

# CSS Layout I

CISC-2350-R01 | Fall 2017 | Week 9-1

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# Today's Agenda

- Attendance
- Web review presentations (David, John, Lea)
- Review: CSS Box Model
- Homework show & tell (CSS tricks)
- Intro to positioning:
  - Position property
  - z-index
  - Float
- In-class exercise
- Homework Assignment

**Web review presentations: John, David, Lea**

# Review: CSS Box Model

**CSS treats each HTML element  
as it lives in a box.**

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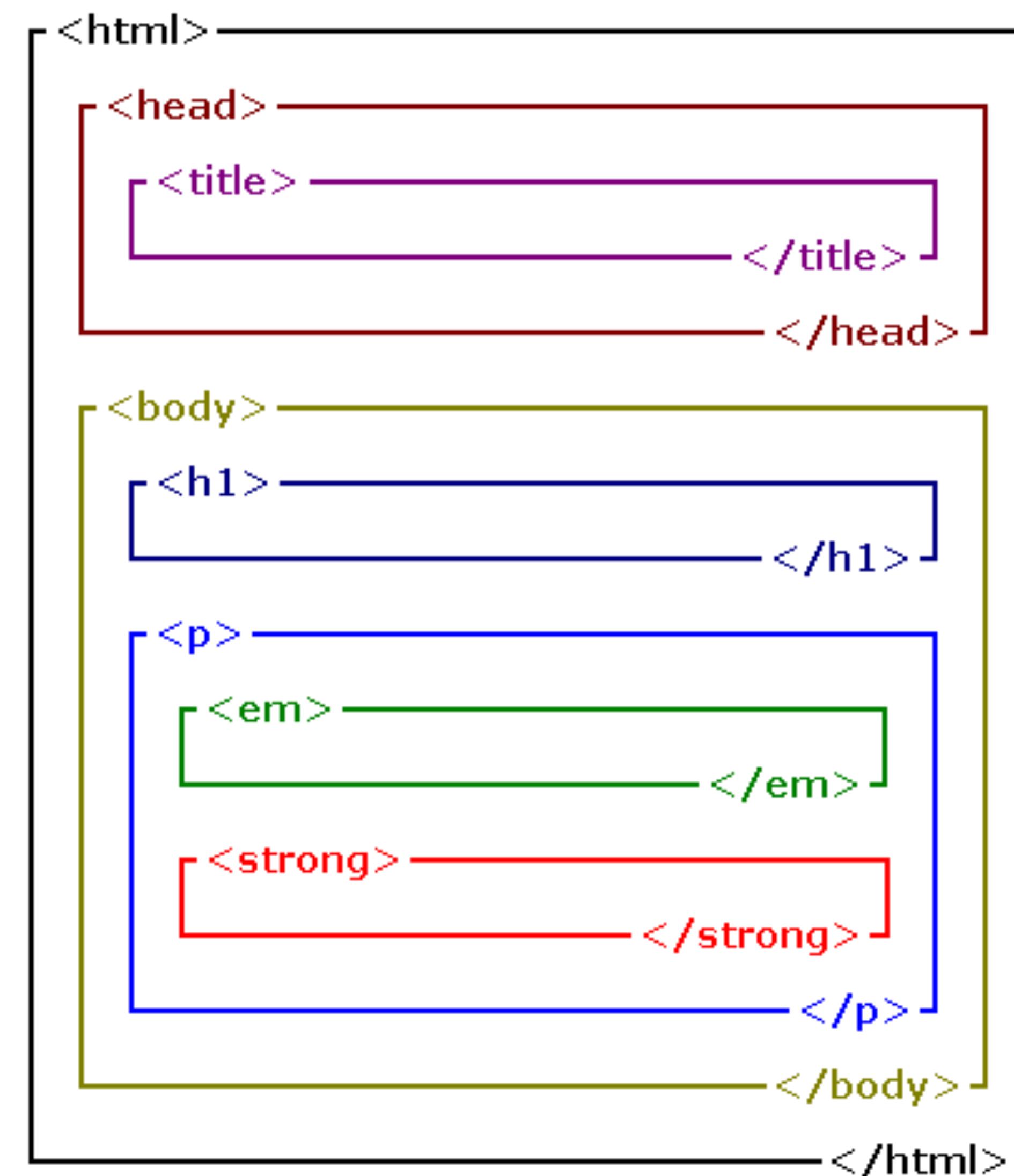
Full name

Email

Password

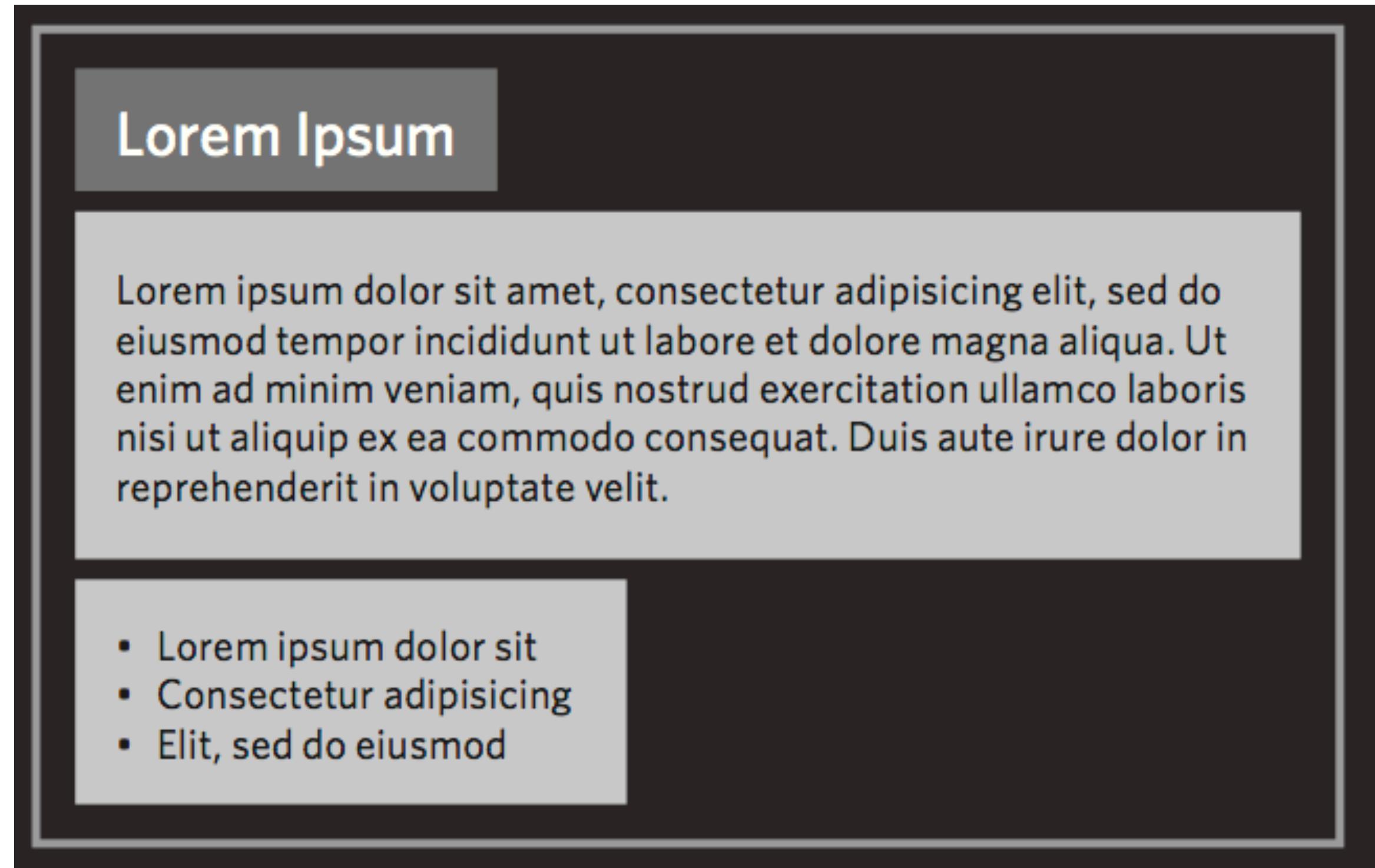
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# There are block and inline elements



# Block elements

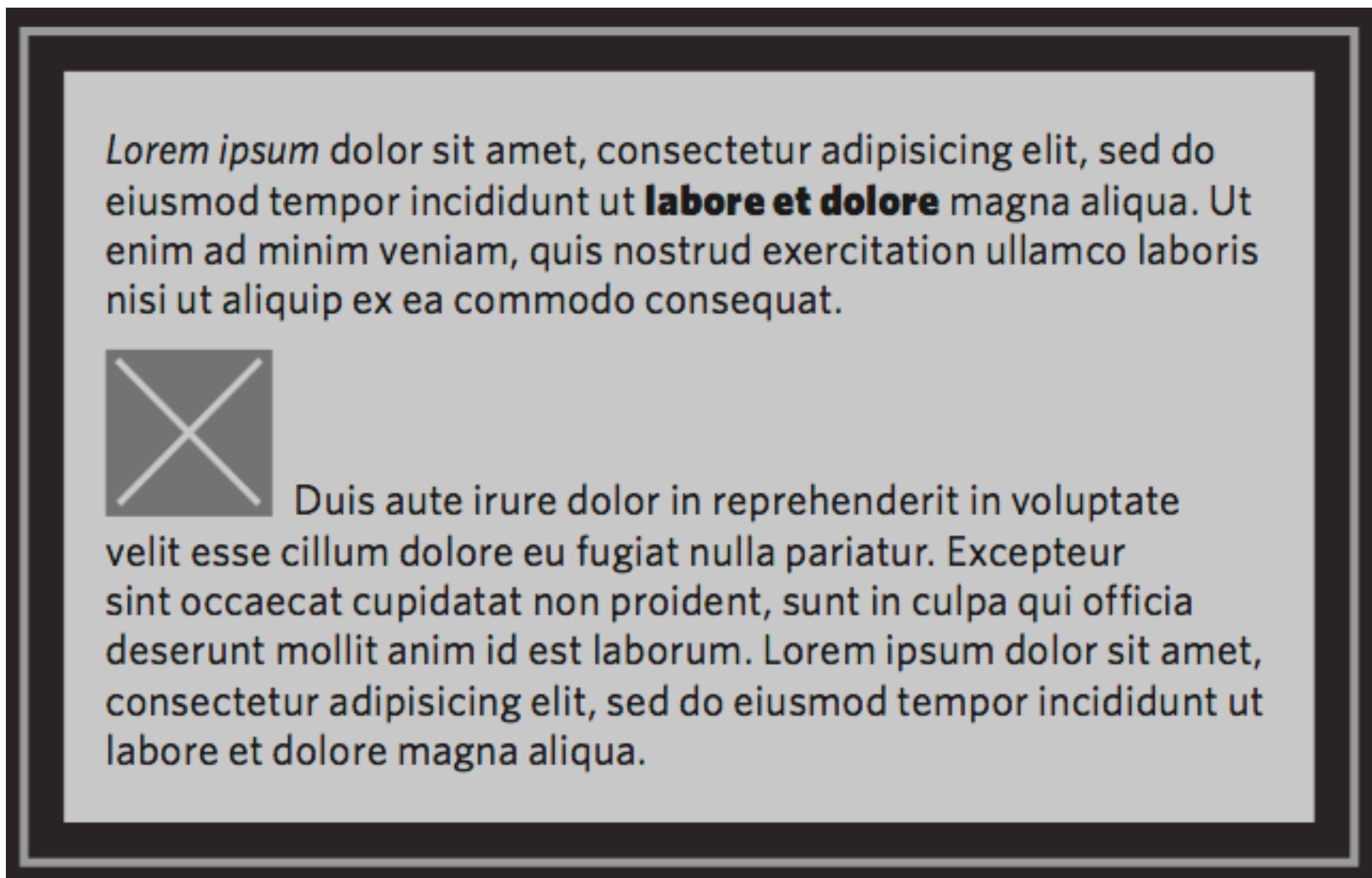
Block elements start on a new line and act as the main building blocks of any layout: <h1> <p> <ul> <li>



# Inline elements

Inline elements float between surrounding text:

<img> <span> <b> <i>

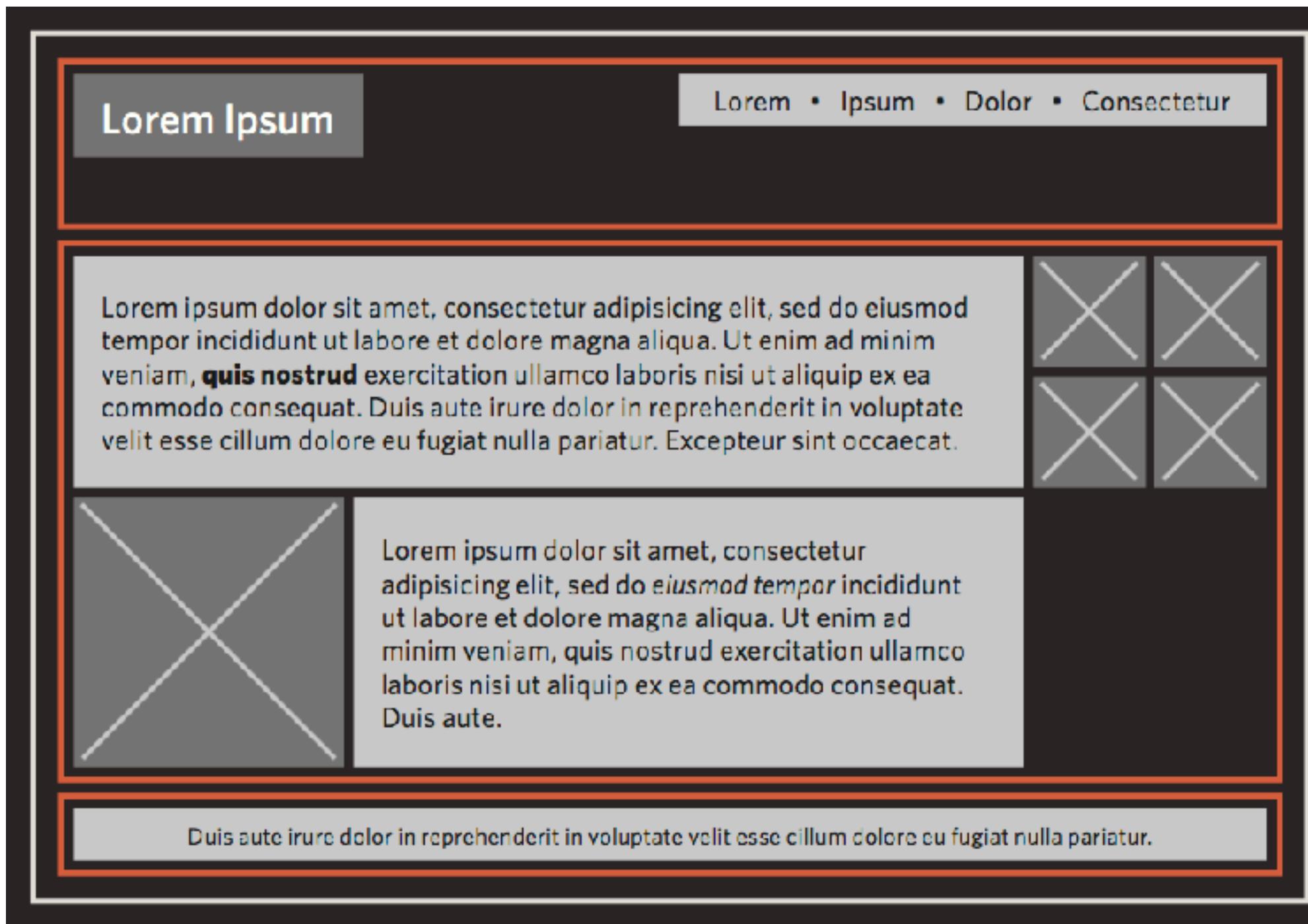


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# Nested block elements

If one block-level element sits inside another block-level element then the outer box is known as the **containing** or **parent** element.  
(remember what we spoke about <div>)



You can control how much space each box takes up by setting the width and height of the boxes.

# Width and Height

- The dimensions of a block element are specified with width and height:

```
div {  
    width: 400px;  
    height: 400px;  
    background color: white;  
}
```

- Like text, they can be given px, % and em values

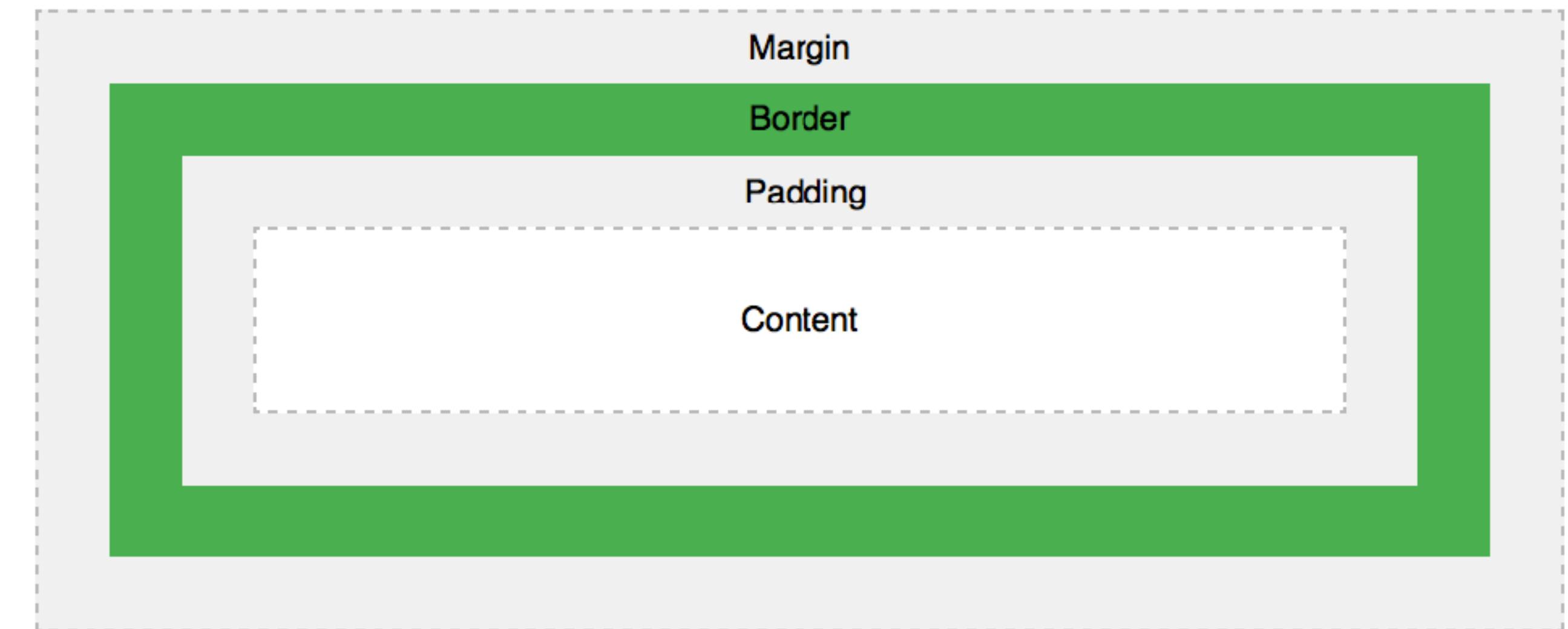
# Max/min width and height

```
div {  
    min-width: 400px;  
    max-width: 600px;  
    background color: white;  
}  
p {  
    width: 75%;  
}
```

To separate boxes, you can use borders,  
margins, and padding.

# Border, margin, padding

- **Border:** separates the boxes from one another
- **Margin:** creates a gap between borders of two boxes
- **Padding:** a space between the border of the box and the content in it



# Border

- The border property allows you to specify the width, style and color of a border in one property (and the values should be coded in that specific order).

```
p {  
    border-width: 2px;  
    border-style: dashed;  
    border-color: blue;  
}
```

**OR**

```
border: 2px dotted blue;
```

# Padding

- The padding property allows you to specify how much space should appear between the content of an element and its borders.

```
p {  
    border-width: 2px;  
    border-style: dashed;  
    border-color: blue;  
    padding: 10px;  
}
```

**OR**

padding-top, padding-right, padding-bottom, padding-left

**OR**

padding: 10px 5px 3px 1px;

**Note:** padding **gets added** to the width.

# Margin

- The margin property controls the gap between boxes.

```
p {  
    min-width: 400px;  
    max-width: 600px;  
    margin: 40px;  
}
```

**OR**

margin-top, margin-right, margin-bottom, margin-left

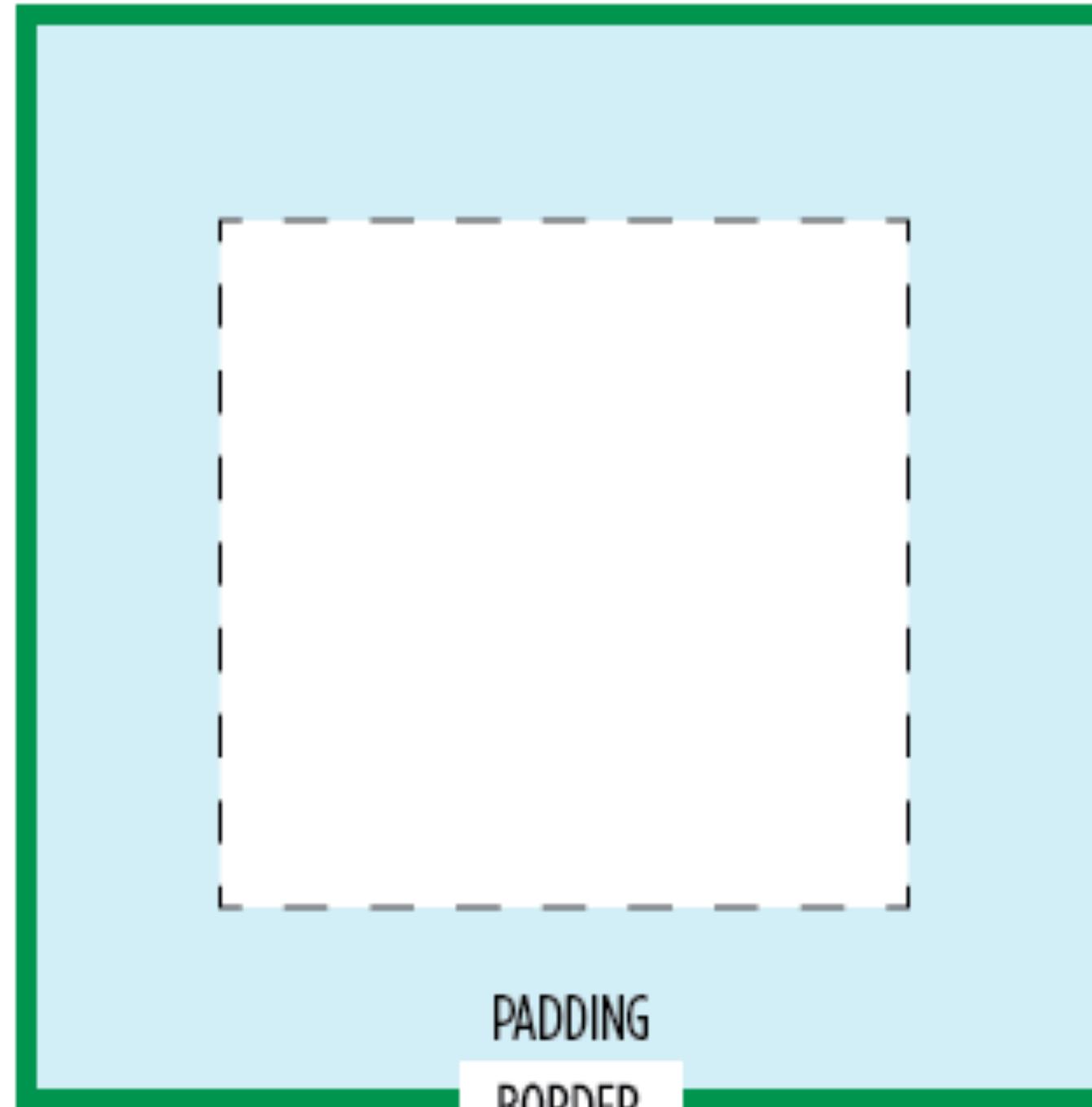
**OR**

margin: 10px 5px 3px 1px;

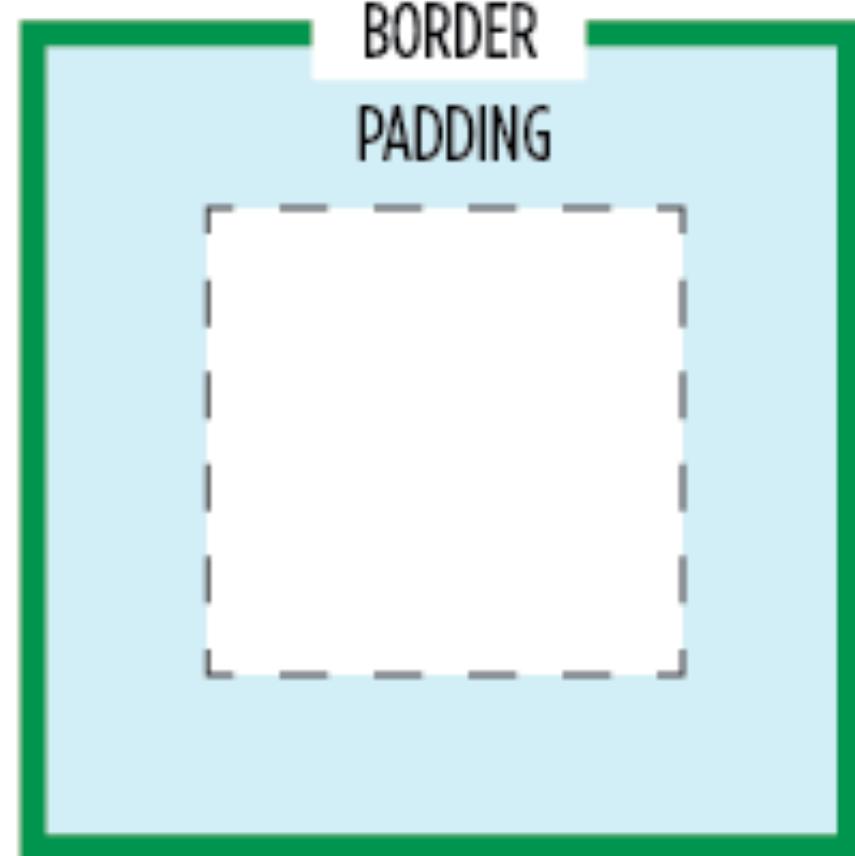
**Note:** margin also **gets added** to the width.

**By default extra border, margin and padding values are being added in addition to the box width and height.**

That's where the box-sizing  
property comes in.



**DEFAULT BOX MODEL**



**ADJUSTED WITH  
BOX-SIZING PROPERTY**

# box-sizing

```
div {  
    min-width: 400px;  
    max-width: 600px;  
    border: 5px solid red;  
    box-sizing: border-box;  
}
```

# Questions?

# Homework show & tell

<http://bit.ly/2xzLHvt>

# Intro to CSS Positioning

In CSS we use the *position* property  
to control the layout of the page.

# Positioning

Position can be normal, relative, absolute, or fixed

- **Normal** is the default flow, each block element begins on a new line
- **Relative** positioning is based on its parent element, doesn't affect the positioning of other elements
- **Absolute** positioning doesn't depend on any other elements and scrolls with the page
- **Fixed** doesn't depend on any other elements but doesn't scroll with a page (i.e. a footer)

# Positioning

I am a lonely absolute

```
background-color:#DCF9E1;  
border:1px solid white;  
padding:15px;  
width:150px;  
position:absolute;  
top:0;  
left:0;
```

## How CSS Positioning Works

[« Go Back to the Tutorial](#)

I am relative (resize window)

```
background-color:#F8F7C3;  
border:1px solid white;  
width:200px;  
padding:20px;  
position:relative;  
left:400px;
```

I am absolute inside relative

```
background-color:#F8D9C3;  
border:1px solid white;  
padding:20px;  
position:absolute;  
left:-100px;  
bottom:0px;
```

I am fixed (scroll the page)

```
background-color:#F6E4F5;  
border:1px solid white;  
padding:15px;  
right:95px;  
width:300px;  
z-index:10;  
position:fixed;  
bottom:15px;
```

I am absolute inside fixed

```
background-color:#DCF4F9;  
border:1px solid white;  
padding:15px;  
position:absolute;  
right:-50px;  
top:-90px;
```

# Normal flow

**Normal** is the default flow, each block element begins on a new line, causing each item to appear lower down the page than the previous one.

## Guitars

I have lots of guitars. I started with a really bad Sears red guitar. My parents got it for me for Christmas when I was about 6. It couldn't stay in tune. But I was so bad when I first started strumming on a guitar, I didn't know any better.

When I was 13 I finally started trying to actually learn how to play. I then realized how bad a guitar that was. I saved up and got a Godin brand guitar. It's a Canadian brand and pretty good. That did me well for a few years.

Near the end of high school I got more serious and played a lot of shows with bands. I wanted something good a rugged because I played in loud bands and jumped around a lot. I went with a Fender Telecaster.

I've since also used a Gibson 335, and a Gibson SG very often. I'm on my second Telecaster as well, the first one was stolen while a band I played in was on tour. I also play a Gibson Dove acoustic guitar and a Taylor acoustic guitar as well.

# Normal flow

```
body {  
    width:750px;  
    font-family: sans-serif;  
    background-color: rgba(0, 0, 255,  
    0.3);  
}
```

## Example

```
h1 {  
    background-color: rgba(0, 0,  
    255, 0.3);  
    padding: 10px;  
}
```

### Guitars

I have lots of guitars. I started with a really bad Sears red guitar. My parents got it for me for Christmas when I was about 6. It couldn't stay in tune. But I was so bad when I first started strumming on a guitar, I didn't know any better.

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# Relative positioning

**Relative** positioning is based on its parent element, doesn't affect the positioning of other elements. It moves an element from the position it would be in normal flow, shifting it to the top, right, bottom, or left of where it would have been placed.

I have lots of guitars. I started with a really bad Sears red guitar. My parents got it for me for Christmas when I was about 6. It couldn't stay in tune. But I was so bad when I first started strumming on a guitar, I didn't know any better.

When I was 13 I finally started trying to actually learn how to play. I then realized how bad a guitar that was. I saved up and got a Godin brand guitar. It's a Canadian brand and pretty good. That did me well for a few years.

Near the end of high school I got more serious and played a lot of shows with bands. I wanted something good a rugged because I played in loud bands and jumped around a lot. I went with a Fender Telecaster.

# Relative positioning

```
#two {  
  position: relative;  
  top: 10px;  
  left: 50px;  
}
```

## Example

I have lots of guitars. I started with a really bad Sears red guitar. My parents got it for me for Christmas when I was about 6. It couldn't stay in tune. But I was so bad when I first started strumming on a guitar, I didn't know any better.

When I was 13 I finally started trying to actually learn how to play. I then realized how bad a guitar that was. I saved up and got a Godin brand guitar. It's a Canadian brand and pretty good. That did me well for a few years.

Near the end of high school I got more serious and played a lot of shows with bands. I wanted something good a rugged because I played in loud bands and jumped around a lot. I went with a Fender Telecaster.

# Absolute positioning

**Absolute** positioning positions the element in relation to its containing element. It doesn't depend on any other elements and scrolls with the page.

## Guitars

When I was 13 I finally started trying to actually learn how to play. I then realized how bad a guitar that was. I saw an ad and got a Godin brand guitar. It's a Canadian brand and pretty good. That did me well for a few years.

I have lots of guitars. I started with a really bad Sears red guitar. My parents got it for me for Christmas when I was about 6. It couldn't stay in tune. But I was so bad when I first started strumming on a guitar, I didn't know any better.

Near the end of high school I got more serious and played a lot of shows with bands. I wanted something good a rugged because I played in loud bands and jumped around a lot. I went with a Fender Telecaster.

I've since also used a Gibson 335, and a Gibson SG very often. I'm on my second Telecaster as well, the first one was stolen while a band I played in was on tour. I also play a Gibson Dove acoustic guitar and a Taylor acoustic guitar as well.

# Absolute positioning

```
#two {  
  position: absolute;  
  top: 10px;  
  left: 50px;  
}
```

## Example

### Guitars

When I was 13 I finally started trying to actually learn how to play. I then realized how bad a guitar that was. I saw aitus and got a Godin brand guitar. It's a Canadian brand and pretty good. That did me well for a few years.

I have lots of guitars. I started with a really bad Sears red guitar. My parents got it for me for Christmas when I was about 6. It couldn't stay in tune. But I was so bad when I first started strumming on a guitar, I didn't know any better.

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# Example: absolute positioning (title)

```
body {  
    font-family: sans-serif;  
    background-color: rgba(0, 0, 255, 0.3);  
}
```

```
h1 {  
    position: absolute;  
    background-color: rgba(0, 0, 255, 0.3);  
    width: 130px;  
    left: 550px;  
    top: -10px;  
    padding: 10px;  
}
```

```
p {  
    width: 500px;  
}
```

I have lots of guitars. I started with a really bad Sears red guitar. My parents got it for me for Christmas when I was about 6. It couldn't stay in tune. But I was so bad when I first started strumming on a guitar, I didn't know any better.

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Near the end of high school I got more serious and played a lot of shows with bands. I wanted something good a rugged because I played in loud bands and jumped around a lot. I went with a Fender Telecaster.

**Guitars**

# Fixed positioning

**Fixed** doesn't depend on any other elements but doesn't scroll with a page (i.e. a footer). It positions the element in relation to the browser window: when a user scrolls down the page, it stays in the exact same place.

The sidebar has a purple background and a vertical scrollbar on the right. A blue button labeled "Guitars" is positioned at the top right. Below it are six white text boxes, each containing a quote about guitars:

- I'm in tune. But I was so bad when I first started strumming on a guitar, I didn't know any better.
- When I was 13 I finally started trying to actually learn how to play. I then realized how bad a guitar that was. I saved up and got a Godin brand guitar. It's a Canadian brand and pretty good. That did me well for a few years.
- Near the end of high school I got more serious and played a lot of shows with bands. I wanted something good and rugged because I played in loud bands and jumped around a lot. I went with a Fender Telecaster.
- I've since also used a Gibson 335, and a Gibson SG very often. I'm on my second Telecaster as well, the first one was stolen while a band I played in was on tour. I also play a Gibson Dove acoustic guitar and a Taylor acoustic guitar as well.
- I have lots of guitars. I started with a really bad Sears red guitar. My parents got it for me for Christmas when I was about 6. It couldn't stay in tune. But I was so bad when I first started strumming on a guitar, I didn't know any better.
- When I was 13 I finally started trying to actually learn how to play. I then realized how bad a guitar that was. I saved up and got a Godin brand guitar. It's a Canadian brand and pretty good. That did me well for a few years.
- Near the end of high school I got more serious and played a lot of shows with bands. I wanted something good and rugged because I played in loud bands and jumped around a lot. I went with a Fender

# Fixed positioning

```
h1 {  
    position: fixed;  
    background-color: rgba(0, 0,  
    255, 0.3);  
    width: 130px;  
    left: 550px;  
    top: -10px;  
    padding: 10px;  
}
```

## Example

in tune. But I was so bad when I first started strumming on a guitar, I didn't know any better.

When I was 13 I finally started trying to actually learn how to play. I then realized how bad a guitar that was. I saved up and got a Godin brand guitar. It's a Canadian brand and pretty good. That did me well for a few years.

Near the end of high school I got more serious and played a lot of shows with bands. I wanted something good a rugged because I played in loud bands and jumped around a lot. I went with a Fender Telecaster.

I've since also used a Gibson 335, and a Gibson SG very often. I'm on my second Telecaster as well, the first one was stolen while a band I played in was on tour. I also play a Gibson Dove acoustic guitar and a Taylor acoustic guitar as well.

I have lots of guitars. I started with a really bad Sears red guitar. My parents got it for me for Christmas when I was about 6. It couldn't stay in tune. But I was so bad when I first started strumming on a guitar, I didn't know any better.

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Guitars

# Overlapping elements: z-index

When you use relative, fixed, or absolute positioning, boxes can overlap.

If boxes do overlap, the elements that appear later in the HTML code sit on top of those that are earlier in the page.

**You can use z-index to control which of the elements will sit on top of a few elements overlapping.**

**The element that has the greater z-index will be on the top.**

I have lots of guitars. I started with a really bad Sears red guitar. My parents got it for me for Christmas when I was about 6. It couldn't stay in tune. But I was so bad when I first started strumming on a guitar, I didn't know any better.

# Floating elements

- The *float* property lets you take an element in normal flow and place it as far to the left or right of the containing element as possible.
- Anything sitting inside the containing element will flow around the element floated.
- Make sure when you use the float property you use the width property to set how wide the floated element should be.

# Float

```
blockquote {  
    float: right;  
    width: 200px;  
    font-family: serif;  
    font-style:italic;  
}
```

## Example

### Guitars

I have lots of guitars. I started with a really bad Sears red guitar. My parents got it for me for Christmas when I was about 6. It couldn't stay in tune. But I was so bad when I first started strumming on a guitar, I didn't know any better.

*"This machine kills fascists."*  
— Woody Guthrie

When I was 13 I finally started trying to actually learn how to play. I then realized how bad a guitar that was. I saved up and got a Godin brand guitar. It's a Canadian brand and pretty good. That did me well for a few years.

# Float to place elements side by side

**Float** property is also used to create a layout where boxes are placed next to each other.

```
p {  
    width: 230px;  
    margin: 5px;  
    padding: 5px;  
    float: left;  
}
```

## Example

### Guitars

I have lots of guitars. I started with a really bad Sears red guitar. My parents got it for me for Christmas when I was about 6. It couldn't stay in tune. But I was so bad when I first started strumming on a guitar, I didn't know any better.

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*"This machine kills fascists." — Woody Guthrie*

# Using “clear” with float

The **clear** property allows you to say that no element (within the same containing element) should touch the left or right-hand sides of a box. It can take the values: *left, right, both, none*

```
blockquote {  
    width: 230px;  
    margin: 5px;  
    padding: 5px;  
    float: left;  
    clear: left;  
}
```

## Guitars

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*“This machine kills fascists.” — Woody Guthrie*

# Questions?

# Homework assignment

# Homework

**By Wednesday, October 25, 6pm**

**1. Read and review the following CSS documentation on positioning:**

1. Mozilla documentation: [https://developer.mozilla.org/en-US/docs/Learn/CSS/CSS\\_layout/Introduction](https://developer.mozilla.org/en-US/docs/Learn/CSS/CSS_layout/Introduction)
2. Go through the Learn CSS Layout tutorial on this website:
  1. <http://learnlayout.com/>

**3. Go through 3 lessons on Codecademy Learn CSS course:**

1. <https://www.codecademy.com/learn/learn-css>
2. The Box Model & Changing the Box Model
3. CSS Display and Positioning
4. Do only free lessons (until Pro part)
5. After you go through lessons, write 2-3 sentences on #General channel on Slack about what new you learned.

**By Sunday, October 29, 6pm**

**4. Web review presentations: Claire & Hayden (post your website links by Sunday 6pm).**

**5. Create a narrative piece that:**

1. Has 5 paragraphs (it can be any content you want)
2. And style it in 3-4 different ways using different positioning values that we went through in class (meaning, it should be 3-4 different HTML pages).
3. Use other CSS properties, so it looks pretty
4. Upload your code to a new folder on Github and post two links on #general channel on Slack:
  - Link to your project's repository (folder)
  - Working link to the Github page ([yourusername.github.io/path to folder](https://yourusername.github.io/path to folder))