

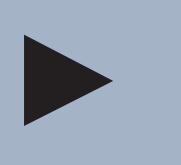
TRY **jQuery**

How does this work?



flight time

3:00



video lessons



challenges



points & badges



points & badges



code school
learn by doing

In order to learn jQuery you need to know:

HTML
content

CSS
style

JavaScript
behavior

level 1



What is jQuery?

What you can do with jQuery



reveal interface elements

1.1 What is jQuery?

What you can do with jQuery

③ Payment

At Code School, there is no contract and you choose your commitment.

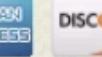
Go monthly and deactivate your account at any time, or choose our discounted yearly option.

If you don't love our service, we'll be happy to refund your last payment, or the remainder of your yearly subscription.

Get 3 months free when you enroll for a year!

PAY YEARLY

PAY WITH

\$25 PER MONTH

NAME ON CARD

CARD NUMBER

EXPIRATION DATE 1 - January 2013

SECURITY CODE

POSTAL CODE

YOUR SUMMARY

Code School Enrollment	\$25
YOUR TOTAL: \$25	

START SCHOOL

change content based on user actions

What you can do with jQuery

The image shows a web page with a light beige background. At the top left, there's a section titled "1 Enroll:" with the sub-instruction "Select an Individual or Group plan." Below this, there are two main options: "INDIVIDUAL" and "MY TEAM". The "INDIVIDUAL" option is highlighted with a dark green button, while the "MY TEAM" option is shown in a dashed box with a mouse cursor hovering over it. Both sections provide details about the monthly cost (\$25/MONTH or \$25/MONTH/SEAT), payment terms ("OR PAY YEARLY AND SAVE!"), and a list of benefits. The "INDIVIDUAL" benefits include unlimited access to all courses, code TV screencasts, voting on upcoming courses, and no contract or commitment. The "MY TEAM" benefits include each member receiving individual benefits, tracking team progress, visual development statistics, and team oversight.

1 Enroll:
Select an Individual or Group plan.

INDIVIDUAL

\$25/MONTH

OR PAY YEARLY AND SAVE!

- UNLIMITED ACCESS TO ALL COURSES
- CODE TV SCREENCASTS
- VOTE ON UPCOMING COURSES
- NO CONTRACT OR COMMITMENT

Or

MY TEAM

\$25/MONTH/SEAT

OR PAY YEARLY AND SAVE!

- EACH MEMBER RECEIVES ACCESS TO ALL OF THE INDIVIDUAL BENEFITS

PLUS

- TRACK YOUR TEAM'S PROGRESS
- VISUAL DEVELOPMENT STATISTICS
- TEAM OVERSIGHT

toggle CSS classes to highlight an element

1.1 What is jQuery?

jQuery makes it easy to:



find

elements in an HTML document



change

HTML content



listen

to what a user does and react accordingly



animate

content on the page



talk

over the network to fetch new content

Changing content

HTML document

```
<!DOCTYPE html>
<html>
<head>
  <title>jQuery Adventures</title>
</head>
<body>
  <h1>Where do you want to go?</h1>
  <p>Plan your next adventure.</p>
</body>
</html>
```

How can we modify the text
of the `<h1>` element?



find it



change it

Finding the proper HTML

HTML document

```
<!DOCTYPE html>
<html>
<head>
  <title>jQuery Adventures</title>
</head>
<body>
  <h1>Where do you want to go?</h1>
  <p>Plan your next adventure.</p>
</body>
</html>
```



find it

How can we search
through our html?



We need to understand how our browser
organizes the HTML it receives.

1.1 What is jQuery?

TRYjQuery

Document Object Model

A tree-like structure created by browsers so we can quickly find HTML Elements using JavaScript.

“DOM”

Loading HTML into the DOM

HTML document

```
<!DOCTYPE html>
<html>
<head>
  <title>jQuery Adventures</title>
</head>
<body>
  <h1>Where do you want to go?</h1>
  <p>Plan your next adventure.</p>
</body>
</html>
```



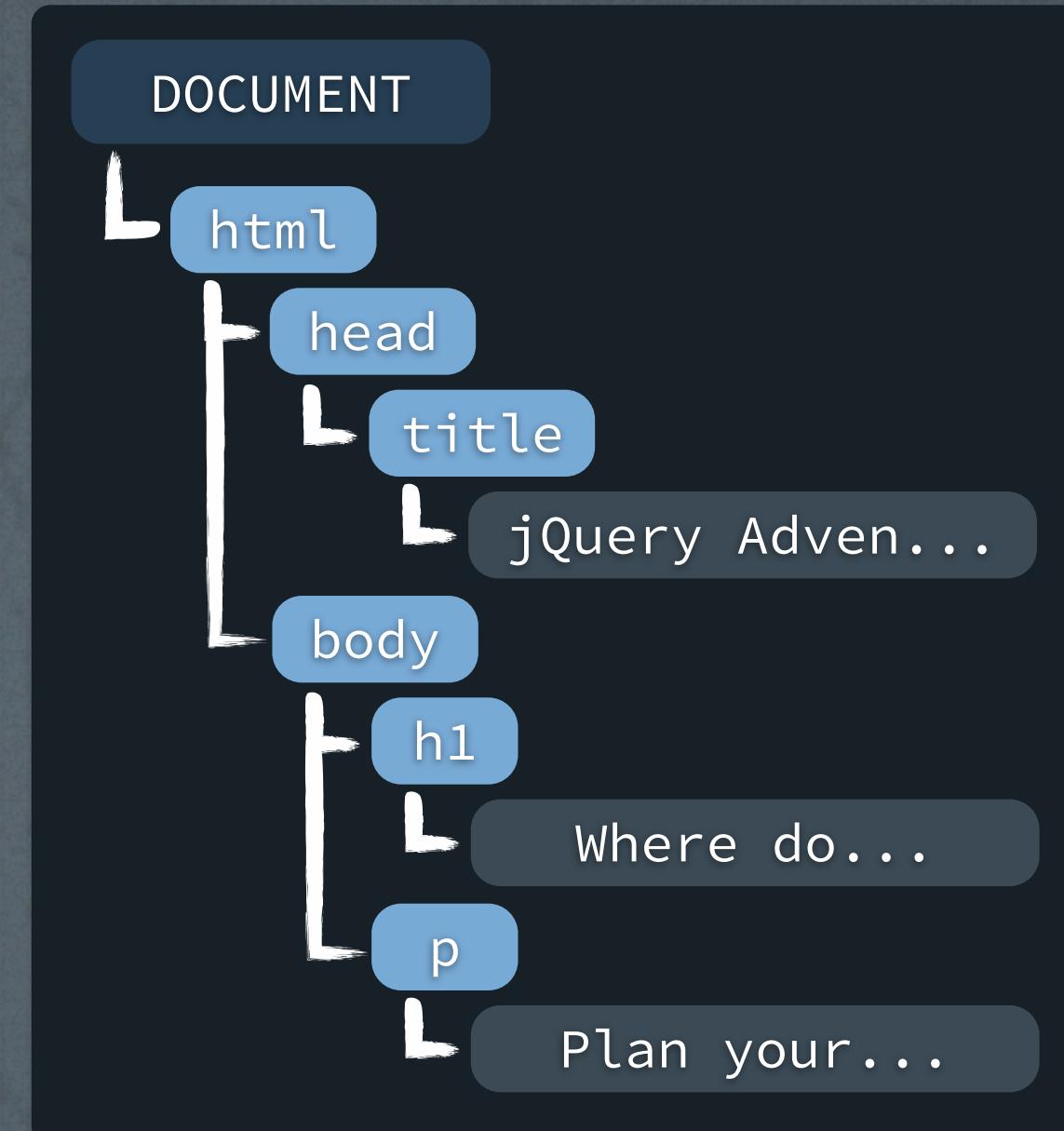
What does that DOM structure look like?

HTML document

```
<!DOCTYPE html>
<html>
<head>
  <title>jQuery Adventures</title>
</head>
<body>
  <h1>Where do you want to go?</h1>
  <p>Plan your next adventure.</p>
</body>
</html>
```



The DOM



Inside the DOM, HTML elements become “nodes” which have relationships with one another.

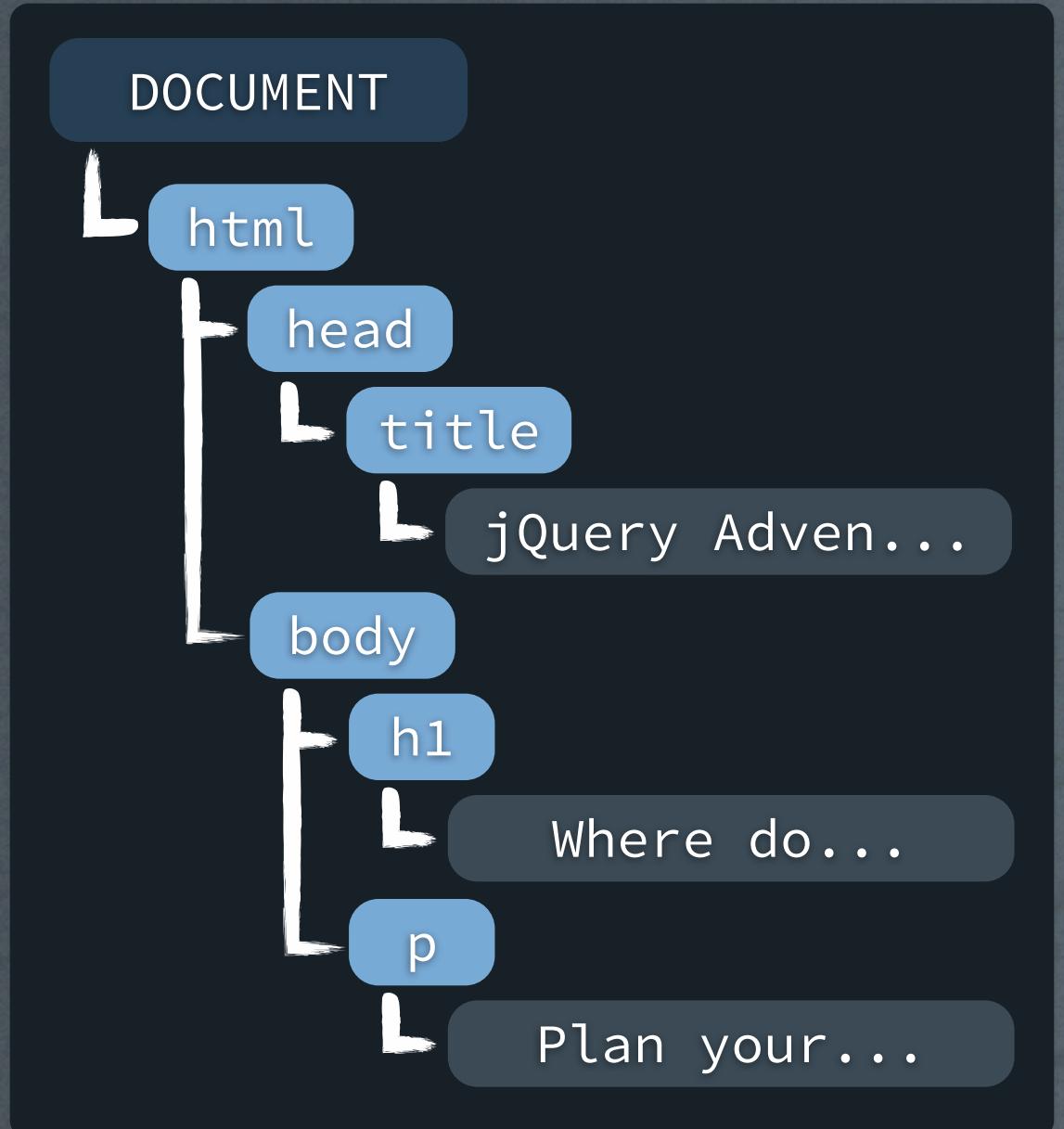
node types: element text

1.1 What is jQuery?

TRYjQuery

How do we search through the DOM?

The DOM



node types: element text

1.1 What is jQuery?

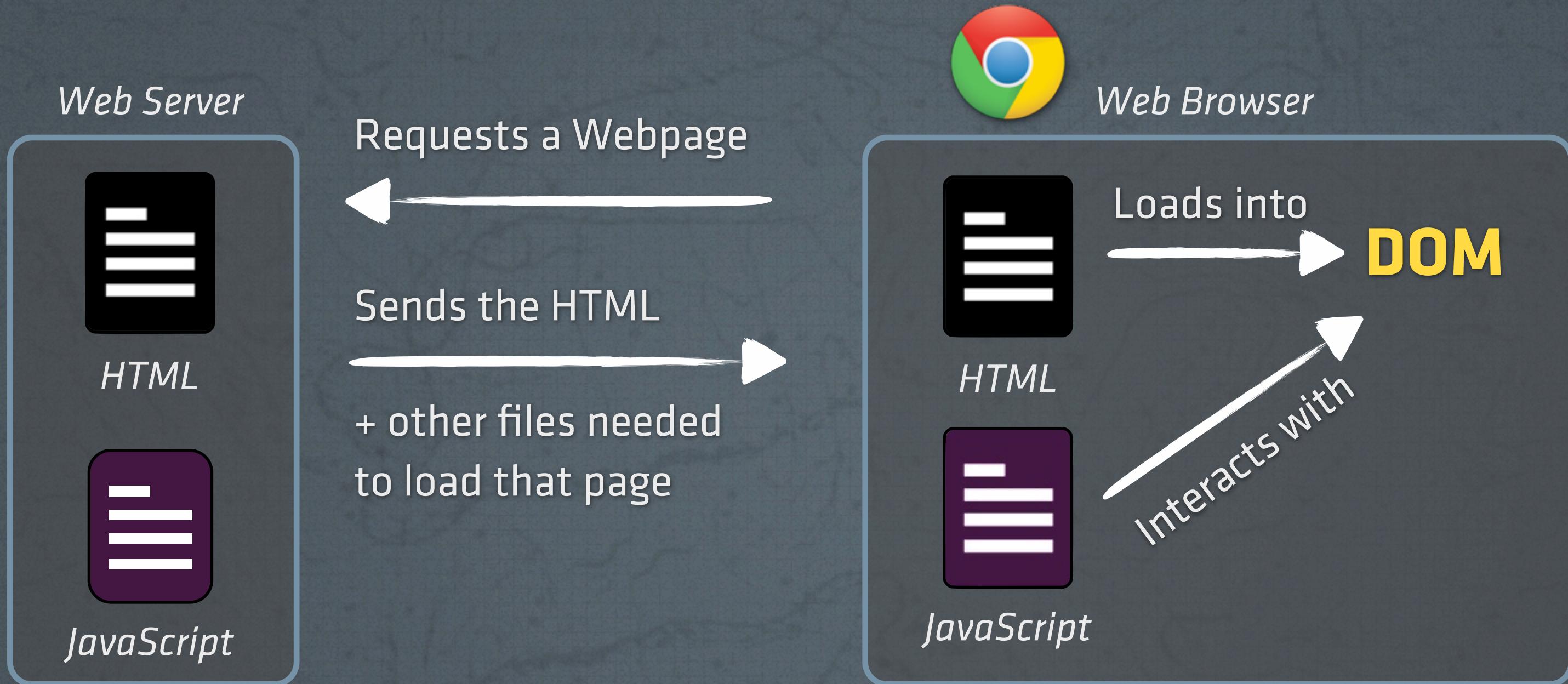


JavaScript

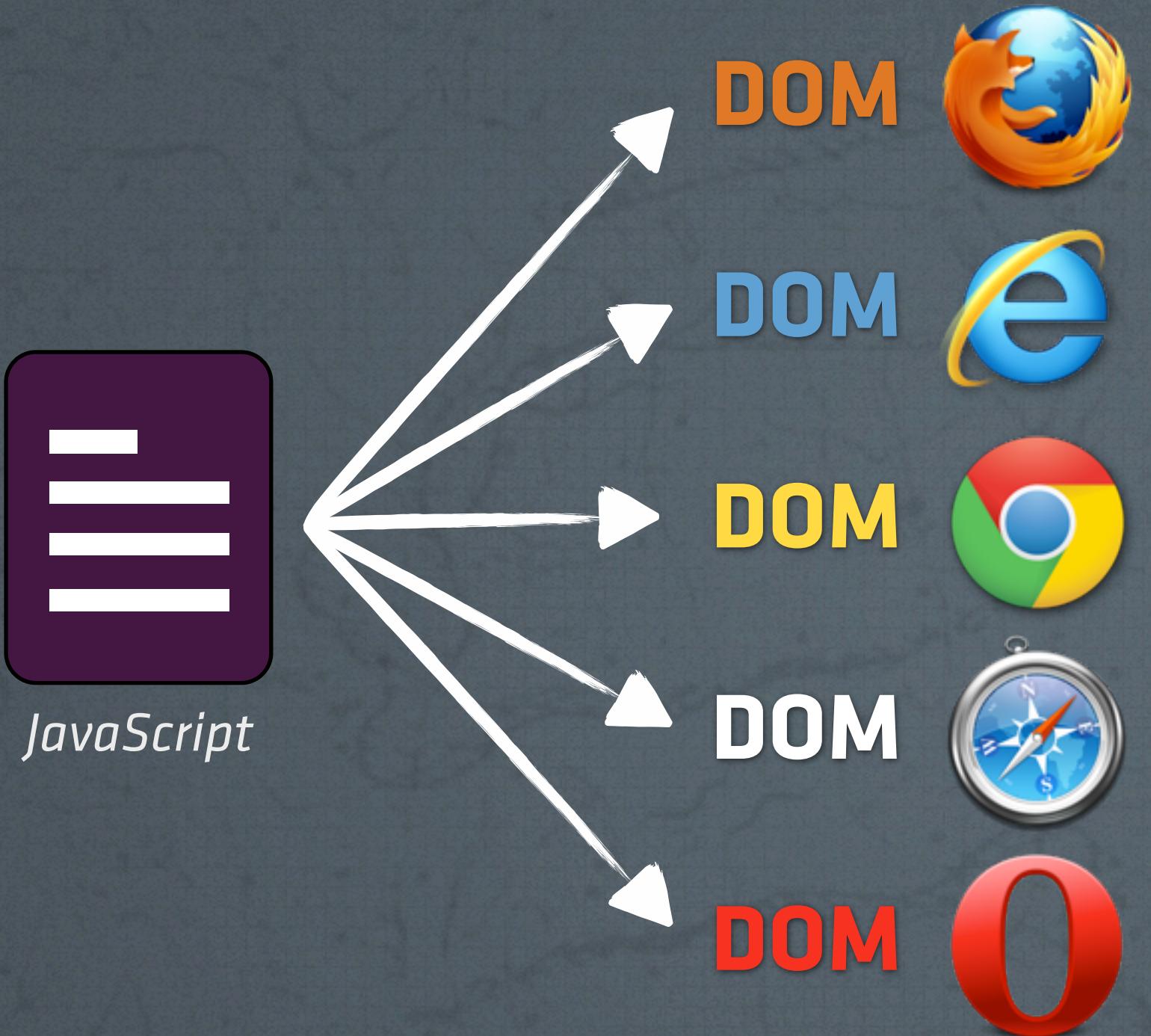
JavaScript gives developers a language to interact with the DOM.

TRYjQuery

How do we find things using the DOM?

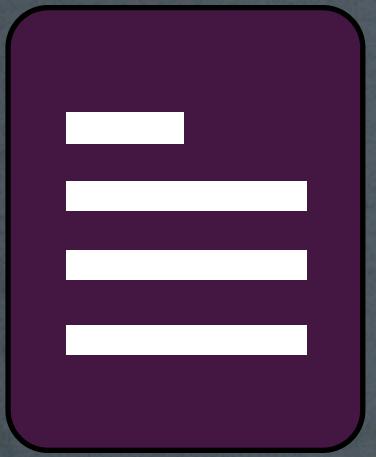


Of course, there's a catch



each browser has a slightly different DOM interface

jQuery to the rescue!

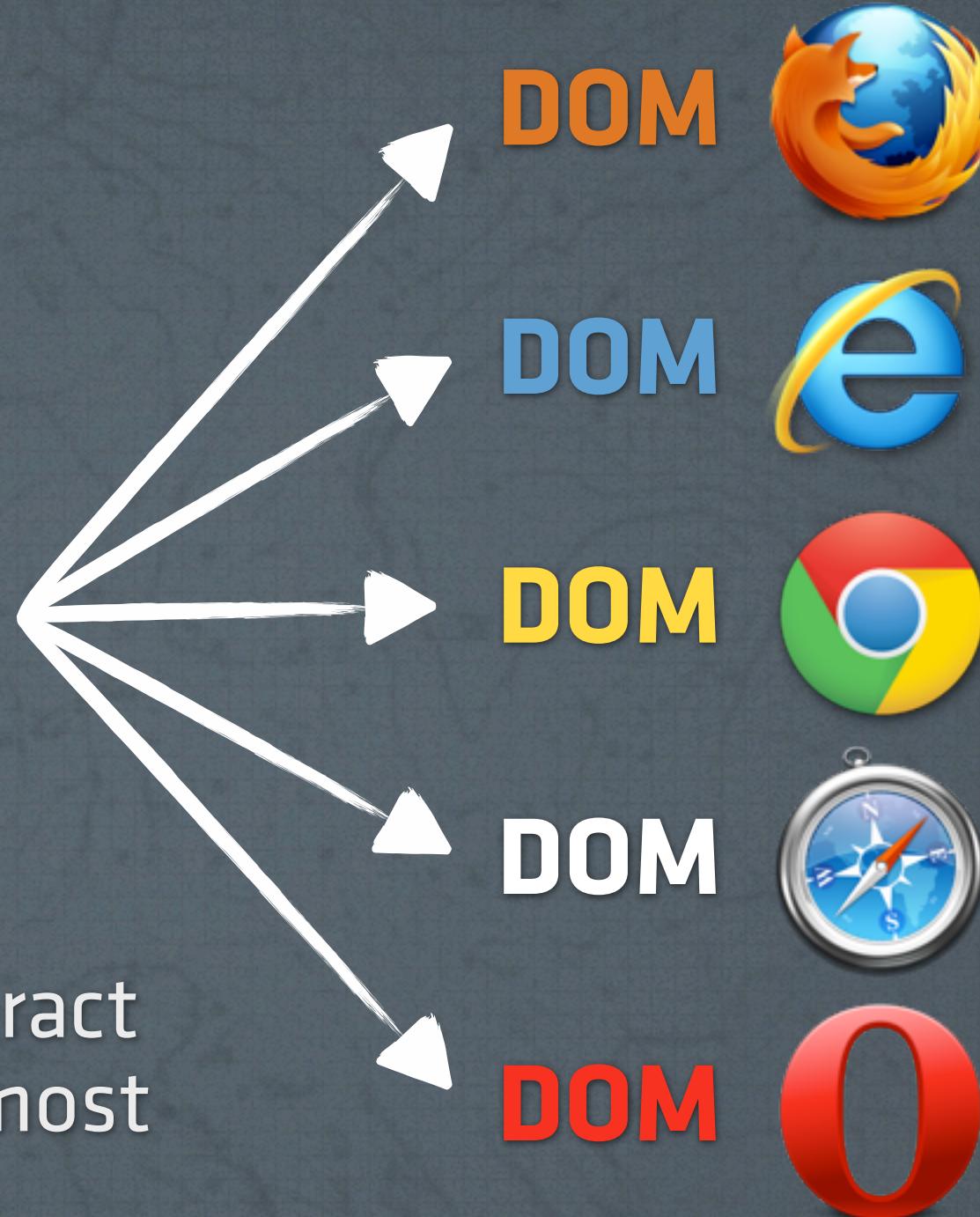


JavaScript



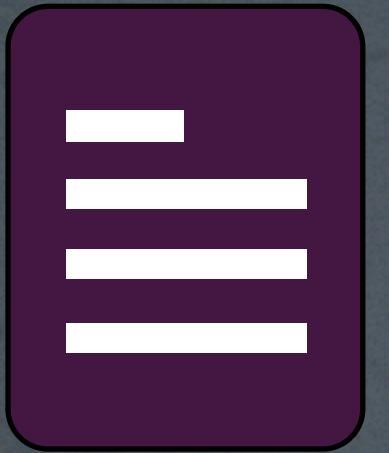
jQuery

If our JavaScript uses jQuery to interact with the DOM then it will work on most modern browsers.



1.1 What is jQuery?

Basic jQuery usage



JavaScript

this is the jQuery function

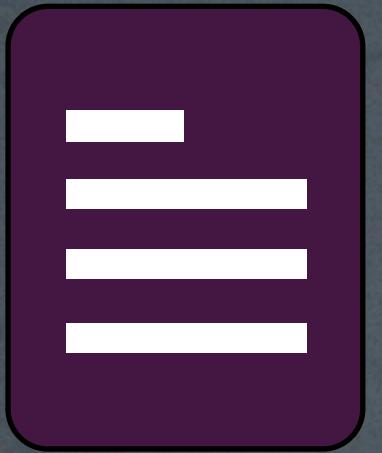


```
jQuery(<code>);
```

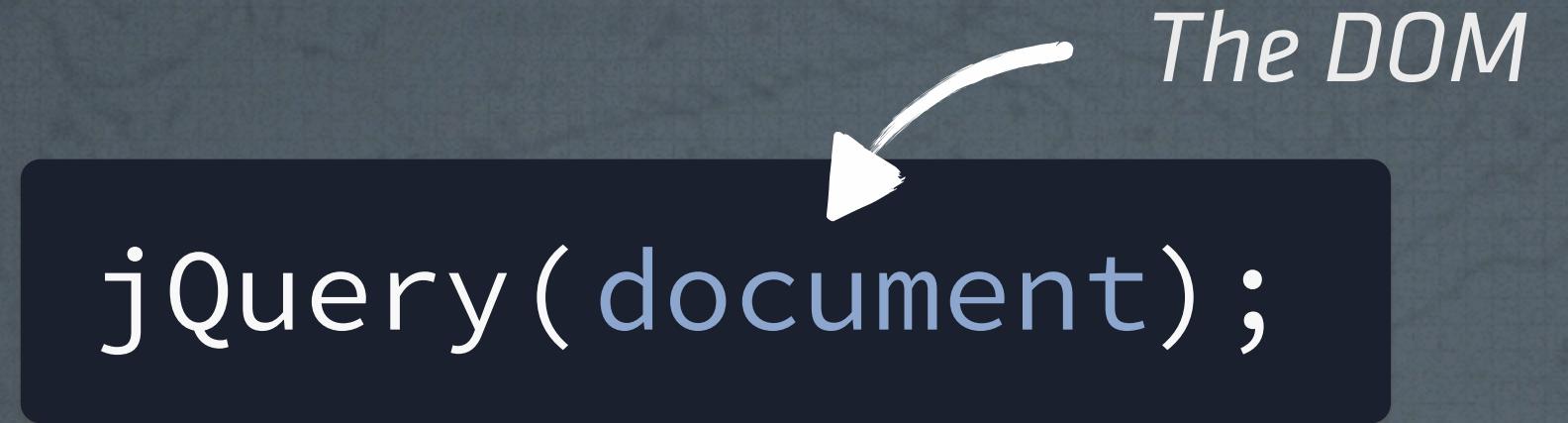
1.1 What is jQuery?

TRY **jQuery**

How jQuery Accesses The DOM



JavaScript



But how can we search through the DOM?

1.1 What is jQuery?

TRYjQuery

We need to use CSS selectors

HTML document

```
<!DOCTYPE html>
<html>
<head>
  <title>jQuery Adventures</title>
</head>
<body>
  <h1>Where do you want to go?</h1>
  <p>Plan your next adventure.</p>
</body>
</html>
```

CSS selectors

```
h1 { font-size: 3em; }
```

```
p { color: blue; }
```

Using the jQuery function to find nodes

HTML document

```
<!DOCTYPE html>
<html>
<head>
  <title>jQuery Adventures</title>
</head>
<body>
  <h1>Where do you want to go?</h1>
  <p>Plan your next adventure.</p>
</body>
</html>
```

jQuery selectors

jQuery("h1");

jQuery("p");

\$("h1");

\$("p");

*short & sweet
syntax*

Changing the content of an element

HTML document

```
<!DOCTYPE html>
<html>
<head>
  <title>jQuery Adventures</title>
</head>
<body>
  <h1>Where do you want to go?</h1>
  <p>Plan your next adventure.</p>
</body>
</html>
```

How can we modify the text
of the `<h1>` element?



find it



change it

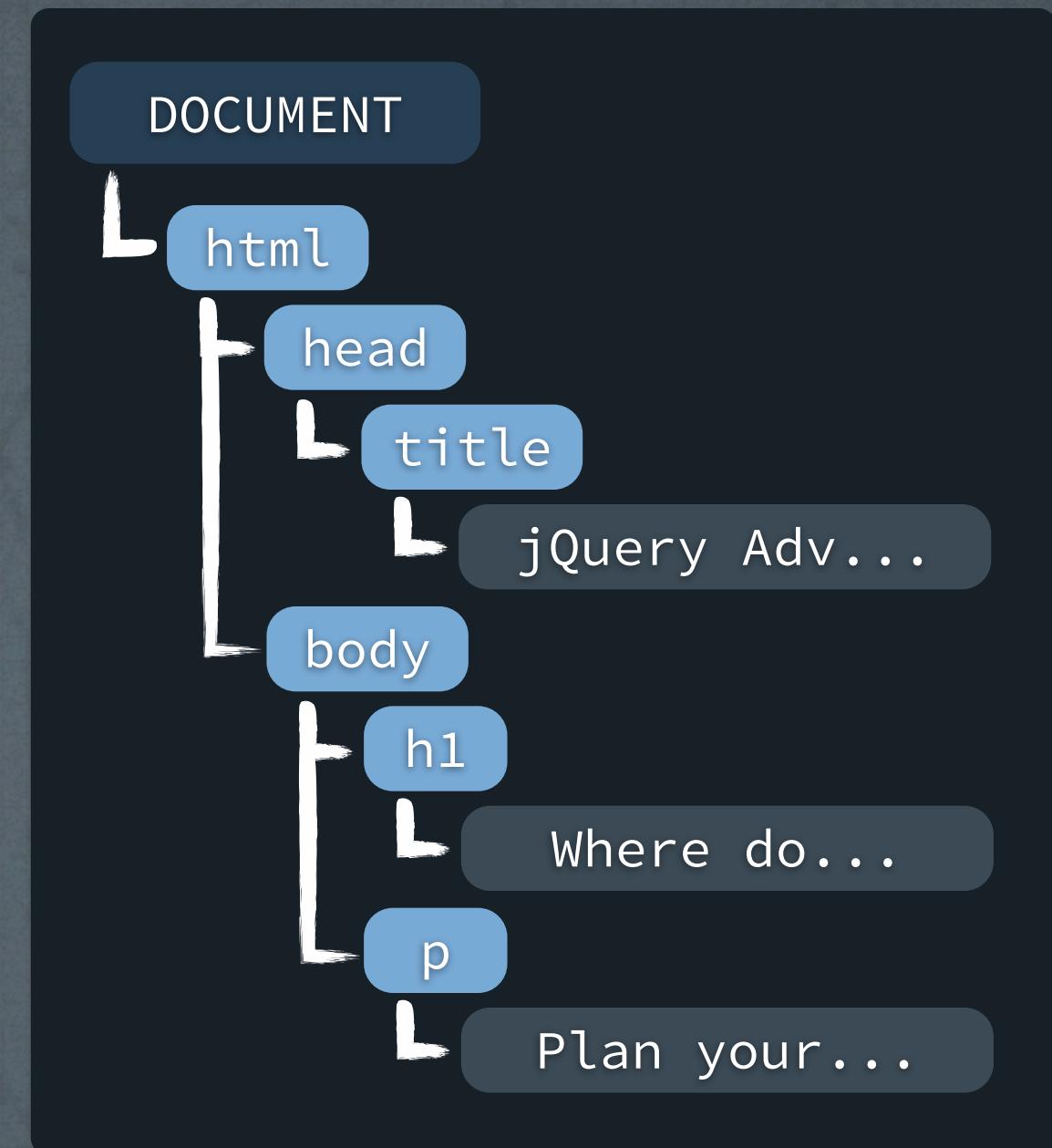
Selecting by HTML element name

HTML document

```
<!DOCTYPE html>
<html>
<head>
  <title>jQuery Adventures</title>
</head>
<body>
  <h1>Where do you want to go?</h1>
  <p>Plan your next adventure.</p>
</body>
</html>
```



DOM representation of the document

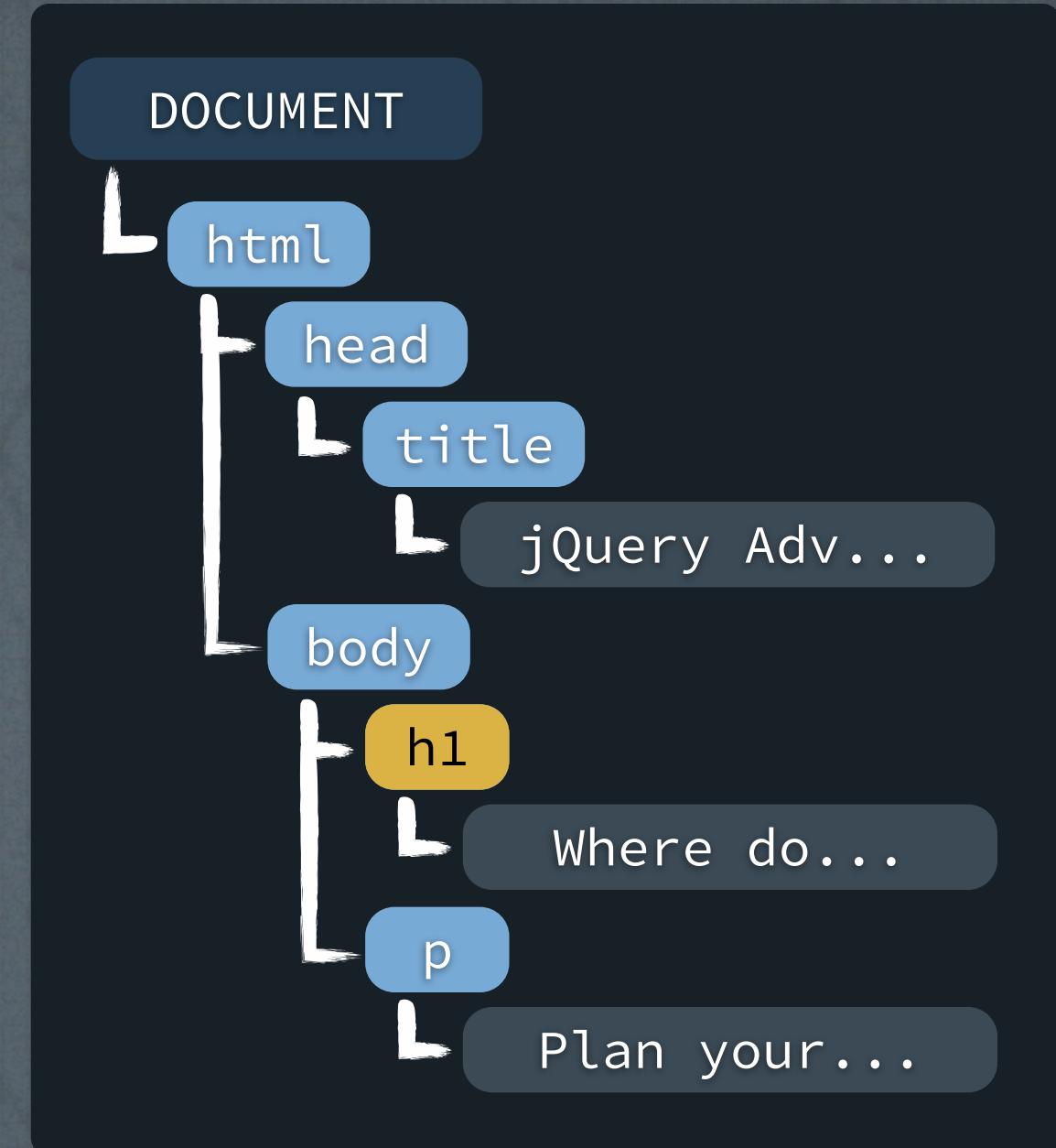


Selecting by HTML element name

```
$( "h1" );
```



DOM representation of the document



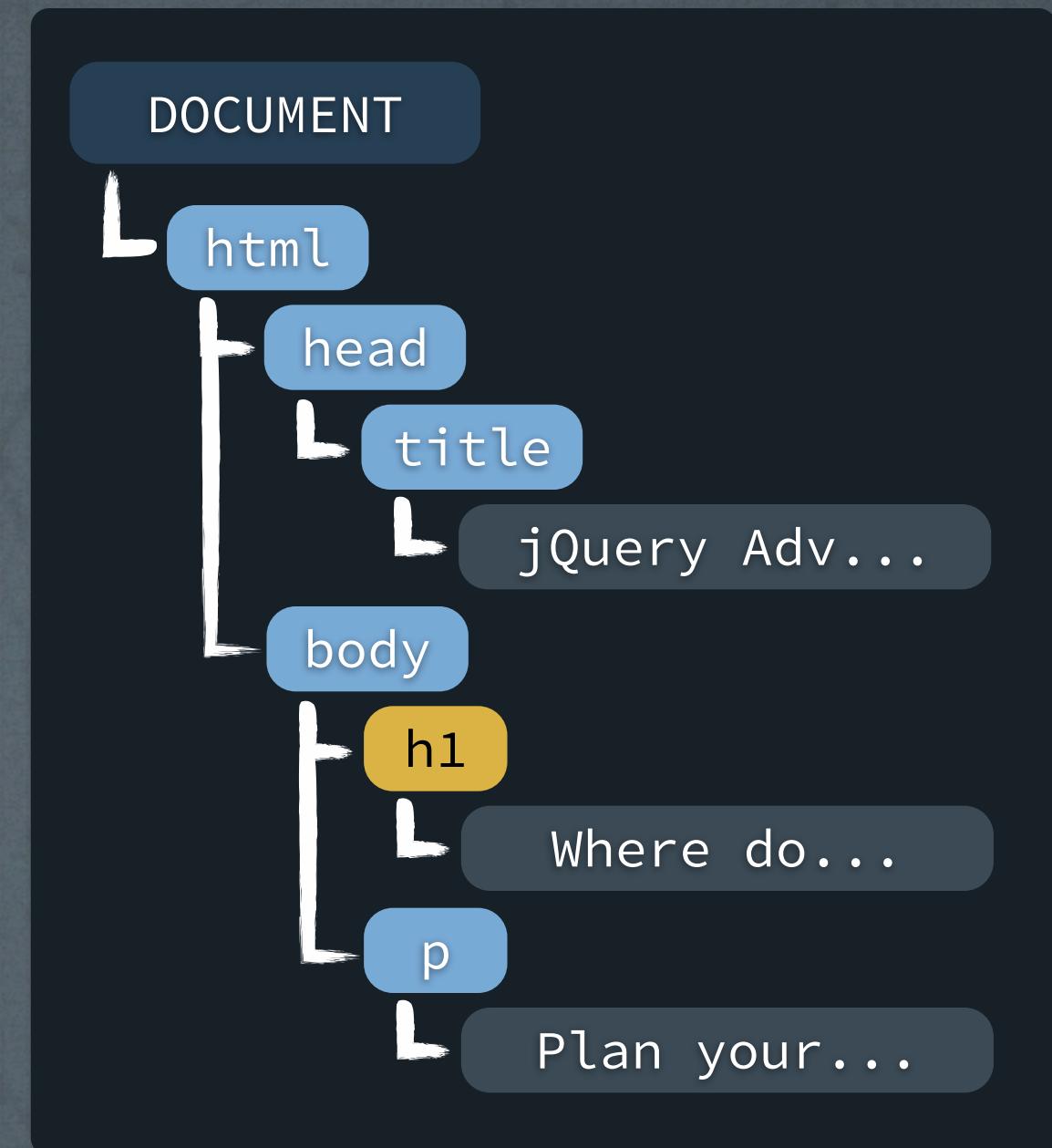
Fetching an element's text

text() is a method offered by jQuery

```
$("h1").text();
```

↳ "Where do you want to go"

DOM representation of the document



Modifying an element's text

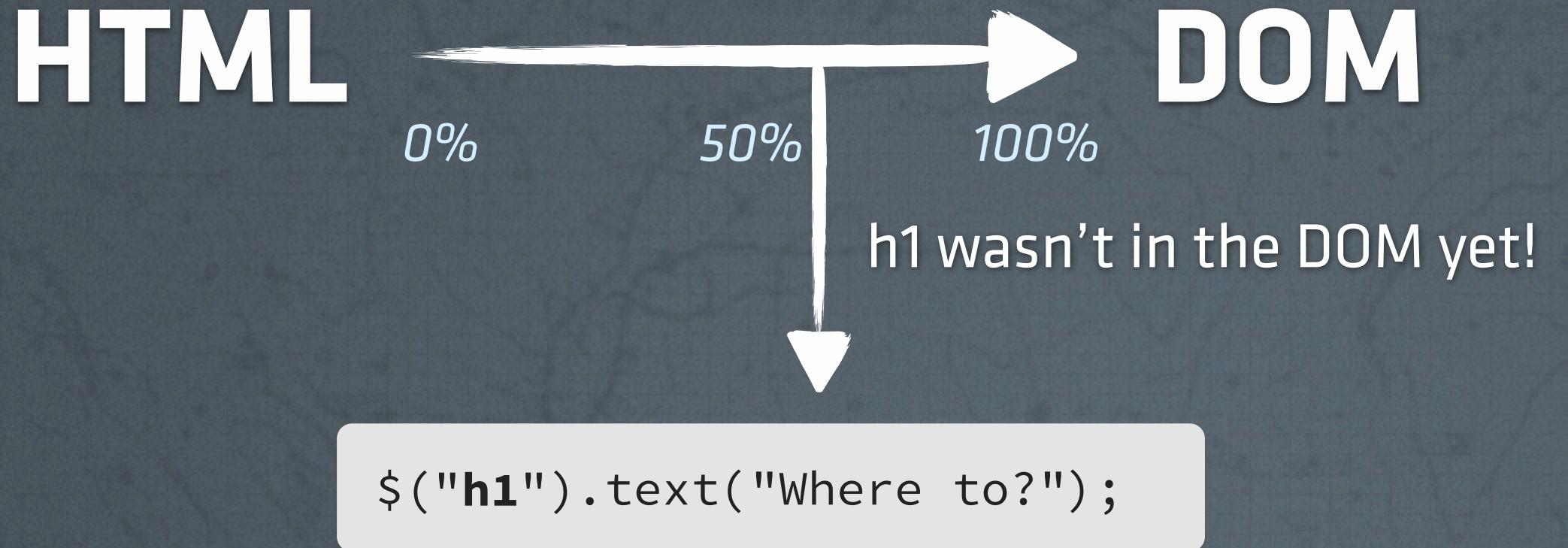
text() also allows to modify the text node

```
$("h1").text("Where to?");
```

DOM representation of the document

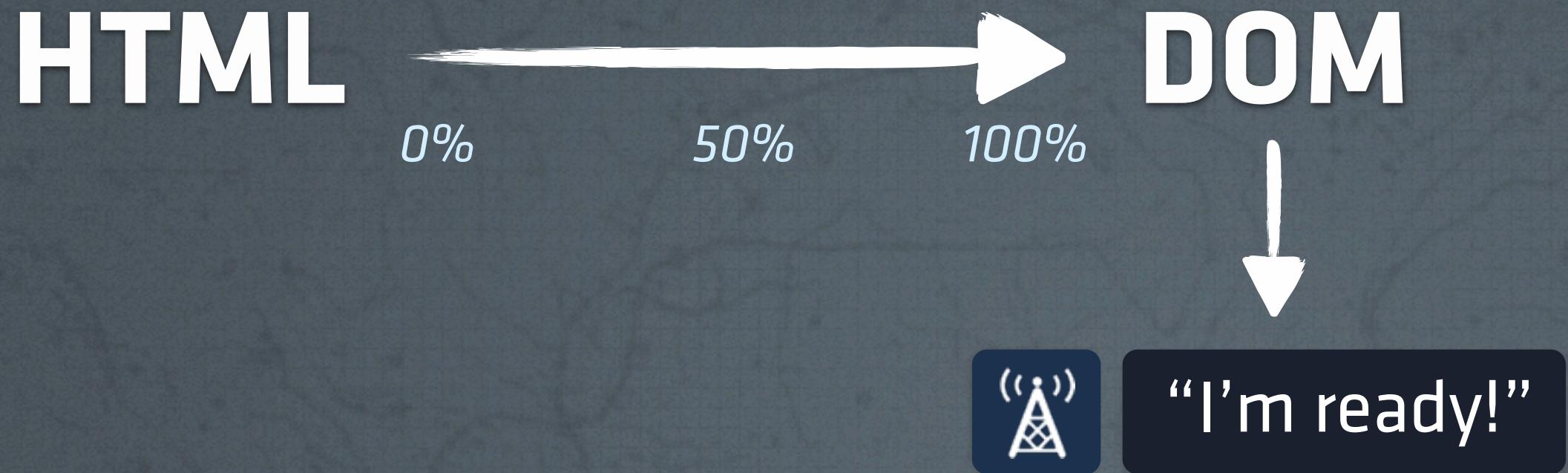


JavaScript may execute before the DOM loads



We need to make sure the DOM has finished loading the HTML content before we can reliably use jQuery.

The DOM ready event



How can we listen for this signal?



Listen for “I’m ready” then run <code>

Listening for document ready



```
jQuery(document).ready(function(){
    <code>
});
```

DOM



“I’m ready!”

Will only run this code once the DOM is “ready”

Our completed code



```
jQuery(document).ready(function(){
    $("h1").text("Where to?");
});
```



Using jQuery

Getting started

1

download jQuery

2

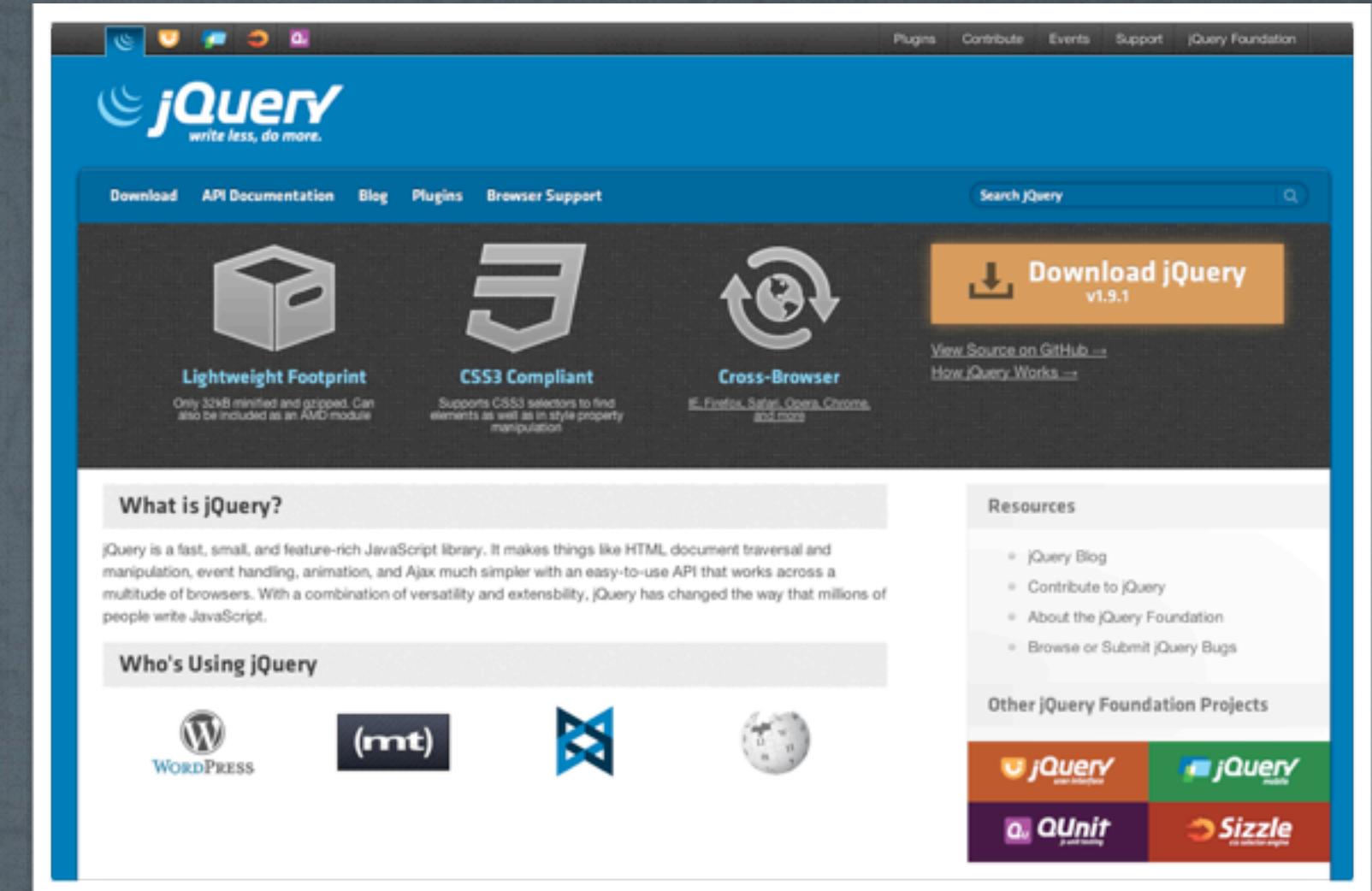
load it in your HTML document

```
<script src="jquery.min.js"></script>
```

3

start using it

```
<script src="application.js"></script>
```



Changing multiple elements at once

HTML document

```
<h1>Where do you want to go?</h1>
<h2>Travel Destinations</h2>
<p>Plan your next adventure.</p>
<ul id="destinations">
  <li>Rome</li>
  <li>Paris</li>
  <li class='promo'>Rio</li>
</ul>
```

How do we change the text of every `` in this page?



find them

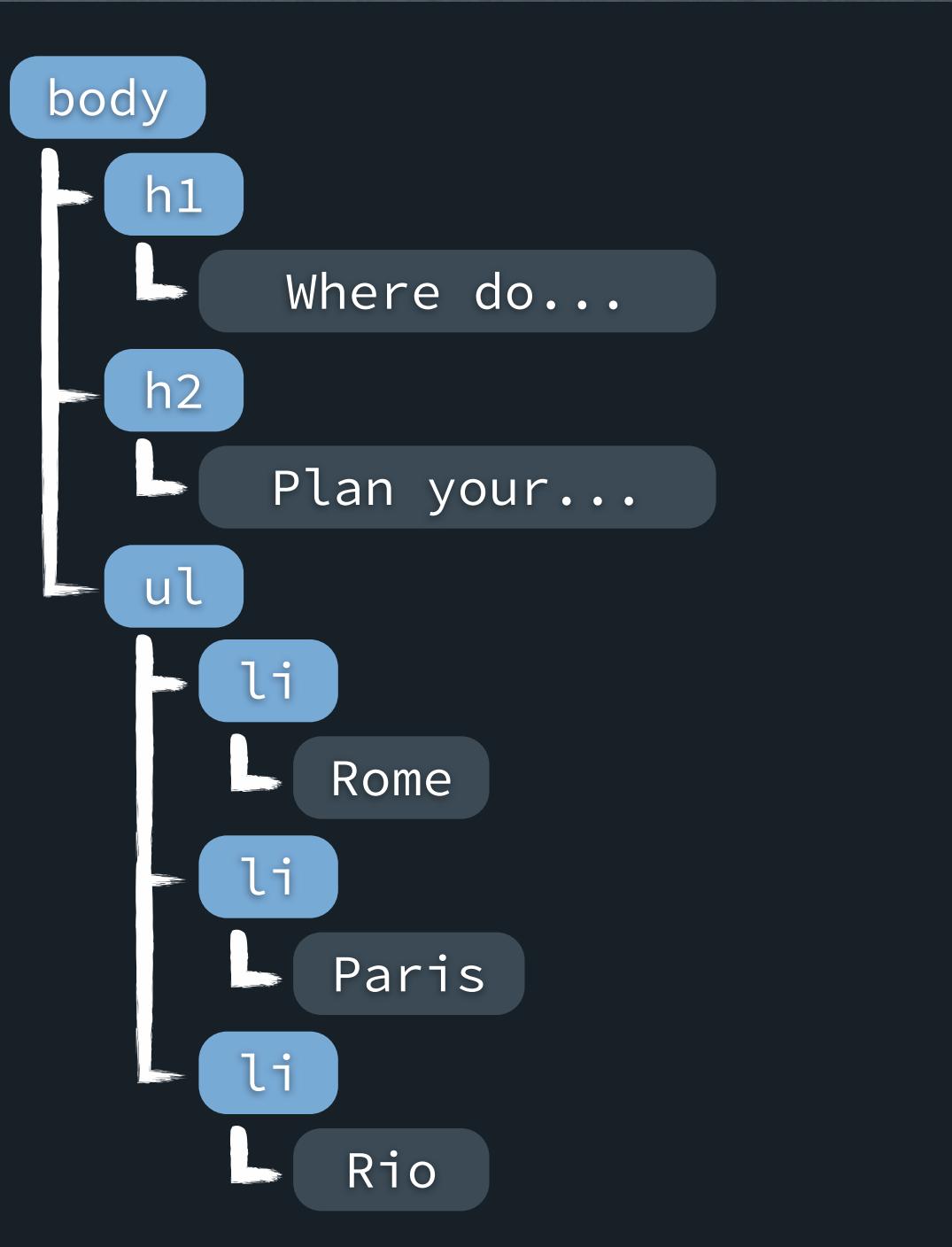


modify their text

Load HTML into the DOM

HTML document

```
<h1>Where do you want to go?</h1>
<h2>Travel Destinations</h2>
<p>Plan your next adventure.</p>
<ul id="destinations">
  <li>Rome</li>
  <li>Paris</li>
  <li class='promo'>Rio</li>
</ul>
```

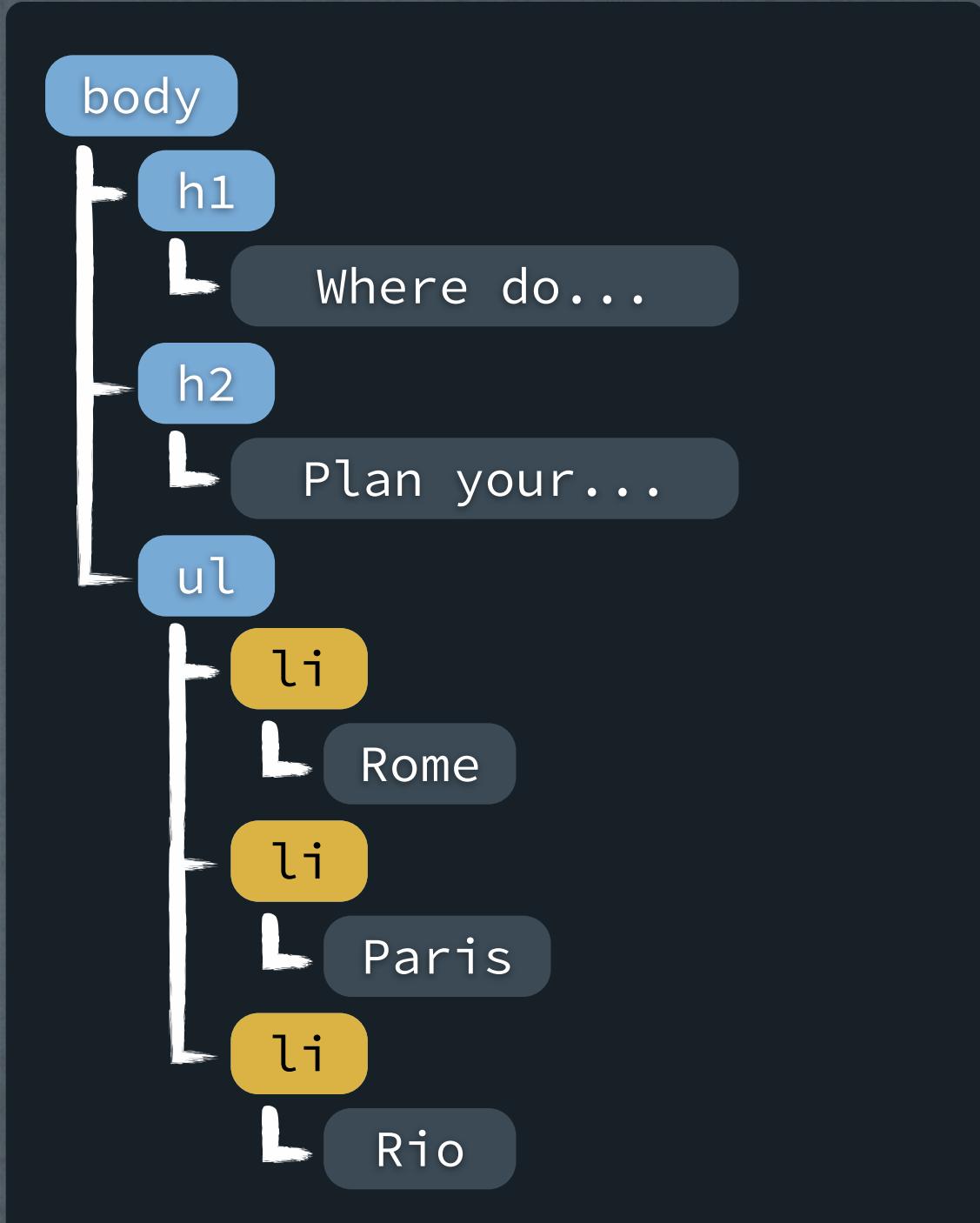


Selecting multiple elements

HTML document

```
<h1>Where do you want to go?</h1>
<h2>Travel Destinations</h2>
<p>Plan your next adventure.</p>
<ul id="destinations">
  <li>Rome</li>
  <li>Paris</li>
  <li class='promo'>Rio</li>
</ul>
```

```
$( "li" );
```

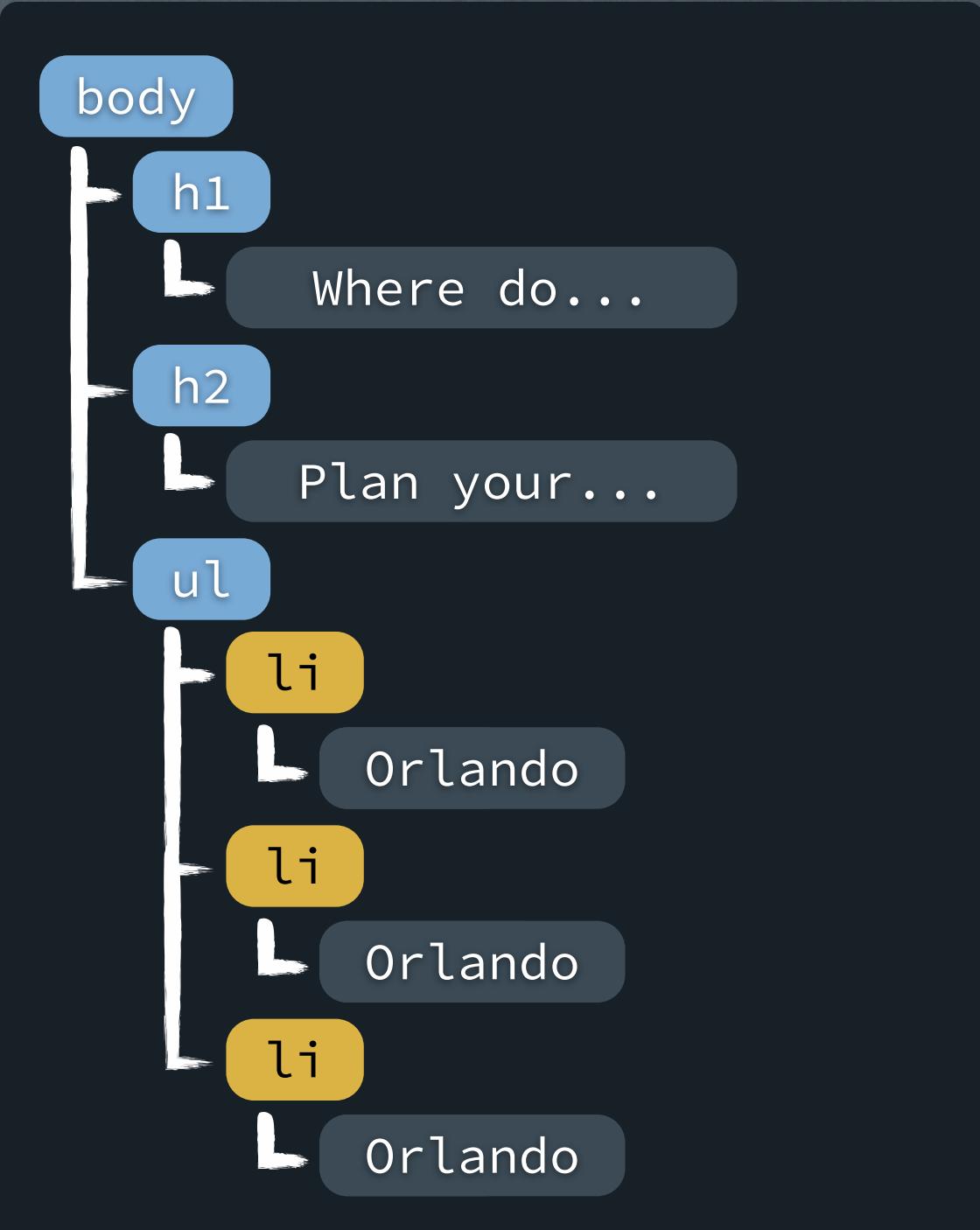


Modifying each of their text nodes

HTML document

```
<h1>Where do you want to go?</h1>
<h2>Travel Destinations</h2>
<p>Plan your next adventure.</p>
<ul id="destinations">
  <li>Rome</li>
  <li>Paris</li>
  <li class='promo'>Rio</li>
</ul>
```

```
$( "li" ).text("Orlando");
```



We can find elements by ID or Class

CSS

```
p { ... }
```

```
#container { ... }
```

```
.articles { ... }
```

jQuery

```
$( "p" );
```

```
$( "#container" );
```

```
$( ".articles" );
```



Changing multiple elements at once

HTML document

```
<h1>Where do you want to go?</h1>
<h2>Travel Destinations</h2>
<p>Plan your next adventure.</p>
<ul id="destinations">
  <li>Rome</li>
  <li>Paris</li>
  <li class='promo'>Rio</li>
</ul>
```

How do we specifically select the `` that has a “destinations” ID?



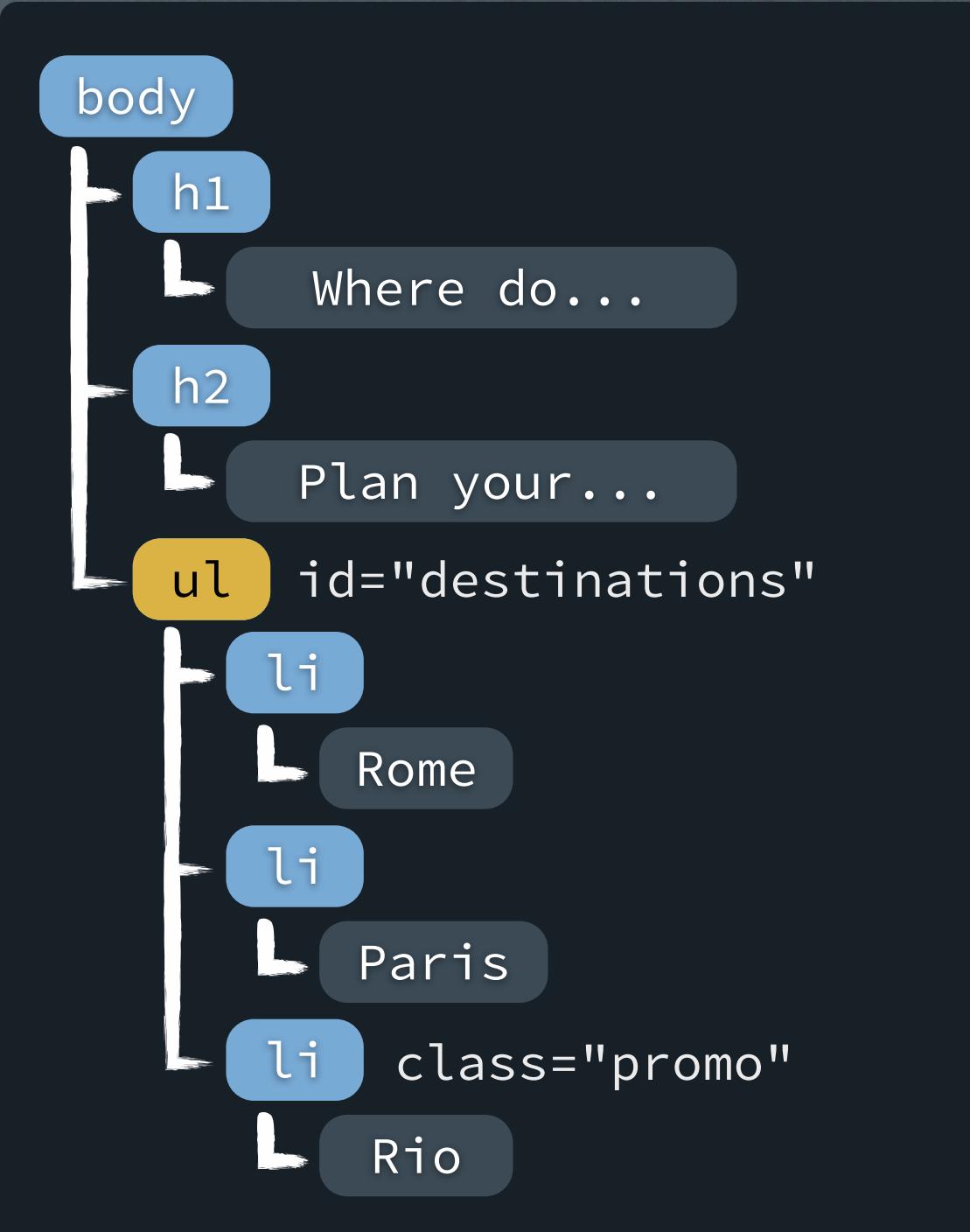
find it using the ID

Selecting by unique ID

HTML document

```
<h1>Where do you want to go?</h1>
<h2>Travel Destinations</h2>
<p>Plan your next adventure.</p>
<ul id="destinations">
  <li>Rome</li>
  <li>Paris</li>
  <li class='promo'>Rio</li>
</ul>
```

```
$("#destinations");
```



Changing multiple elements at once

HTML document

```
<h1>Where do you want to go?</h1>
<h2>Travel Destinations</h2>
<p>Plan your next adventure.</p>
<ul id="destinations">
  <li>Rome</li>
  <li>Paris</li>
  <li class='promo'>Rio</li>
</ul>
```

How can we select just the `` that has a “promo” class attribute?



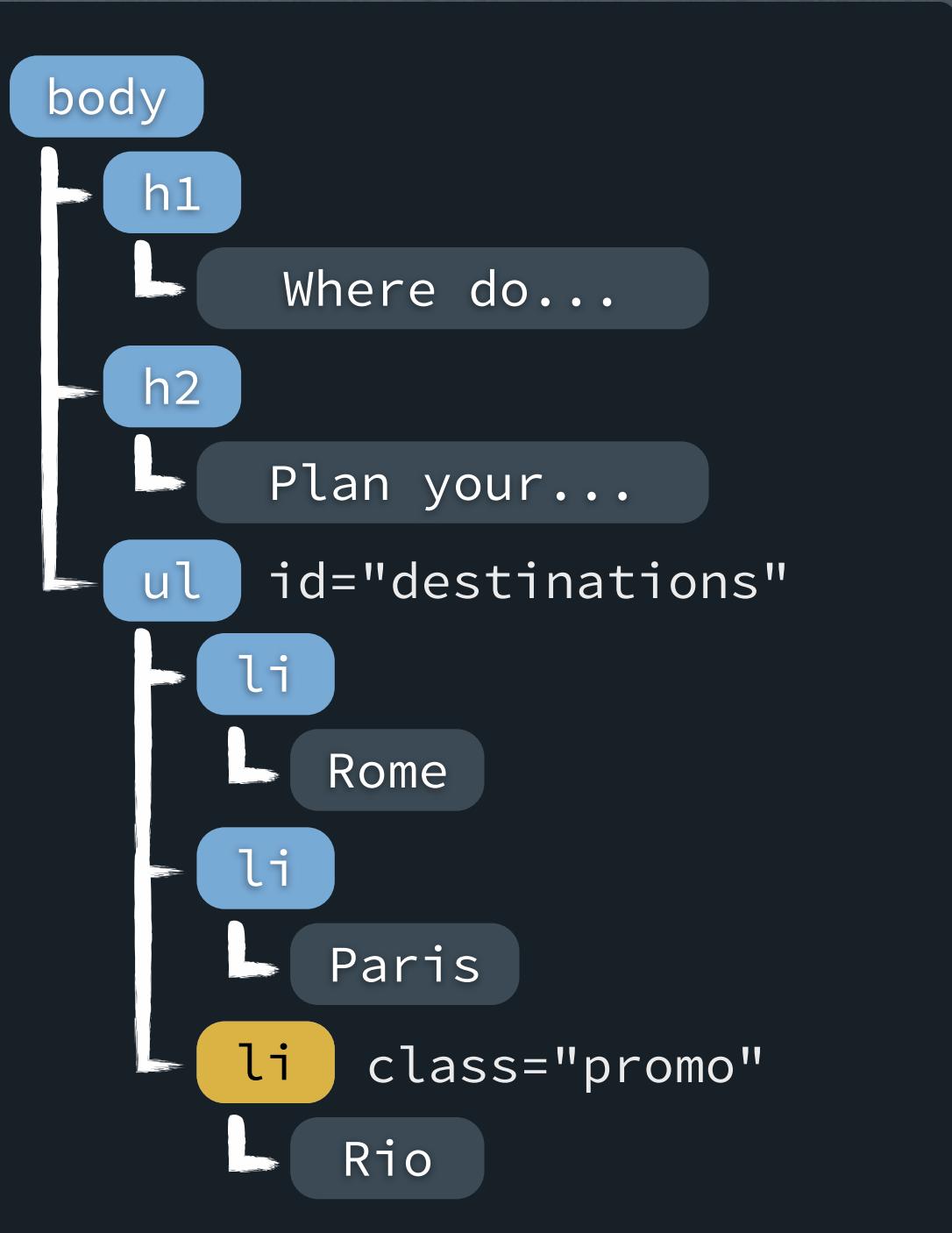
find it using the class

Selecting by Class Name

HTML document

```
<h1>Where do you want to go?</h1>
<h2>Travel Destinations</h2>
<p>Plan your next adventure.</p>
<ul id="destinations">
  <li>Rome</li>
  <li>Paris</li>
  <li class='promo'>Rio</li>
</ul>
```

```
$(".promo");
```



level 2



Searching the DOM

Selecting descendants

HTML document

```
<h1>Where do you want to go?</h1>
<h2>Travel Destinations</h2>
<p>Plan your next adventure.</p>
<ul id="destinations">
  <li>Rome</li>
  <li>Paris</li>
  <li class='promo'>Rio</li>
</ul>
```

How do we find the `` elements that are inside of the `` with a “destinations” ID?



descendant selector

Using the descendant selector

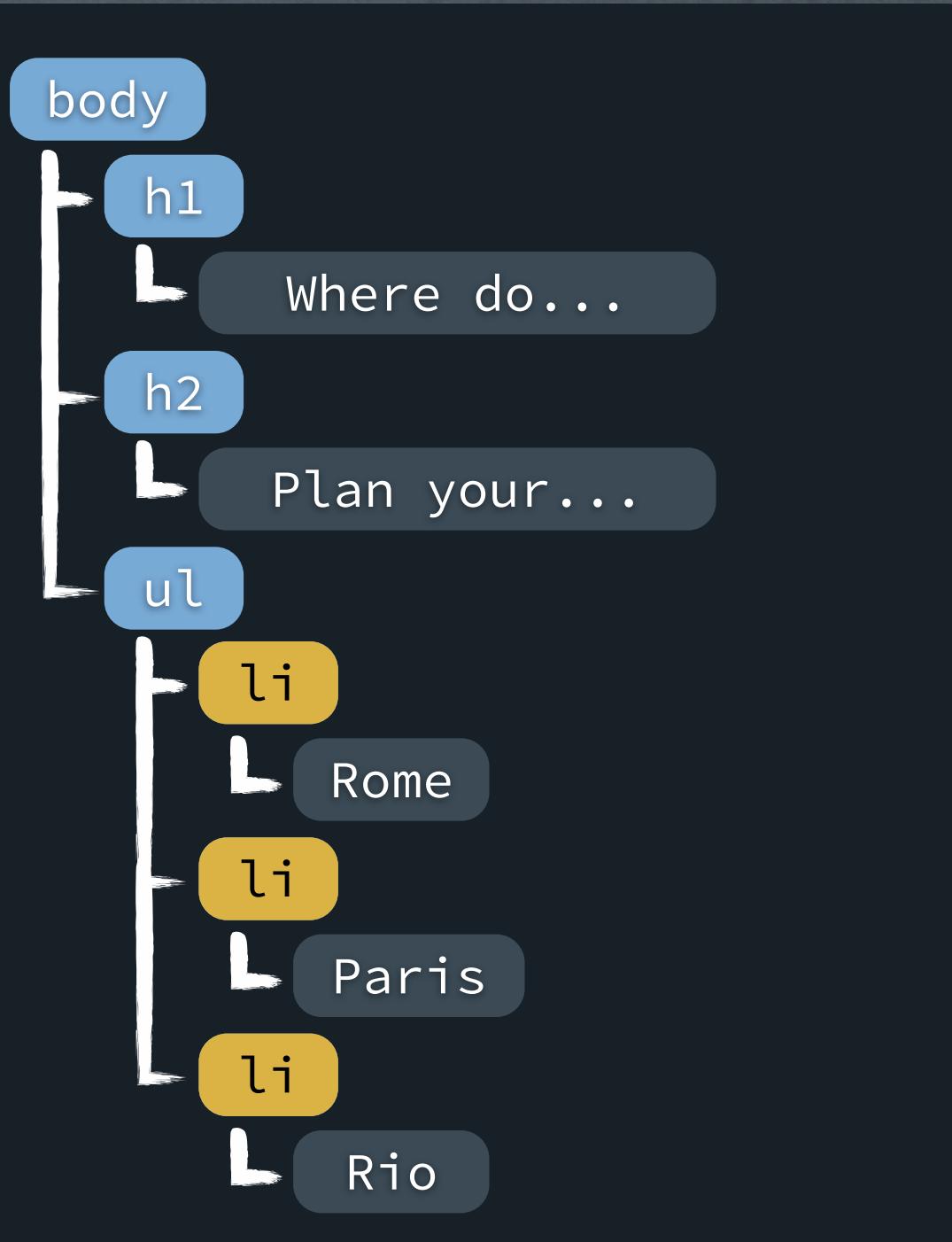
HTML document

```
<h1>Where do you want to go?</h1>
<h2>Travel Destinations</h2>
<p>Plan your next adventure.</p>
<ul id="destinations">
  <li>Rome</li>
  <li>Paris</li>
  <li class='promo'>Rio</li>
</ul>
```

the space matters

```
$("#destinations li");
```

parent *descendant*



2.1 Searching the DOM

Selecting direct children

HTML document

```
<h1>Where do you want to go?</h1>
<h2>Travel Destinations</h2>
<p>Plan your next adventure.</p>
<ul id="destinations">
  <li>Rome</li>
  <li>
    <ul id="france">
      <li>Paris</li>
    </ul>
  </li>
  <li class='promo'>Rio</li>
</ul>
```

How do we find only the `` elements that are children of the “destinations” ``?



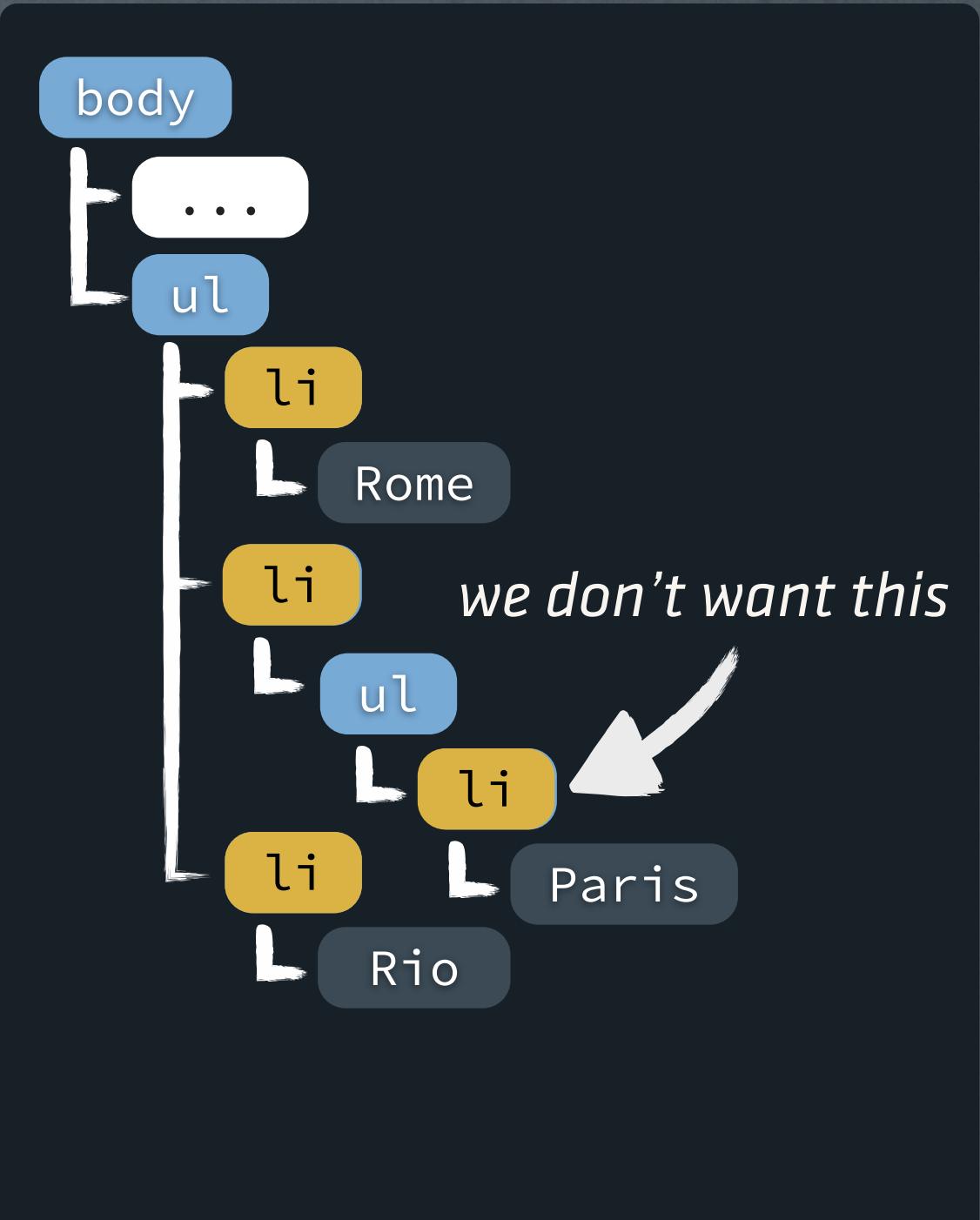
descendant selector?

Selecting direct children

HTML document

```
<h1>Where do you want to go?</h1>
<h2>Travel Destinations</h2>
<p>Plan your next adventure.</p>
<ul id="destinations">
  <li>Rome</li>
  <li>
    <ul id="france">
      <li>Paris</li>
    </ul>
  </li>
  <li class='promo'>Rio</li>
</ul>
```

```
$("#destinations li");
```



2.1 Searching the DOM

Selecting only direct children

HTML document

```
<h1>Where do you want to go?</h1>
<h2>Travel Destinations</h2>
<p>Plan your next adventure.</p>
<ul id="destinations">
  <li>Rome</li>
  <li>
    <ul id="france">
      <li>Paris</li>
    </ul>
  </li>
  <li class='promo'>Rio</li>
</div>
```

How do we find only the `` elements that are **direct** children of the “destinations” `` then?



child selector

Selecting only direct children

HTML document

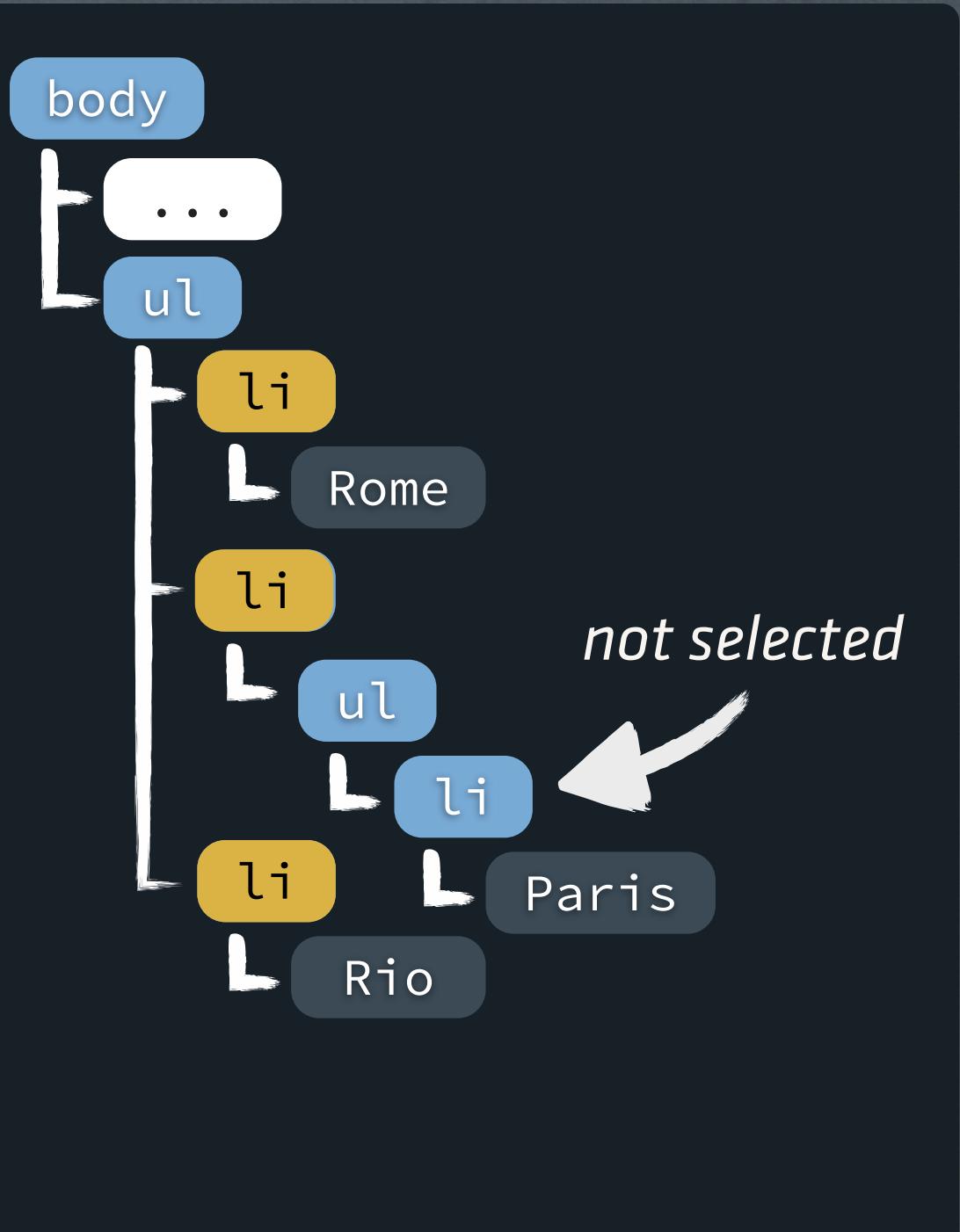
```
<h1>Where do you want to go?</h1>
<h2>Travel Destinations</h2>
<p>Plan your next adventure.</p>
<ul id="destinations">
  <li>Rome</li>
  <li>
    <ul id="france">
      <li>Paris</li>
    </ul>
  </li>
  <li class='promo'>Rio</li>
</ul>
```

the sign matters

```
$("#destinations > li");
```

parent

child



Selecting multiple elements

HTML document

```
<h1>Where do you want to go?</h1>
<h2>Travel Destinations</h2>
<p>Plan your next adventure.</p>
<ul id="destinations">
  <li>Rome</li>
  <li>
    <ul id="france">
      <li>Paris</li>
    </ul>
  </li>
  <li class='promo'>Rio</li>
</ul>
```

How do we find only elements with either a “promo” class or a “france” ID



multiple selector

Selecting multiple elements

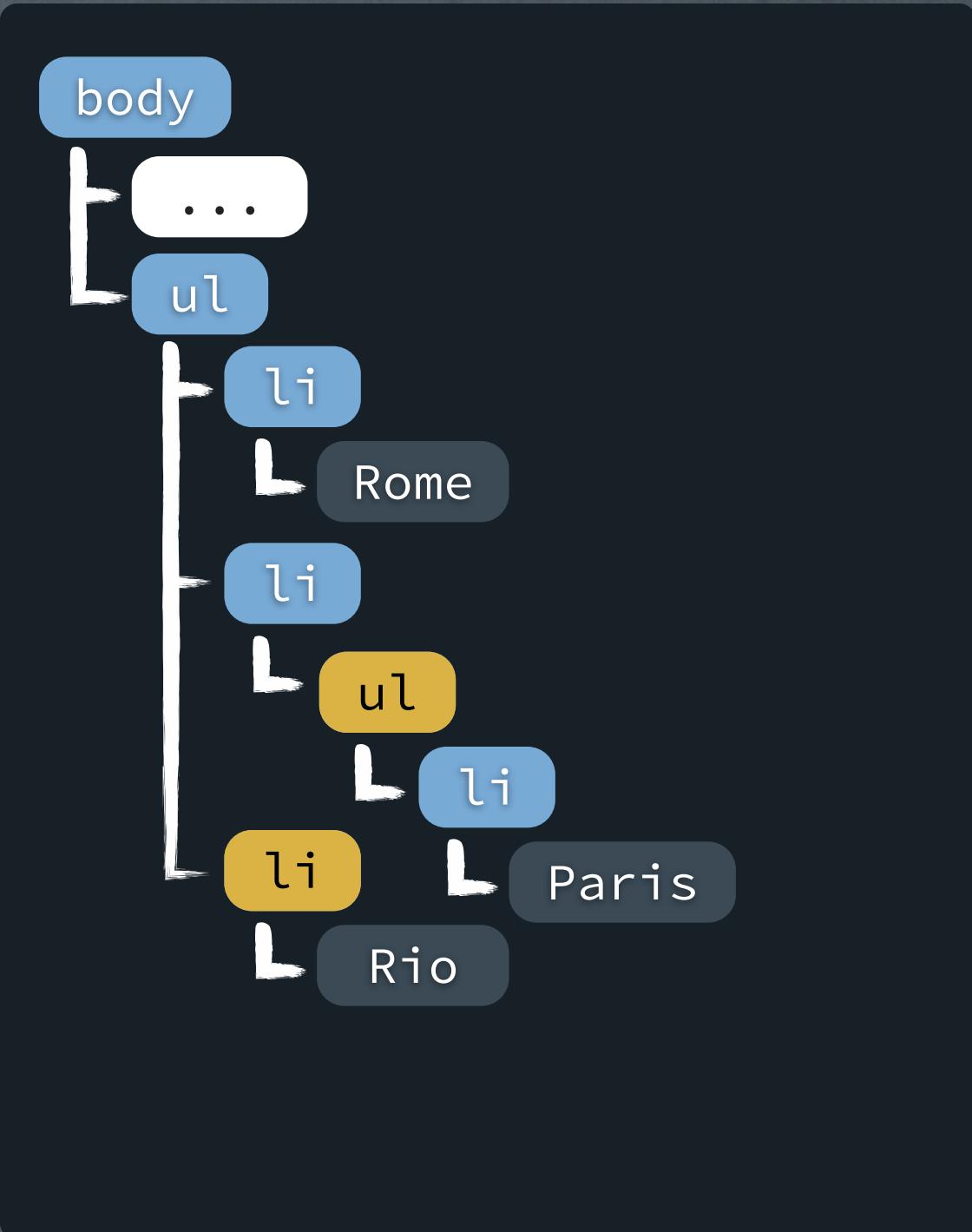
HTML document

```
<h1>Where do you want to go?</h1>
<h2>Travel Destinations</h2>
<p>Plan your next adventure.</p>
<ul id="destinations">
  <li>Rome</li>
  <li>
    <ul id="france">
      <li>Paris</li>
    </ul>
  </li>
  <li class='promo'>Rio</li>
</ul>
```



the comma matters

```
$(".promo, #france");
```

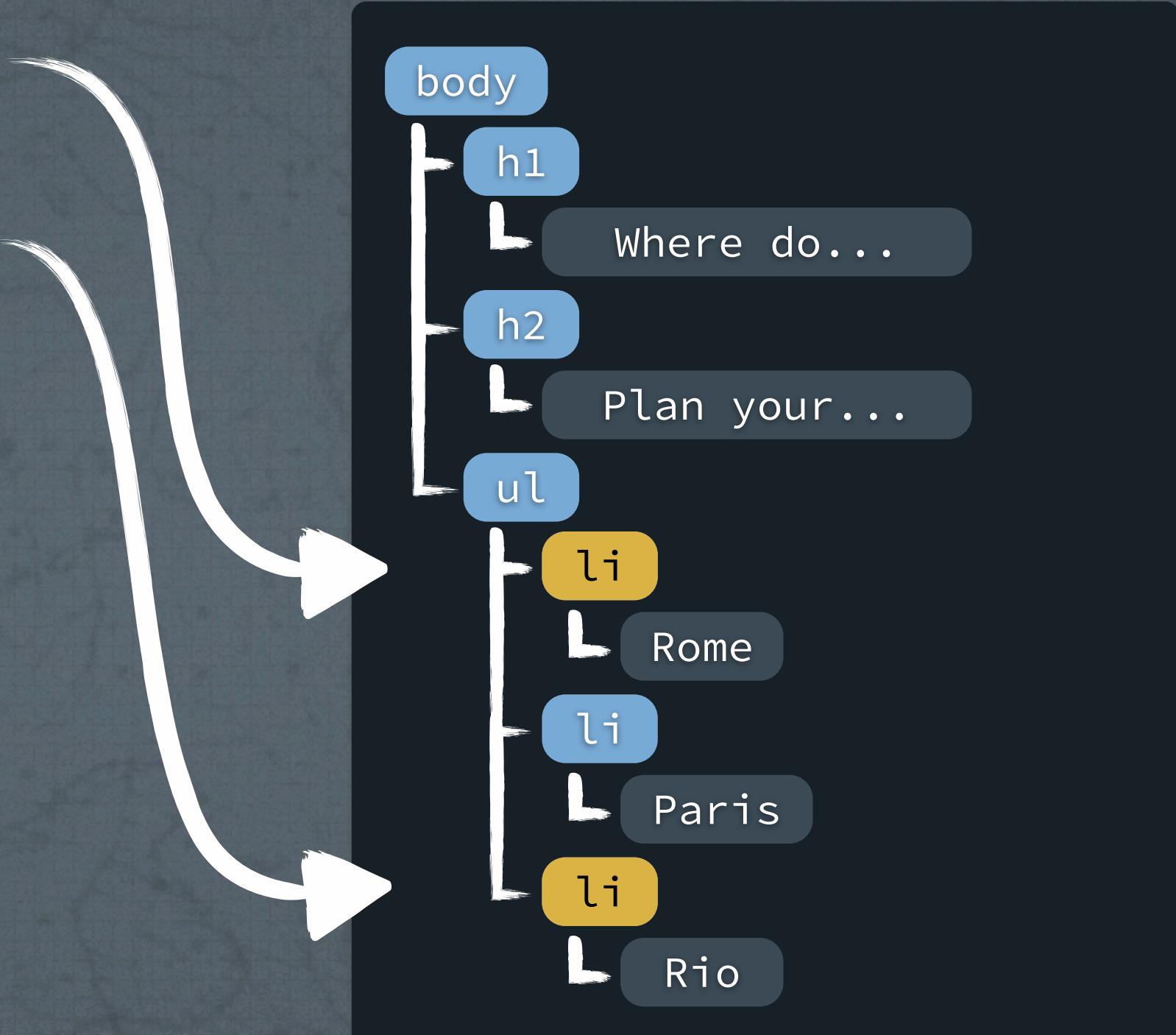


CSS-like pseudo classes

```
$("#destinations li:first");
```

```
$("#destinations li:last");
```

filter



CSS-like pseudo classes

```
$("#destinations li:odd");
```

```
$("#destinations li:even");
```

⚠ watch out, the index starts at 0





Traversing

Walking the DOM by traversing it

HTML document

```
<h1>Where do you want to go?</h1>
<h2>Travel Destinations</h2>
<p>Plan your next adventure.</p>
<ul id="destinations">
  <li>Rome</li>
  <li>Paris</li>
  <li class='promo'>Rio</li>
</ul>
```

Can we find all the `` elements that the “destinations” list contains without using a descendant selector?



filter by traversing

Filtering by traversing

```
$("#destinations li");
```



```
$("#destinations").find("li");
```



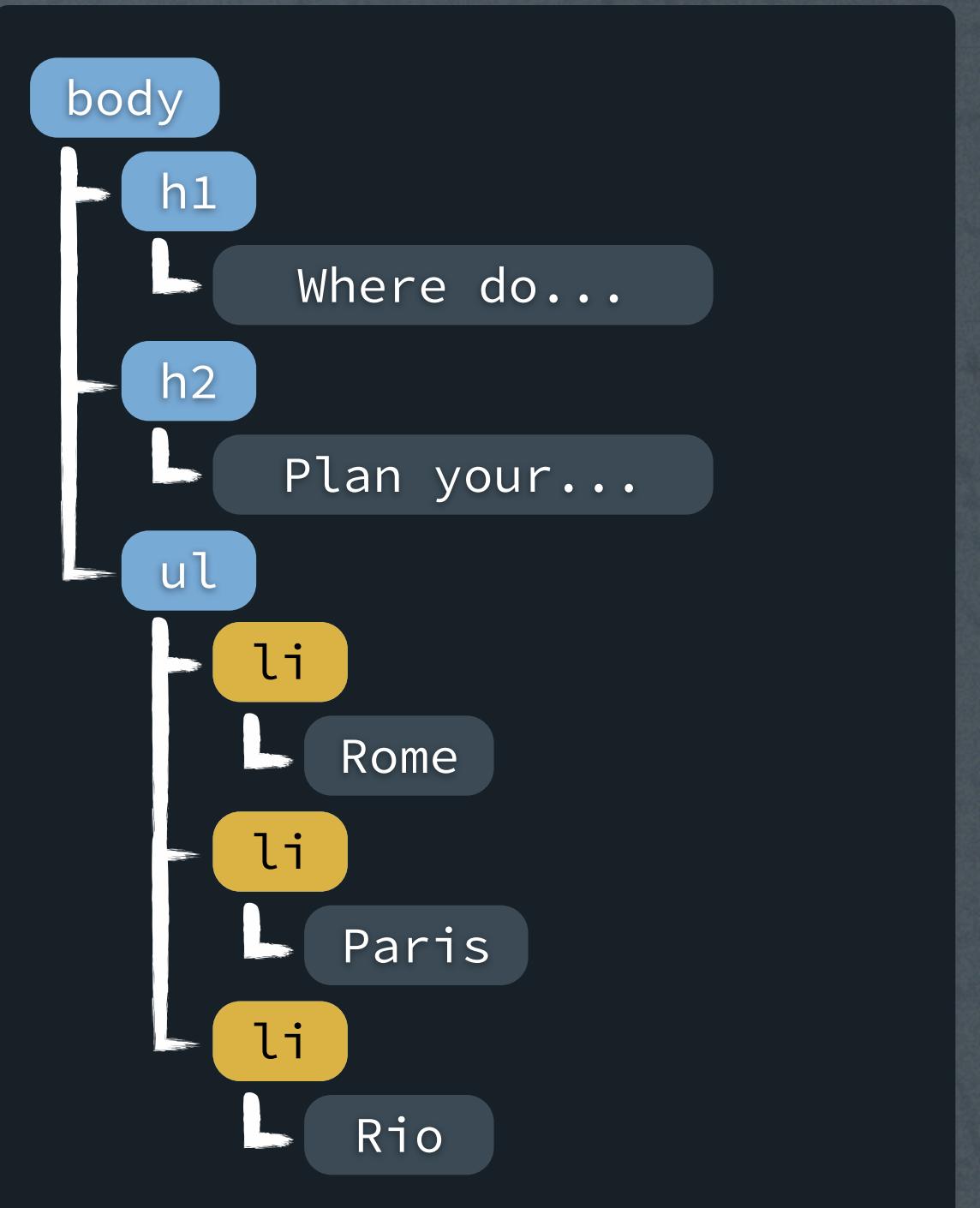
selection



traversal



It takes a bit more code, but it's faster.



2.2 Traversing

Filtering by traversing

```
$(“li:first”);
```



```
$(“li”).first();
```



body

h1

Where do...

h2

Plan your...

ul

li

Rome

li

Paris

li

Rio

Filtering by traversing

```
$( "li:last" );
```



```
$( "li" ).last();
```



body

h1

Where do...

h2

Plan your...

ul

li

Rome

li

Paris

li

Rio

Walking the DOM

HTML document

```
<h1>Where do you want to go?</h1>
<h2>Travel Destinations</h2>
<p>Plan your next adventure.</p>
<ul id="destinations">
  <li>Rome</li>
  <li>Paris</li>
  <li class='promo'>Rio</li>
</ul>
```

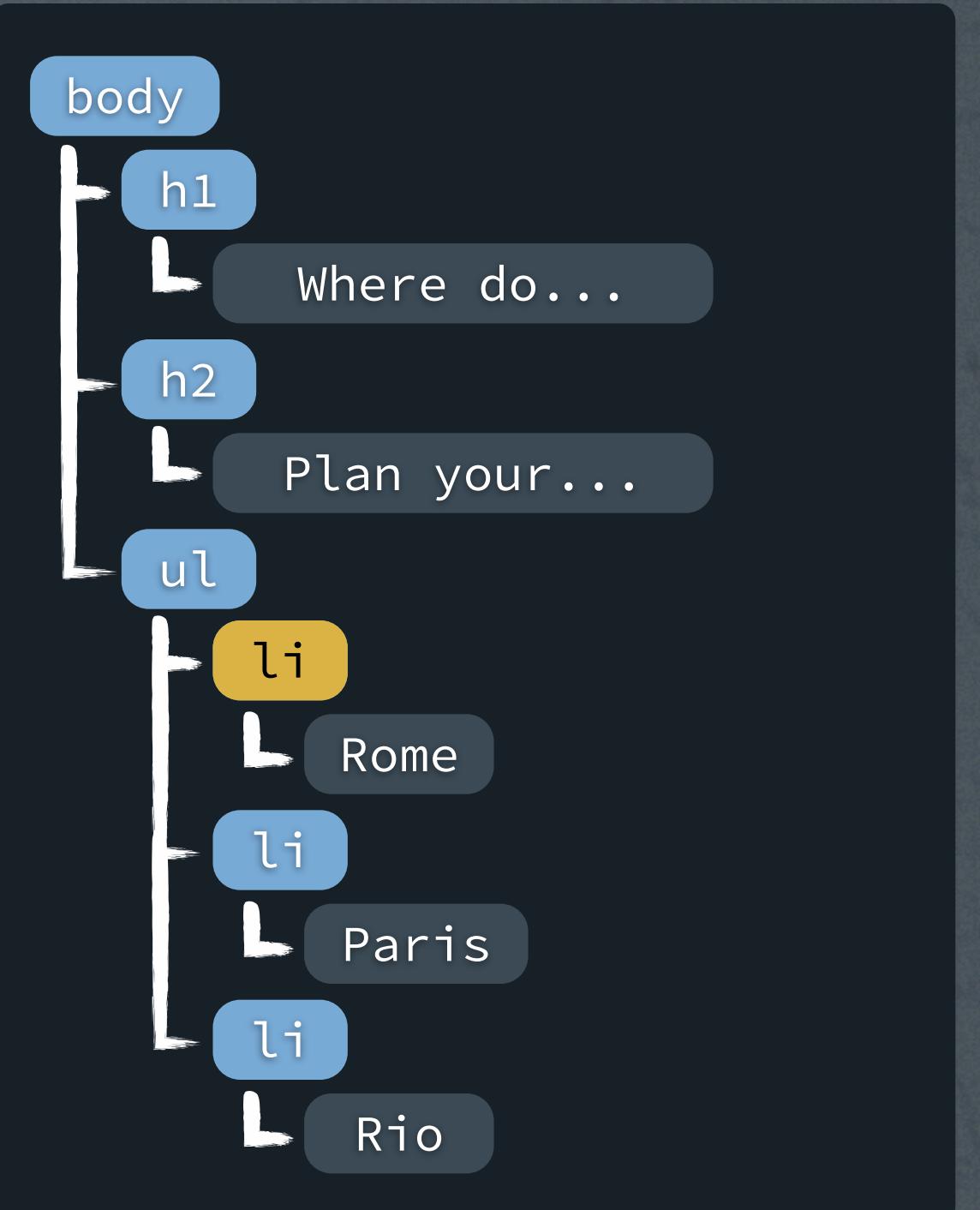
Can we find the middle list item, knowing there is no filter to find it unlike :first or :last?



traversing

Walking the DOM

```
$( "li" ).first();
```

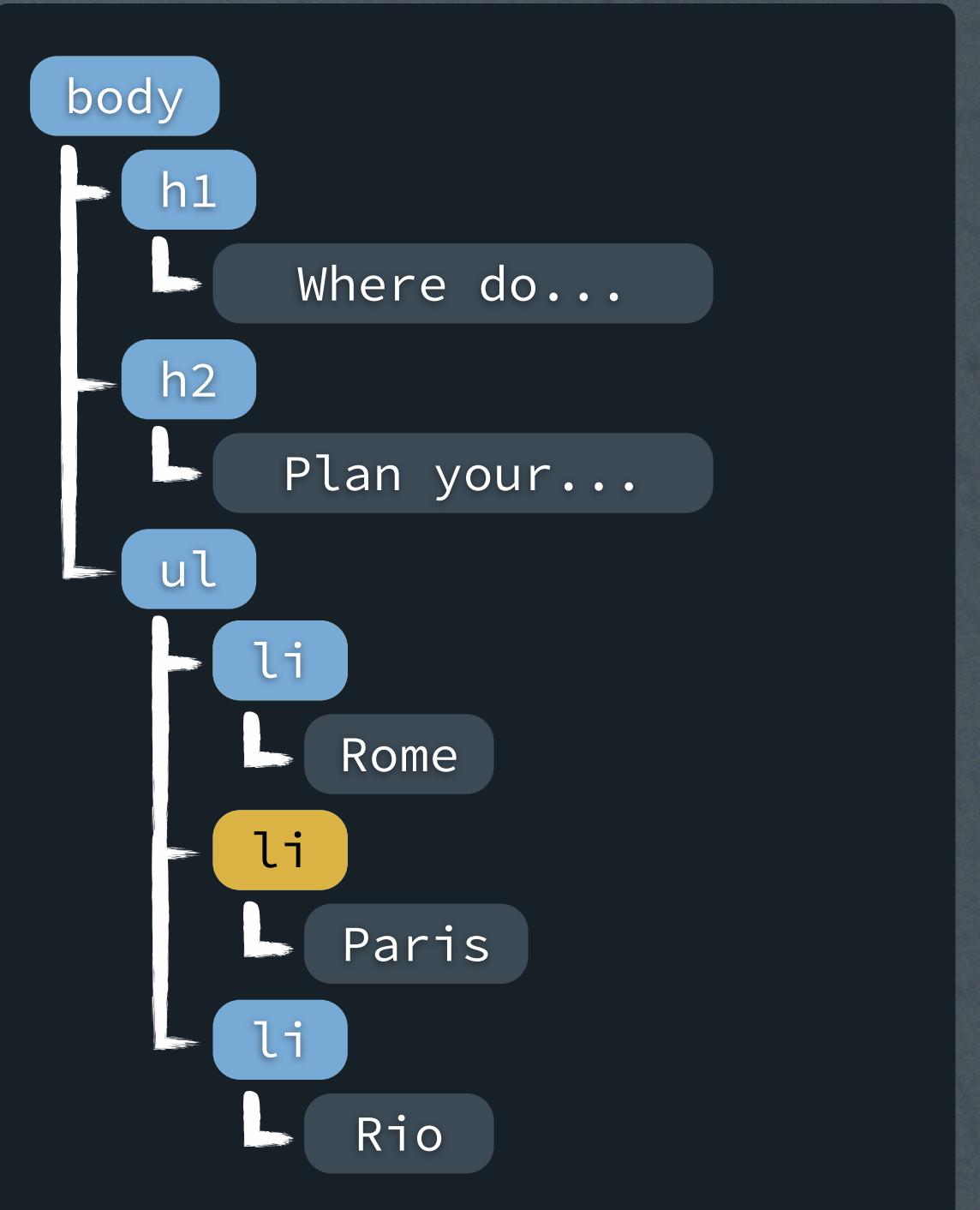


2.2 Traversing

Walking the DOM

```
$( "li" ).first();
```

```
$( "li" ).first().next();
```



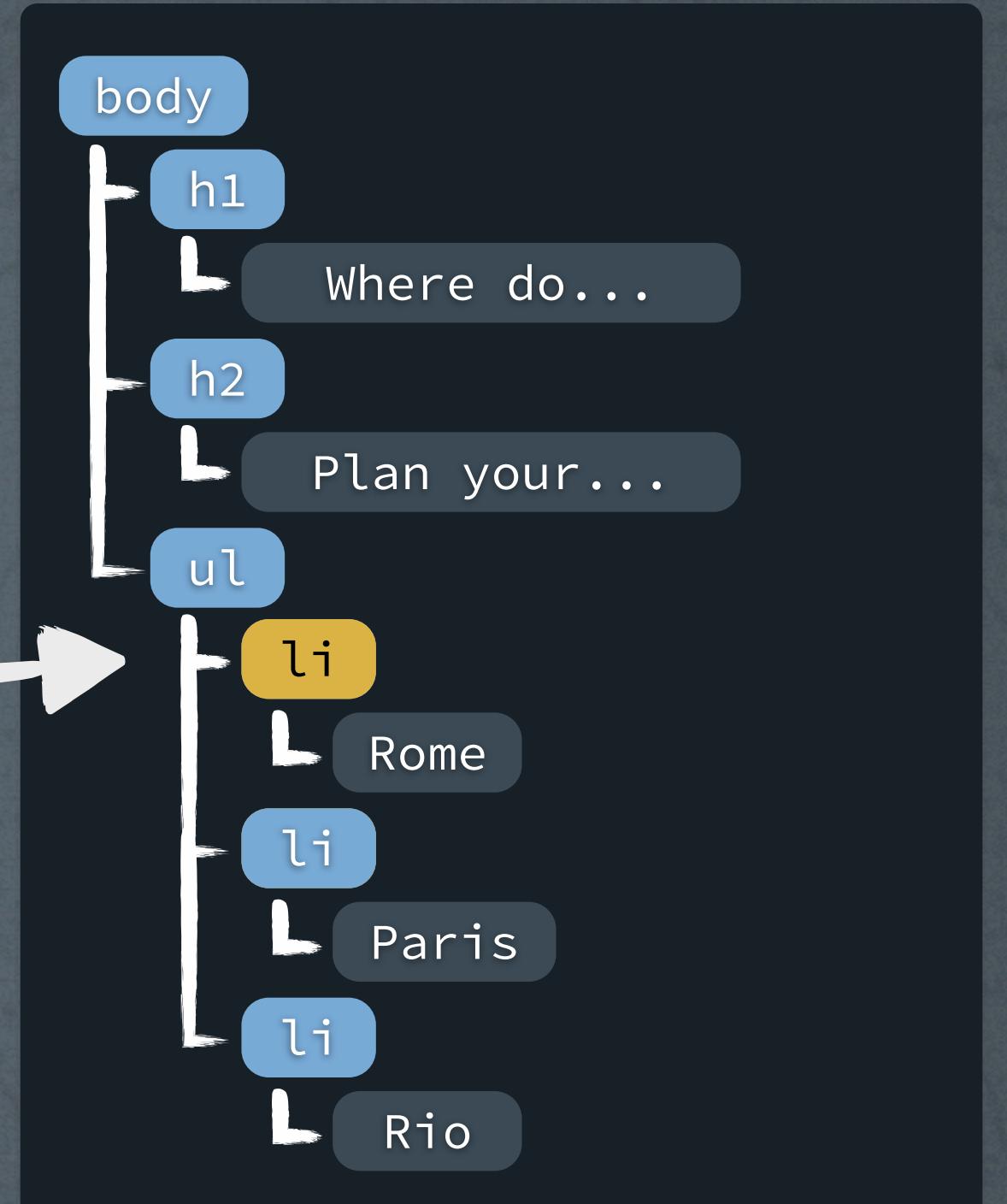
2.2 Traversing

Walking the DOM

```
$( "li" ).first();
```

```
$( "li" ).first().next();
```

```
$( "li" ).first().next().prev();
```



2.2 Traversing

Walking up the DOM

HTML document

```
<h1>Where do you want to go?</h1>
<h2>Travel Destinations</h2>
<p>Plan your next adventure.</p>
<ul id="destinations">
  <li>Rome</li>
  <li>Paris</li>
  <li class='promo'>Rio</li>
</ul>
```

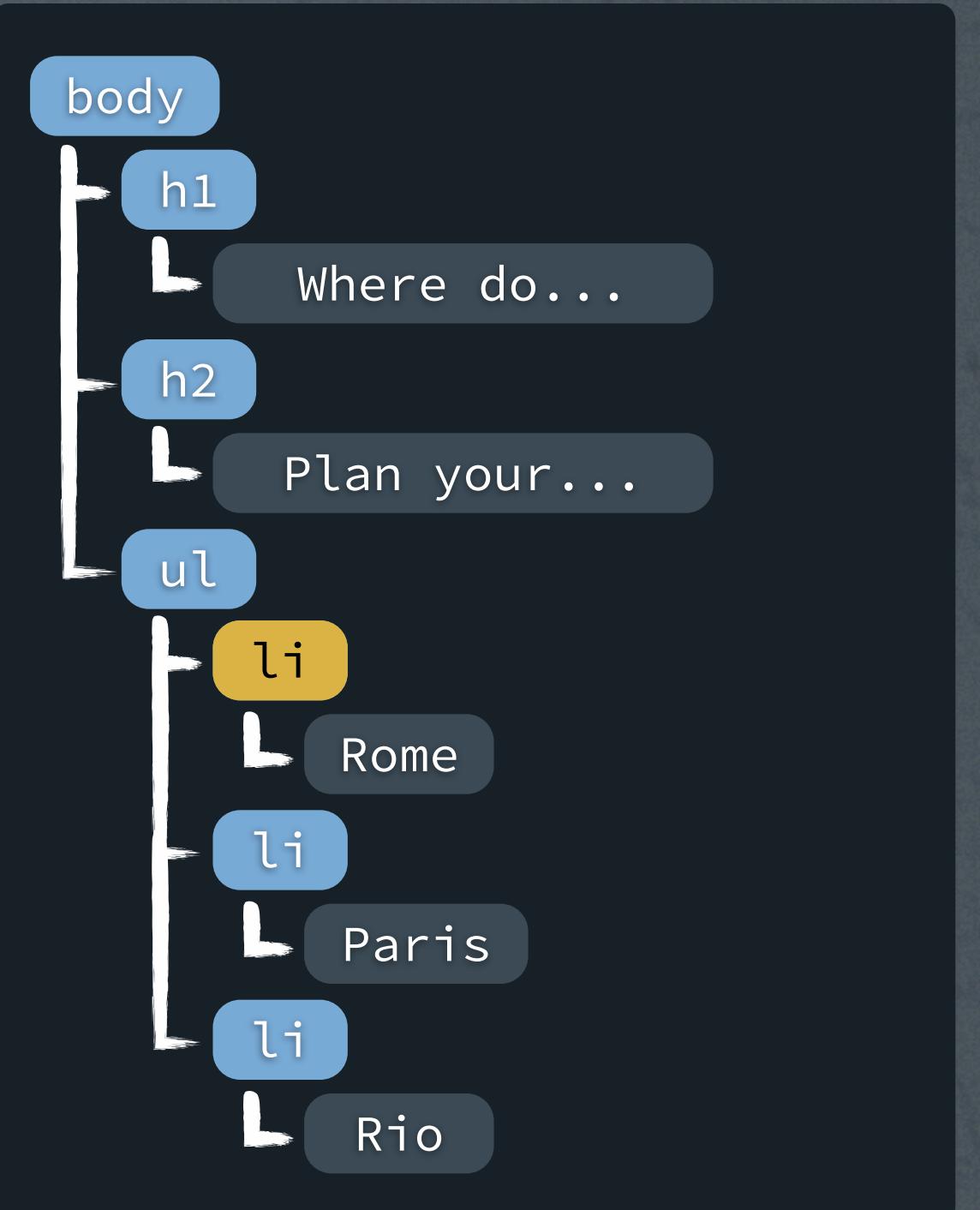
If we started by selecting a child, can we figure out what element is its direct parent?



traversing up

Walking up the DOM

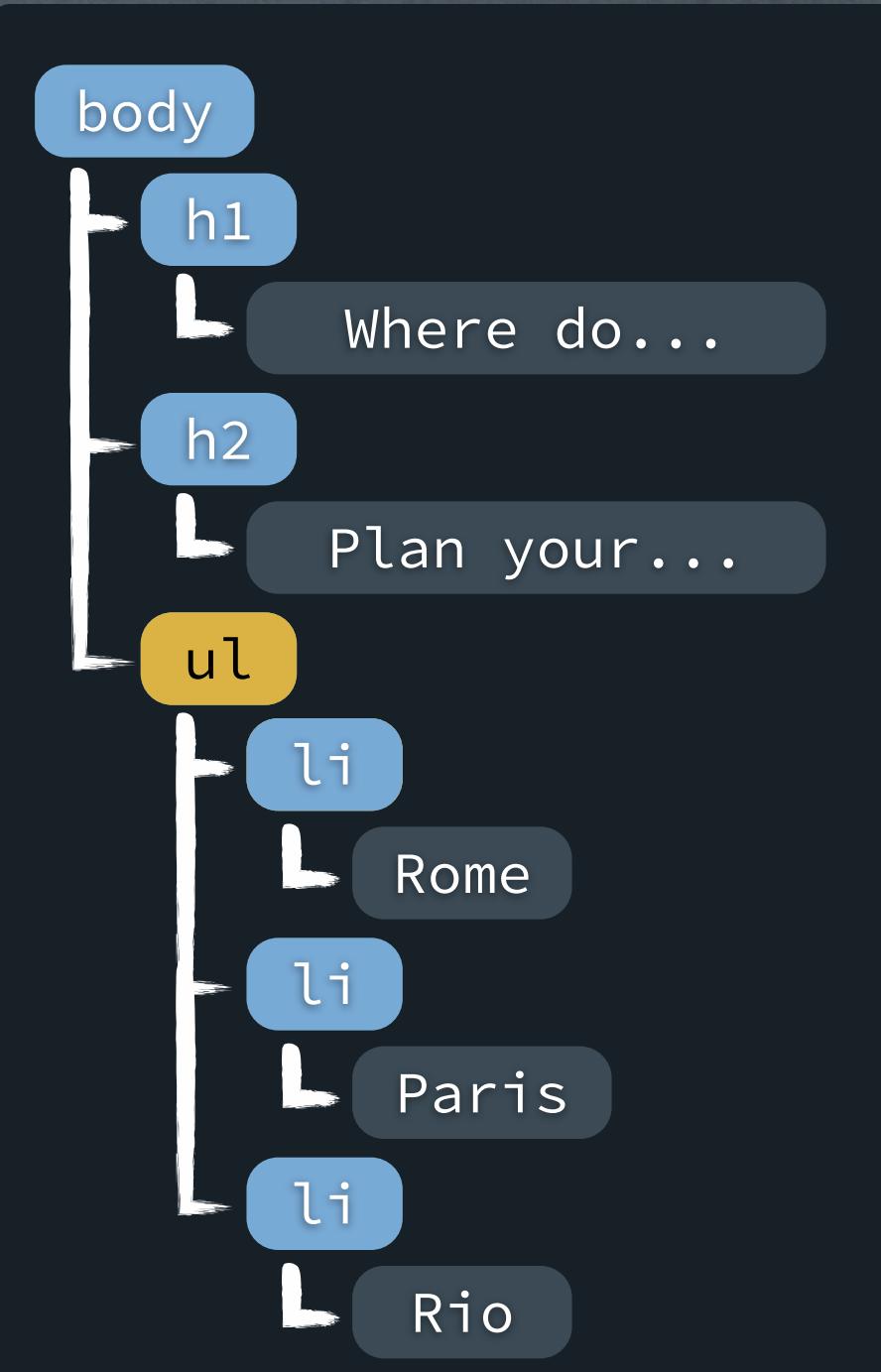
```
$( "li" ).first();
```



Walking up the DOM

```
$( "li" ).first();
```

```
$( "li" ).first().parent();
```



Walking down the DOM

HTML document

```
<h1>Where do you want to go?</h1>
<h2>Travel Destinations</h2>
<p>Plan your next adventure.</p>
<ul id="destinations">
  <li>Rome</li>
  <ul id="france">
    <li>Paris</li>
  </ul>
  <li class='promo'>Rio</li>
</ul>
```

With a parent that has many children who in turn have their own children, how could we find only the first generation of children?

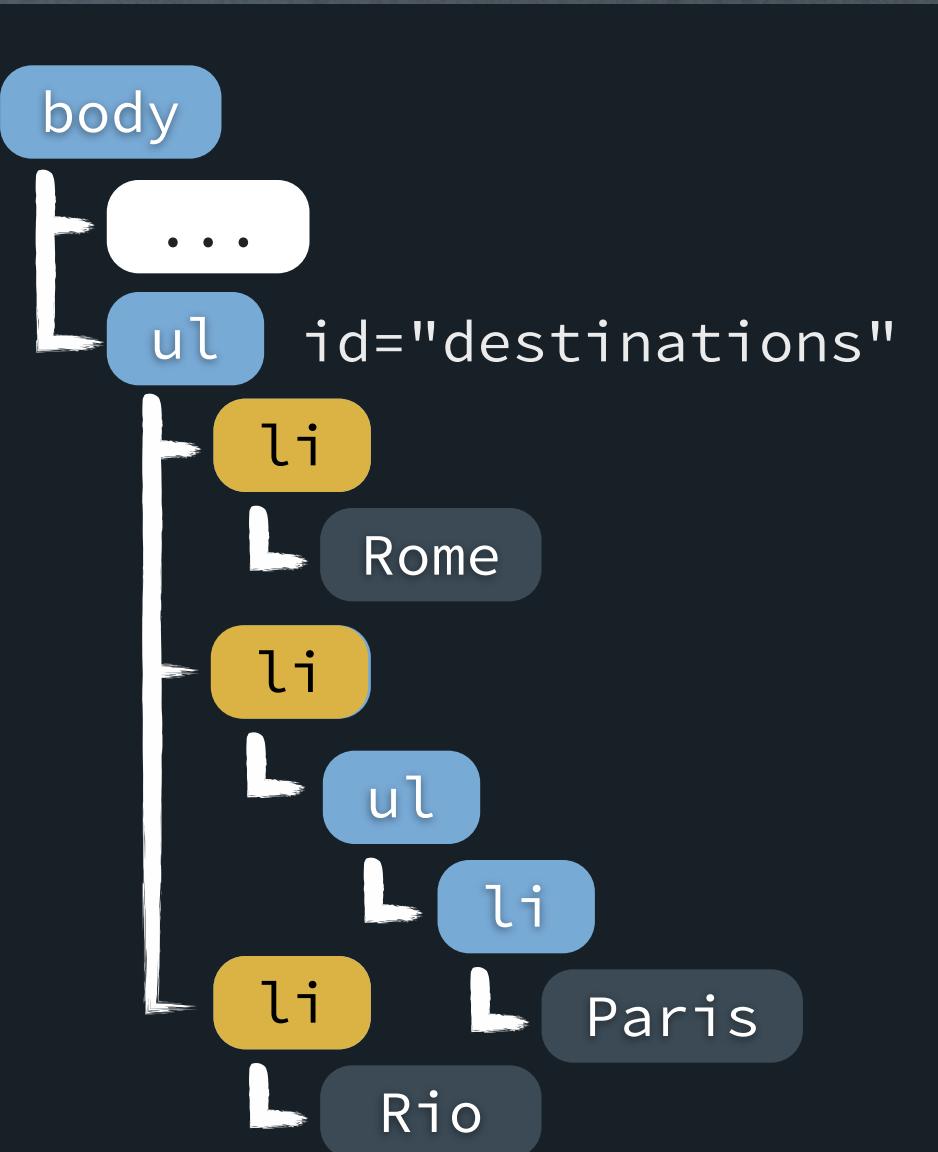


traversing down

Walking the DOM up and down

```
$("#destinations").children("li");
```

children(), unlike find(), only selects direct children



level 3



Working with the DOM

Rendered HTML:

Vacation Packages

jQuery Travels

Hawaiian Vacation

Comments on this deal:

"Amazing Deal!"

"Can't wait to take this trip!"

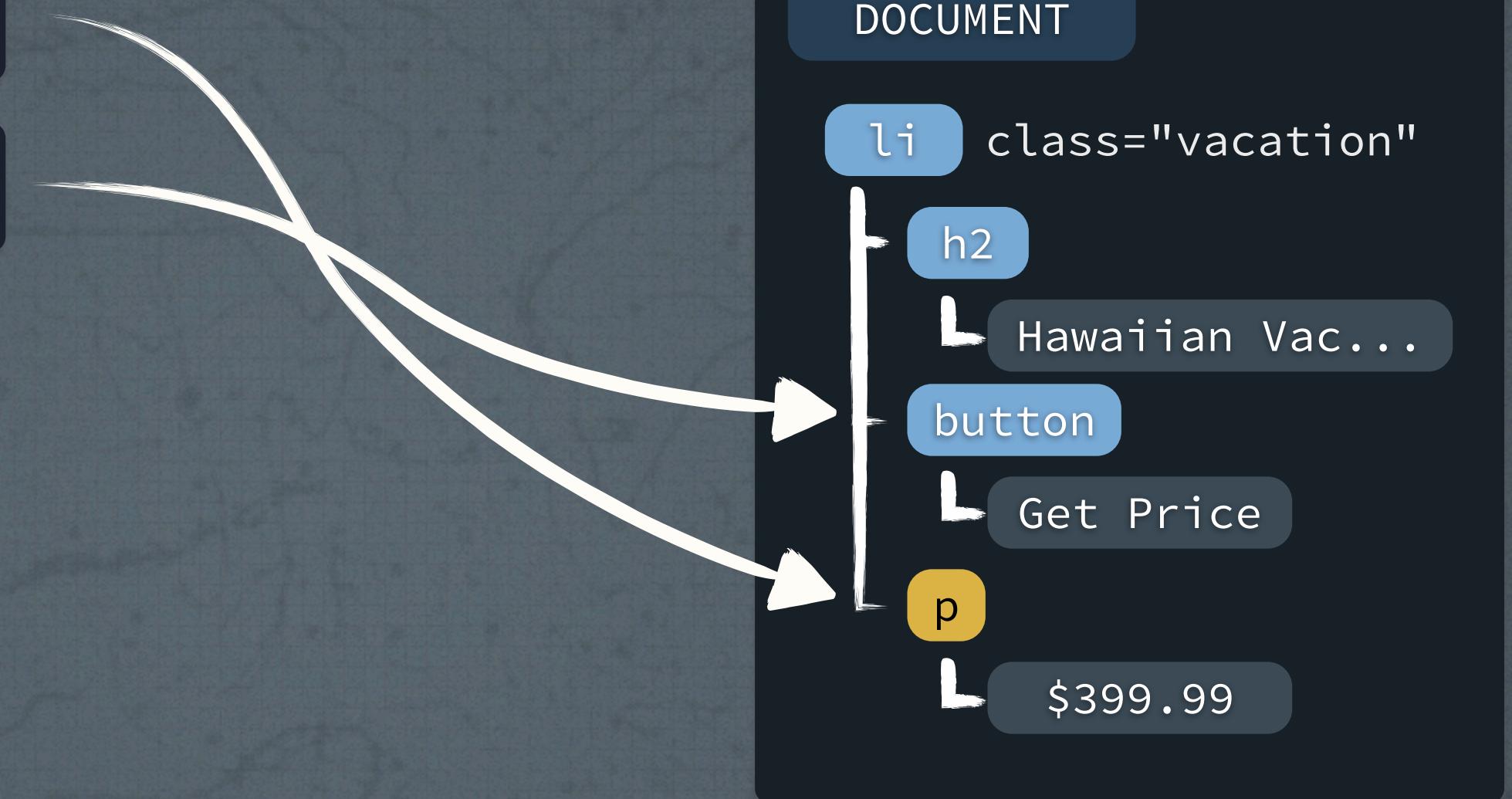
GET PRICE

Call us at 1-555-jquery-air to make a reservation today!

Appending to the DOM

DOM representation of the document

- 1 append a new DOM node
- 2 remove a DOM node



Appending to the DOM

application.js

```
$(document).ready(function() {  
    // create a <p> node with the price  
});
```

```
var price = "From $399.99";
```

```
var price = "<p>From $399.99</p>";
```

```
var price = $('

From $399.99

'); 
```

DOCUMENT

li class="vacation"

h2

L Hawaiian Vac...

button

L Get Price

Price node (not in the DOM yet)

p

L \$399.99

 Creates a node but doesn't add it to the DOM

Appending to the DOM

application.js

```
$(document).ready(function() {  
  var price = $('

From $399.99</p>');  
});


```

ways to add this price node to the DOM

.append(<element>)

.prepend(<element>)

.after(<element>)

.before(<element>)

DOCUMENT

li class="vacation"

h2

L Hawaiian Vac...

button

L Get Price

Price node (not in the DOM yet)

p

L

\$399.99

Before

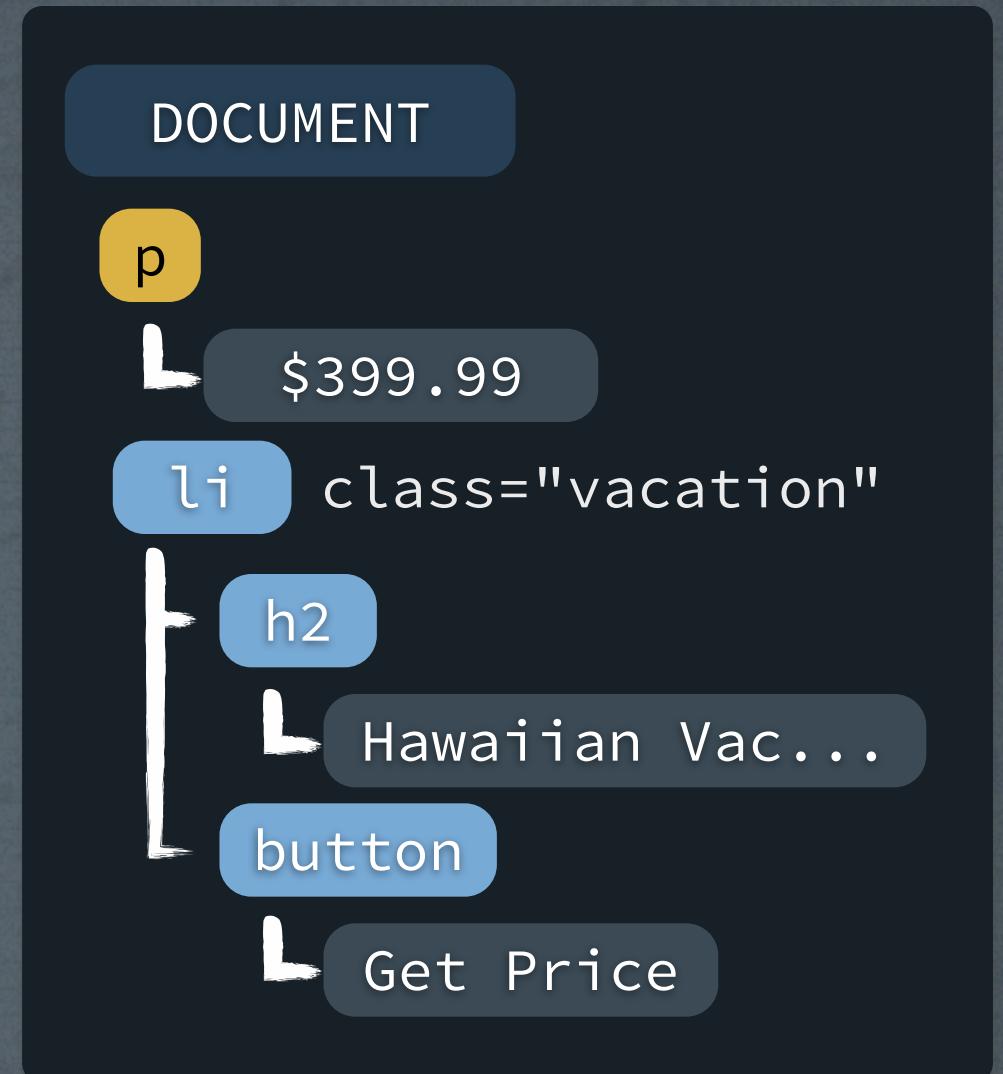
application.js

```
$(document).ready(function() {  
  var price = $('

From $399.99</p>');  
  $('.vacation').before(price);  
});


```

Puts the price node before .vacation



After

application.js

```
$(document).ready(function() {  
  var price = $('

From $399.99</p>');  
  $('.vacation').after(price);  
});


```

Puts the price node after .vacation

DOCUMENT

li class="vacation"

h2

L Hawaiian Vac...

button

L Get Price

p

L \$399.99

Prepend

application.js

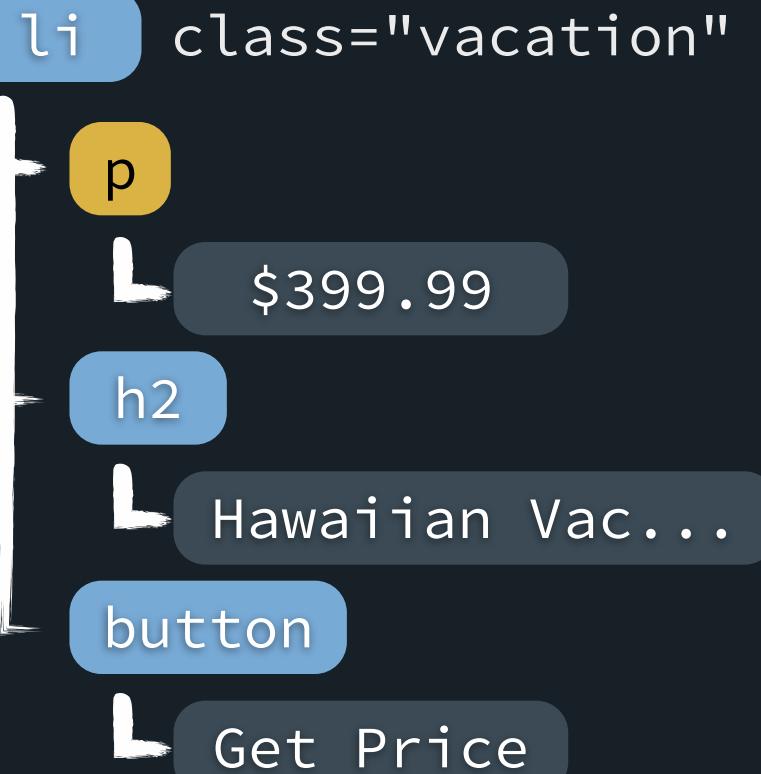
```
$(document).ready(function() {  
  var price = $('

From $399.99</p>');  
  $('.vacation').prepend(price);  
});


```

Adds the node to the top of .vacation

DOCUMENT



Prepend and Append

application.js

```
$(document).ready(function() {  
  var price = $('

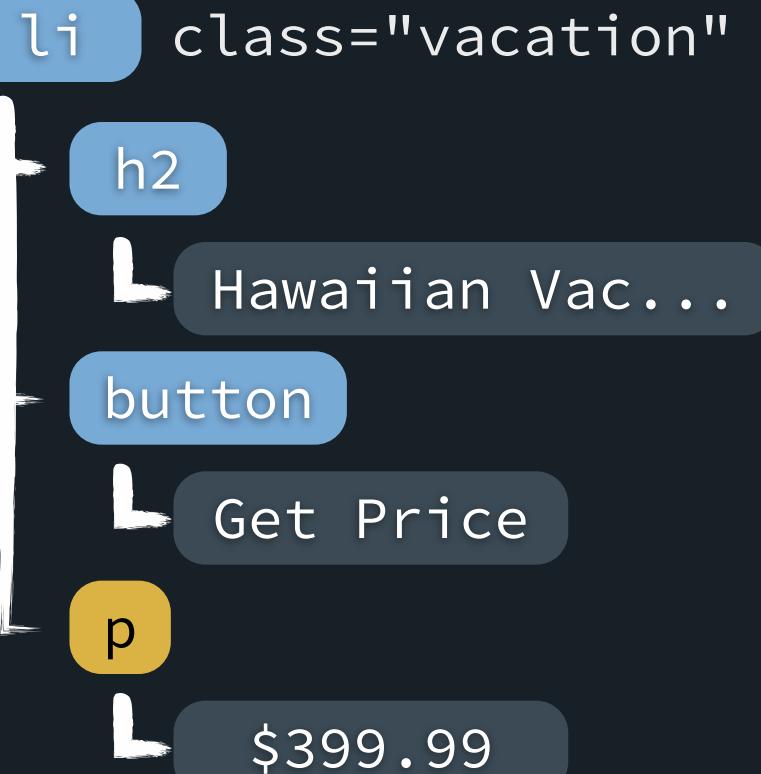
From $399.99</p>');  
  $('.vacation').append(price);  
});


```



Puts the price node at the bottom of .vacation

DOCUMENT



Removing from the DOM

application.js

```
$(document).ready(function() {  
    var price = $('

From $399.99</p>');  
    $('.vacation').append(price);  
    $('button').remove();  
});

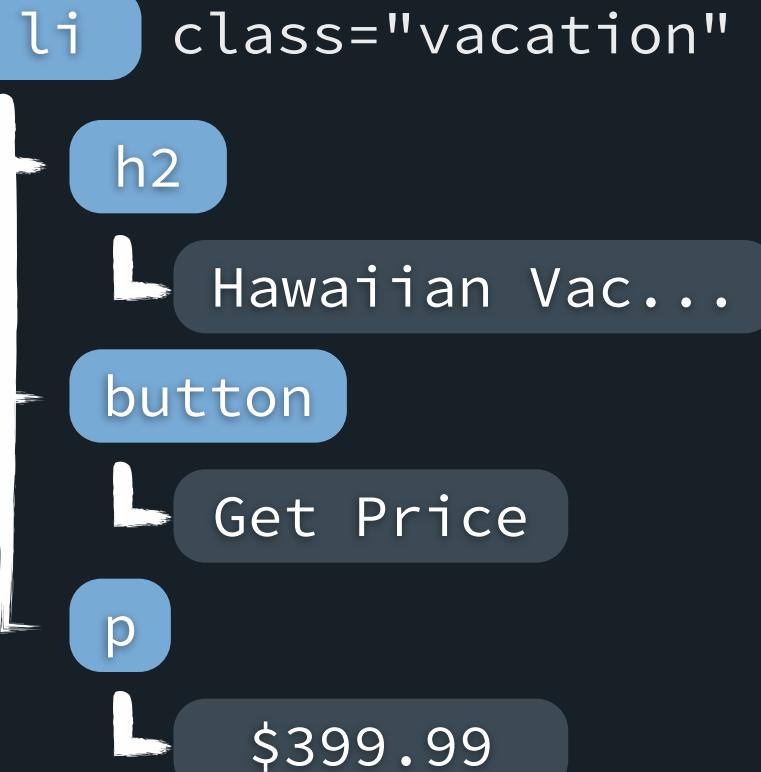

```



Removes the <button> from the DOM



DOCUMENT



Vacation Packages

jQuery Travels

Hawaiian Vacation

Comments on this deal:

"Amazing Deal!"

"Can't wait to take this trip!"

GET PRICE

Call us at 1-555-jquery-air to make a reservation today!

Appending to the DOM

application.js

```
$(document).ready(function() {  
    var price = $('

From $399.99</p>');  
    $('.vacation').append(price);  
    $('button').remove();  
});


```

Appends in the same place

.appendTo(<element>)

.prependTo(<element>)

.insertAfter(<element>)

.insertBefore(<element>)

```
price.appendTo($('.vacation'));
```

DOCUMENT

```
li class="vacation"  
h2  
↳ Hawaiian Vac...  
button  
↳ Get Price
```

Price node (not in the DOM yet)

```
p  
↳ $399.99
```



Acting on Interaction

Passing in a function

```
$(document).ready(<event handler function>);
```

The ready method takes an event handler function as argument

```
function() {  
    // executing the function runs the code  
    // between the braces  
}
```

We create a function with the function keyword

```
$(document).ready(function() {  
    // this function runs when the DOM is ready  
});
```

And we pass this function as an argument to the ready method.

Rendered HTML:

Vacation Packages

jQuery Air Atlantic

Hawaiian Vacation

Comments on this deal:

"Amazing Deal!"

"Can't wait to take this trip!"

GET PRICE



Call us at 1-555-jquery-air to make a reservation today!

Watching for Click

application.js

```
$(document).ready(function() {  
    // runs when the DOM is ready  
});
```

Target all buttons

Watch for any clicks

```
($('button').on('click', function() {  
    // runs when any button is clicked  
});
```

Run the code inside of this function

DOCUMENT

```
li class="vacation"  
  h2 Hawaiian Vacation  
  button  
  button Get Price
```

jQuery Object Methods

`.on(<event>, <event handler>)`

Removing from the DOM

application.js

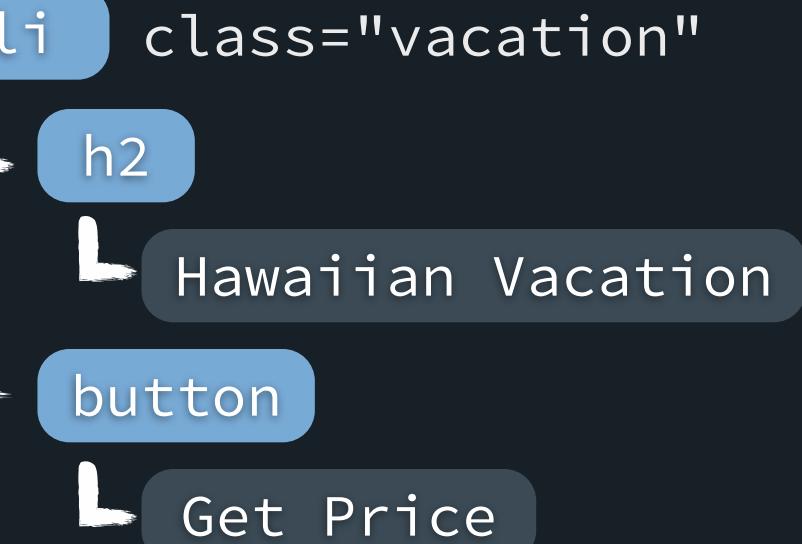
```
$(document).ready(function() {  
  $('button').on('click', function() {  
    // run this function on click  
  });  
});
```

runs when the DOM is ready



runs when a button is clicked

DOCUMENT



Removing from the DOM

application.js

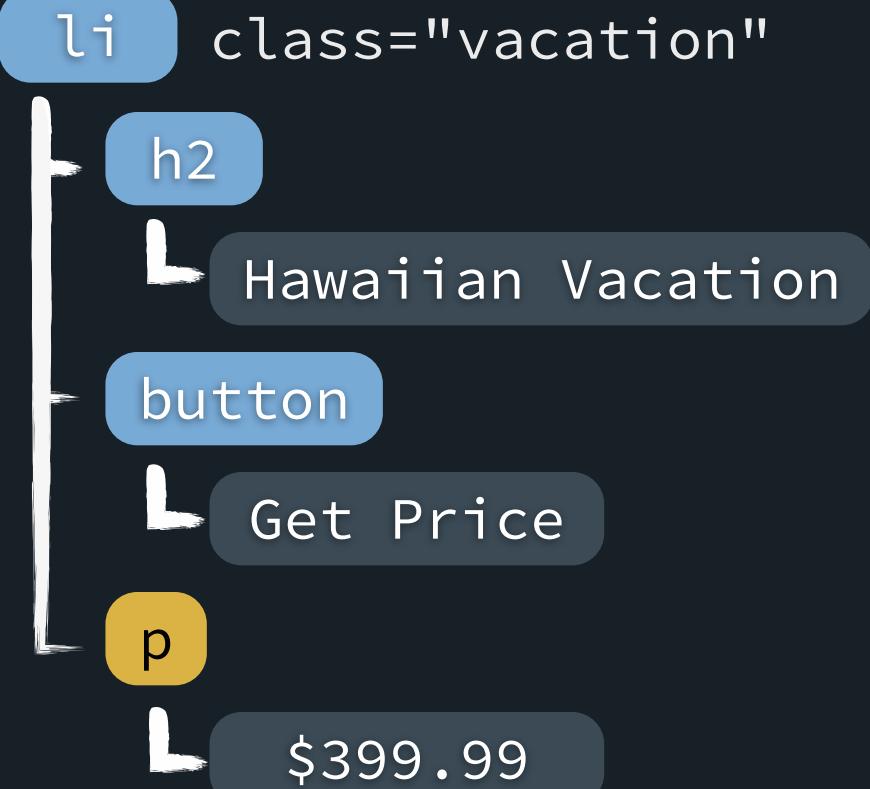
```
$(document).ready(function() {  
  $('button').on('click', function() {  
    var price = $('

From $399.99

');  
    $('.vacation').append(price);  
    $('button').remove();  
  });  
});
```



DOCUMENT



Rendered HTML:

Vacation Packages

jQuery Air Atlantic

Hawaiian Vacation

Comments on this deal:

"Amazing Deal!"

"Can't wait to take this trip!"

GET PRICE



Call us at 1-555-jquery-air to make a reservation today!

Now the price will be shown when we click the button



Refactor using Traversing

Vacation Packages

jQuery Travels

Hawaiian Vacation

Comments on this deal:

"Amazing Deal!"

"Can't wait to take this trip!"

GET PRICE

Orlando

Comments on this deal:

*There aren't any comments on
this deal yet.*

GET PRICE

Visit Japan

Comments on this deal:

"Never been, but can't wait!"

GET PRICE

Call us at 555-2593 to make a reservation today!

What if there are multiple vacation packages?

TRY **jQuery**

Working, but with Errors

application.js

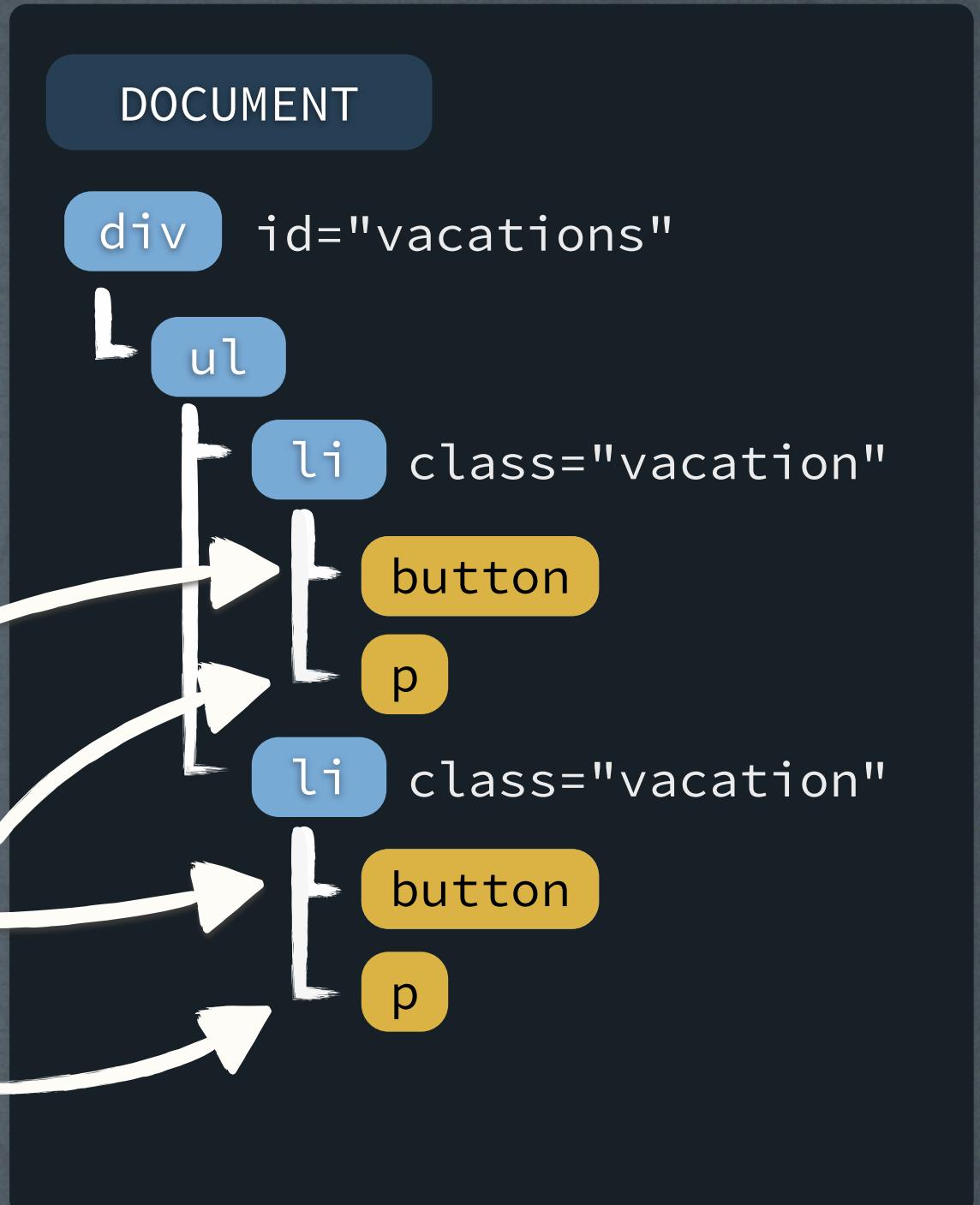
```
$(document).ready(function() {  
    $('button').on('click', function() {  
        var price = $('

From $399.99

');  
        $('.vacation').append(price);  
        $('button').remove();  
    });  
});
```

Every button will be removed

The price will be appended to both .vacation elements



An Introduction to `$(this)`

application.js

```
$(document).ready(function() {  
    $('button').on('click', function() {  
        var price = $('

From $399.99

');  
        $('.vacation').append(price);  
        $('button').remove();  
    });  
});
```

If clicked, the button will be 'this'

```
this.remove();
```

```
$(this).remove();
```



DOCUMENT

div id="vacations"

ul

li class="vacation"

button

p

li class="vacation"

button

p

An Introduction to \$(this)

application.js

```
$(document).ready(function() {  
    $('button').on('click', function() {  
        var price = $('

From $399.99

');  
        $('.vacation').append(price);  
        $(this).remove();  
    });  
});
```

► Only removes whichever button was clicked



DOCUMENT

div id="vacations"

ul

li class="vacation"

button

p

li class="vacation"

button

p

Vacation Packages

jQuery Travels

Hawaiian Vacation

Comments on this deal:

"Amazing Deal!"

"Can't wait to take this trip!"

GET PRICE

Orlando

Comments on this deal:

*There aren't any comments on
this deal yet.*

GET PRICE

Visit Japan

Comments on this deal:

"Never been, but can't wait!"

GET PRICE

Call us at 555-2593 to make a reservation today!

The clicked button will now be removed

TRY jQuery

Traversing from `$(this)`

application.js

```
$(document).ready(function() {
  $('button').on('click', function() {
    var price = $('

From $399.99

');
    $('.vacation').append(price);
    $(this).remove();
  });
});

$(this).after(price);
```



Adds the `<p>` node after the `<button>`

DOCUMENT

ul

↳ li

class="vacation"

h2

Hawaiian Vac...

button

↳ Get Price

p

↳ \$399.99

Traversing from \$(this)

application.js

```
$(document).ready(function() {  
    $('button').on('click', function() {  
        var price = $('

From $399.99

');  
        $(this).after(price);  
        $(this).remove();  
    });  
});
```

Add the price as a sibling after button

DOCUMENT

ul

li

class="vacation"

h2

Hawaiian Vac...

button

Get Price

p

\$399.99

What if the button is moved?

application.js

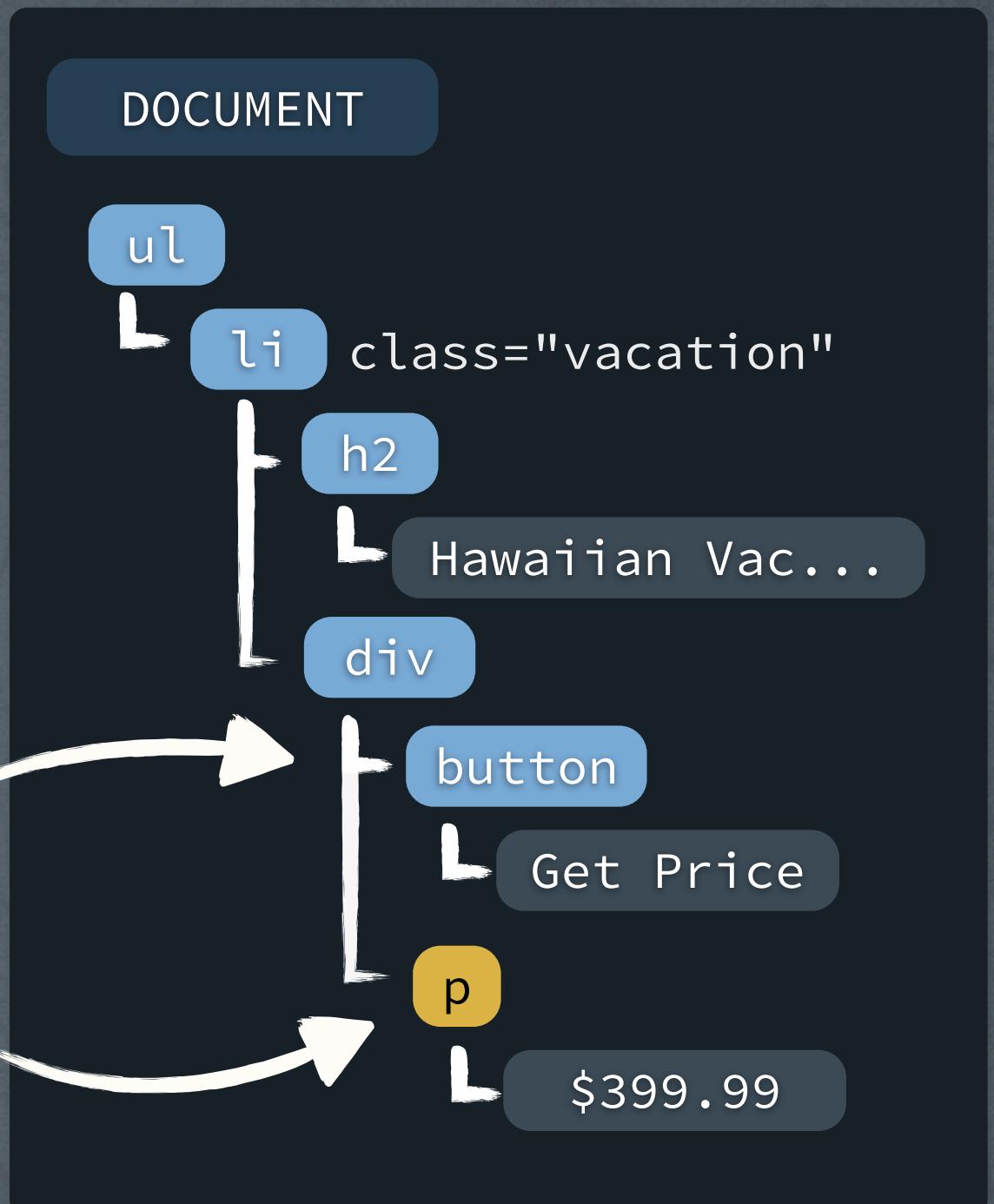
```
$(document).ready(function() {  
    $('button').on('click', function() {  
        var price = $('

From $399.99

');  
        $(this).after(price);  
        $(this).remove();  
    });  
});
```

If the button is moved, the price will be moved

*How do we keep the
price as a child of ?*



Using .closest(<selector>)

application.js

```
$(this).after(price);
```



```
$(this).parent().parent().append(price);
```



```
$(this).parents('.vacation').append(price);
```



```
$(this).closest('.vacation').append(price);
```



DOCUMENT

ul

↳ li

class="vacation"

h2

Hawaiian Vac...

div

↳ button

Get Price

p

↳ \$399.99

Our Finished Handler

application.js

```
$(document).ready(function() {
  $('button').on('click', function() {
    var price = $('

From $399.99

');
    $(this).closest('.vacation').append(price);
    $(this).remove();
  });
});
```

Adds the <p> node at the bottom of .vacation



DOCUMENT

ul

↳ li class="vacation"

h2

↳ Hawaiian Vac...

button

↳ Get Price

p

↳ \$399.99

Vacation Packages

jQuery Travels

Hawaiian Vacation

Comments on this deal:

"Amazing Deal!"

"Can't wait to take this trip!"

GET PRICE

Orlando

Comments on this deal:

*There aren't any comments on
this deal yet.*

GET PRICE

Visit Japan

Comments on this deal:

"Never been, but can't wait!"

GET PRICE

Call us at 555-2593 to make a reservation today!



The prices will be added at the right place



Traversing and Filtering

Vacation Packages

jQuery Travels

Hawaiian Vacation

Comments on this deal:

"Amazing Deal!"

"Can't wait to take this trip!"

GET PRICE



Orlando

Comments on this deal:

"There aren't any comments on this deal yet."

GET PRICE

Visit Japan

Comments on this deal:

"Never been, but can't wait!"

GET PRICE

Call us at 555-2593 to make a reservation today!

How do we allow vacations to have different prices?

Tackling the HTML

index.html

```
<li class="vacation onsale" data-price='399.99'>
  <h3>Hawaiian Vacation</h3>
  <button>Get Price</button>
  <ul class='comments'>
    <li>Amazing deal!</li>
    <li>Want to go!</li>
  </ul>
</li>
```

*All data attributes begin with '**data-**'*

```
$('.vacation').first().data('price');
"399.99"
```

jQuery Object Methods

.data(<name>)

.data(<name>, <value>)

Refactoring ‘Get Price’

application.js

```
$(document).ready(function() {  
  $('button').on('click', function() {  
    var price = $('

From $399.99

');  
    $(this).closest('.vacation').append(price);  
    $(this).remove();  
  });  
});
```



Reads from the data-price attribute

```
var amount = $(this).closest('.vacation').data('price');  
var price = $('

From $' + amount + '

');
```



Joins two strings to create the price

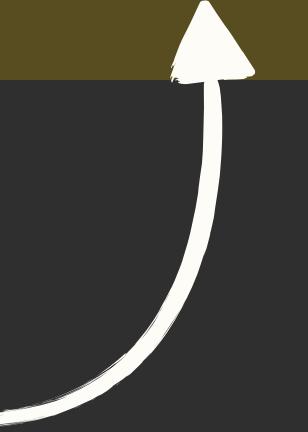
Refactoring ‘Get Price’

application.js

```
$(document).ready(function() {  
    $('button').on('click', function() {  
        var amount = $(this).closest('.vacation').data('price');  
        var price = $('

From $'+amount+'

');  
        $(this).closest('.vacation').append(price);  
        $(this).remove();  
    });  
});
```



Each vacation can have its own price

Reusing jQuery Objects

application.js

```
$(document).ready(function() {
  $('button').on('click', function() {
    var amount = $(this).closest('.vacation').data('price');
    var price = $('

From $'+amount+'

');
    $(this).closest('.vacation').append(price);
    $(this).remove();
  });
});
```



```
var vacation = $(this).closest('.vacation');
var amount = vacation.data('price');
vacation.append(price);
```



Reusing jQuery Objects

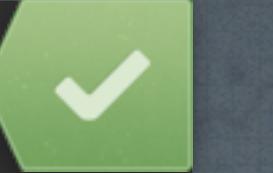
application.js

```
$(document).ready(function() {
  $('button').on('click', function() {
    var vacation = $(this).closest('.vacation');
    var amount = vacation.data('price');
    var price = $('

From $' + amount + '

');
    vacation.append(price);

    $(this).remove();
  });
});
```



*We'll only query the DOM
once for this element*

Vacation Packages

jQuery Travels

On Sale Now

Expiring Soon

Hawaiian Vacation

Comments on this deal:

"Amazing Deal!"

"Can't wait to take this trip!"

GET PRICE



Orlando

Comments on this deal:

There aren't any comments on this deal yet.

GET PRICE

Visit Japan

Comments on this deal:

"Never been, but can't wait!"

GET PRICE

Call us at 555-2593 to make a reservation today!

Each vacation can have its dynamic own price now

On With a Selector

application.js

```
$(document).ready(function() {  
  $('button').on('click', function() {  
    ...  
  });  
});
```



If we add new buttons anywhere, they will trigger this click handler

```
$('.vacation button').on('click', function() {});
```



```
$('.vacation').on('click', 'button', function() {});
```



*Only target a 'button'
if it's inside a '.vacation'*

Vacation Packages

jQuery Travels

On Sale Now

Expiring Soon

Hawaiian Vacation

Comments on this deal:

"Amazing Deal!"

"Can't wait to take this trip!"

GET PRICE

Orlando

Comments on this deal:

*There aren't any comments on
this deal yet.*

GET PRICE

Visit Japan

Comments on this deal:

"Never been, but can't wait!"

GET PRICE

Call us at 555-2593 to make a reservation today!

We'll implement our new filters next

Filtering HTML

index.html

```
<div id='filters'>  
  ...  
  <button class='onsale-filter'>On Sale Now</button>  
  <button class='expiring-filter'>Expiring</button>  
  ...  
</div>
```

We'll write 2 event handlers for our buttons

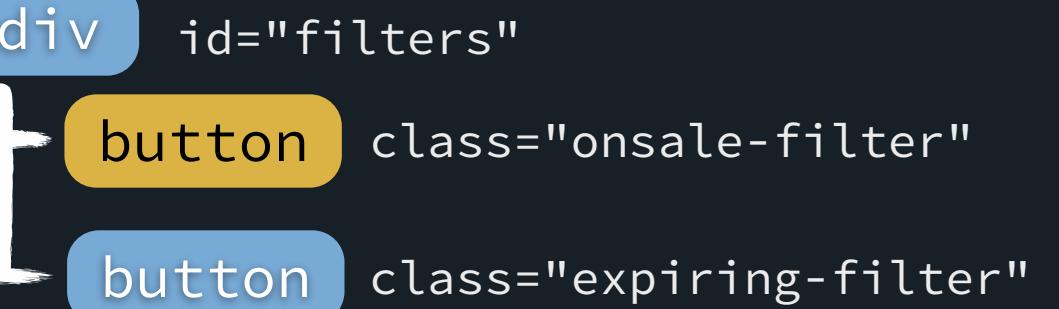
We'll highlight vacations with these traits

Filtering for Vacations On sale

application.js

```
$( '#filters' ).on( 'click' , '.onsale-filter' ,  
    function() {  
        // find all vacations that are on-sale  
        // add a class to these vacations  
    } );
```

DOCUMENT



```
div id="filters"  
    button class="onsale-filter"  
    button class="expiring-filter"
```

Filtering for Vacations On sale

application.js

```
$('#filters').on('click', '.onsale-filter',  
    function() {  
        // find all vacations that are on-sale  
        // add a class to these vacations  
    });
```

```
$('.vacation.onsale')
```



```
$('.vacation').filter('.onsale')
```



DOCUMENT

ul

li class="vacation onsale"

ul class="comments"

li
li

li class="vacation"

li class="vacation"

Filtering for Vacations On sale

application.js

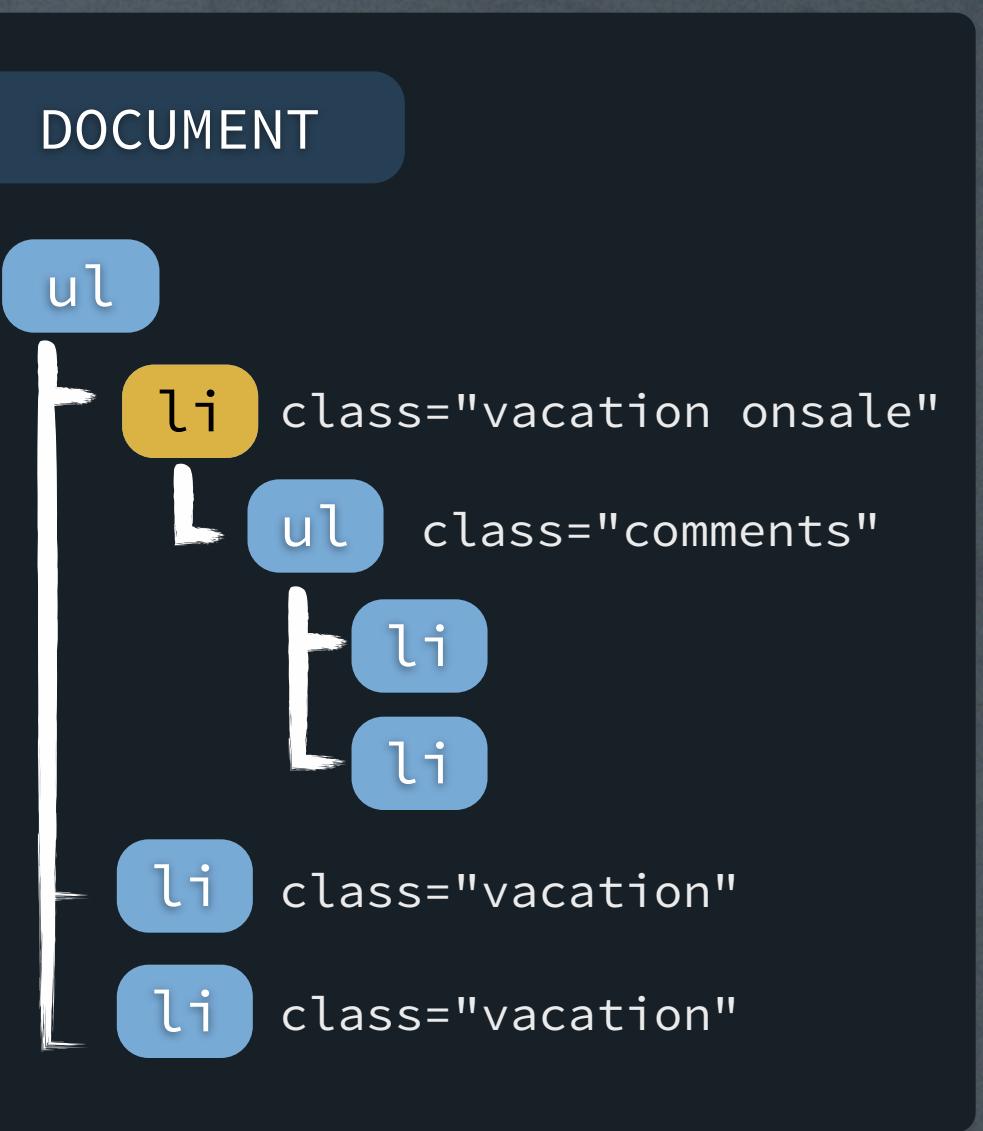
```
$('#filters').on('click', '.onsale-filter',  
    function() {  
        $('.vacation').filter('.onsale')  
        // add a class to these vacations  
   });
```

Class Manipulation

.addClass(<class>)



.removeClass(<class>)



```
$('.vacation').filter('.onsale').addClass('highlighted');
```



3.4 Traversing & Filtering

TRYjQuery

Filtering for Vacations On sale

application.js

```
$( '#filters' ).on( 'click', '.onsale-filter', function() {  
    $('.vacation').filter('.onsale').addClass('highlighted');  
});
```



Finds only the right vacations

Adds a class of 'highlighted'

*The same can be done for our **expiring** filter*

```
$( '#filters' ).on( 'click', '.expiring-filter', function() {  
    $('.vacation').filter('.expiring').addClass('highlighted');  
});
```



Vacation Packages

jQuery Travels

On Sale Now

Expiring Soon

Hawaiian Vacation

Comments on this deal:

"Amazing Deal!"

"Can't wait to take this trip!"

GET PRICE

Orlando

Comments on this deal:

*There aren't any comments on
this deal yet.*

GET PRICE

Visit Japan

Comments on this deal:

"Never been, but can't wait!"

GET PRICE

Call us at 555-2593 to make a reservation today!

How do we make sure not all vacations are highlighted?

Unhighlighting Vacations

application.js

```
$('#filters').on('click', '.onsale-filter', function() {  
    $('.highlighted').removeClass('highlighted');  
    $('.vacation').filter('.onsale').addClass('highlighted');  
});
```



*Remove the highlighted
class before adding it back*

Vacation Packages

jQuery Travels

On Sale Now

Expiring Soon

Hawaiian Vacation

Comments on this deal:

"Amazing Deal!"

"Can't wait to take this trip!"

GET PRICE

Orlando

Comments on this deal:

*There aren't any comments on
this deal yet.*

GET PRICE

Visit Japan

Comments on this deal:

"Never been, but can't wait!"

GET PRICE

Call us at 555-2593 to make a reservation today!

*We clear the highlighted class on click, only
highlighting the targeted vacations*

TRYjQuery

level 4



On DOM Load

jQuery Air Atlantic - Vacation Confirmation

Confirmations

Hawaiian Vacation

Paid \$399.99 on January 14, 2013.

FLIGHT DETAILS



Call us at 555-25937 to make a reservation today!

Adding Ticket Confirmation

index.html

```
<li class="confirmation">  
  ...  
  <button>FLIGHT DETAILS</button>  
  <ul class="ticket">...</ul>  
</li>
```

Clicking this button...

...will show the ticket

```
.ticket {  
  display: none;  
}
```



Hide ticket on page load

Rendered HTML:

jQuery Air Atlantic - Vacation Confirmation

Confirmations

Hawaiian Vacation

Paid \$399.99 on January 14, 2013.

FLIGHT DETAILS

Call us at 555-25937 to make a reservation today!



watch for click



find the ticket



show the ticket

Using slideDown to Show Elements

index.html

```
<li class="confirmation">  
  ...  
  <button>FLIGHT DETAILS</button>  
  <ul class="ticket">...</ul>  
</li>
```

jQuery Object Methods

.slideDown()

.slideUp()

.slideToggle()

application.js

```
$('.confirmation').on('click', 'button', function() {  
  $(this).closest('.confirmation').find('.ticket').slideDown();  
});
```



Searches up through ancestors

Searches down through children

jQuery Travels - Vacation Confirmation

Confirmations

Hawaiian Vacation

Paid \$399.99 on January 14, 2013.

FLIGHT DETAILS

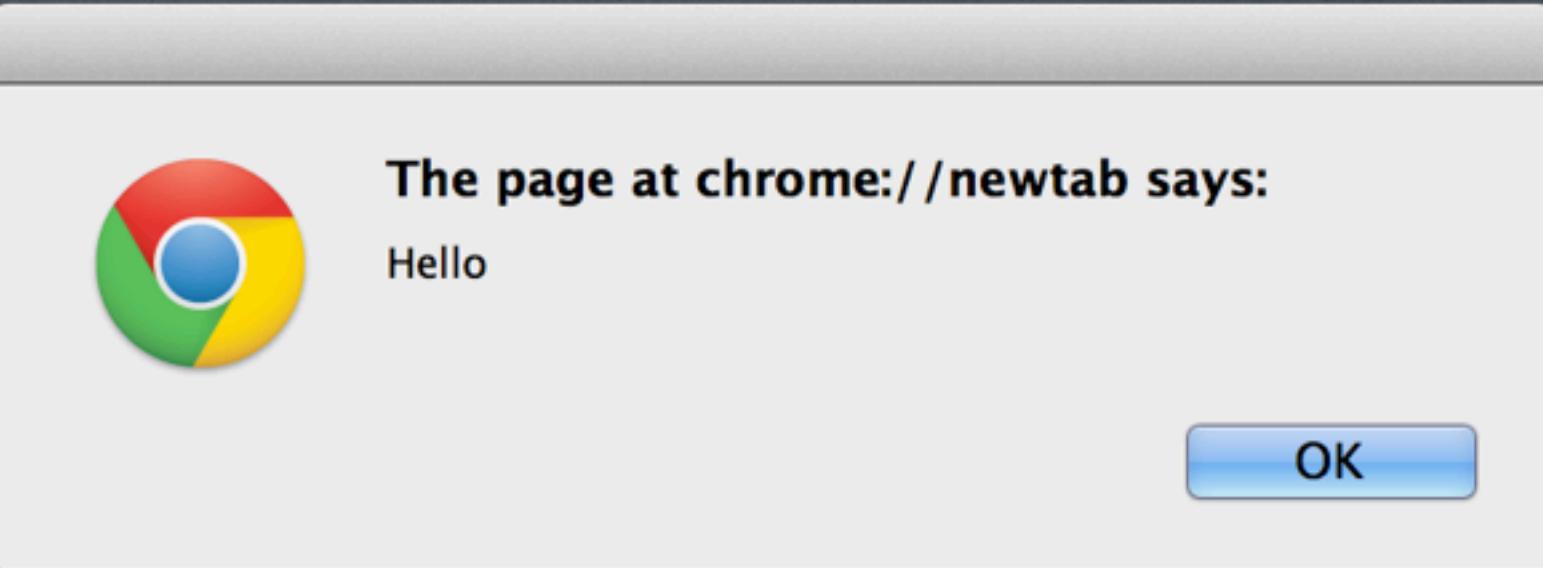


Call us at 555-25937 to make a reservation today!

Why doesn't the button work?

Alert and Length

```
alert('Hello');
```



```
$('.li').length;
```

↳ 3

To query how many nodes are on a page.

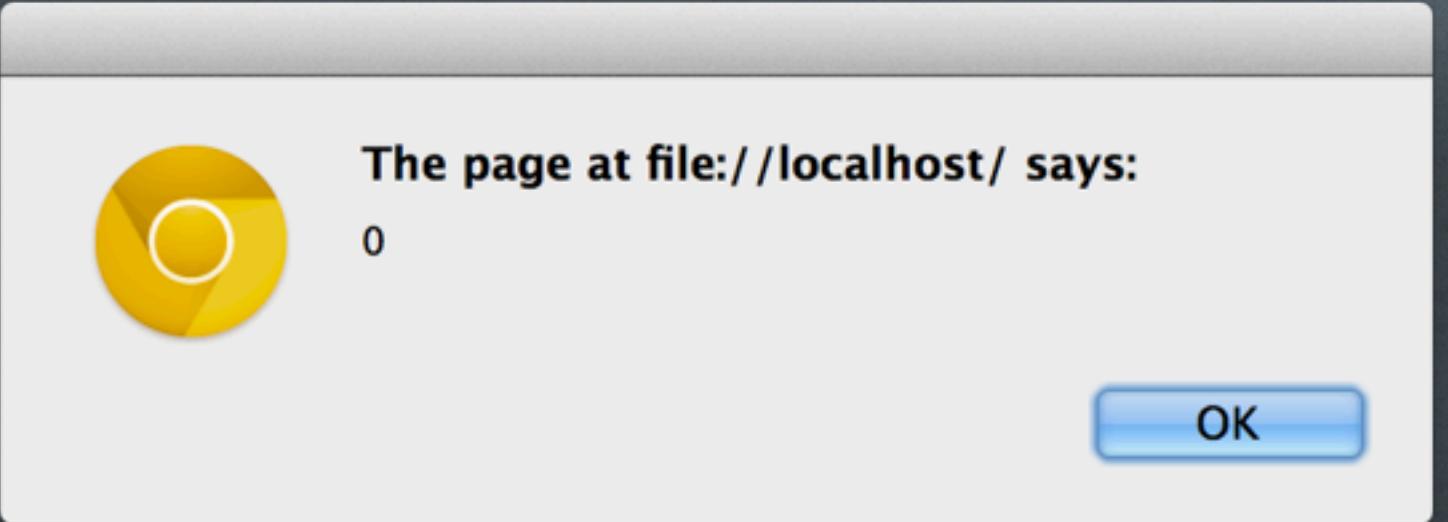
Debugging with Alert

application.js

```
alert($('button').length);
$('.confirmation').on('click', 'button', function() {
  $(this).closest('.confirmation').find('.ticket').slideDown();
});
```



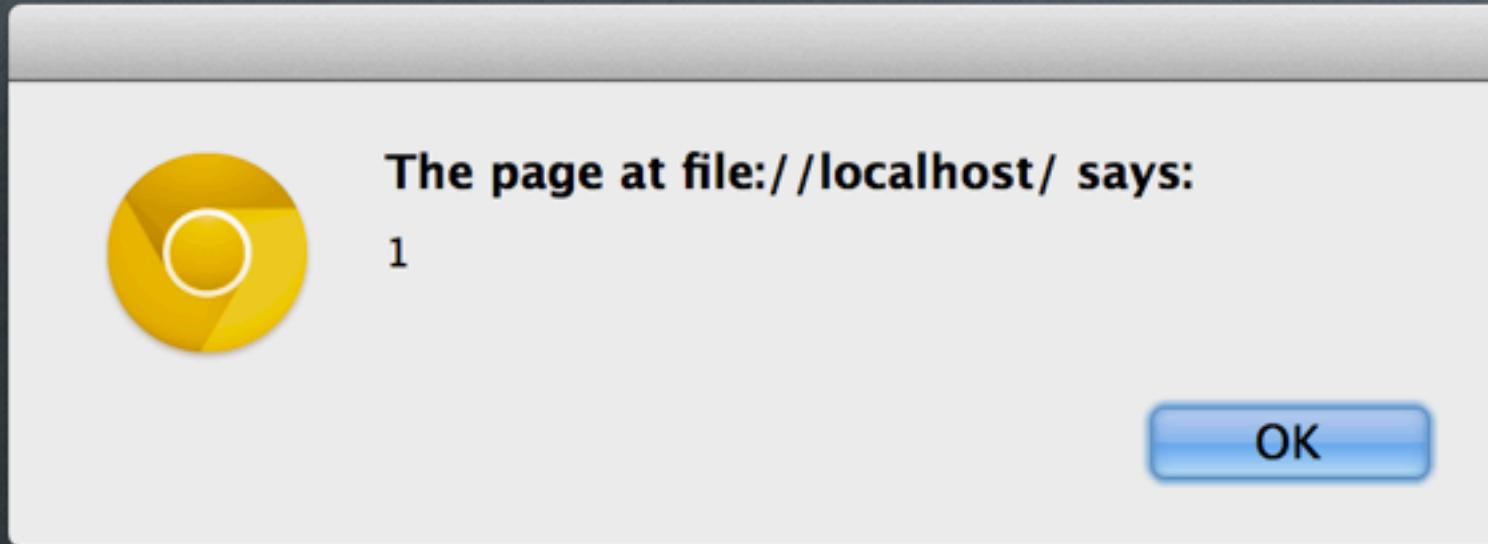
The alert dialog



We Forgot \$(document).ready() already

application.js

```
$(document).ready(function() {  
    alert($('button').length);  
    $('.confirmation').on('click', 'button', function() {  
        $(this).closest('.confirmation').find('.ticket').slideDown();  
    });  
});
```



The button is found after the DOM has loaded



jQuery Air Atlantic - Vacation Confirmation

Confirmations

Hawaiian Vacation

Paid \$399.99 on January 14, 2013.

FLIGHT DETAILS



Call us at 555-25937 to make a reservation today!

Now that the DOM has loaded, jQuery can find our button



Expanding on on()

jQuery Travels - Vacation Confirmation

Confirmations

Hawaiian Vacation

Paid \$399.99 on January 14, 2013. 

FLIGHT DETAILS

Call us at 555-25937 to make a reservation today!

What if we also want to show the ticket when they hover over the <h3> tag?

Deciding on an Event

application.js

```
$(document).ready(function() {
  $('.confirmation').on('click', 'button', function() {
    $(this).closest('.confirmation').find('.ticket').slideDown();
  });
  $('.confirmation').on('?', 'h3', function() {
    $(this).closest('.confirmation').find('.ticket').slideDown();
  });
});
```



What event should we watch for?

Mouse Events

Fires when the mouse is first positioned over the element

click

focusin

mousedown

mousemove

mouseover

mouseenter

dblclick

focusout

mouseup

mouseout

mouseleave



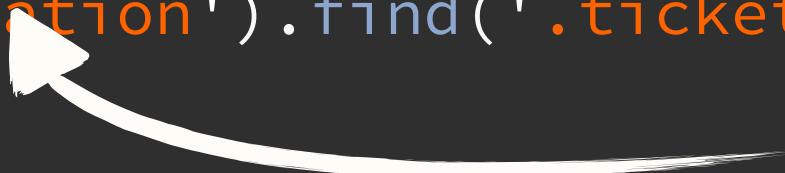
Mouse Events

application.js

```
$(document).ready(function() {  
    $('.confirmation').on('click', 'button', function() {  
        $(this).closest('.confirmation').find('.ticket').slideDown();  
    });  
    $('.confirmation').on('mouseenter', 'h3', function() {  
        $(this).closest('.confirmation').find('.ticket').slideDown();  
    });  
});
```



*Show the ticket when the mouse
is positioned over the h3*



jQuery Travels - Vacation Confirmation

Confirmations

Hawaiian Vacation

Paid \$399.99 on January 14, 2013. ↗

FLIGHT DETAILS

Call us at 555-25937 to make a reservation today!

We have two ways of showing the ticket now

TRY **jQuery**

Refactoring Handler Functions

application.js

```
$(document).ready(function() {  
    $('.confirmation').on('click', 'button', function() {  
        $(this).closest('.confirmation').find('.ticket').slideDown();  
    });  
    $('.confirmation').on('mouseenter', 'h3', function() {  
        $(this).closest('.confirmation').find('.ticket').slideDown();  
    });  
});
```



This code is duplicated, how can we refactor this?



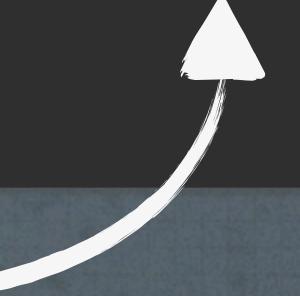
Extract out and name our event handler

```
function showTicket () {  
    $(this).closest('.confirmation').find('.ticket').slideDown();  
}
```

Refactoring Handler Functions

application.js

```
function showTicket () {  
  $(this).closest('.confirmation').find('.ticket').slideDown();  
}  
  
$(document).ready(function() {  
  $('.confirmation').on('click', 'button', showTicket);  
  $('.confirmation').on('mouseenter', 'h3', showTicket);  
});
```



Don't add () at the end - that would execute the function immediately

jQuery Travels - Vacation Confirmation

Confirmations

Hawaiian Vacation

Paid \$399.99 on January 14, 2013. ↗

FLIGHT DETAILS

Call us at 555-25937 to make a reservation today!

Now the exact same code is run for both events



Keyboard Events

jQuery Travels - Trip Planner

Packages

Hawaiian Vacation

\$399.99 per ticket

Tickets:

1



Total Price: \$399.99

Call us at 555-25937 to make a reservation today!

Changing this “Tickets” input field should recalculate the total

TRY **jQuery**

Trip Planner Page

index.html

```
<div class="vacation" data-price='399.99'>
  <h3>Hawaiian Vacation</h3>
  <p>$399.99 per ticket</p>
  <p>
    Tickets:
    <input type='number' class='quantity' value='1' />
  </p>
</div>
<p>Total Price: $<span id='total'>399.99</span></p>
```

When this updates...

...we'll update the calculated price here

Keyboard and Form Events

application.js

```
$(document).ready(function() {  
    $('.vacation').on('?', '.quantity', function() {  
    });  
});
```



Keyboard Events

keypress

keydown

keyup



Form Events

blur

select

change

focus

submit

<http://api.jquery.com/category/events/keyboard-events/>

<http://api.jquery.com/category/events/form-events/>

Writing our Event Handler

application.js

```
$document.ready(function() {  
    $('.vacation').on('keyup', '.quantity', function() {  
        // Get the price for this vacation  
        // Get the quantity entered  
        // Set the total to price * quantity  
    });  
});
```

```
var price = $(this).closest('.vacation').data('price');  
↳ '399.99'
```

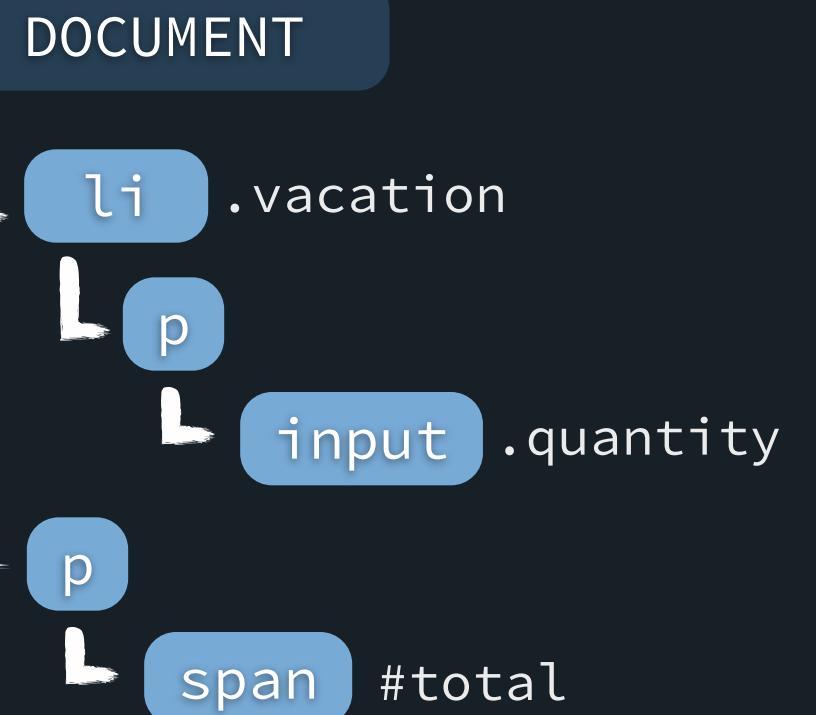
Returns price as a string

```
var price = +$(this).closest('.vacation').data('price');  
↳ 399.99
```

Use + to convert the string to a number

4.3 Keyboard Events

TRYjQuery



Getting the Quantity of Tickets

application.js

```
$document).ready(function() {
  $('.vacation').on('keyup', '.quantity', function() {
    var price = +$(this).closest('.vacation').data('price');
    // Get the quantity entered
    // Set the total to price * quantity
  });
});
```

```
var quantity = this.val();
```



Errors - not a jQuery object

```
var quantity = $(this).val();
↳ '2'
```



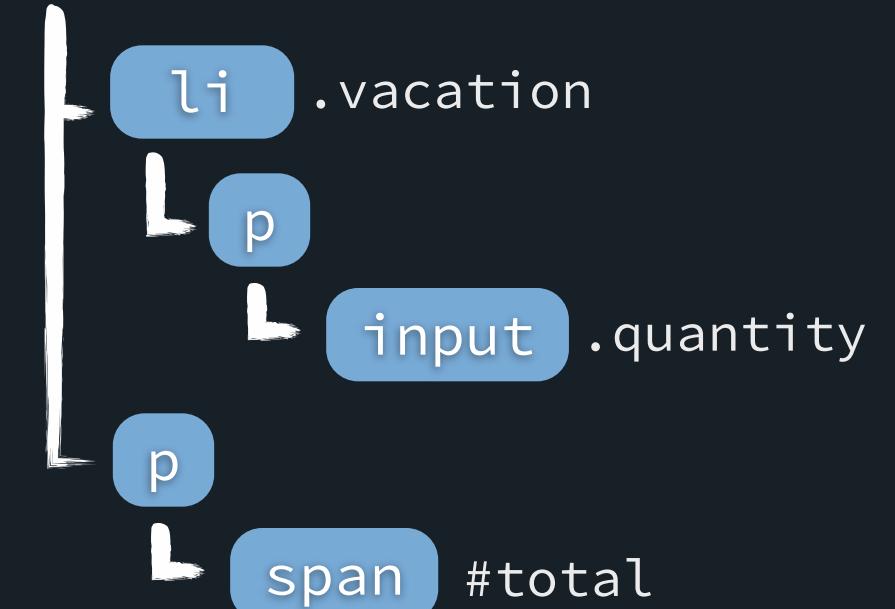
Sets quantity to a string

```
var quantity = +$(this).val();
↳ 2
```



Sets quantity to a number

DOCUMENT



jQuery Object Methods

`.val(<new value>)`

`.val()`

Setting the Total Price

application.js

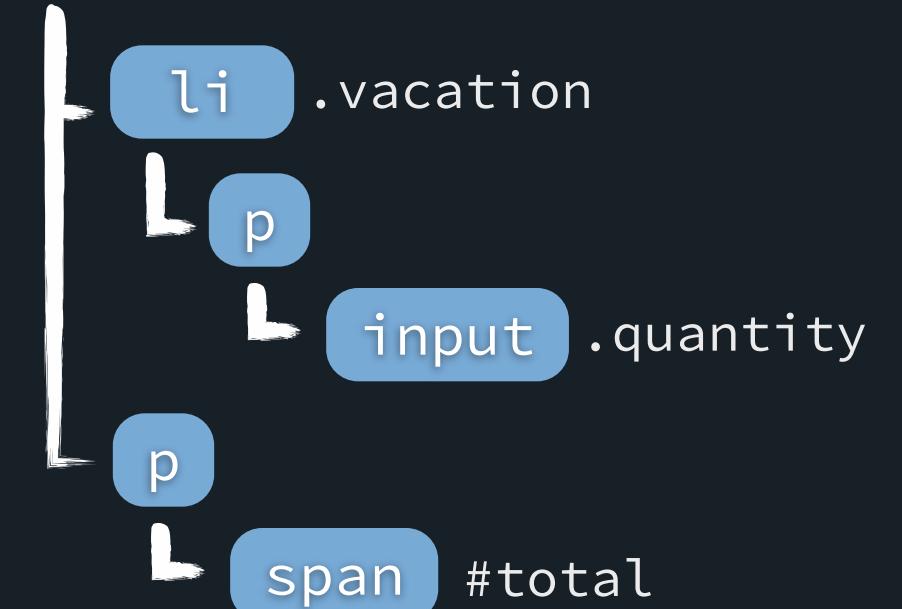
```
$document).ready(function() {  
    $('.vacation').on('keyup', '.quantity', function() {  
        var price = +$(this).closest('.vacation').data('price');  
        var quantity = +$(this).val();  
        // Set the total to price * quantity  
    });  
});
```

```
$('#total').text(price * quantity);
```



You can pass a number or a string to the `.text()` method

DOCUMENT

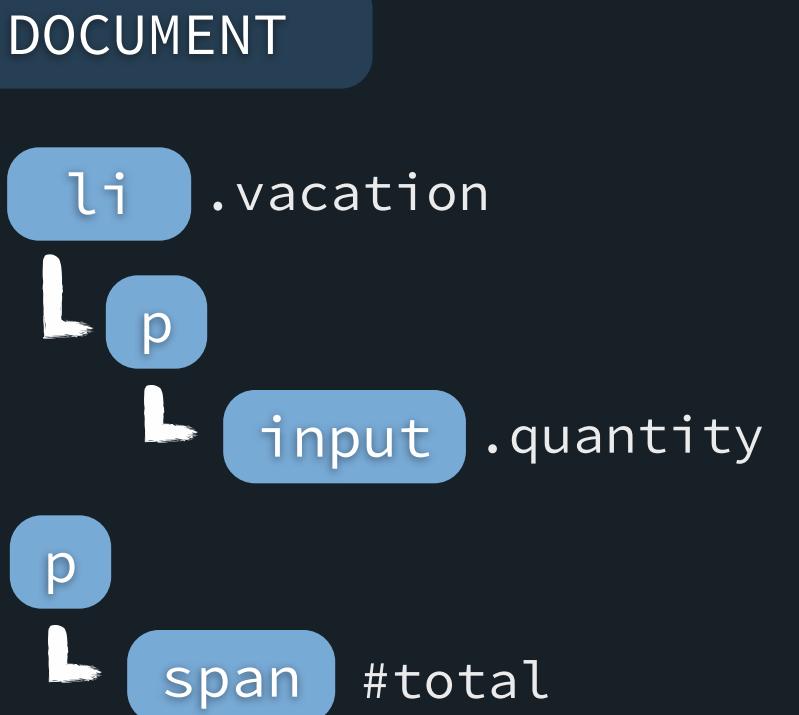


The Completed Event Handler

application.js

```
$document.ready(function() {  
    $('.vacation').on('keyup', '.quantity', function() {  
        var price = +$(this).closest('.vacation').data('price');  
        var quantity = +$(this).val();  
        $('#total').text(price * quantity);  
    });  
});
```

Whenever the quantity is changed, the total will be updated



jQuery Travels - Trip Planner

Packages

Hawaiian Vacation

\$399.99 per ticket

Tickets:

1



*The total changes
immediately as we wanted*

Total Price: \$399.99

Call us at 555-25937 to make a reservation today!



Link Layover

jQuery Travels - Vacation Packages

Packages *Clicking Show Comments will cause them to fade in*

Hawaiian Vacation

GET PRICE

Show Comments



Europoean Getaway

GET PRICE

Visit Japan

GET PRICE

Show Comments

Orlando

GET PRICE

Denver

GET PRICE

Portland

GET PRICE

Show Comments

Preparing for Flight

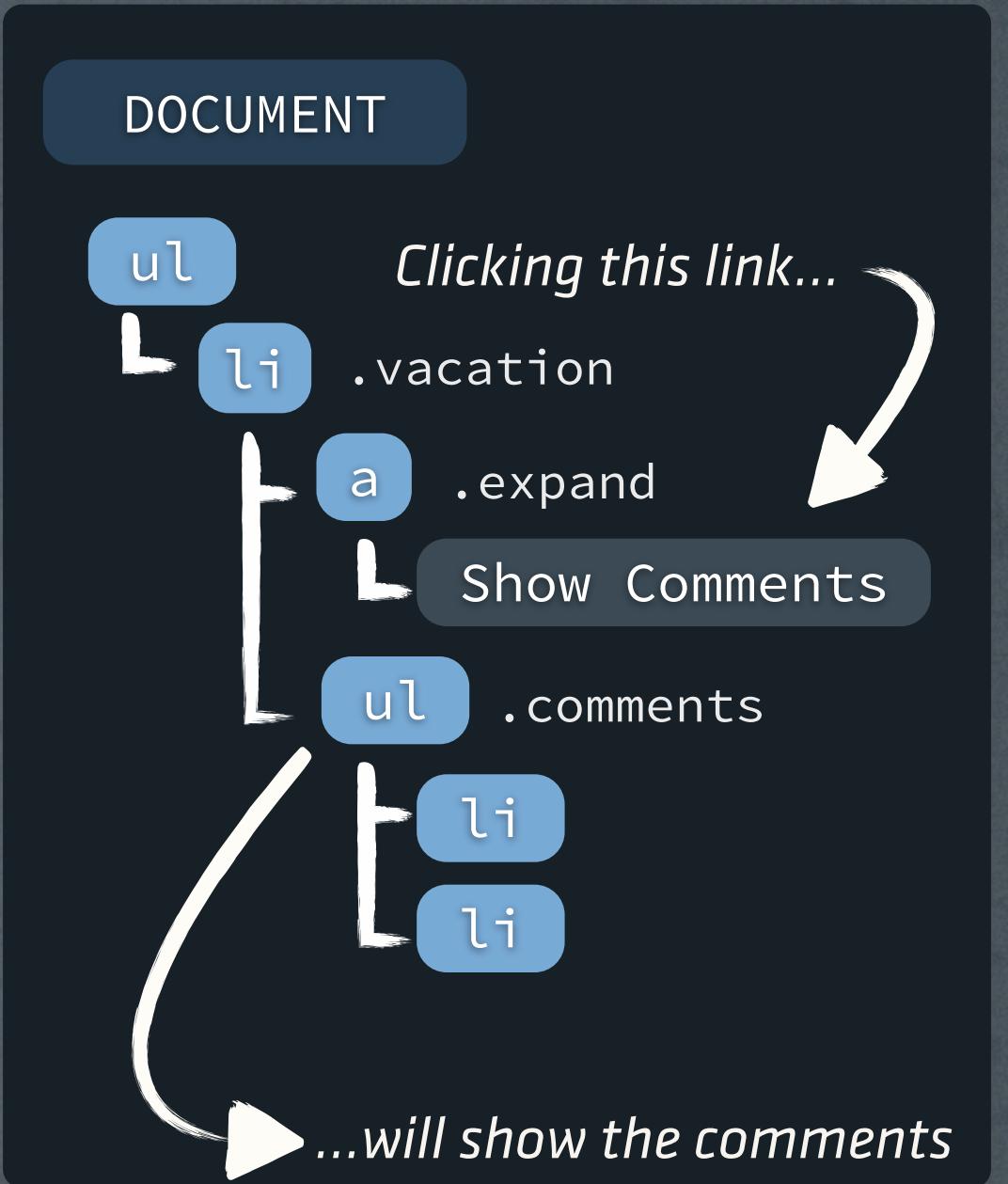
application.css

```
.comments {  
    display: none;  
}
```

application.js

```
$(document).ready(function() {  
    $('.vacation').on('click', '.expand', function() {  
        // Find the comments ul  
        // Show the comments ul  
    });  
});
```

We need to write the event handler



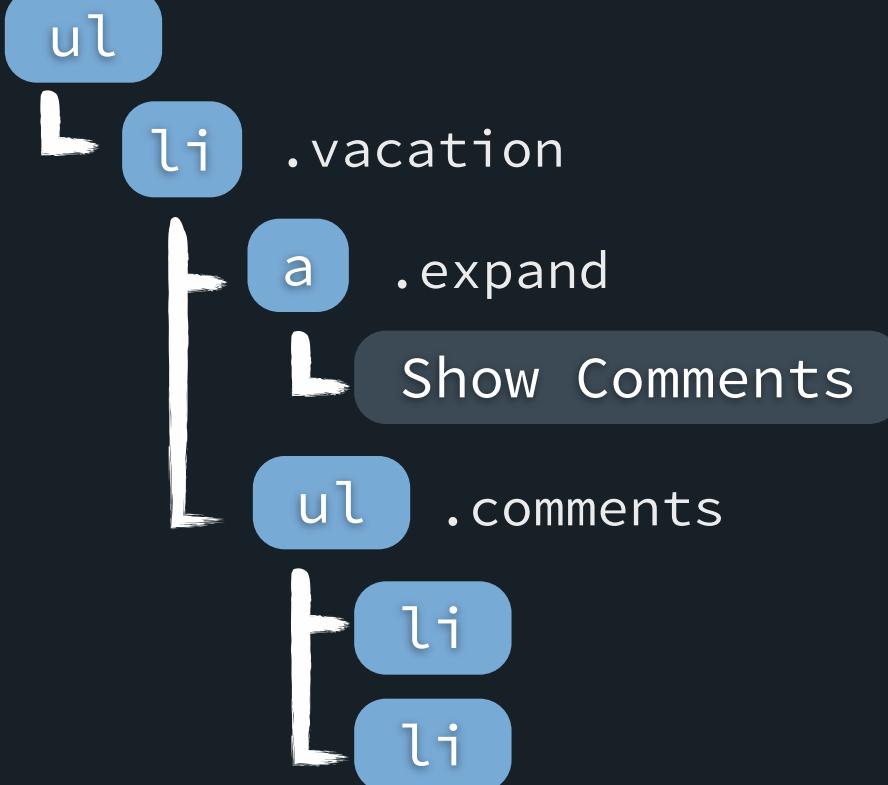
Preparing for Flight

application.js

```
$(document).ready(function() {  
    $('.vacation').on('click', '.expand', function() {  
        // Find the comments ul  
        // Show the comments ul  
    });  
});  
  
$(this).closest('.vacation').find('.comments')
```

Find the .comments ul using traversing

DOCUMENT



Preparing for Flight

application.js

```
$(document).ready(function() {
  $('.vacation').on('click', '.expand', function() {
    $(this).closest('.vacation')
      .find('.comments')
    // Show the comments ul
  });
});
```

jQuery Object Methods

.fadeIn()

.fadeOut()

.fadeToggle()

These are similar to the slide methods

DOCUMENT

ul

li

.vacation

a

.expand

Show Comments

ul

li

li

Handling the Click

application.js

```
$(document).ready(function() {  
    $('.vacation').on('click', '.expand', function() {  
        $(this).closest('.vacation')  
            .find('.comments')  
            .fadeToggle();  
    });  
});
```



*fadeIn() .comments on first click,
fadeOut() .comments on next click.*

DOCUMENT

ul

li

.vacation

a .expand

Show Comments

ul .comments

li

li

jQuery Travels - Vacation Packages

Packages

Why does the page jump to the top?

Hawaiian Vacation

GET PRICE

Show Comments



Europoean Getaway

GET PRICE

Visit Japan

GET PRICE

Show Comments

Orlando

GET PRICE

Denver

GET PRICE

Portland

GET PRICE

Show Comments

How the Browser Handles the Click

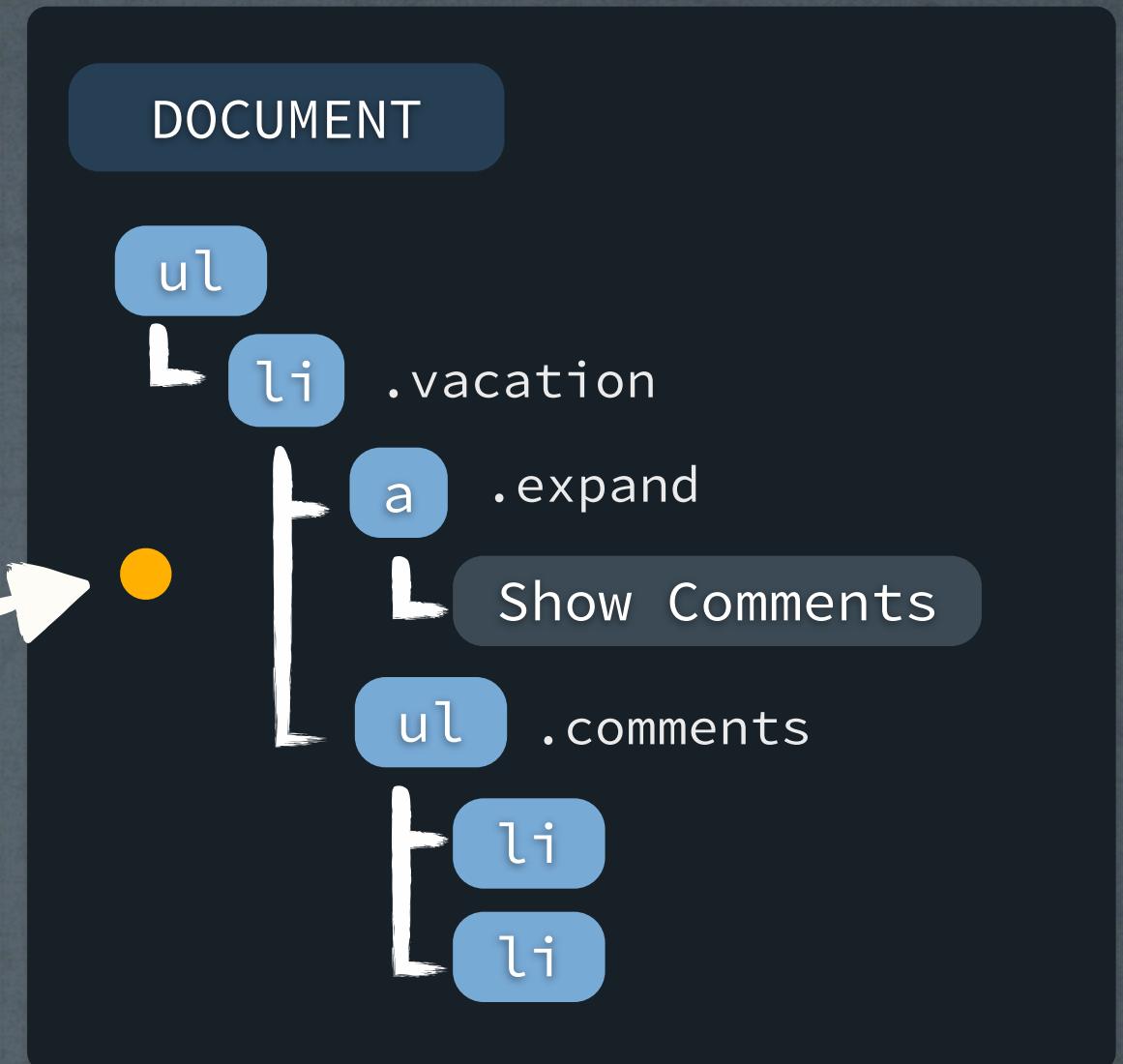
index.html

```
<a href="#" class='expand'>Show Comments</a>
```

*Follows the link!
(goes to the top of the page)*



*The click event will “bubble up”
to each parent node*



The Event Object

application.js

```
$(document).ready(function() {  
    $('.vacation').on('click', '.expand',  
        function(event) {  
            $(this).closest('.vacation')  
                .find('.comments')  
                .fadeToggle();  
        } );  
});
```



▶ Add the event parameter

DOCUMENT

ul

↳ li .vacation

a .expand

↳ Show Comments

ul .comments

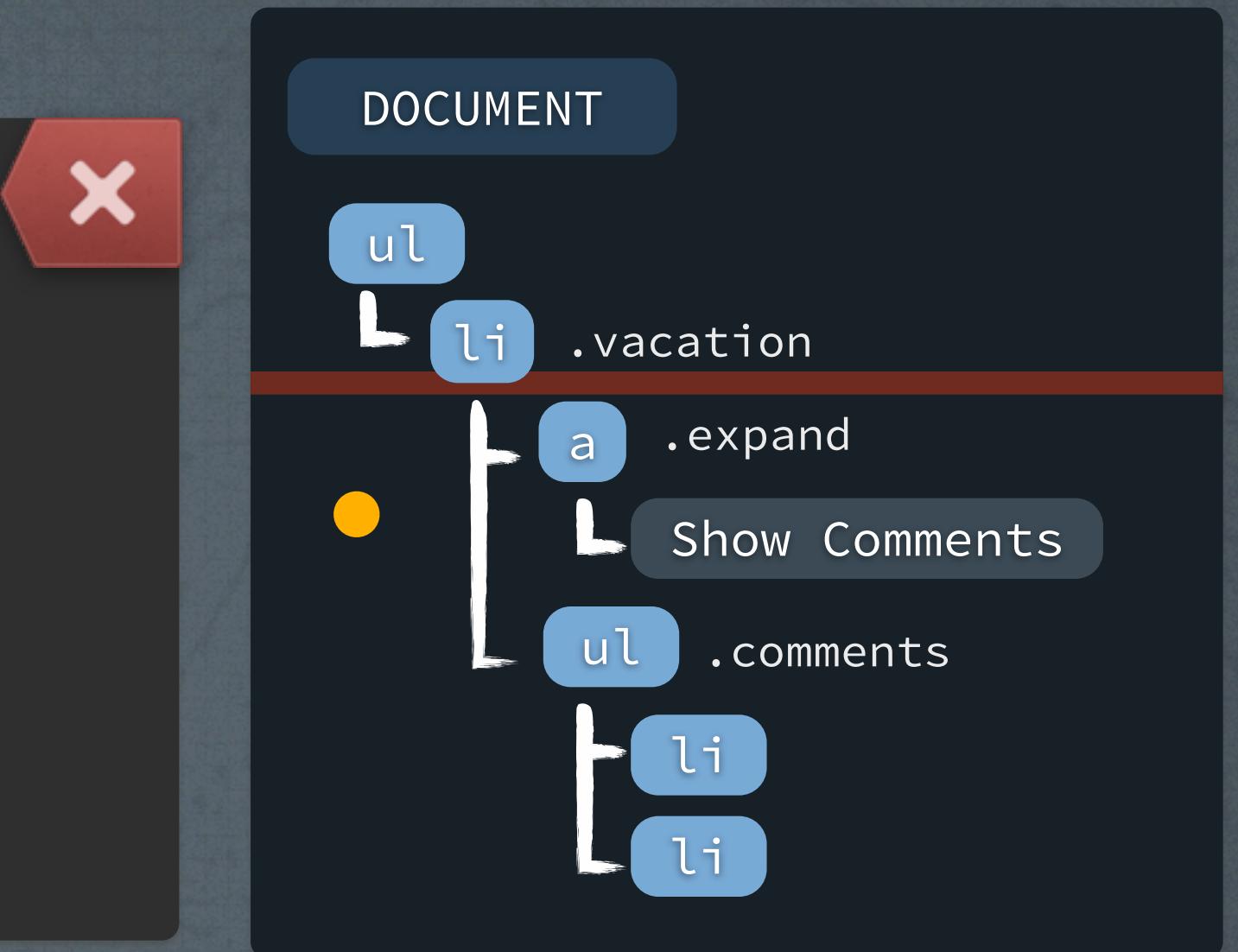
↳ li

↳ li

event.stopPropagation()

application.js

```
$(document).ready(function() {  
    $('.vacation').on('click', '.expand',  
        function(event) {  
            event.stopPropagation();  
            $(this).closest('.vacation')  
                .find('.comments')  
                .fadeToggle();  
  
        } );  
});
```

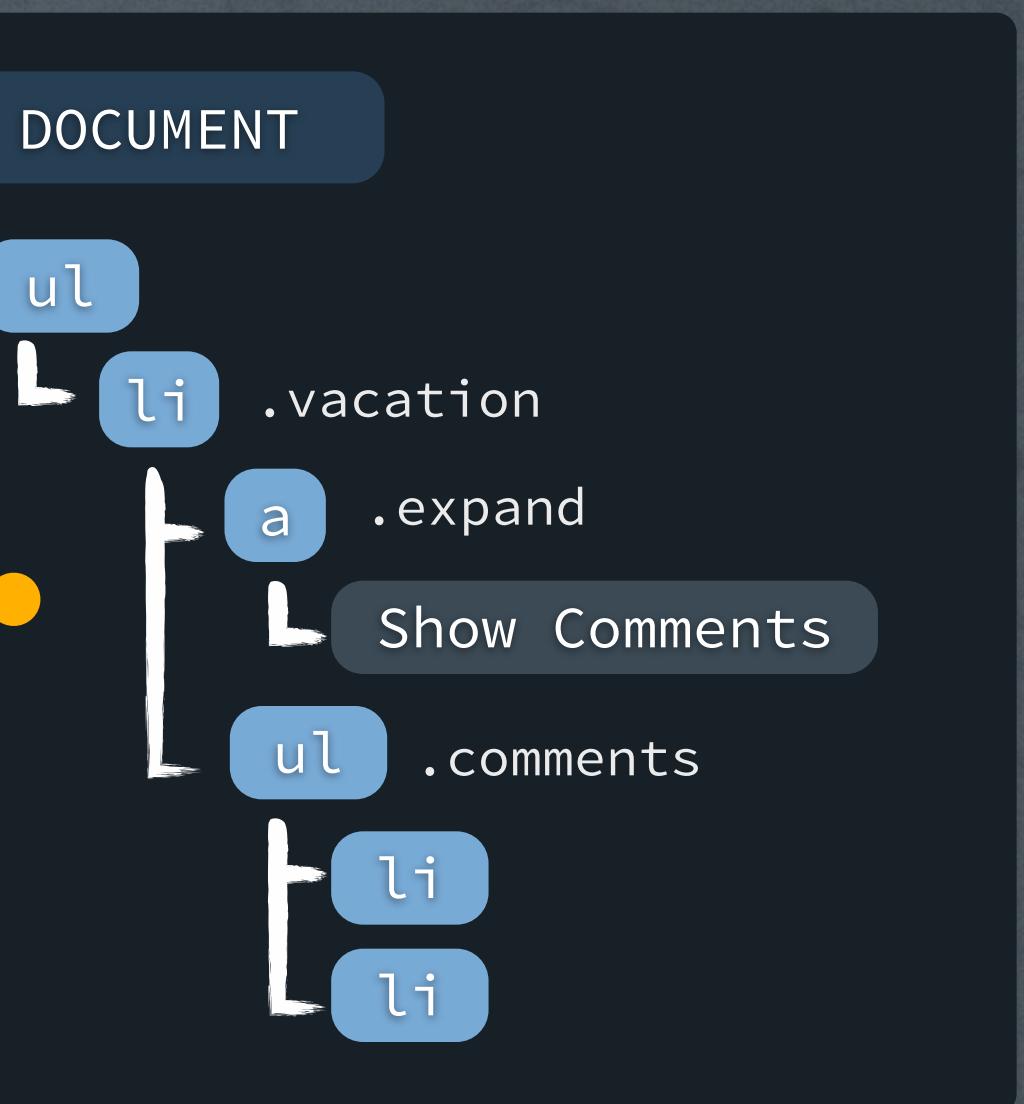


The browser will still handle the click event but will prevent it from “bubbling up” to each parent node.

event.preventDefault()

application.js

```
$(document).ready(function() {  
    $('.vacation').on('click', '.expand',  
        function(event) {  
            event.preventDefault();  
            $(this).closest('.vacation')  
                .find('.comments')  
                .fadeToggle();  
        }  
    );  
});
```



The click event will “bubble up” but the browser won’t handle it

jQuery Travels - Vacation Packages

Packages *We're preventing the default action of the browser now.*

Hawaiian Vacation

GET PRICE

[Show Comments](#)

Orlando

GET PRICE

European Getaway

GET PRICE

Denver

GET PRICE

Visit Japan

GET PRICE

[Show Comments](#)

Portland

GET PRICE

[Show Comments](#)

level 3



Taming CSS

Separation of Concerns



To style something based on user interaction, which would we use?

Changing our Style

jQuery Travels - Vacation Packages

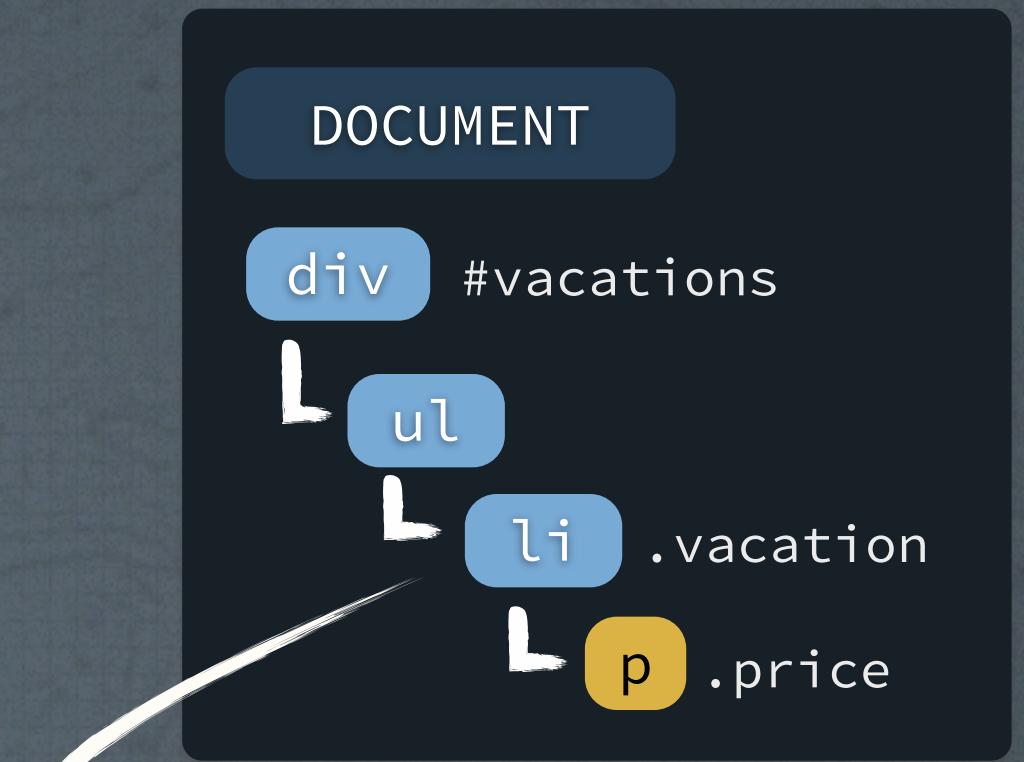
Packages

- Hawaiian Vacation
- European Getaway
- Visit Japan

Call us at 555-25937 to make a reservation today!

Let's make all **.vacation** elements clickable...

DOM representation



...and allow people to click
on the element

Changing the Style

application.js

```
$(document).ready(function() {  
  $('#vacations').on('click', '.vacation', function() {  
    $(this).css('background-color', '#252b30');  
    $(this).css('border-color', '1px solid #967');  
  });  
});
```

```
$(this).css('background-color', '#252b30')  
  .css('border-color', '1px solid #967');
```

```
$(this).css({  
  'background-color': '#252b30',  
  'border-color': '1px solid #967'});
```

Passing in a JavaScript Object as an argument is a common jQuery pattern

DOM representation

DOCUMENT

```
div #vacations  
└ ul  
  └ li .vacation  
    └ p .price
```

jQuery Object Methods

.css(<attr>, <value>)

.css(<attr>)

.css(<object>)

Showing the Price

application.js

```
$(document).ready(function() {
  $('#vacations').on('click', '.vacation', function() {
    $(this).css({'background-color': '#252b30',
      'border-color': '1px solid #967'});
  });
});
```

```
$(this).find('.price').css('display', 'block');
```

```
$(this).find('.price').show();
```

Same as CSS syntax, but easier to read and understand

DOM representation

DOCUMENT

```
div #vacations
  L ul
    L li .vacation
      L p .price
```

jQuery Object Methods

.show()

.hide()

Showing the Price

application.js

```
$(document).ready(function() {
  $('#vacations').on('click', '.vacation', function() {
    $(this).css({'background-color': '#252b30',
      'border-color': '1px solid #967'});
    $(this).find('.price').show();
  });
});
```

Highlights the Vacation Package and shows the price

DOM representation

DOCUMENT

```
div #vacations
  L ul
    L li .vacation
      L p .price
```

jQuery Travels - Vacation Packages

Packages

Hawaiian Vacation

European Getaway

Visit Japan

Call us at **555-25937** to make a reservation today!

*Our **.vacation** elements are highlighted when we click on them*

TRY jQuery

Moving Styles to External CSS

application.js

```
$(document).ready(function() {  
  $('#vacations').on('click', '.vacation', function() {  
    $(this).css({'background-color': '#563',  
                 'border-color': '1px solid #967'});  
    $(this).find('.price').show();  
  });  
});
```

DOM representation

DOCUMENT

```
div #vacations  
  ul  
    li .vacation  
      p .price
```

application.css

```
.highlighted {  
  background-color: #563;  
  border-color: 1px solid #967;  
}  
.highlighted .price {  
  display: block;  
}
```

Can we move these to a CSS stylesheet?

```
$(this).addClass('highlighted');
```

Moving Styles to External CSS

application.js

```
$(document).ready(function() {  
  $('#vacations').on('click', '.vacation', function() {  
    $(this).addClass('highlighted');  
  });  
});
```



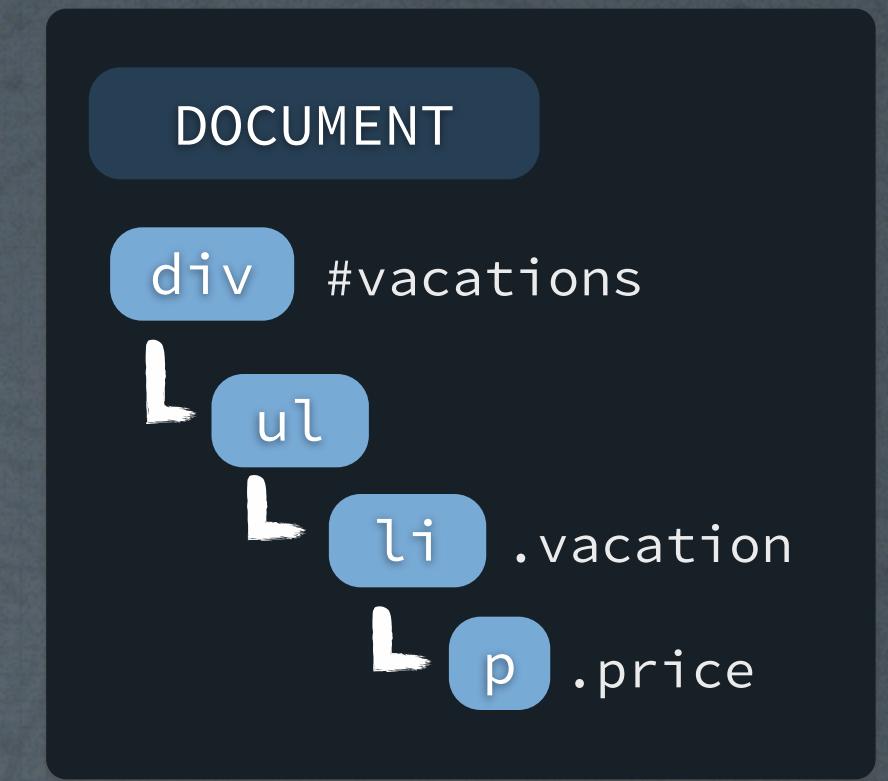
It's now much easier to manipulate with external CSS styles

application.css

```
.highlighted {  
  background-color: #563;  
  border-color: 1px solid #967;  
}  
.highlighted .price {  
  display: block;  
}
```



DOM representation



Moving Styles to External CSS

application.js

```
$(document).ready(function() {  
  $('#vacations').on('click', '.vacation', function() {  
    $(this).addClass('highlighted');  
  });  
});
```



We can only show price, but how would we hide price?

```
$(this).toggleClass('highlighted');
```



*Adds the class if **\$(this)** doesn't have it, removes it if **\$(this)** already has it*

DOM representation

DOCUMENT

```
div #vacations  
└ ul  
  └ li .vacation  
    └ p .price
```

jQuery Object Methods

.toggleClass()



.addClass(<class>)

.removeClass(<class>)

jQuery Travels - Vacation Packages

Packages

Hawaiian Vacation

European Getaway

Visit Japan

Call us at **555-25937** to make a reservation today!

Our refactored page still works, and will be much easier to maintain

TRY **jQuery**

Challenges



Animation

jQuery Travels - Vacation Packages

Packages

Hawaiian Vacation

European Getaway

Visit Japan

Call us at **555-25937** to make a reservation today!

What can we do to add a bit more movement to this?

TRY jQuery

Adding Movement

application.js

```
$(document).ready(function() {  
  $('#vacations').on('click', '.vacation', function() {  
    $(this).toggleClass('highlighted');  
  });  
});  
  
$(this).css({'top': '-10px'});
```



The box will jump up 10 px

```
$(this).animate({'top': '-10px'});
```



5.2 Animation

DOM representation



jQuery Object Methods

.animate(<object>)

Takes in a JavaScript object similar to the .css() method

Adding Movement

application.js

```
$(document).ready(function() {  
  $('#vacations').on('click', '.vacation', function() {  
    $(this).toggleClass('highlighted');  
    $(this).animate({'top': '-10px'});  
  });  
});
```

Will adjust a CSS property pixel by pixel in order to animate it

DOM representation

DOCUMENT

```
div #vacations  
  ul  
    li .vacation  
      p .price
```

jQuery Travels - Vacation Packages

Packages

Hawaiian Vacation

FROM \$399.99

European Getaway

FROM \$749.99

Visit Japan

FROM \$859.99

Call us at 555-25937 to make a reservation today!

Our animation can slide up but not slide down

TRY **jQuery**

Moving Back Down

application.js

```
$(document).ready(function() {  
  $('#vacations').on('click', '.vacation', function() {  
    $(this).toggleClass('highlighted');  
    $(this).animate({'top': '-10px'});  
  });  
});
```

*How do we set '**top**' to '0px' if a second click occurs?*

```
if(<vacation has the class highlighted>) {  
  // animate the vacation up  
} else {  
  // animate the vacation back down  
}
```

DOM representation

DOCUMENT

```
div #vacations  
  ul  
    li .vacation  
      p .price
```

“If statements” allow your code to make decisions at runtime

Moving Back Down

application.js

```
$(document).ready(function() {  
  $('#vacations').on('click', '.vacation', function() {  
    $(this).toggleClass('highlighted');  
    if(<vacation has the class highlighted>) {  
      $(this).animate({'top': '-10px'});  
    } else {  
      $(this).animate({'top': '0px'});  
    }  
  });  
});
```

```
$(this).hasClass('highlighted');  
↳ true
```

Returns **true** or **false**

DOM representation

DOCUMENT

```
div #vacations  
└ ul  
  └ li .vacation  
    └ p .price
```

jQuery Object Methods

.hasClass(<class>)

Moving Back Down

application.js

```
$(document).ready(function() {
  $('#vacations').on('click', '.vacation', function() {
    $(this).toggleClass('highlighted');
    if($(this).hasClass('highlighted')) {
      $(this).animate({'top': '-10px'});
    } else {
      $(this).animate({'top': '0px'});
    }
  });
});
```

DOM representation



Our vacation package will move up and down

jQuery Travels - Vacation Packages

Packages

Hawaiian Vacation

FROM \$399.99

European Getaway

FROM \$749.99

Visit Japan

FROM \$859.99

Call us at 555-25937 to make a reservation today!

Could we speed this up a little? Our customers don't have all day.

TRY **jQuery**

Changing the Speed

```
$(this).animate({'top': '-10px'});
```

```
$(this).animate({'top': '-10px'}, 400);
```

```
$(this).animate({'top': '-10px'}, 'fast');
```

```
$(this).animate({'top': '-10px'}, 200);
```

```
$(this).animate({'top': '-10px'}, 'slow');
```

```
$(this).animate({'top': '-10px'}, 600);
```

We can optionally pass in the speed as a second argument to **animate()**

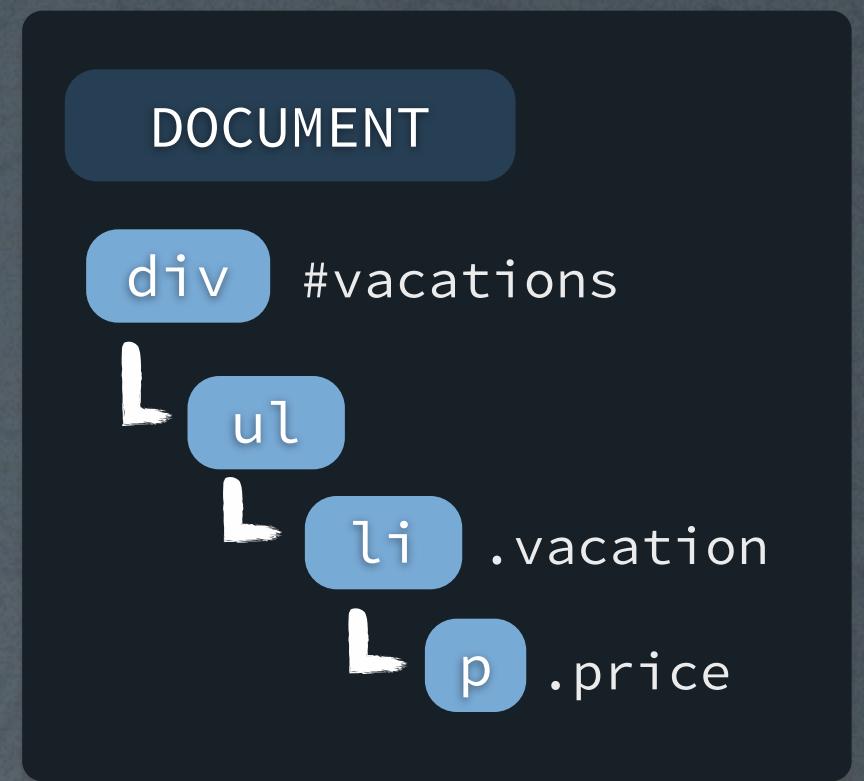
Effects methods like **animate()**, **slideToggle()** and **fadeToggle()** can also be given a specific speed as a String or in milliseconds

Moving Back Down

application.js

```
$(document).ready(function() {  
    $('#vacations').on('click', '.vacation', function() {  
        $(this).toggleClass('highlighted');  
        if($(this).hasClass('highlighted')) {  
            $(this).animate({'top': '-10px'}, 'fast');  
        } else {  
            $(this).animate({'top': '0px'}, 'fast');  
        }  
    });  
});
```

DOM representation



And with this we now have specific speeds for our animation

jQuery Travels - Vacation Packages

Packages

Hawaiian Vacation

FROM \$399.99

European Getaway

FROM \$749.99

Visit Japan

FROM \$859.99

Call us at 555-25937 to make a reservation today!

Our jQuery animation is now using a ‘fast’ speed

TRY **jQuery**

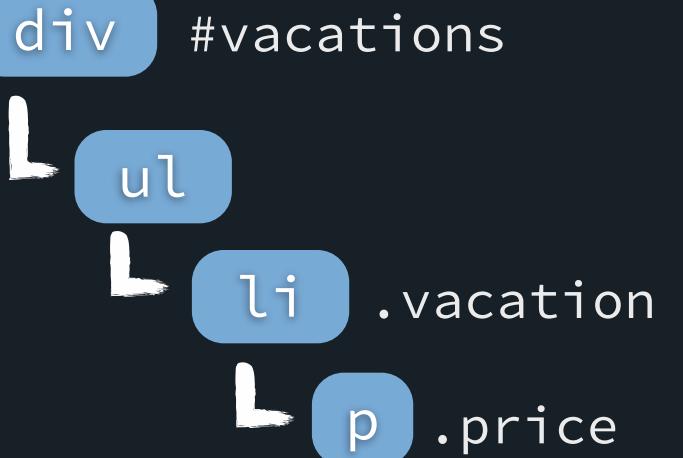
The Next Step with CSS Animations

application.js

```
$(document).ready(function() {  
  $('#vacations').on('click', '.vacation', function() {  
    $(this).toggleClass('highlighted');  
    if($(this).hasClass('highlighted')) {  
      $(this).animate({'top': '-10px'}, 'fast');  
    } else {  
      $(this).animate({'top': '0px'}, 'fast');  
    }  
  });  
});
```

DOM representation

DOCUMENT



Isn't this still styling? Shouldn't it be inside of a stylesheet?

Animation Duration

application.js

```
$(document).ready(function() {  
  $('#vacations').on('click', '.vacation', function() {  
    $(this).toggleClass('highlighted');  
  });  
});
```

application.css

```
.vacation {  
  transition: top 0.2s;  
}  
.highlighted {  
  top: -10px;  
}
```

DOM representation



Will only work with browsers that implement CSS transitions

Working with Modern Browsers

application.js

```
$(document).ready(function() {
  $('#vacations').on('click', '.vacation', function() {
    $(this).toggleClass('highlighted');
  });
});
```

application.css

```
.vacation {
  -moz-transition: top 0.2s;
  -o-transition: top 0.2s;
  -webkit-transition: top 0.2s;
  transition: top 0.2s;
}
.highlighted {
  top: -10px;
}
```

DOM representation

DOCUMENT

```
div #vacations
  L ul
    L li .vacation
      L p .price
```

Unlike jQuery, with CSS we have to account for specific browsers

jQuery Air Atlantic - Vacation Packages

Packages

Hawaiian Vacation

FROM \$399.99

European Getaway

FROM \$749.99

Visit Japan

FROM \$859.99

Call us at 555-25937 to make a reservation today!

CSS Animations are a huge topic, but worth looking into

TRY **jQuery**