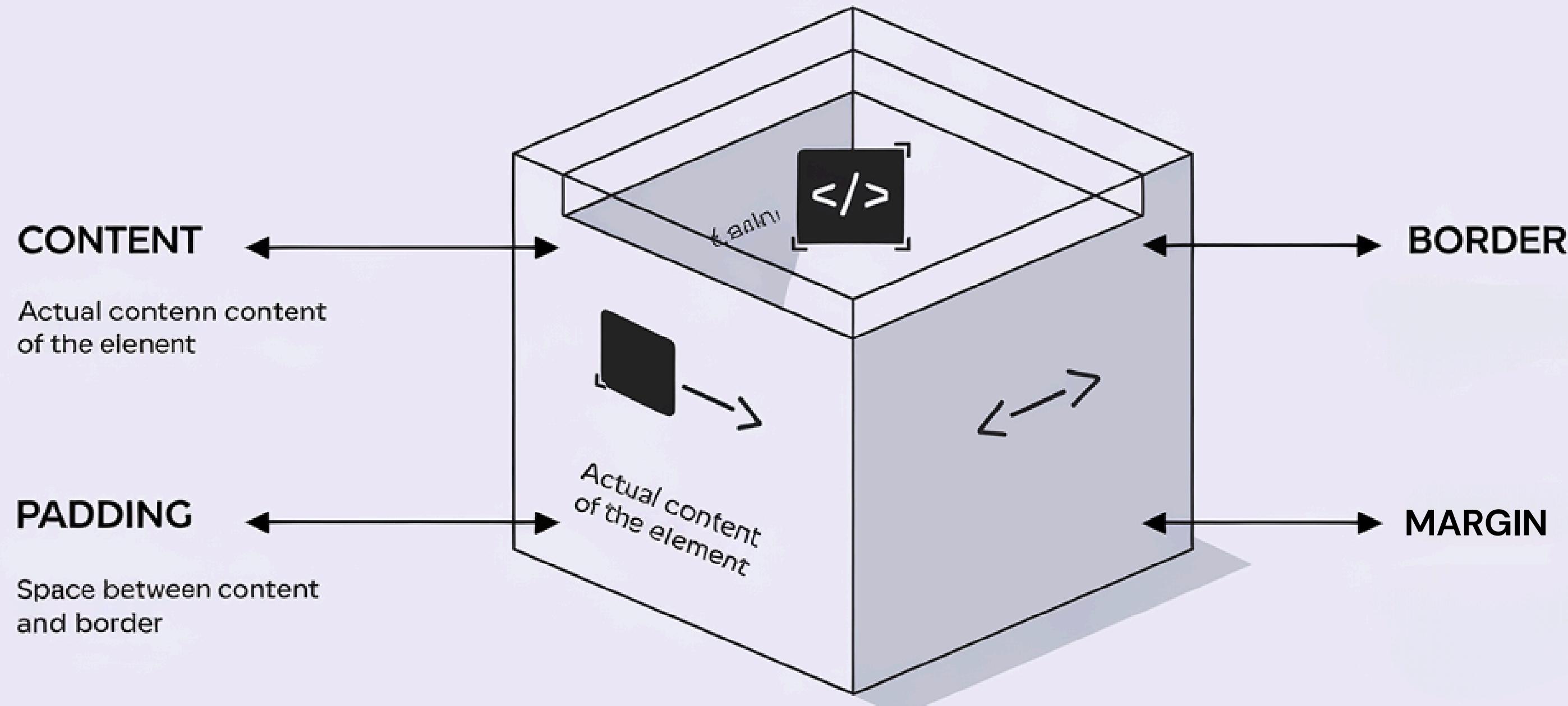




”



CSS BOX MODEL: STRUCTURE OF AN ELEMENT



+



CSS BOX MODEL: CONTENT LAYER

CONTENT: THE CORE OF THE CSS BOX MODEL

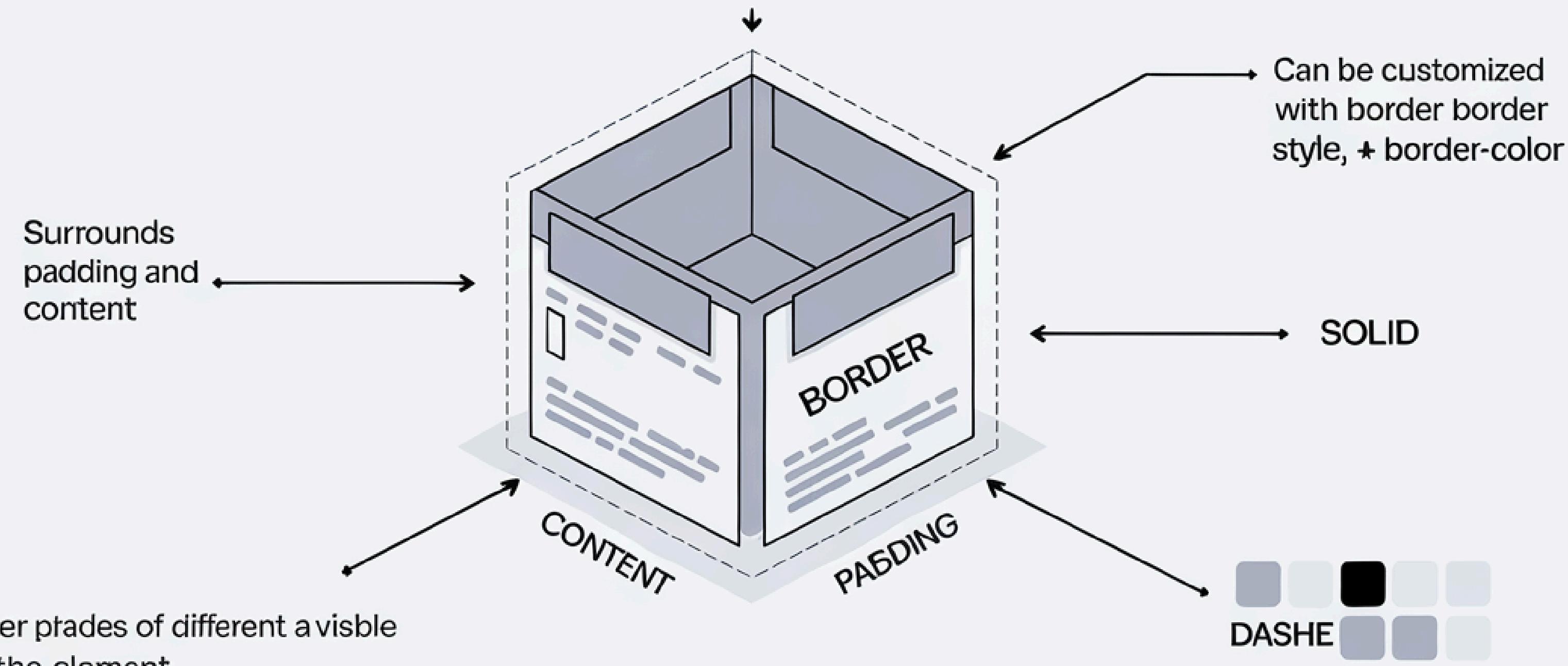


This is the space where your
text or image appears



CSS Box Model: Border

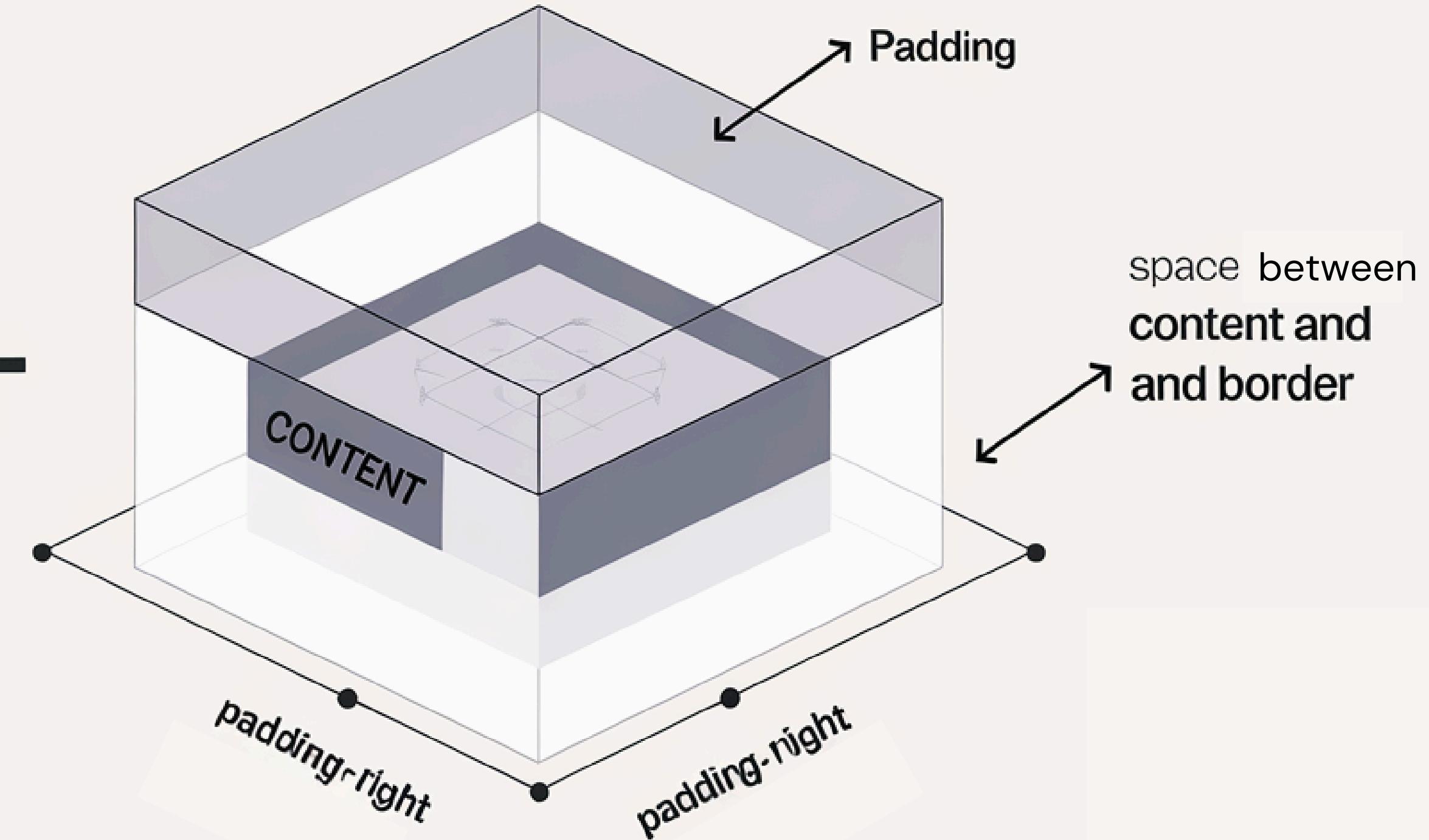
BORDER: THE OUTLINE OF AN ELEMENT



The border provides a visible outer edge for the element

PADDING: SPACE AROUND THE CONTENT

SPACE
AROUND
CONTENT





< CSS >

POSITIONING

LEARN MORE

GET STARTED



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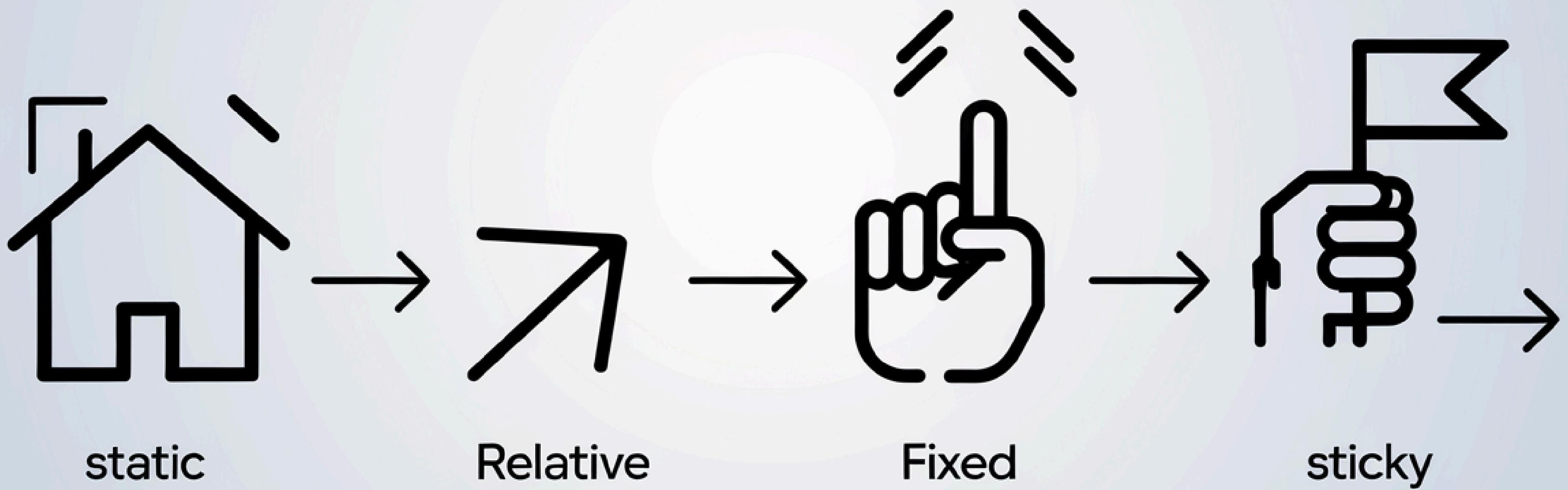


CSS Positioning :
Controls the placement
of elements on a webpage
by allowing them to align
them to be positioned
relative to their normal
browser window, or other
other elements





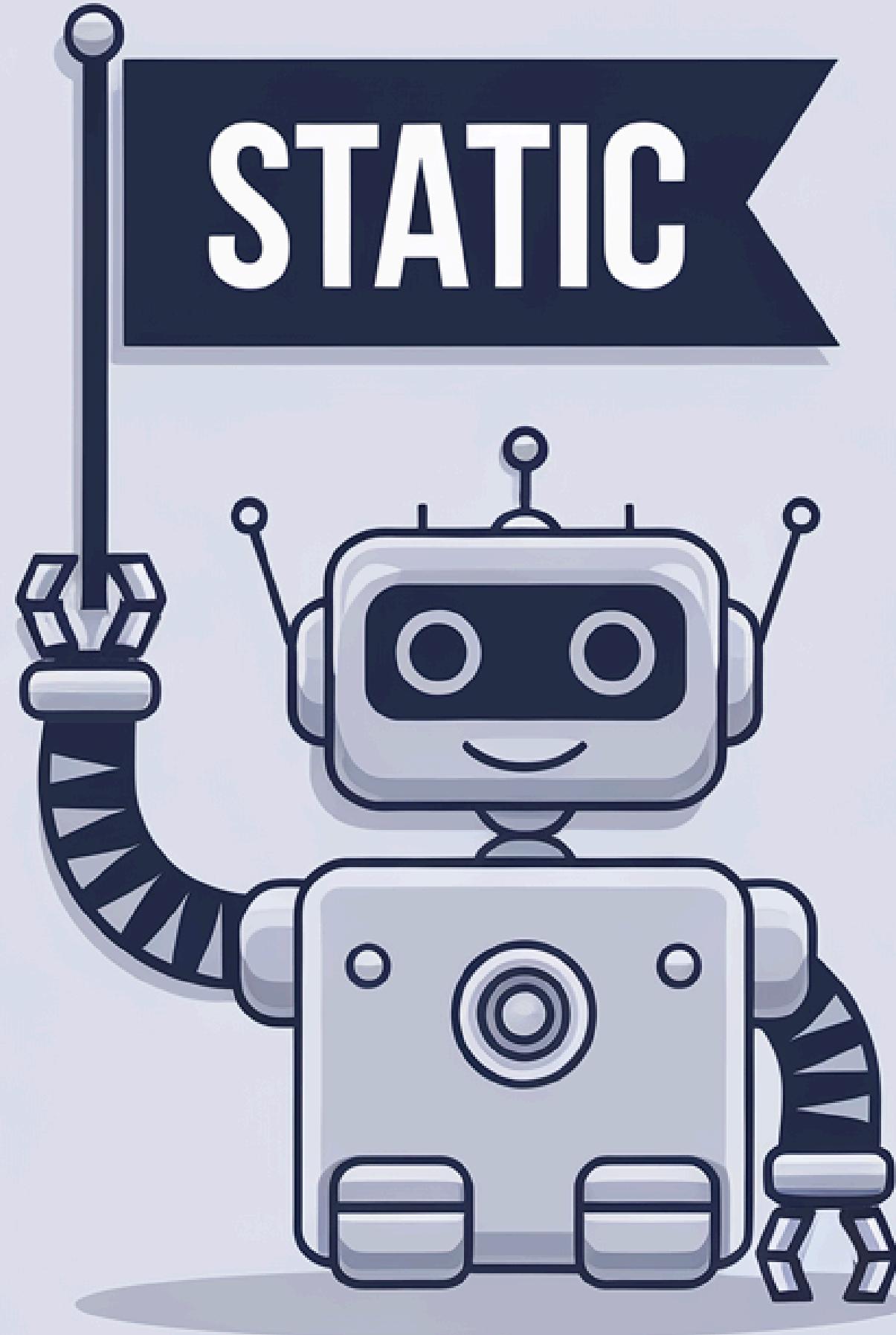
CSS Position determines how an element is placed on a page.





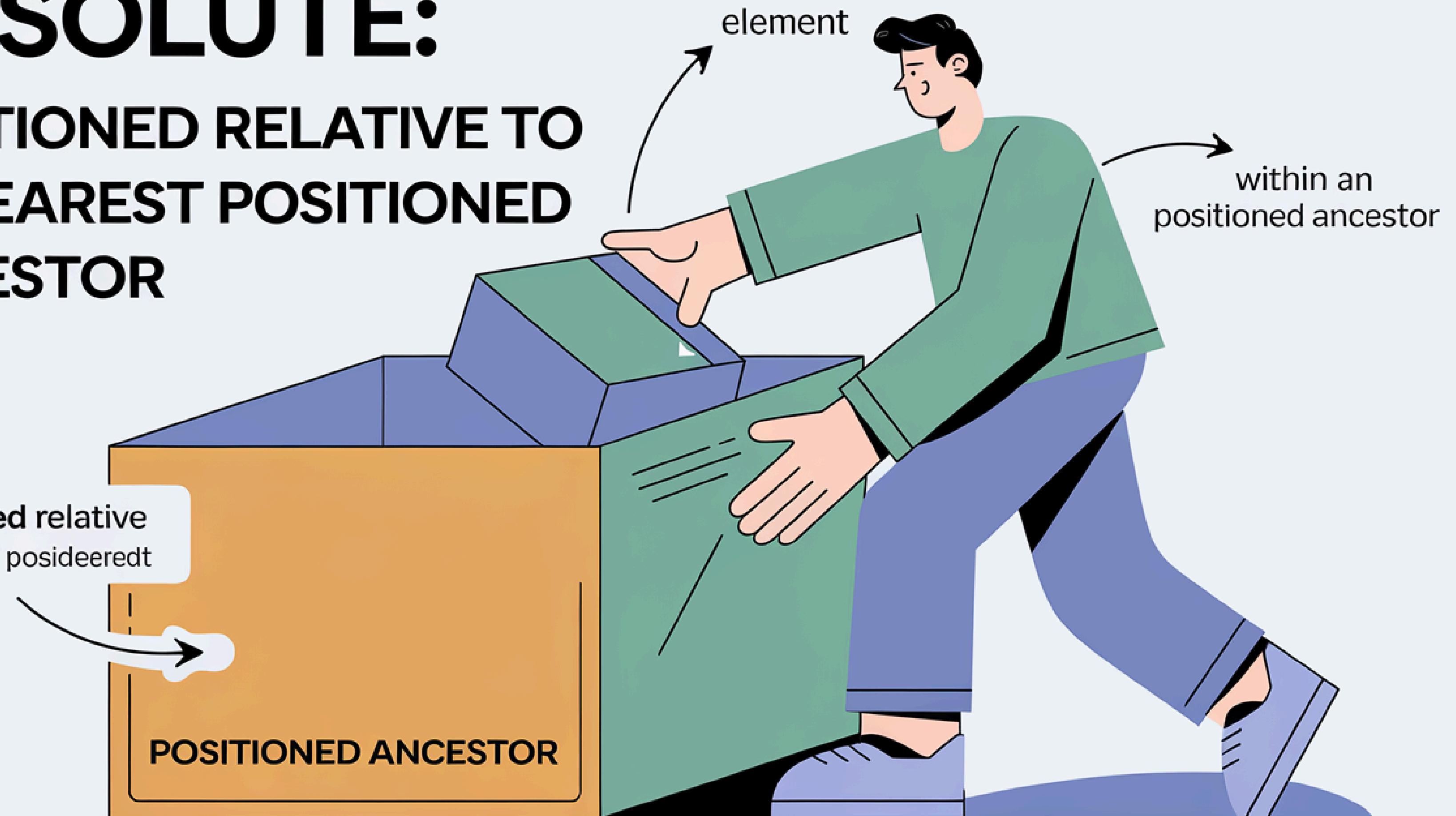
STATIC:

The default positioning where elements follow the normal document flow.



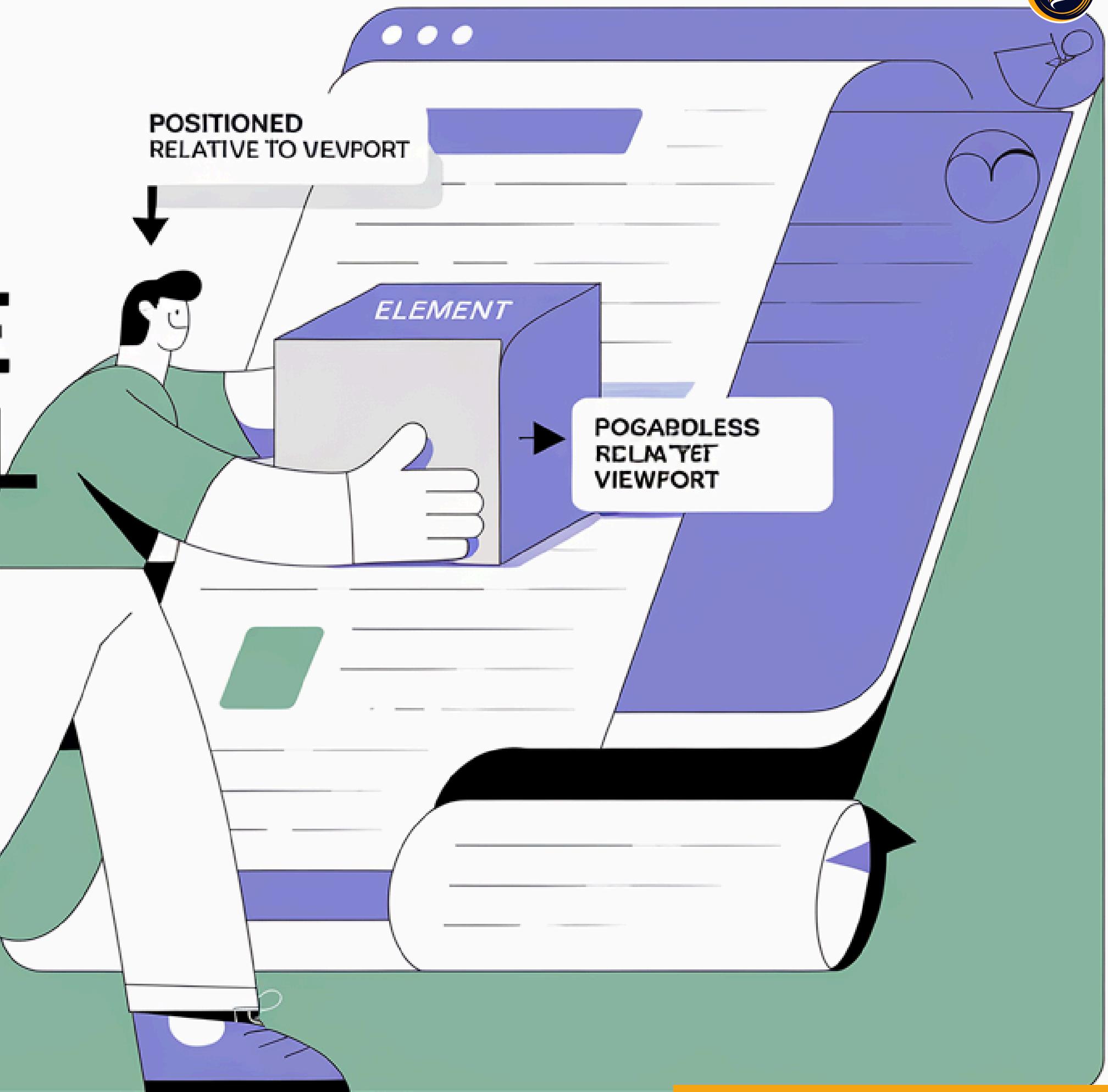


ABSOLUTE: POSITIONED RELATIVE TO THE NEAREST POSITIONED ANCESTOR

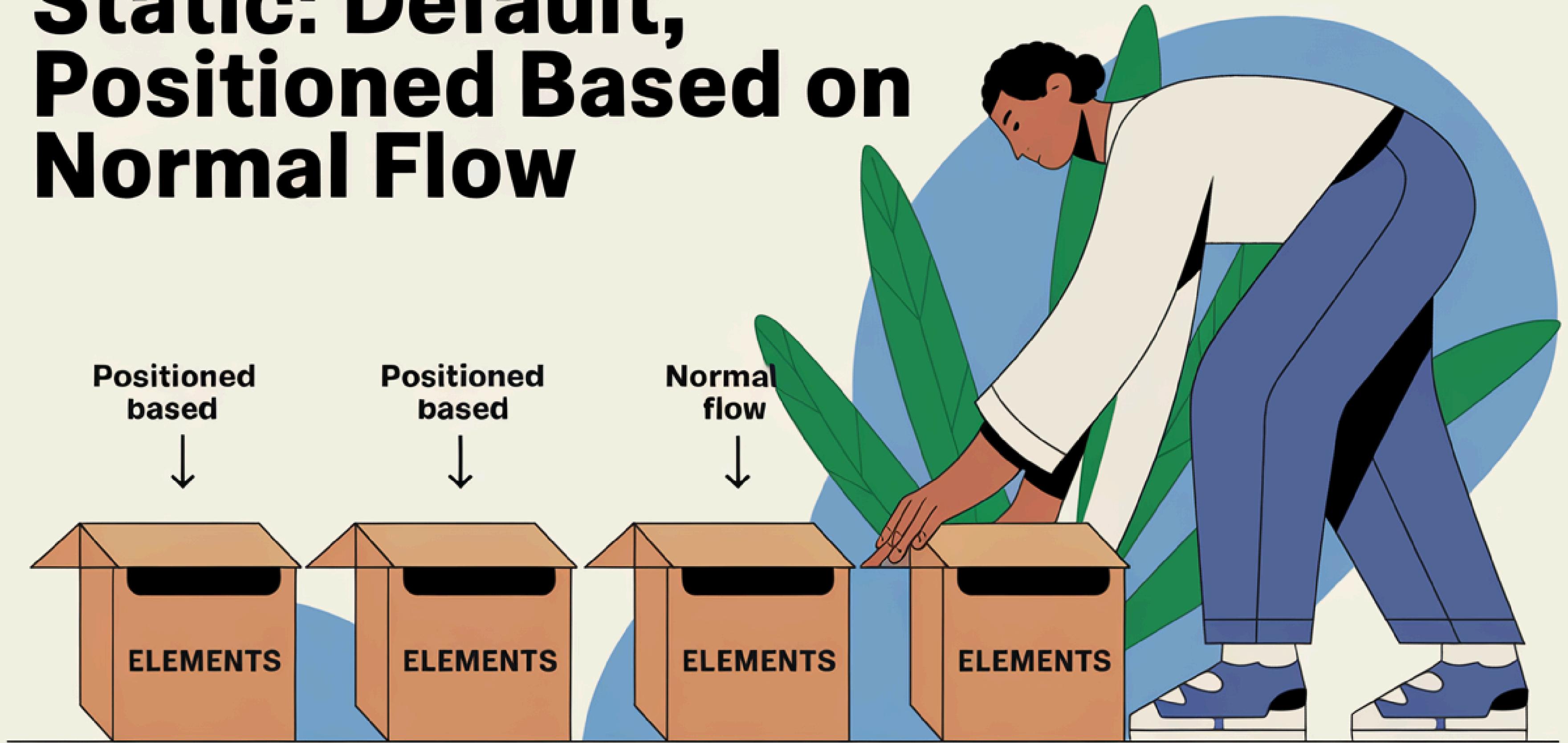




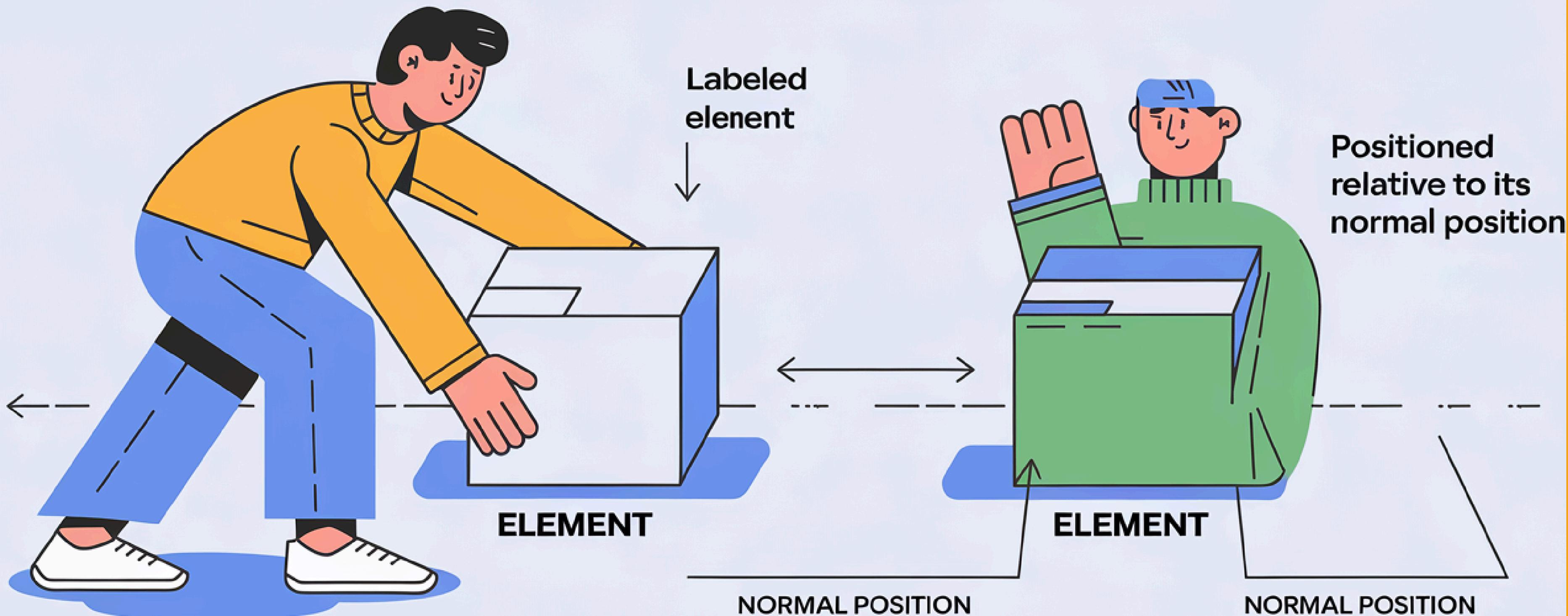
FIXED: POSITIONED RELATIVE TO THE VIEWPORT SCROLL



Static: Default, Positioned Based on Normal Flow



RELATIVE: POSITIONED RELATIVE TO ITS NORMAL POSITION

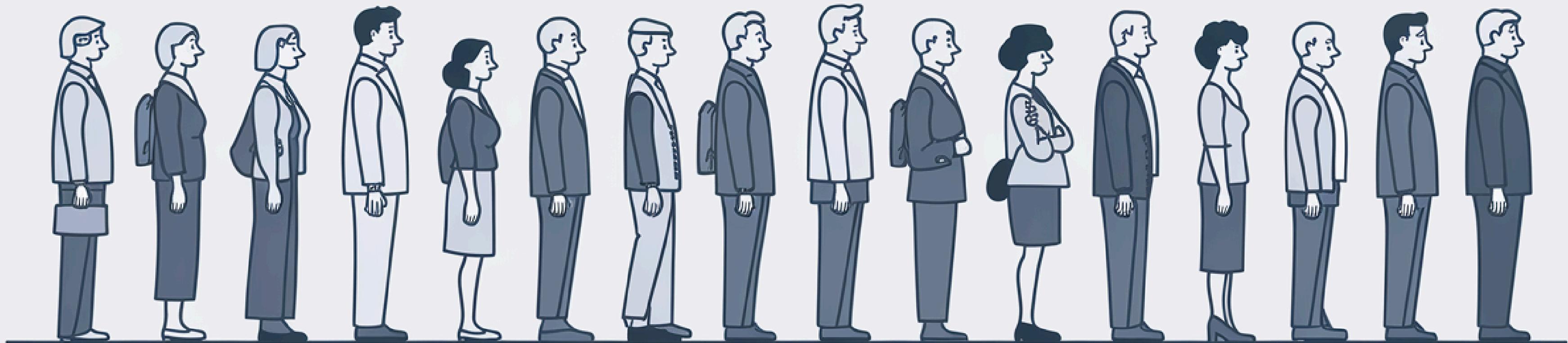


CSS STATIC POSITIONING.

STATIC POSITIONING: THE DEFAULT LAYOUT

(Position: Static)

Default positioning – elements appear in the natural flow of the page, with no special positioning applied

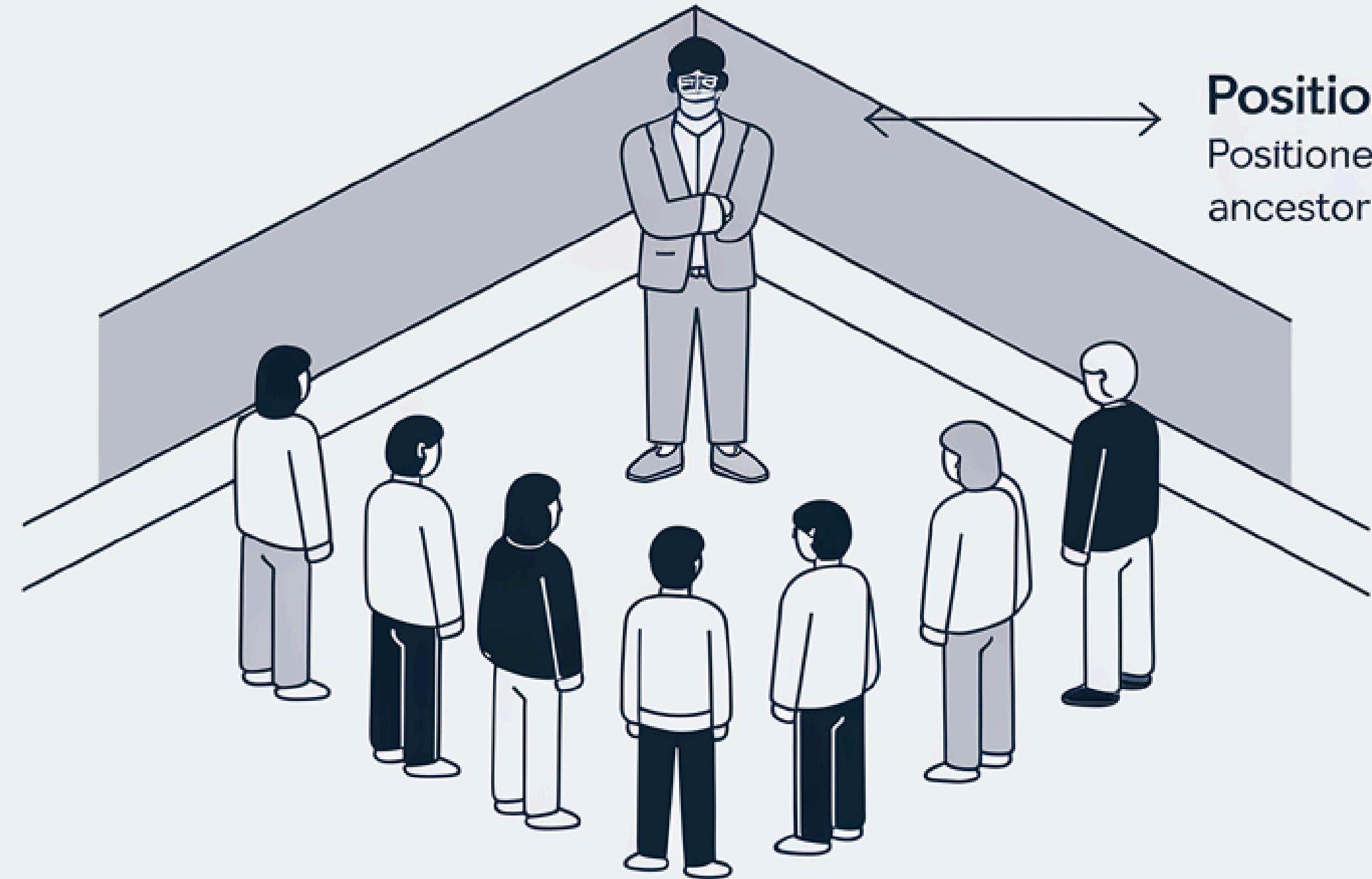


Absolute:

Elements are removed from the document flow and positioned to their nearest positioned ancestor or the browser window.



ABSOLUTE POSITIONING: FIXED TO A SPECIFIC SPOT



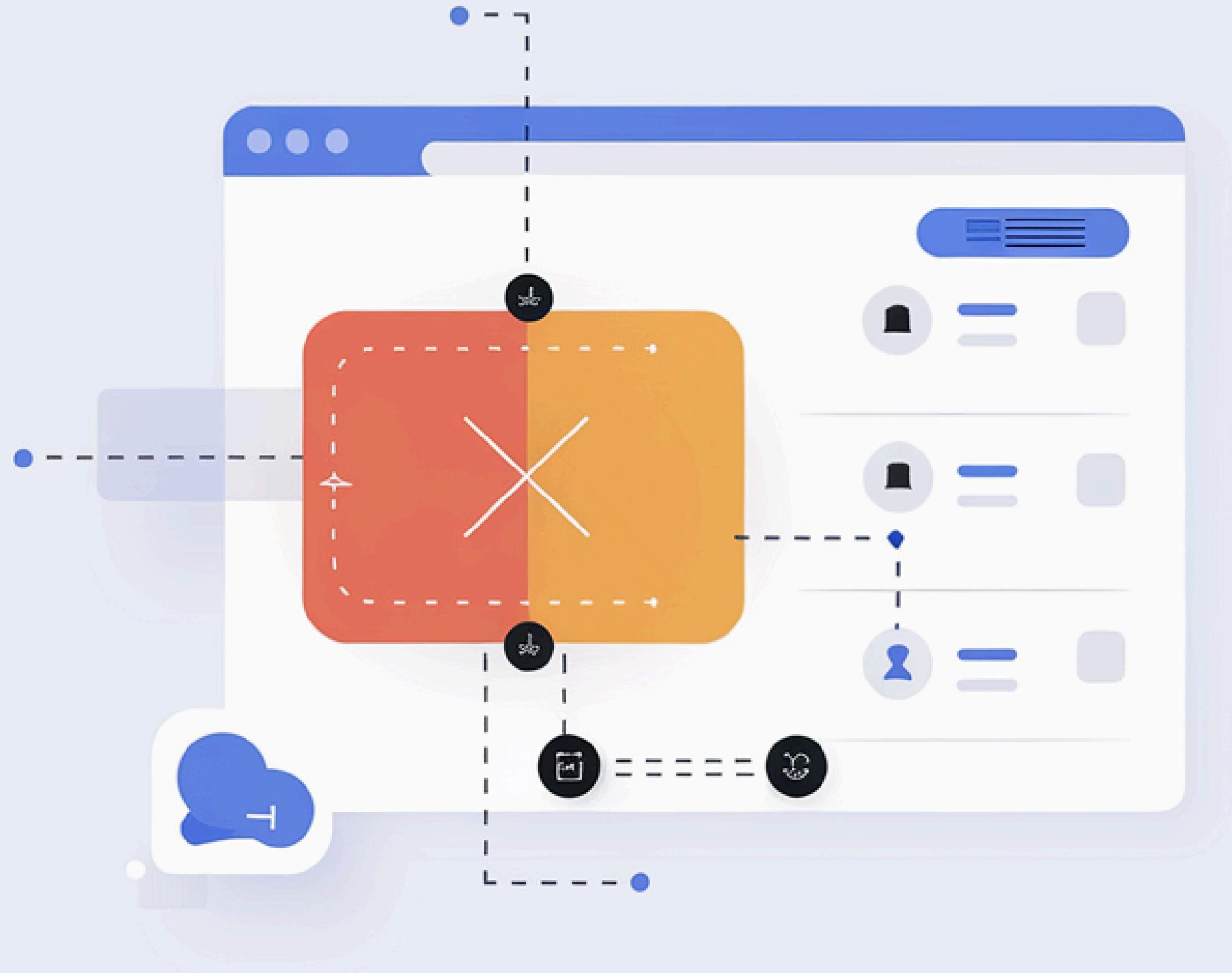
Position: Absolute:

Positioned relative to the nearest ancestor or the document boy.

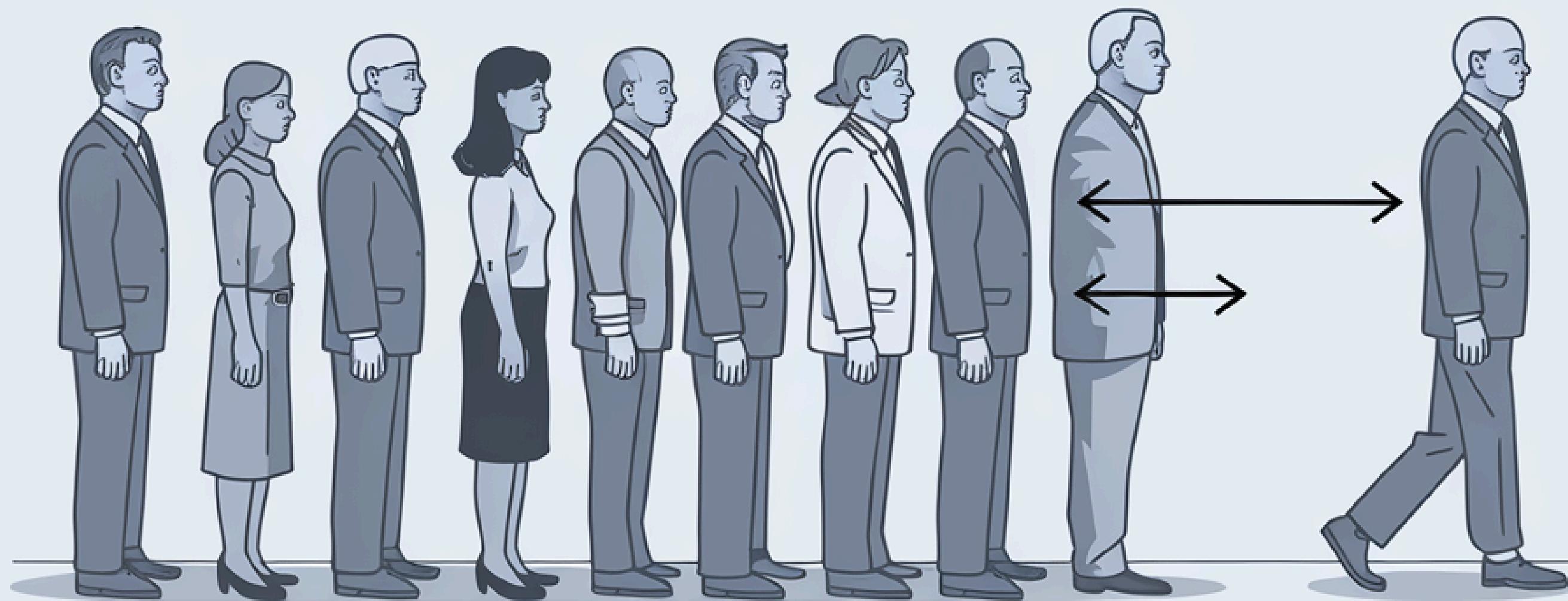


Relative:

Relative positioning moves an element based on its original position while still occupying space in the document flow. It can be adjusted with top, left, right, or bottom properties without affecting other elements.



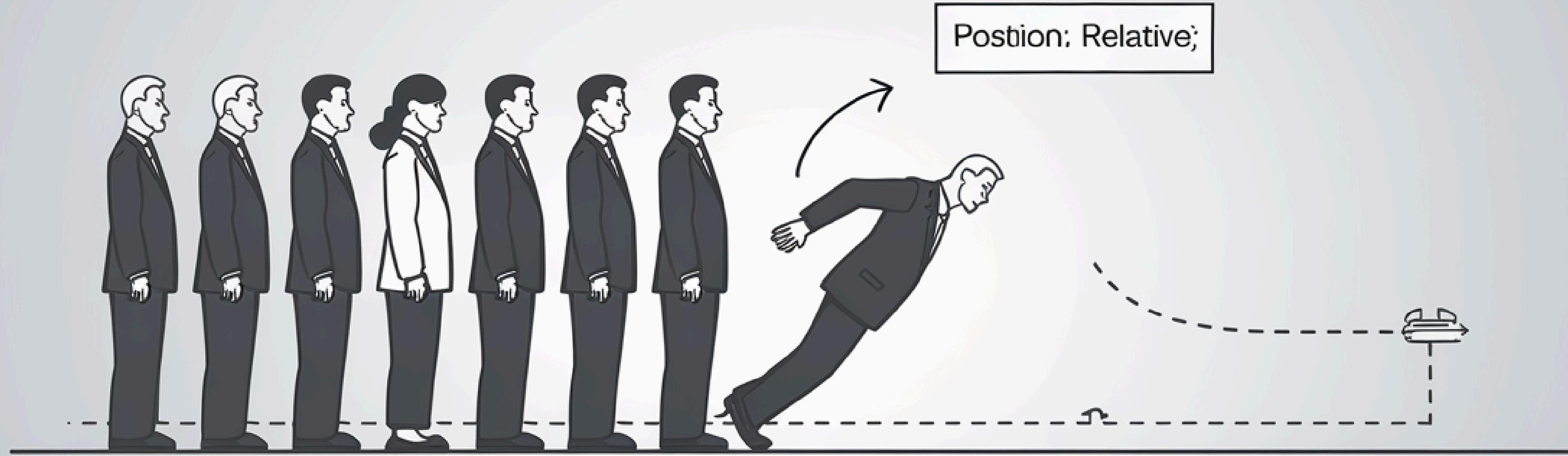
CSS RELATIVE POSITIONING: SHIFTING IN PLACE



**Position:
Relative:**

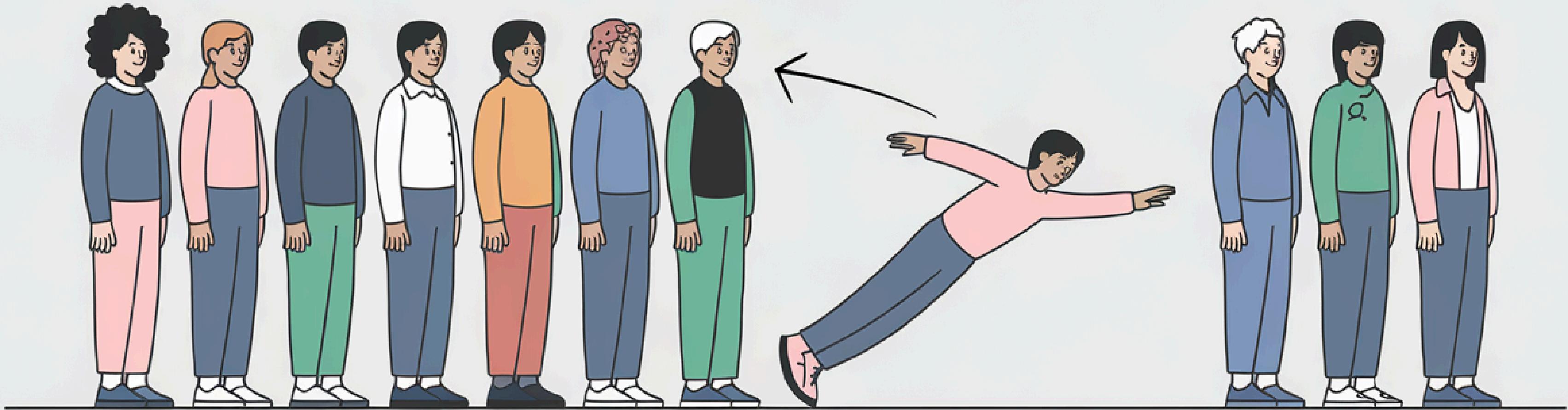
Shifted relative to its original position, but space is still reserved for the element

Relative positioning; Shifting in place



Shifted relative to its original position,
but space is still reserved for the element.

Relative Positioning: Shifting in Place

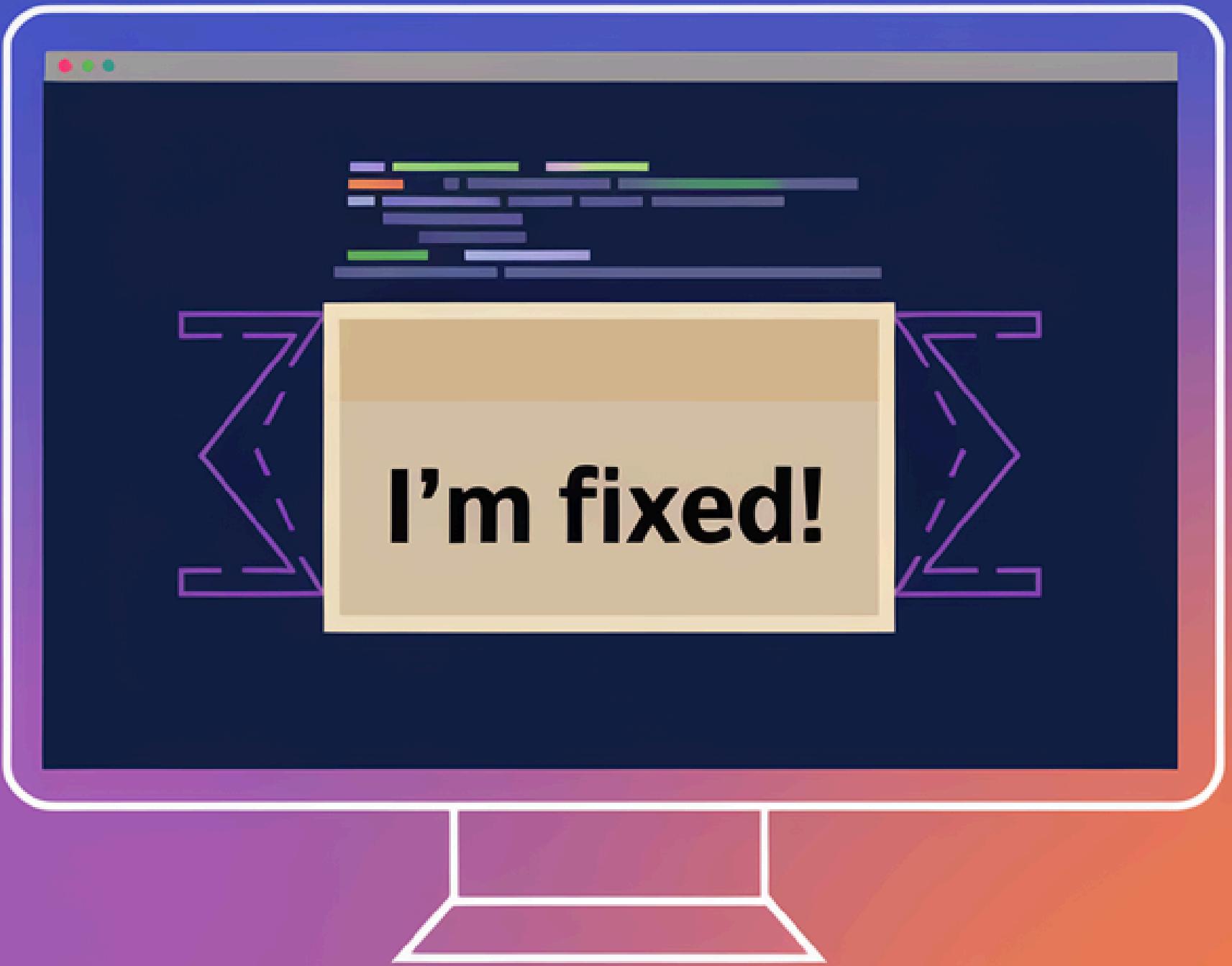


Position: Relative:

Shifted relative to its original position, but
space is reserved for the element

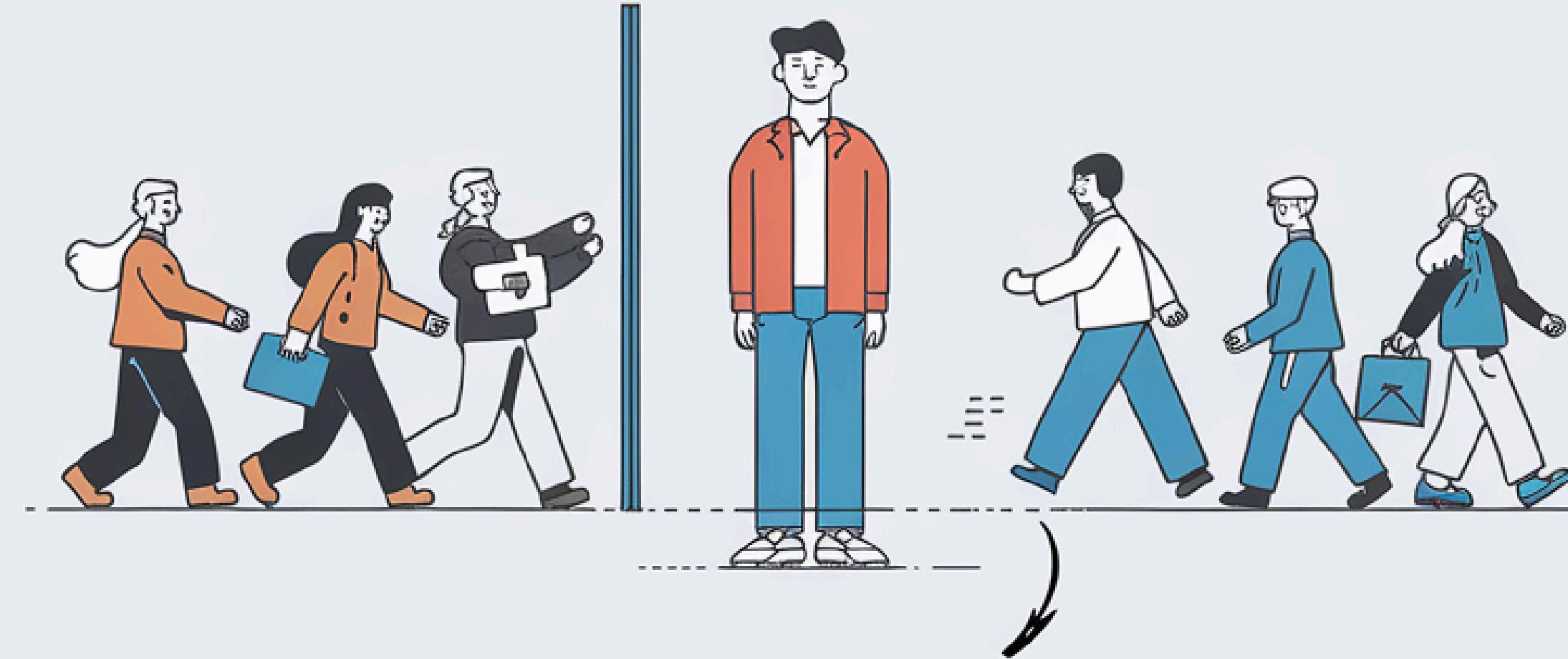
Fixed:

Elements are removed from the flow and fixed to the browser window, staying in place during scrolling



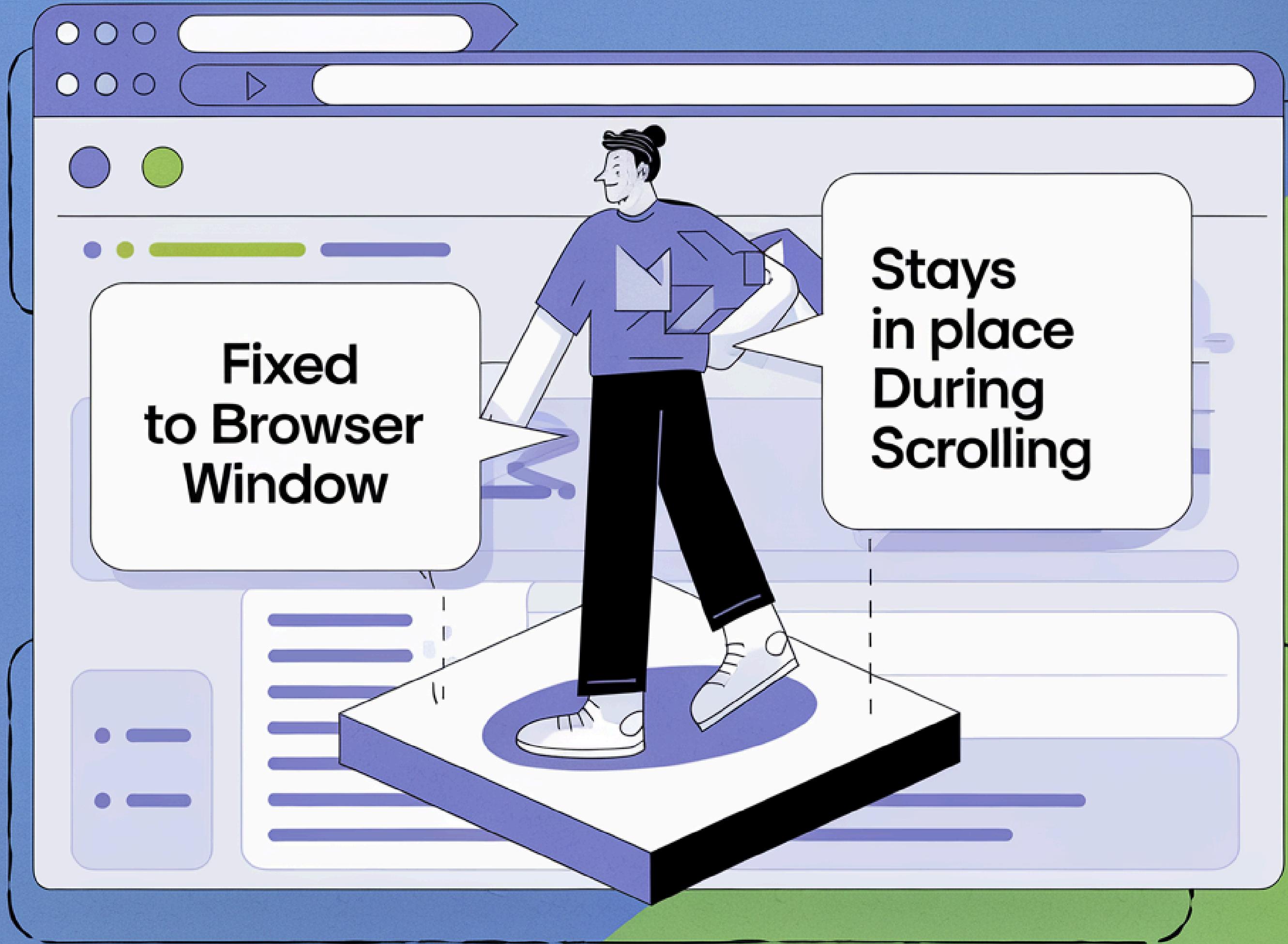
FIXED POSITIONING:

STAYS IN PLACE WHILE OTHERS MOVE



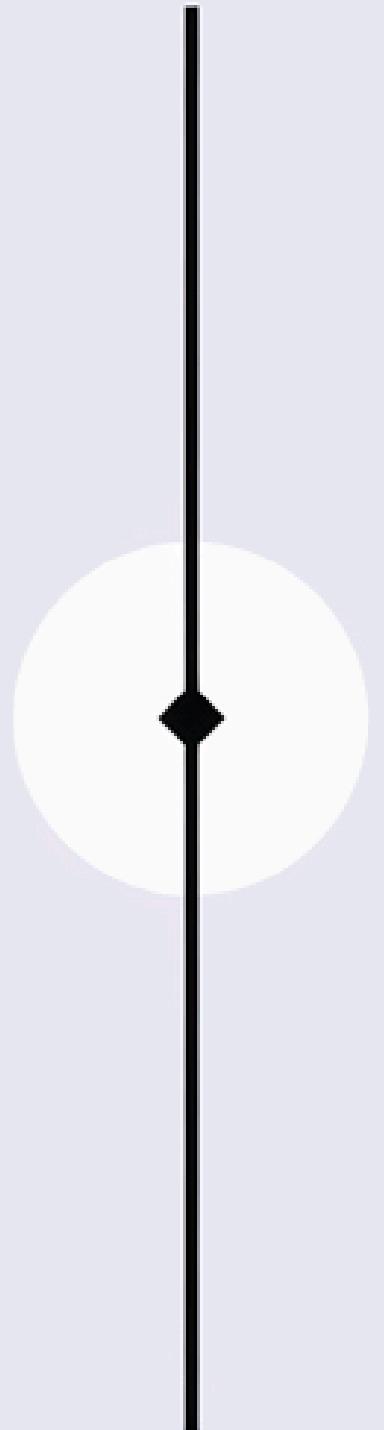
POSITION; FIXED:

Remains in a fixed position,
even when the page is scrolled



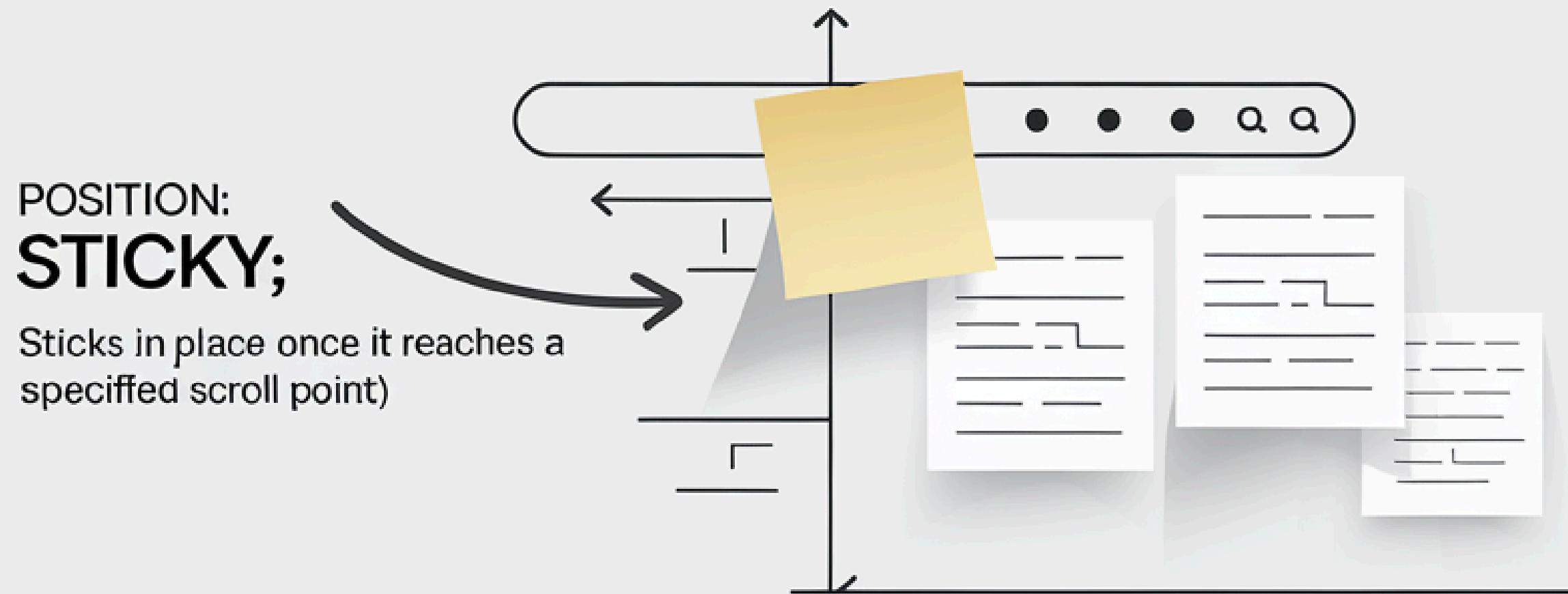
Sticky:

Combines relative
and fixed behavior,
sticking in place
once a scroll position
reached.



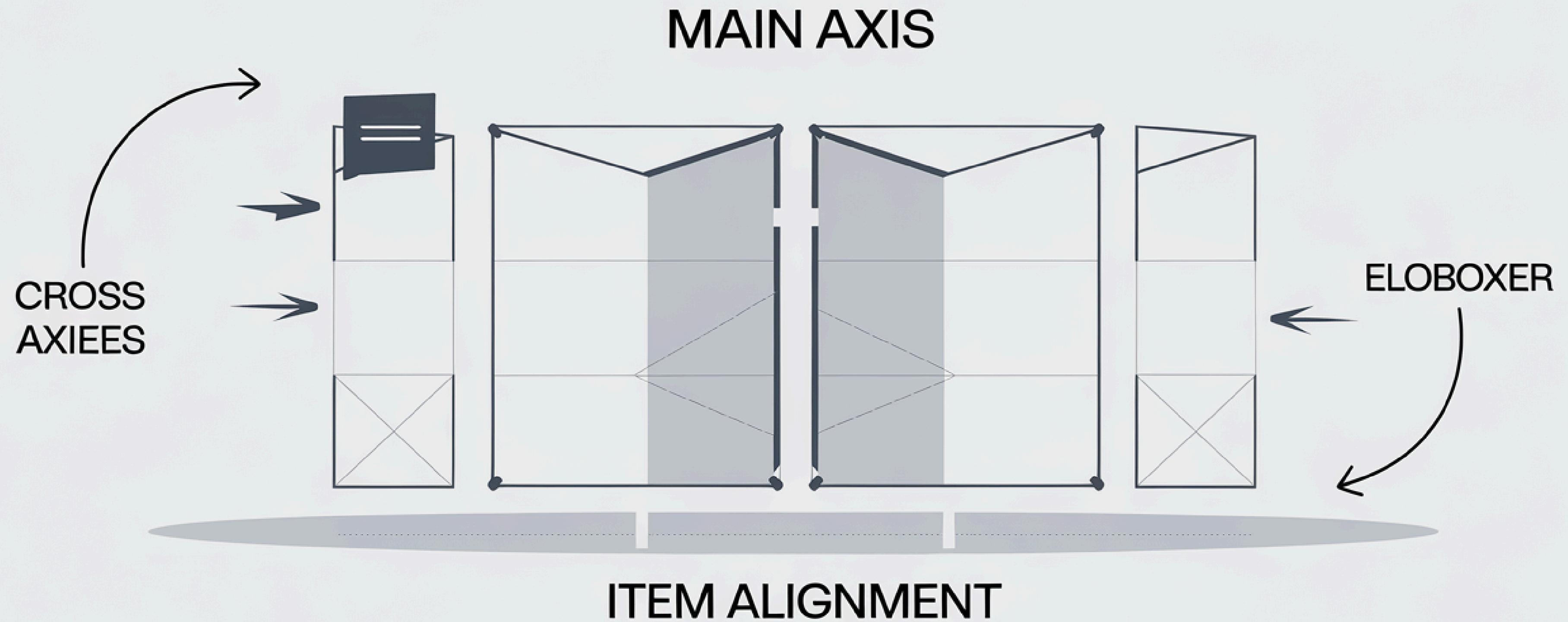
STICKY POSITIONING:

STAYS IN PLACE AFTER SCROLLING



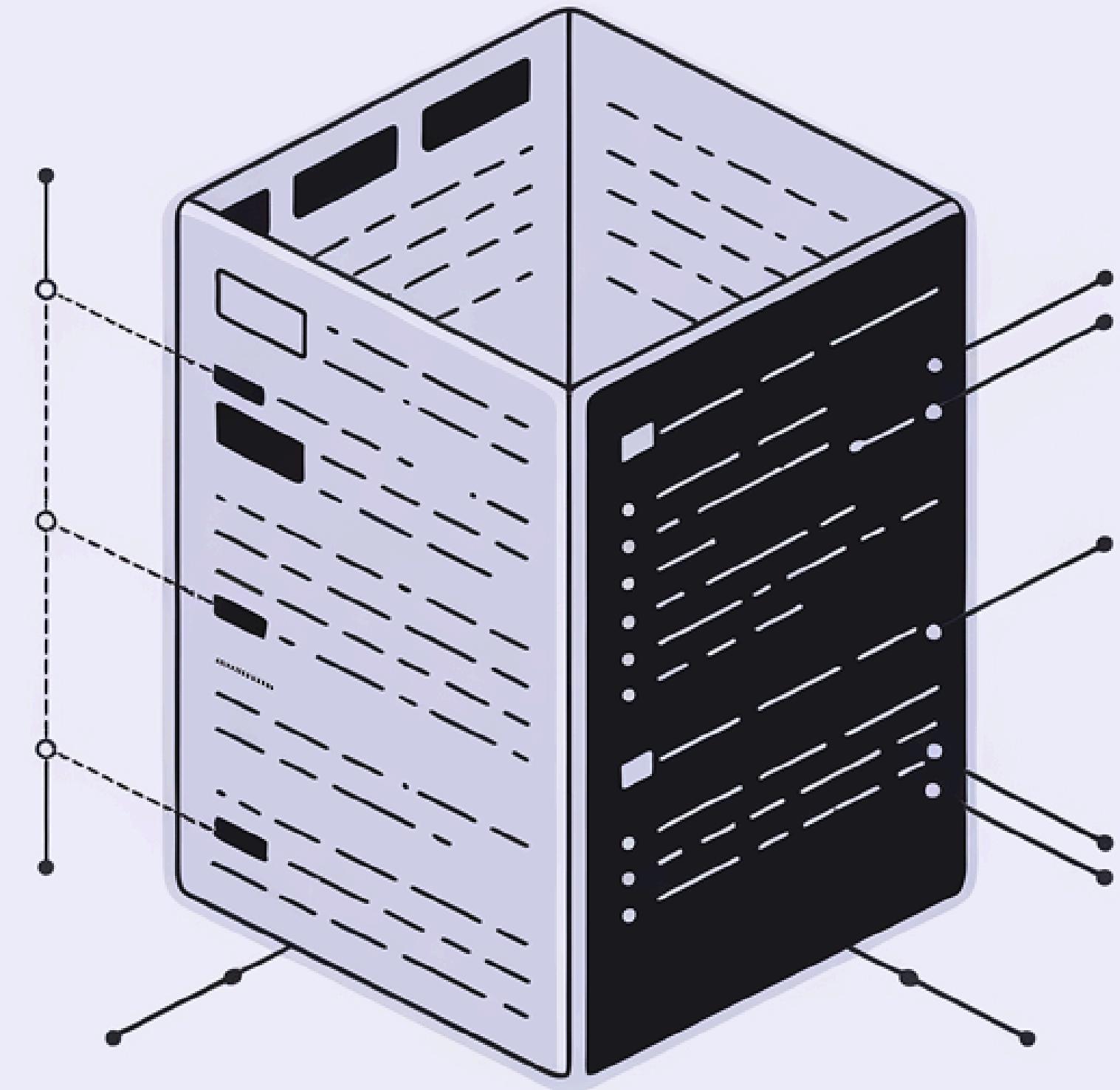
FLEXBOX

FlexBox is a CS layout ag zout model for aistributing and distributing space within containers efficiently, even with width unknown item sizes.



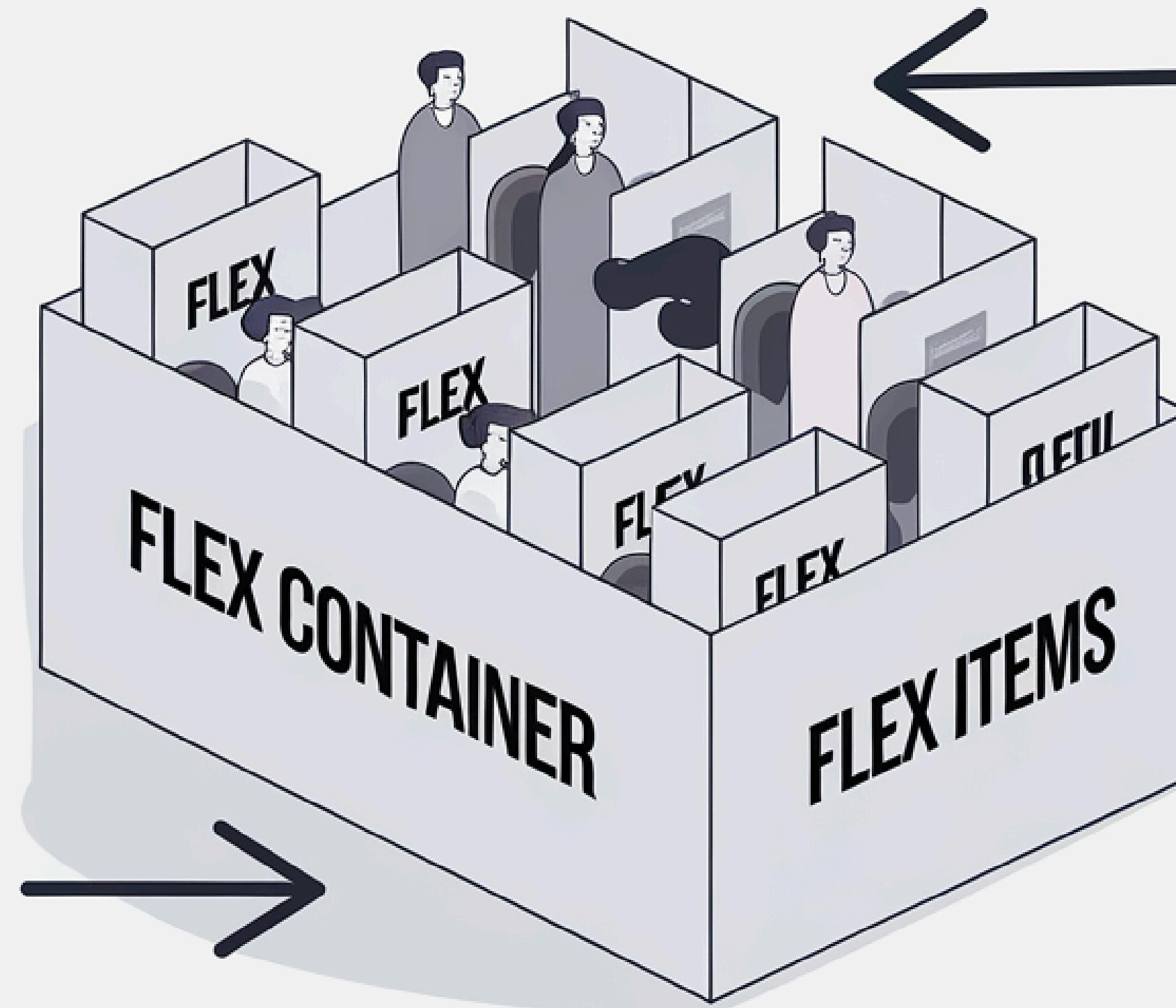
FLEX CONTAINER:

The parent element that defines the child flexbox layout for its elements (flex items)



FLEX CONTAINERS AND FLEX ITEMS

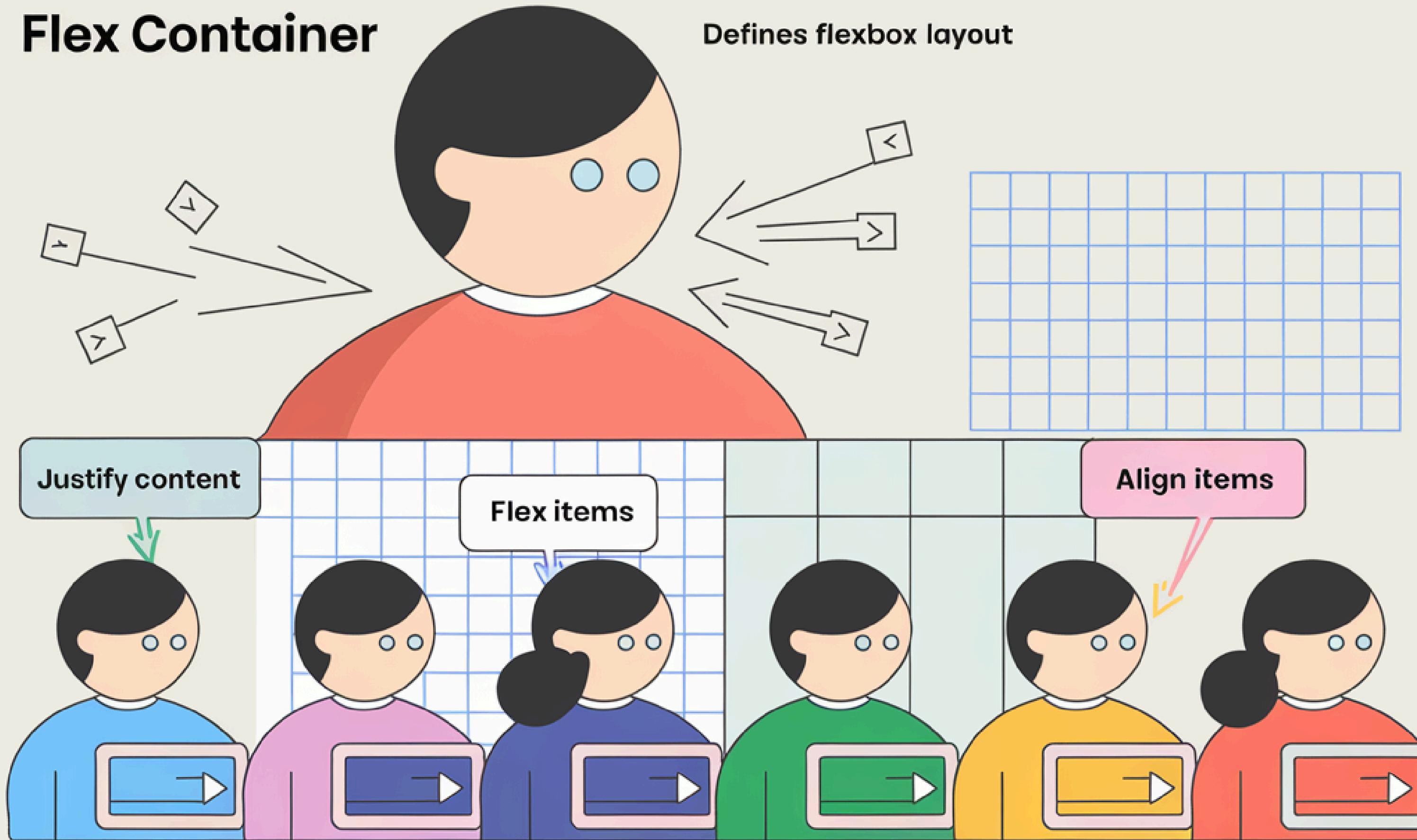
FLEX CONTAINER:
representing people
or object context



**FLEX CONTAINERS
AND FLEX ITEMS**

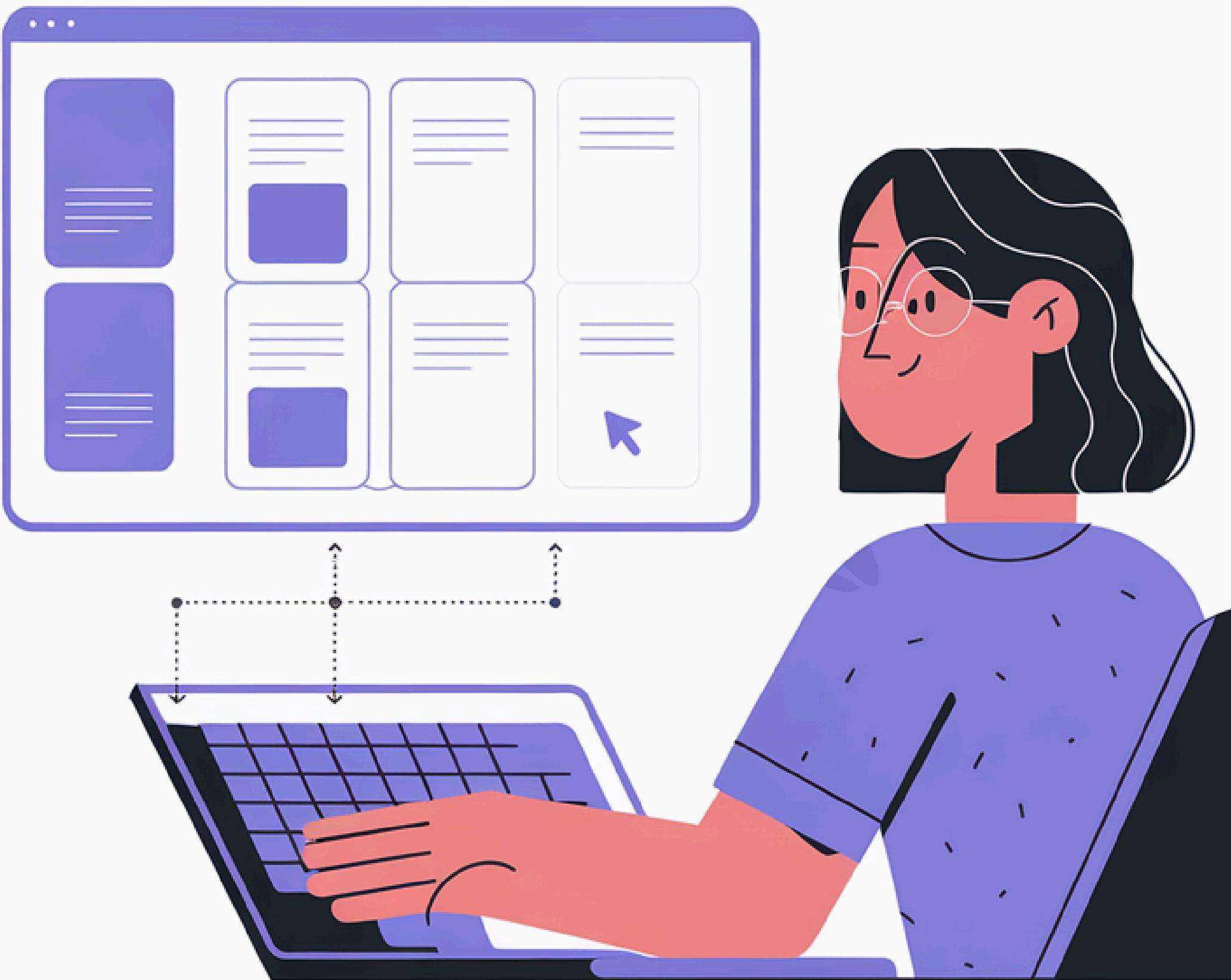
FLEX ITEMS

Flex Container

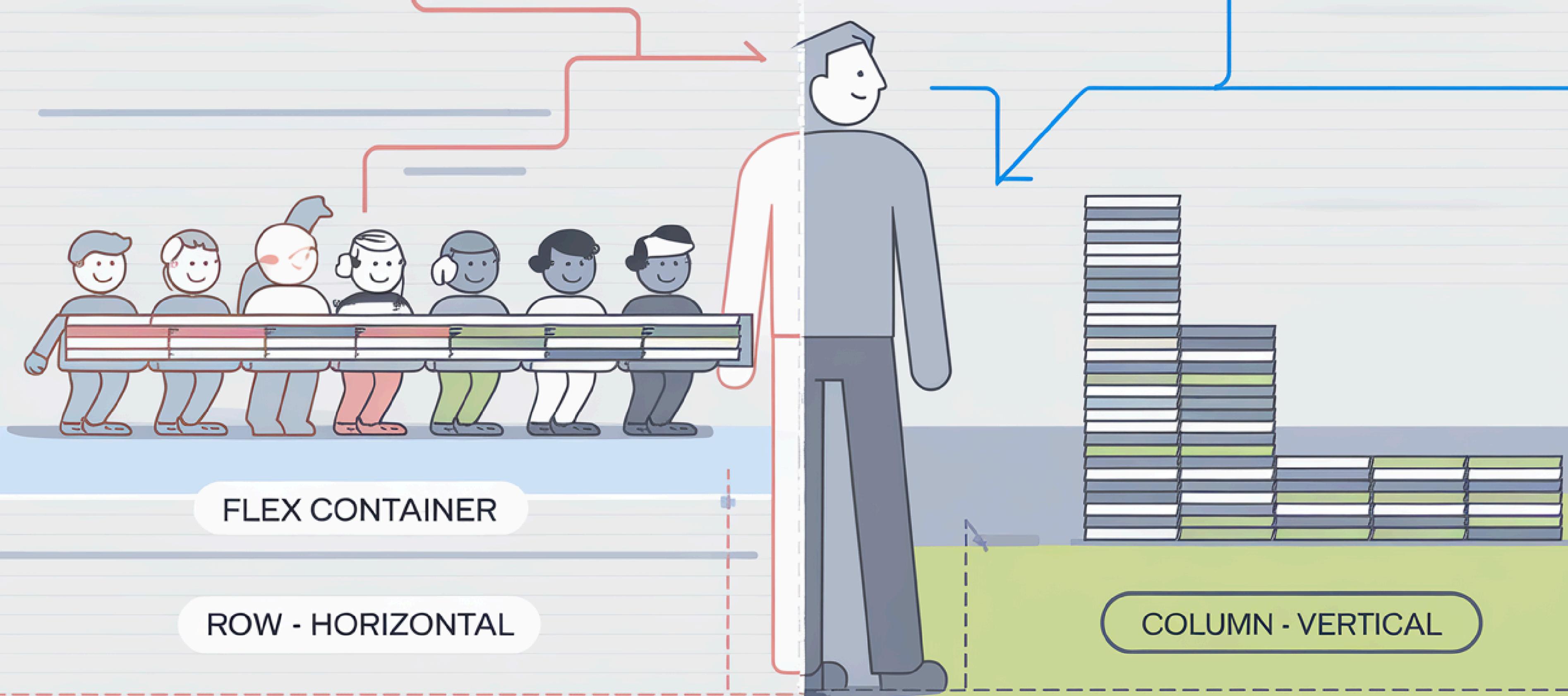




Flex Direction:
Controls whether flex
flex items are arranged
in a row (in a row
(horizontal) or column
vertical)



FLEX DIRECTION



Flexbox: Rows and Columns

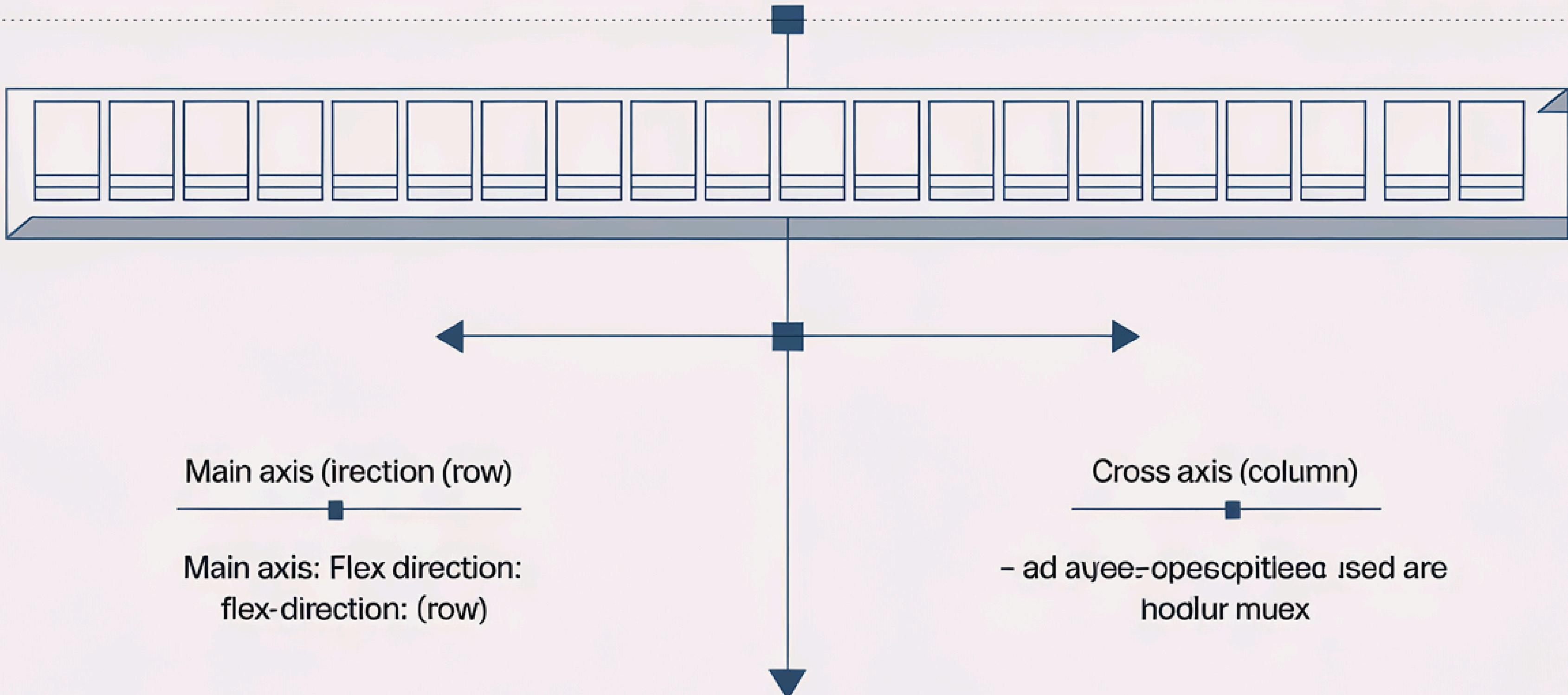


Flex-direction ; row)



Flex-direction ; column)

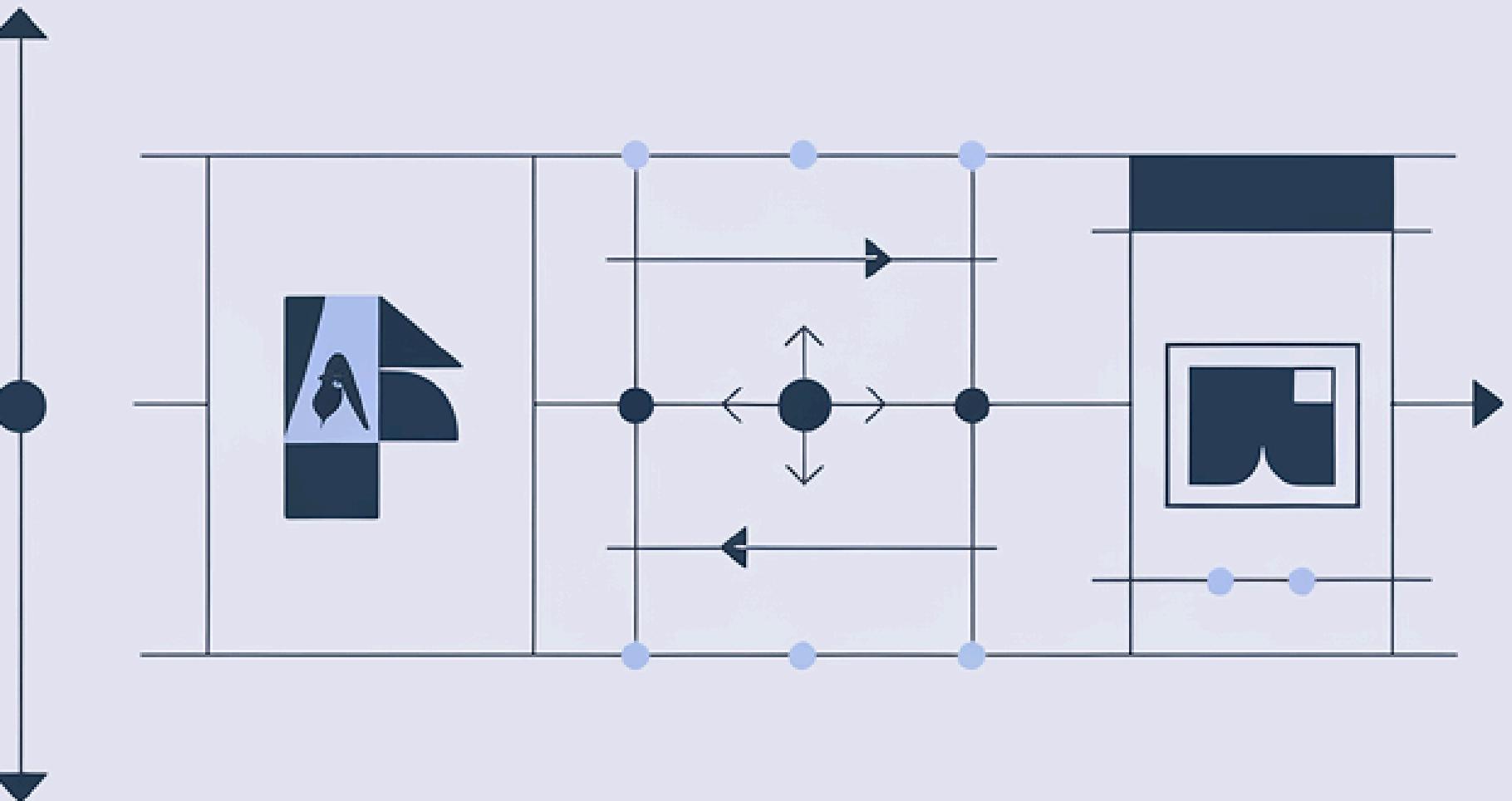
MAIN AND CROSS AXIS: | FLEXBOX LAYOUTS EXPLAINED



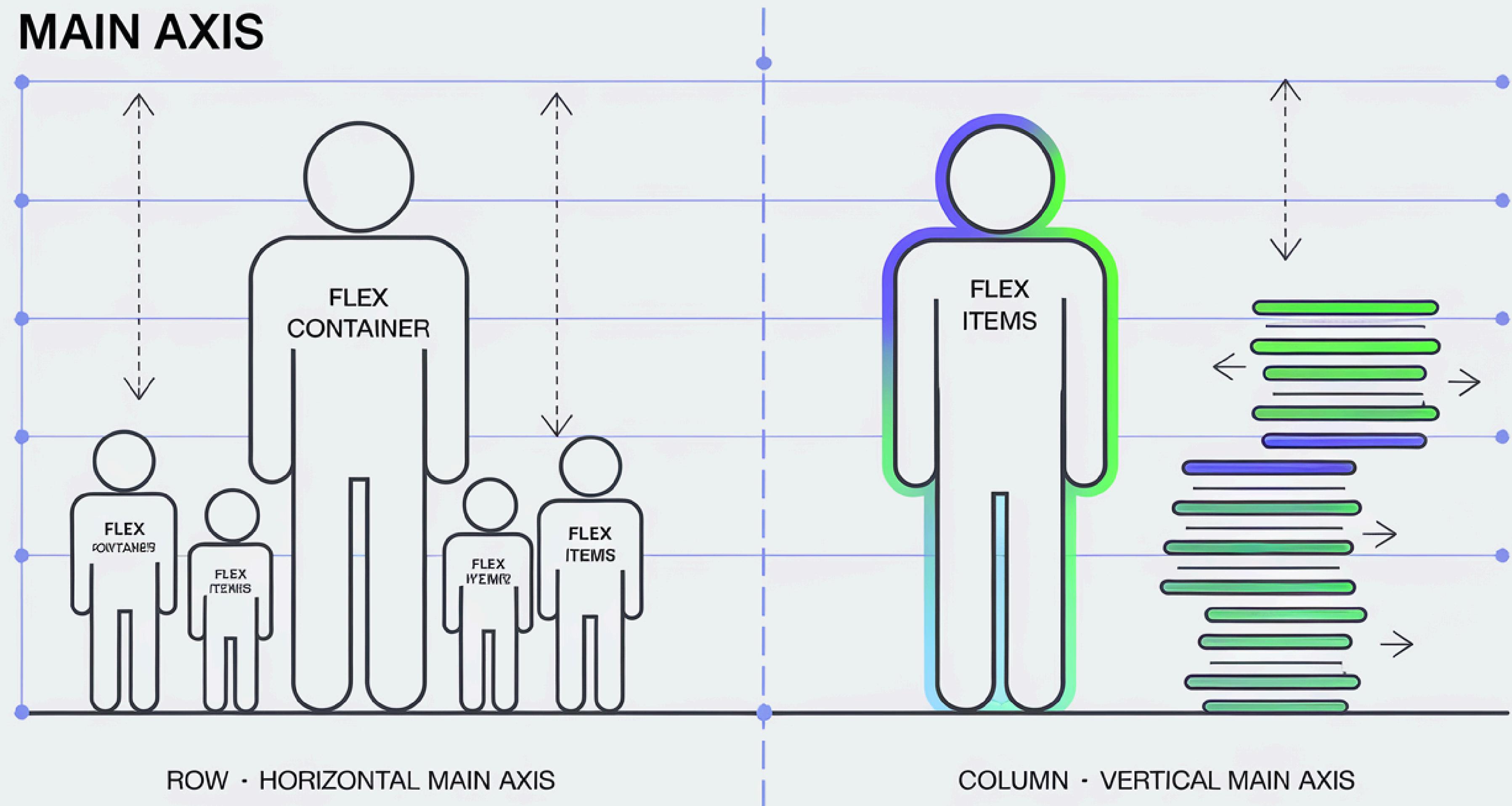


Main Axis:

The primary axis)
(horizontal or vertical)
along which flex
items are placed
and aligned.



MAIN AXIS



ROW · HORIZONTAL MAIN AXIS

COLUMN · VERTICAL MAIN AXIS



MASYNCTECH

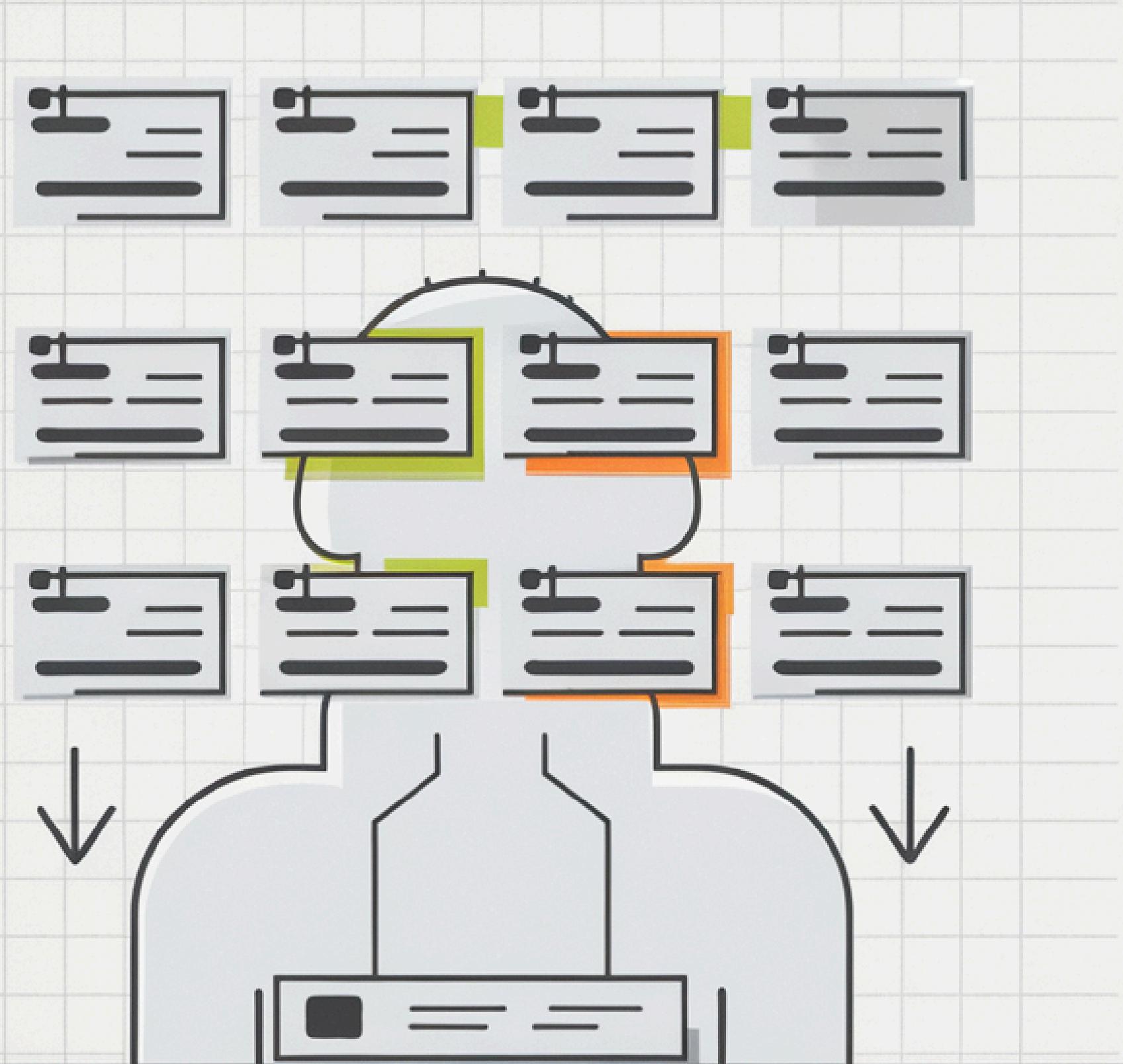


WWW.MASYNCTECH.COM

CROSS AXIS

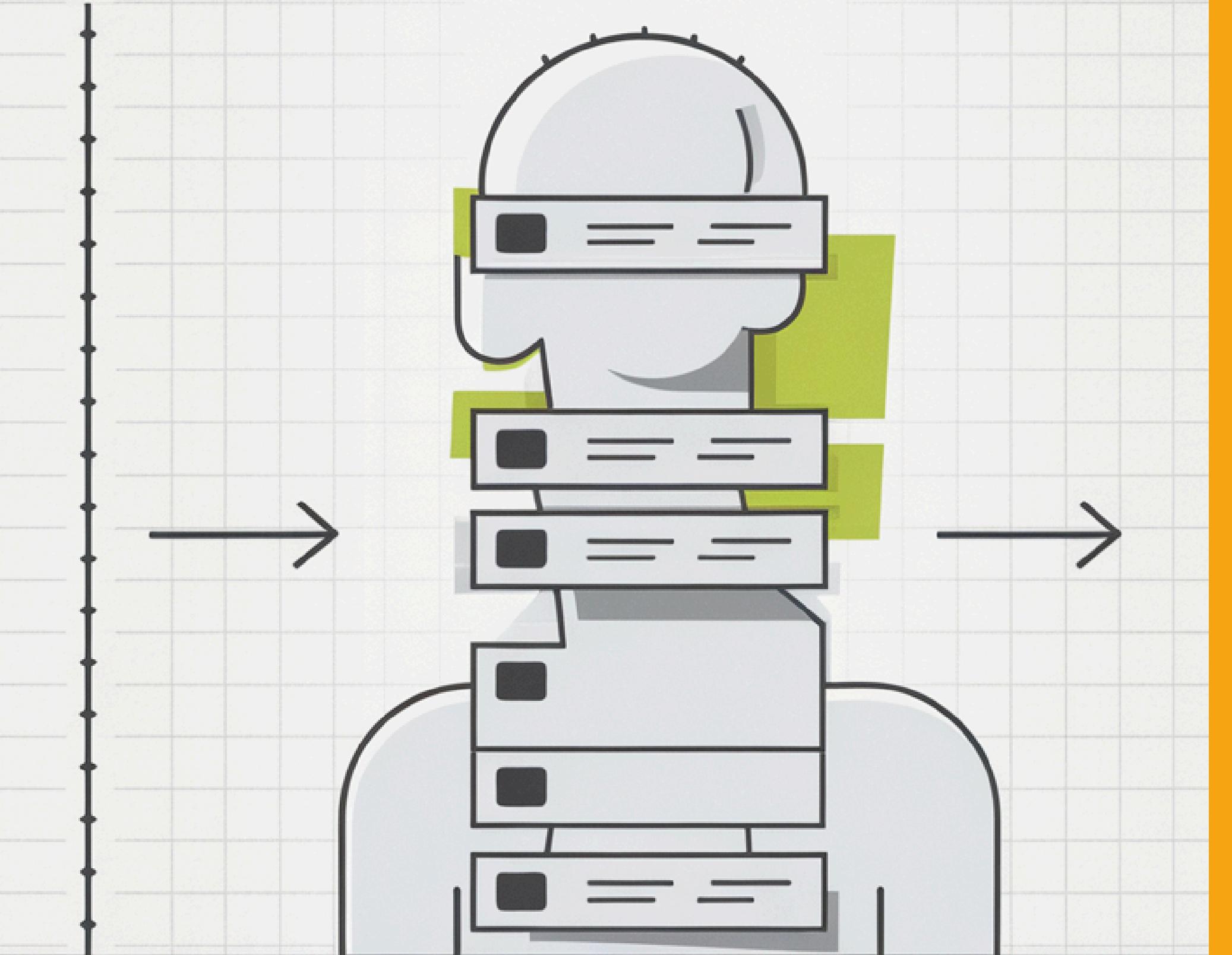
The axis perpendicular to the Main axis where items can be aligned e(g., bottom, or center)





CROSS AXIS

HORIZONTAL MAIN AXIN AXIS)



CROSS AXIS

VERTICAL MAIN MAIN AXIS)



MASYNCTECH

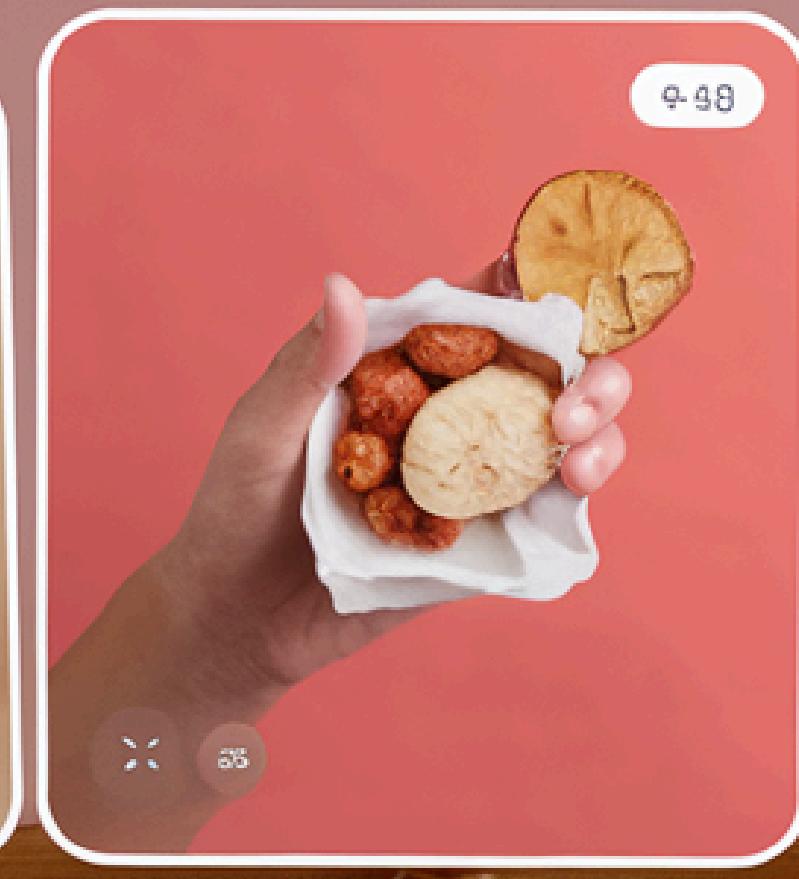
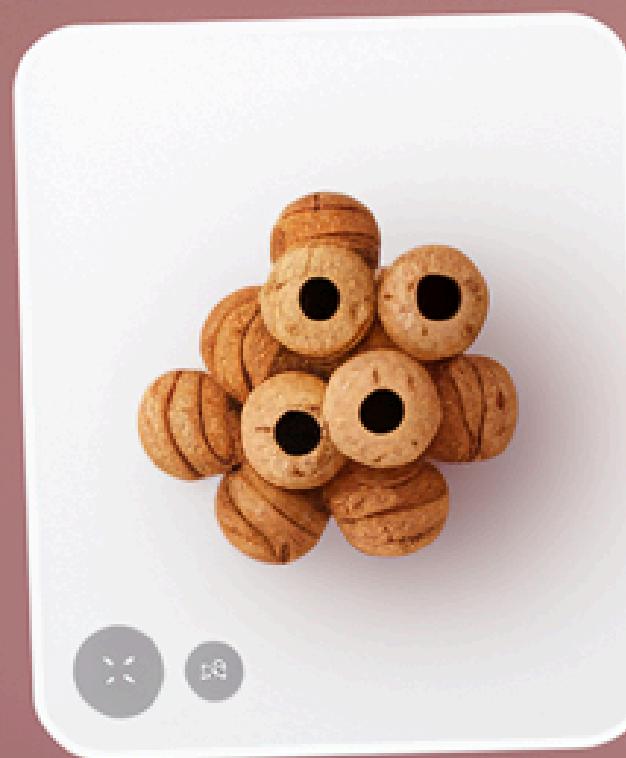


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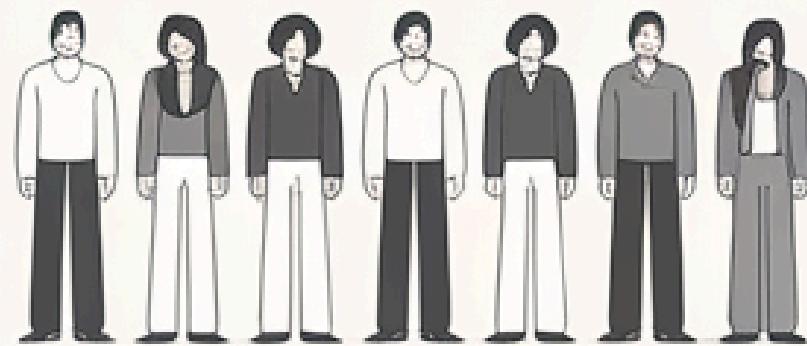
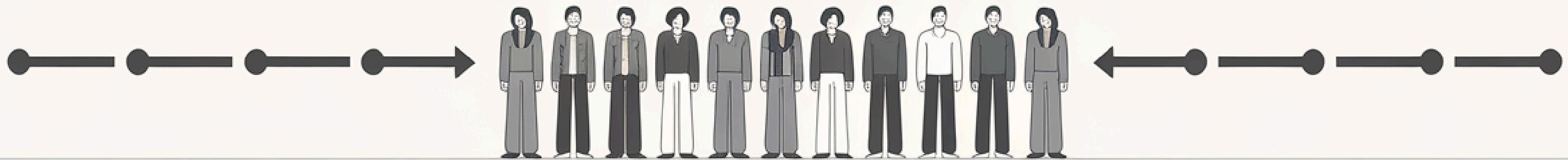
Flex, Grow, Shrink, and Basis

Allows items to grow, shrink, or maintain a size based on the available space.

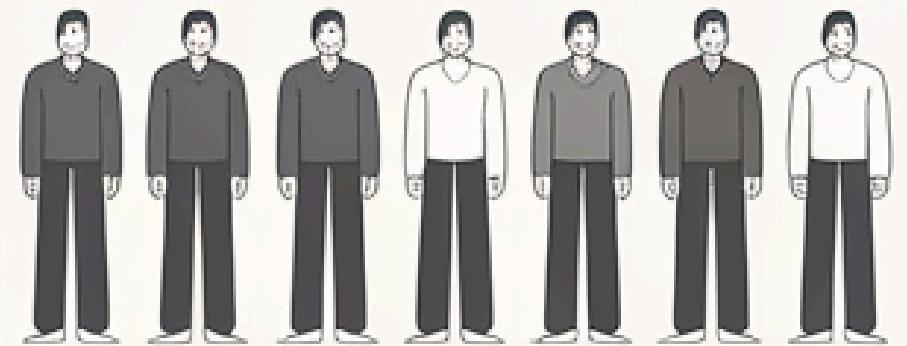




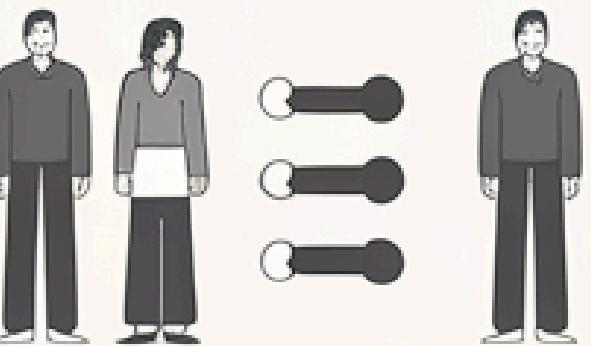
CSS FLEXBOX: JUSTIFY CONTENT



JUSTIFY-CONTENT: SPACE-BETWEEN
Items spread out with space between them.



JUSTIFY-CONTENT: FLEX-END
Items aligned to the end



JUSTIFY-CONTENT: CENTER