Lesson 5

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[What we learnt last time?]

- Most popular HTML tags

- Most popular CSS properties

- Resetting default browser styles

- display property: "block", "inline-block" and "inline"

[DAN.IT]
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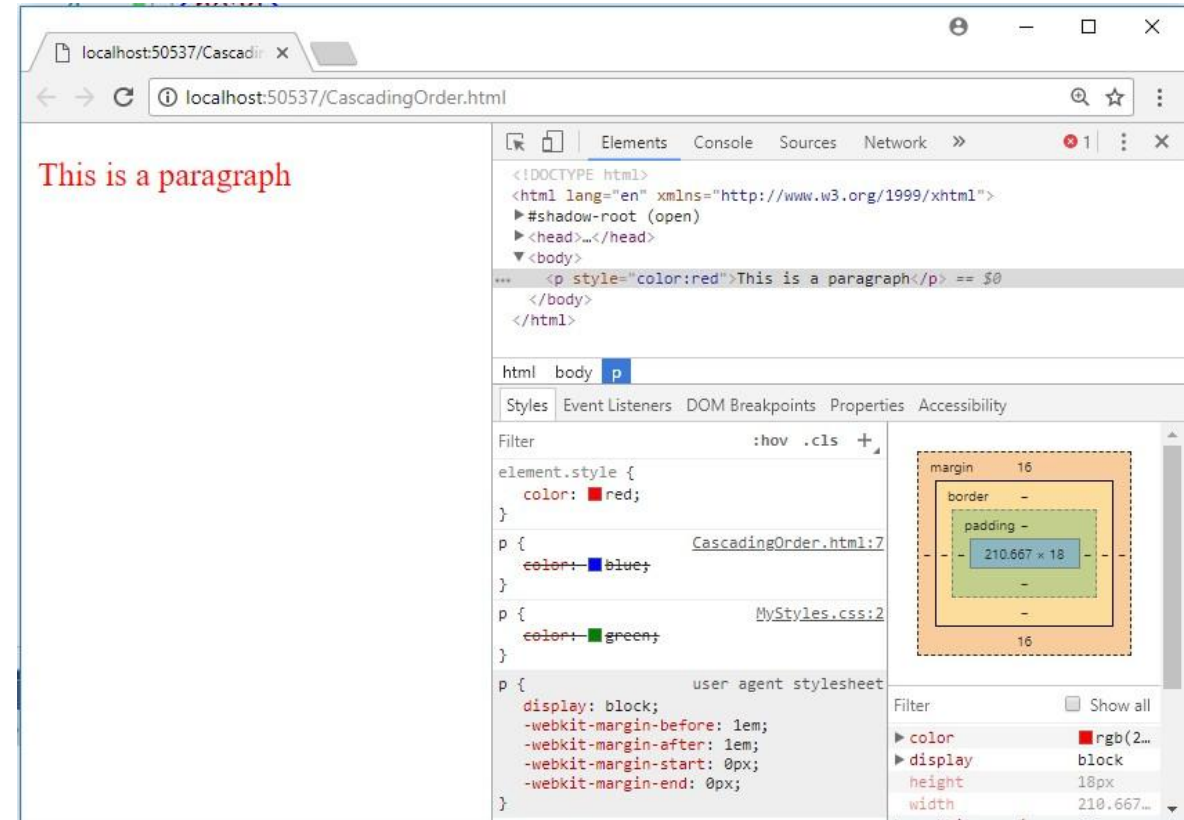# [Our targets for today]

- How to place several block elements on one line with "inline-block"

- How to create columns using <div> and "inline-block"

- How to create button using <a> and "inline-block"

- How to use "margin" and "padding" with "inline-block"

- Placing several block elements on top of one line using "float"

- How to make several columns using "float"

- Place adjacent content under floating elements using "clear: both"

[DAN.IT]
E D U C A T I O N

[Cascading Order]

→ What style will be used when there is more than one style specified for an HTML element?

→ Inline style (inside a specific HTML element) has the highest priority

→ Then external and internal style sheets (in the head section)

→ And lastly the browser default

→ You can examine which styles have been overridden by which rules using the browser developer tools

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Cascading Order

```
<head>
    <link href="MyStyles.css" rel="stylesheet" />
    <style>
        p {
            color: blue;
        }
    </style>
</head>
<body>
    <p style="color:red">This is a paragraph</p>
</body>
```


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[Specificity]

→ If there are two or more conflicting CSS rules that point to the same element, the browser checks which one is most specific and therefore wins out

  → How to calculate specificity?

  → Start at 0

  → add 1000 for style attribute

  → add 100 for each ID

  → add 10 for each attribute, class or pseudo-class

  → add 1 for each element name or pseudo-element

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[Specificity]

→ Consider these three code fragments:

```
A: h1
B: #content h1
C: <h1 style="color: red">Heading</h1>
```
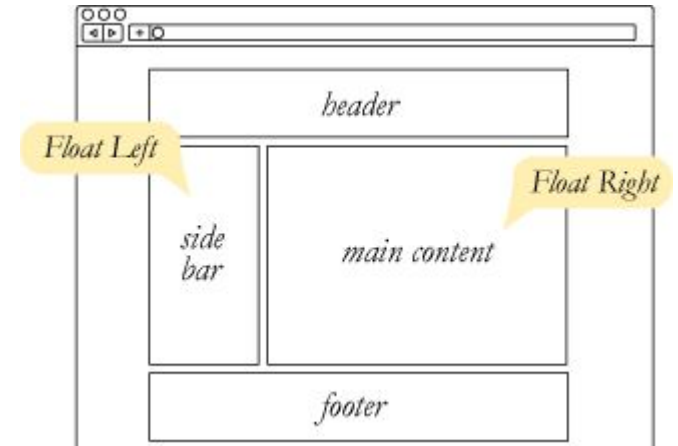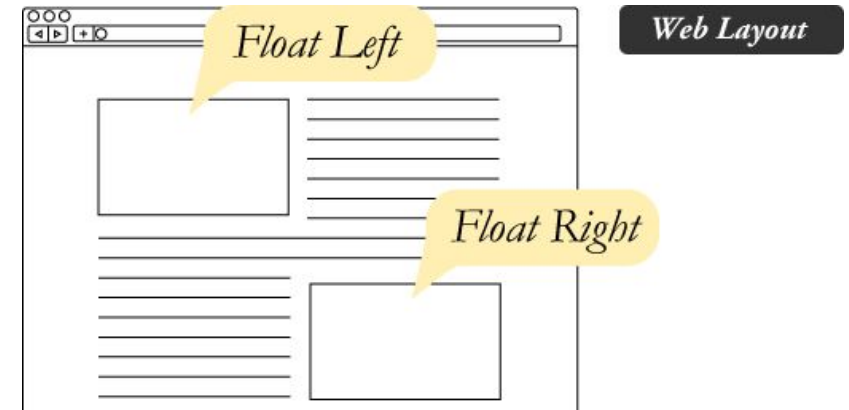
→ The specificity of A is 1 (one element)
The specificity of B is 101 (one ID reference and one element)
The specificity of C is 1000 (inline styling)

→ Since 1 < 101 < 1000, the third rule (C) has a greater level of specificity, and therefore will be applied

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[Float]

→ With CSS float, an element can be pushed to the left or right, allowing other elements to wrap around it

→ The elements **after** the floating element will flow around it

   → The **clear** property turns off the floating

→ The elements before the floating element will not be affected

→ Aside from the simple example of wrapping text around images, floats can be used to create **entire web layouts**

Web Layout

Float Left

Float Right

Float Left

header

side bar

main content

Float Right

footer

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E D U C A T I O N

[Float]

→ The following example specifies that an image should float to the **left** in a text:

```
img {
    float: left;
}
```

In this example, the image will float to the left in the paragraph, and the text in the paragraph will wrap around the image.

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→ The following example specifies that an image should float to the **right** in a text:

```
img {
    float: right;
}
```

In this example, the image will float to the right in the paragraph, and the text in the paragraph will wrap around the image.

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[DAN.IT]
E D U C A T I O N

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[The clear Property]

→ The clear property specifies whether an element can be next to floating elements that precede it or must be moved down (cleared) below them

→ The clear property can have one of the following values:

→ none - the element is *not* moved down to clear past floating elements (default)

→ left - the element is moved down to clear past *left* floats

→ right- the element is moved down to clear past *right* floats

→ both - the element is moved down to clear past *both* left and right floats

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E D U C A T I O N

[The clear Property]

```css
.div1 {
    float: left;  width: 100px;  height: 50px;
    margin: 10px;
    border: 3px solid #73AD21;
}
.div2 {
    border: 1px solid red;
}
.div3 {
    float: left;  width: 100px;  height: 50px;
    margin: 10px;
    border: 3px solid #73AD21;
}
.div4 {
    border: 1px solid red;  clear: left;
}
```

Without clear

| div1 | div2 - Notice that div2 is after div1 in the HTML code. However, since div1 floats to the left, the text in div2 flows around div1. |

With clear

div3

div4 - Here, clear: left; moves div4 down below the floating div3. The value "left" clears elements floated to the left. You can also clear "right" and "both".

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[Images Side By Side]

→ With the float property, it is easy to float images side by side:

```css
.img-container {  float: left;  width:
      33.33%;  padding: 5px;
      box-sizing: border-box;
}

img {
      width: 100%;
}
```


Images Side by Side

```html
<div class="img-container">
      <img src="images/fjords.jpg" alt="Fjords"/>
</div>
```

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[Exercise (3)]

→ Use CSS to create an image gallery with 4 pictures

→ Add a description text below each image

→ When the user hovers over an image, its borders will change color to black

→ Clicking on an image will open a new page displaying the image in its full size

Fjords

A forest

Northern lights

Mountains

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[Overflow]

→ The overflow property controls what happens to content that is too big to fit into a specified area

→ It has the following values:
  → visible - Default. The overflow is not clipped. It renders outside the element's box
  → hidden - The overflow is clipped, and the rest of the content will be invisible
  → scroll - The overflow is clipped, but a scrollbar is added to see the rest of the content
  → auto - If overflow is clipped, a scrollbar should be added to see the rest of the content

→ The overflow property only works for block elements with a specified height

```
div {
    width: 250px;  height: 50px;
    background-color: #eee;  overflow:
    auto;
}
```

You can use the overflow property
when you want to have better control
of the layout. The overflow property

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[Exercise (4)]

→ You are given a list of hyperlinks:

```html
<ul>
    <li><a href="#home" class="active">Home</a></li>
    <li><a href="#news">News</a></li>
    <li><a href="#contact">Contact</a></li>
    <li><a href="#about">About</a></li>
</ul>
```

→ Use float to create the following horizontal menu:

→ Try not to specify the width of each <li> (hint: use the overflow property)

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E D U C A T I O N

[Website Layout]

→   A website is often divided into headers, menus, content and a footer:

Header
Navigation Menu

Content	Main Content	Content

Footer

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[Header]

→ A header is usually located at the top of the website (or right below a top navigation menu). It often contains a logo or the website name:

```css
header {
    background-color: #f1f1f1;  padding:
    20px;
    text-align: center;
}
```



```html
<header>
    <h1>Header</h1>
</header>
```

[Navigation Bar]

→ A navigation bar contains a list of links to help visitors navigating through your website:

```css
nav {
    overflow: hidden;  background-color: #333;
}
    nav a {
        float: left;  display: block;  color:
        #f2f2f2;  text-align: center;  padding:
        15px;
        text-decoration: none;
    }

    nav a:hover {
        background-color: #ddd;  color:
        black;
    }
```

```html
<nav>
    <a href="#">Link</a>
    <a href="#">Link</a>
    <a href="#">Link</a>
</nav>
```

Header

Link   Link   Link

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E D U C A T I O N

[Content]

→ The layout in this section, often depends on the target users

→ The most common layout is one (or combining them) of the following:

  → **1-column** (often used for mobile browsers)

  → **2-column** (often used for tablets and laptops)

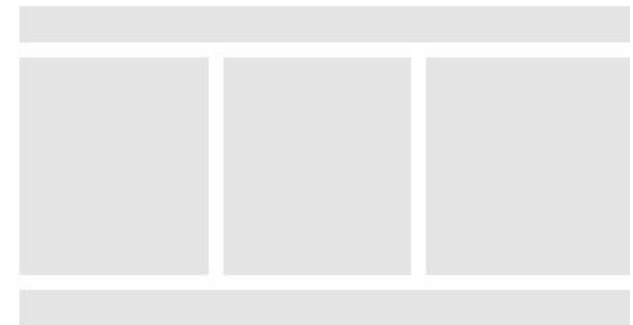 → **3-column layout** (only used for desktops)

1-column:

2-column:

3-column:

[Content]

→ For example, we will create a 3-column layout:
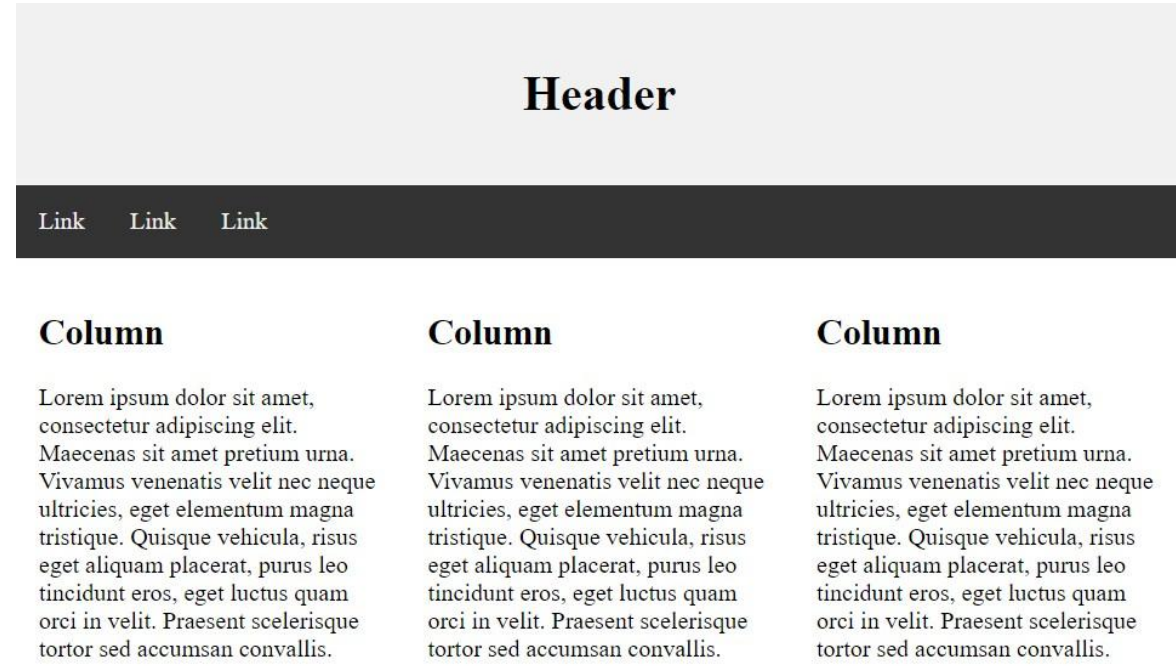
```
.column {
    float: left;  width: 33.33%;  padding: 15px;
}
```

```
<main>
    <div class="column">
        <h2>Column</h2>
        <p>Lorem ipsum...</p>
    </div>
    <div class="column">
        <h2>Column</h2>
        <p>Lorem ipsum...</p>
    </div>
    <div class="column">
        <h2>Column</h2>
        <p>Lorem ipsum...</p>
    </div>
</main>
```
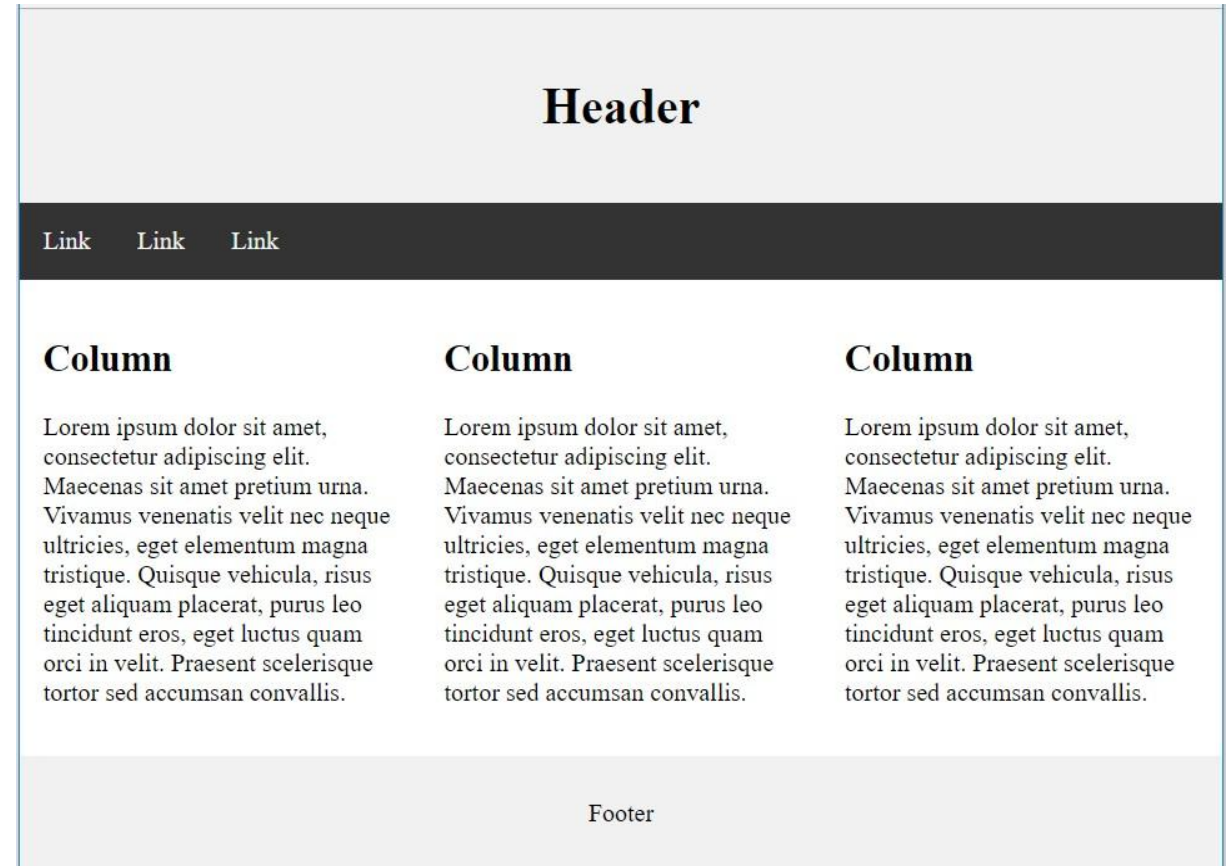
Header

Link   Link   Link

Column

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To create a 2-column layout, change the width to 50%, to create a 4-column layout, use 25%, etc.

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E D U C A T I O N

[Footer]

→ The footer is placed at the bottom of your page. It often contains information like copyright and contact info:

```css
footer {
    background-color: #f1f1f1;
    padding: 10px;
    text-align: center;
    clear: both; /* clear the floats */
}
```
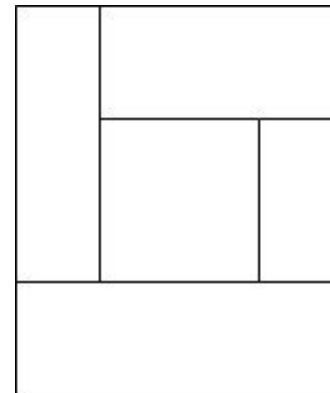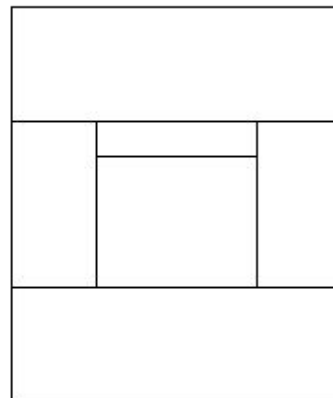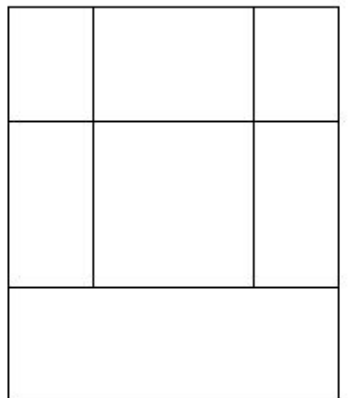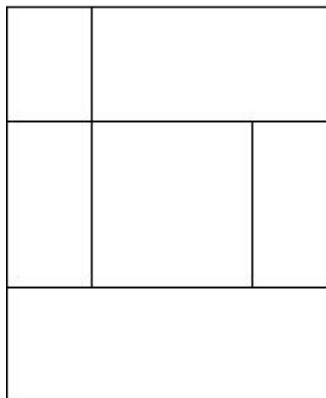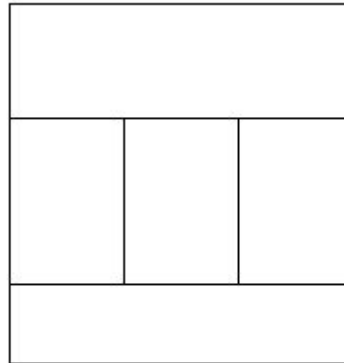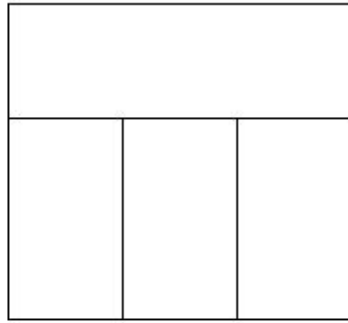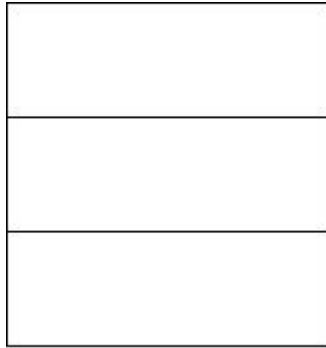
```html
<footer>
    <p>Footer</p>
</footer>
```

Header

Link   Link   Link

Column

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Footer

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[Exercise (5)]

→ Create the following page layouts using only the float property:

[Exercise (6)]

→ Create the following page using the page layout techniques we've learned:

[Control questions]

1. Which attribute has higher weight: "class" or "id"?
2. What is the weight of the following selector?

   h2#page-header a.logo-text.text-white

3. How to overwrite inline styles placed in HTML using CSS?
4. What is the default value of "display" property for elements with "float: right"?
5. How floating elements affect height of parent element?
6. How elements going after tags with "float" property are displayed?
7. How does "clear: right" work?
8. Which element has to contain "clear: both" if you want to fix the problem with overlapping floating elements?

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[Materials]

Core materials:

https://habr.com/post/137588/

https://canonium.com/articles/css-understanding-weight-selectors

https://learn.javascript.ru/float

https://html5book.ru/css-position/#float

Additional materials:

http://css.yoksel.ru/specifity/

Video materials:

https://www.youtube.com/watch?v=2-drD2pKMPs

https://www.youtube.com/watch?v=xara4Z1b18I

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