
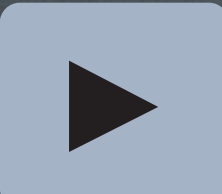
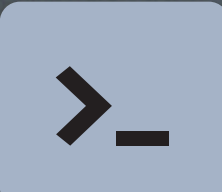



**TRY** *jQuery*

# 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	<b>\$25</b>
<b>YOUR TOTAL:</b>	<b>\$25</b>

**START SCHOOL**

*change content based on user actions*

## 1.1 What is jQuery?



# What you can do with jQuery

**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:

	<b>find</b>	elements in an HTML document
	<b>change</b>	HTML content
	<b>listen</b>	to what a user does and react accordingly
	<b>animate</b>	content on the page
	<b>talk</b>	over the network to fetch new content

## 1.1 What is jQuery?

# 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?

# 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>
```

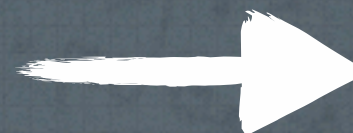


## 1.1 What is jQuery?

# What does that DOM structure look like?

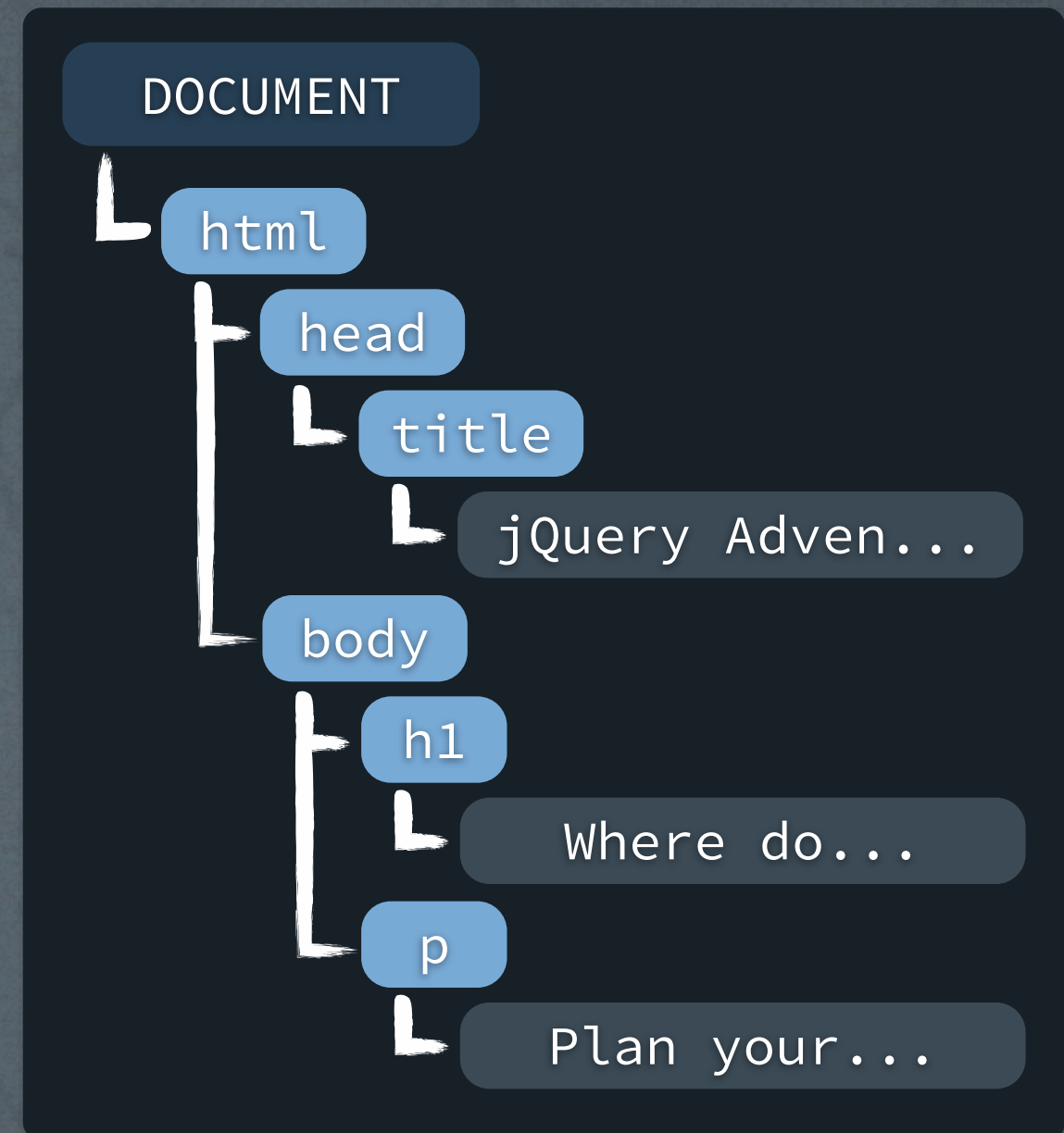
## HTML document

```
<!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>
```



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

## The DOM



node types:

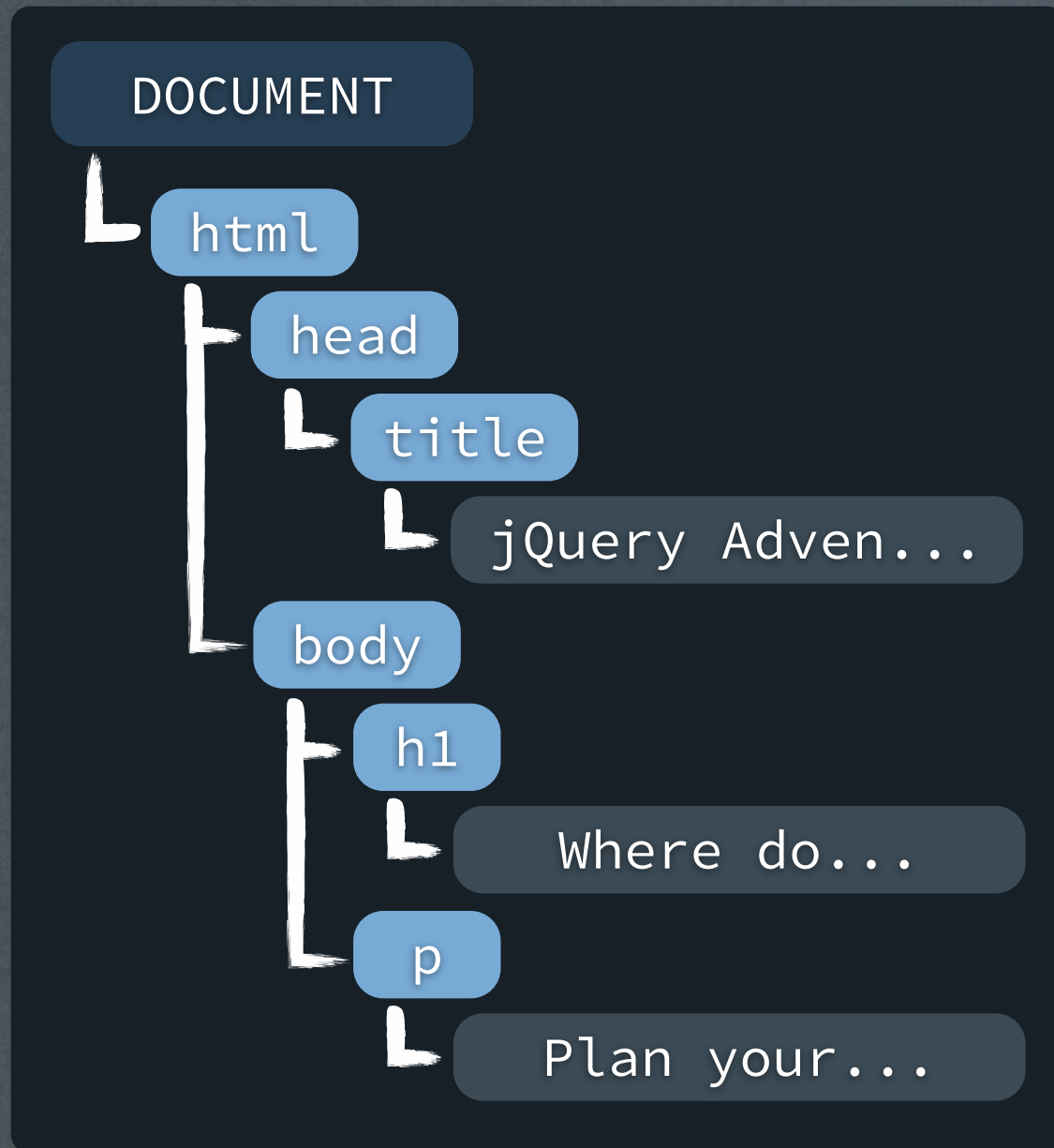
element

text

## 1.1 What is jQuery?

# How do we search through the DOM?

## The DOM



JavaScript

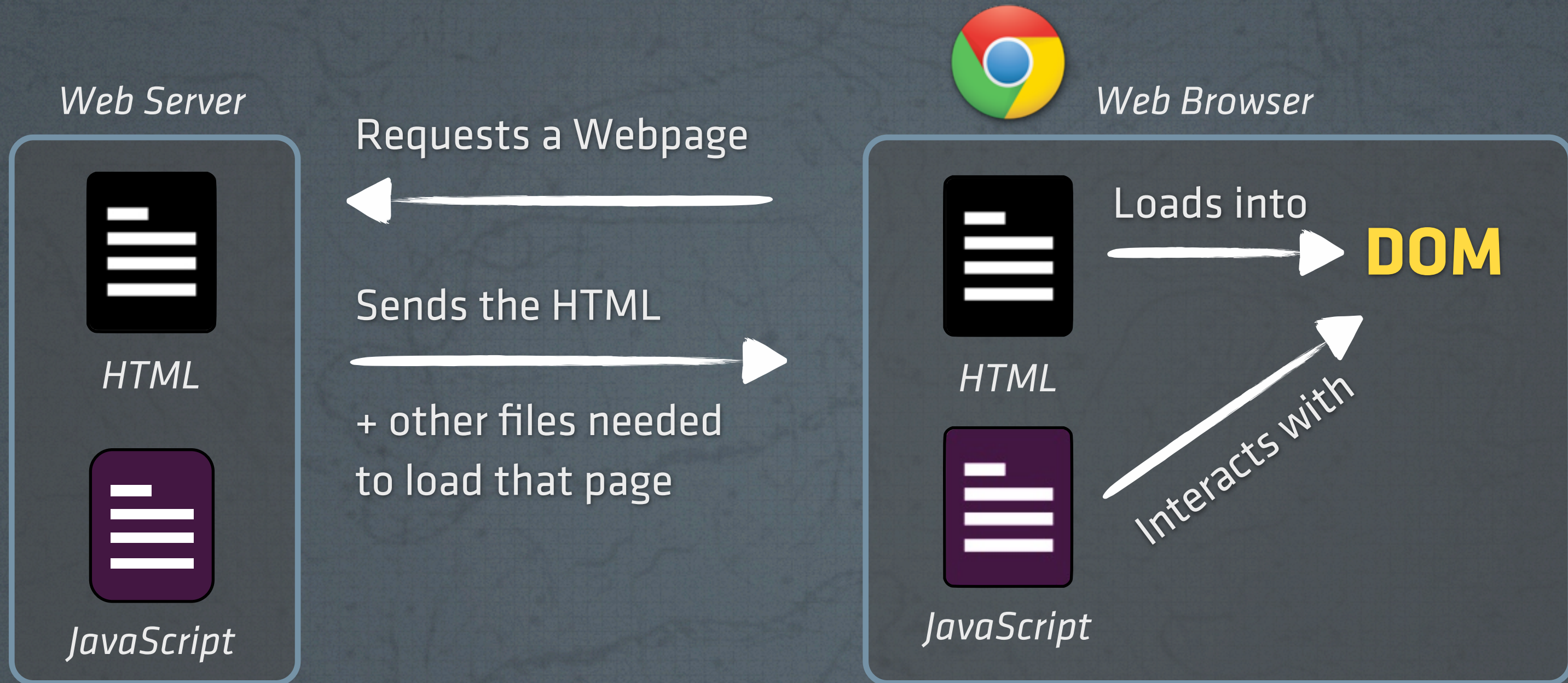
*JavaScript gives developers a language to interact with the DOM.*

node types: **element** text

## 1.1 What is jQuery?

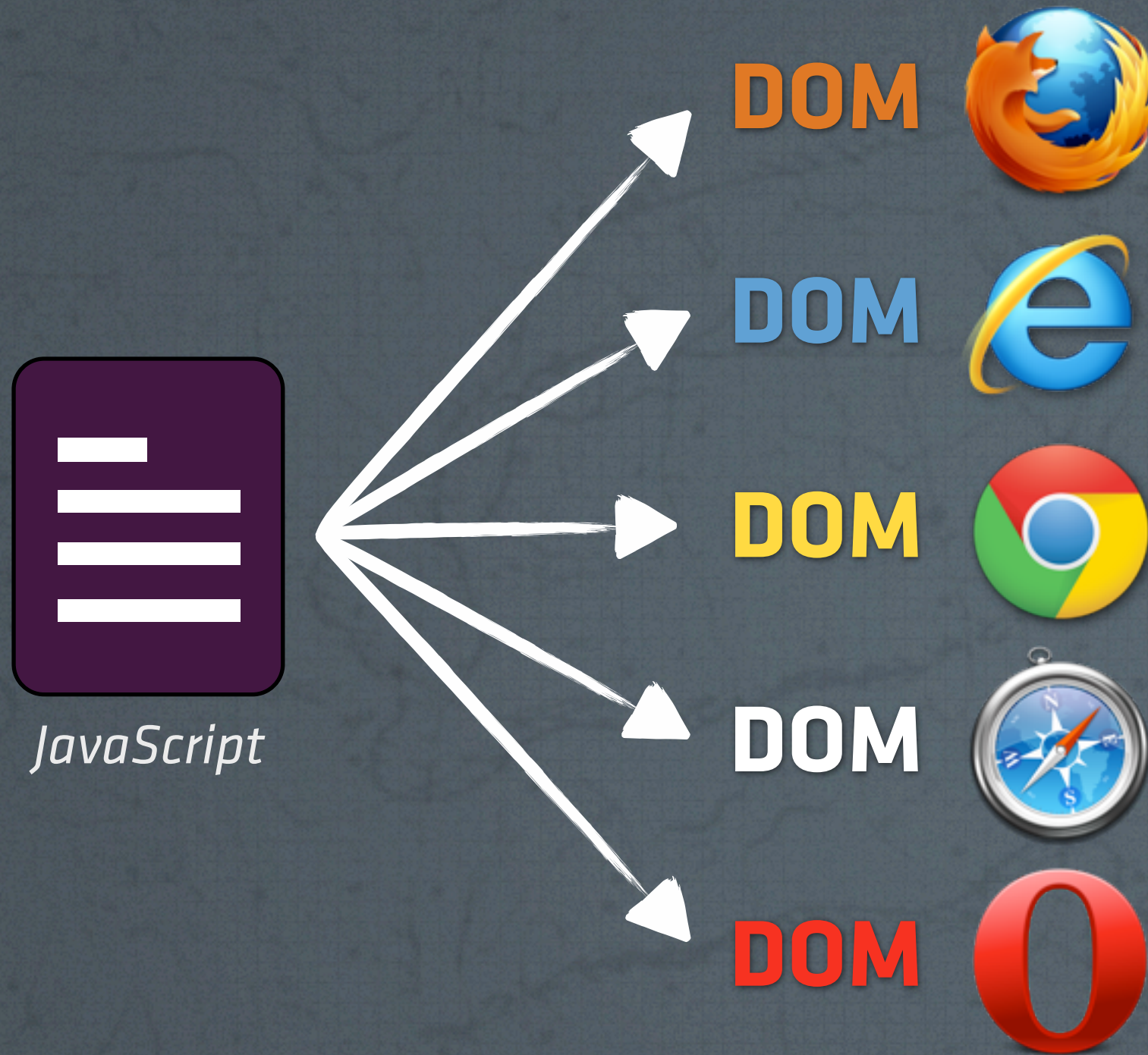


# How do we find things using the DOM?



## 1.1 What is jQuery?

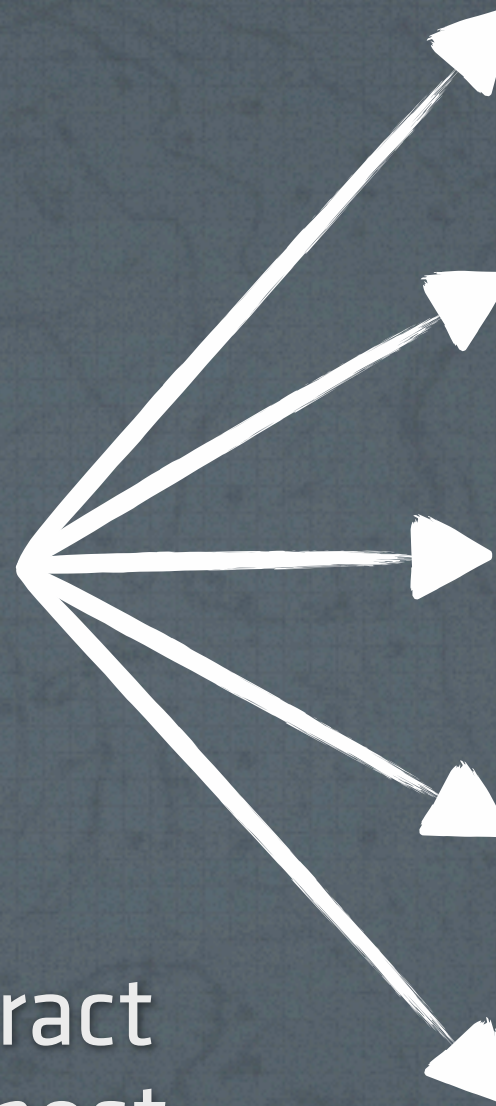
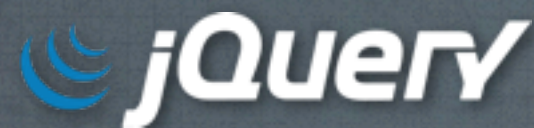
Of course, there's a catch



*each browser has a slightly different DOM interface*

## 1.1 What is jQuery?

# jQuery to the rescue!



DOM



DOM



DOM



DOM



DOM



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*

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

*this is the jQuery function*

## 1.1 What is jQuery?

# How jQuery Accesses The DOM



*JavaScript*

```
jQuery( document );
```

*The DOM*



But how can we search through the DOM?

## 1.1 What is jQuery?

# 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



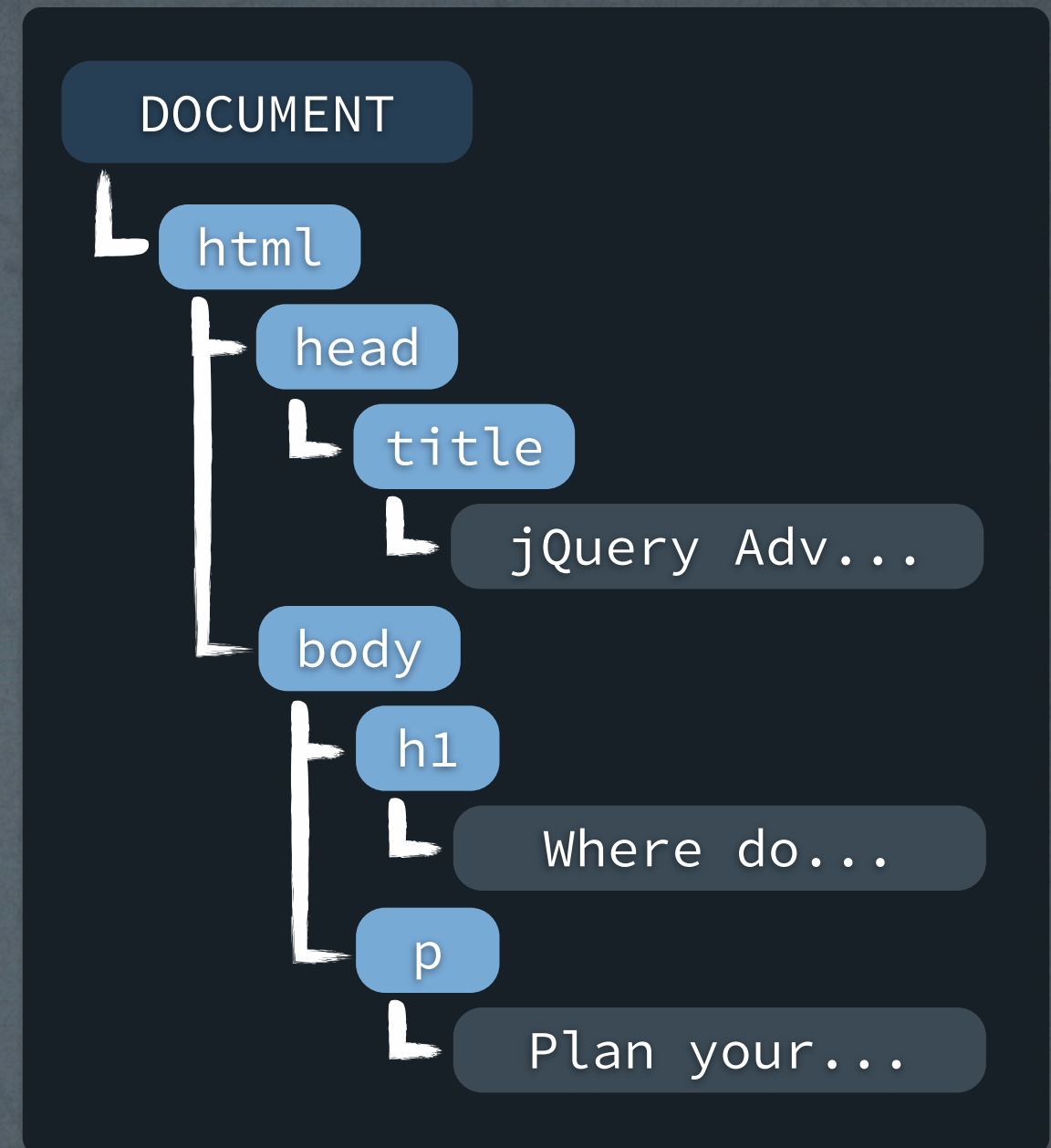
# Selecting by HTML element name

## 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

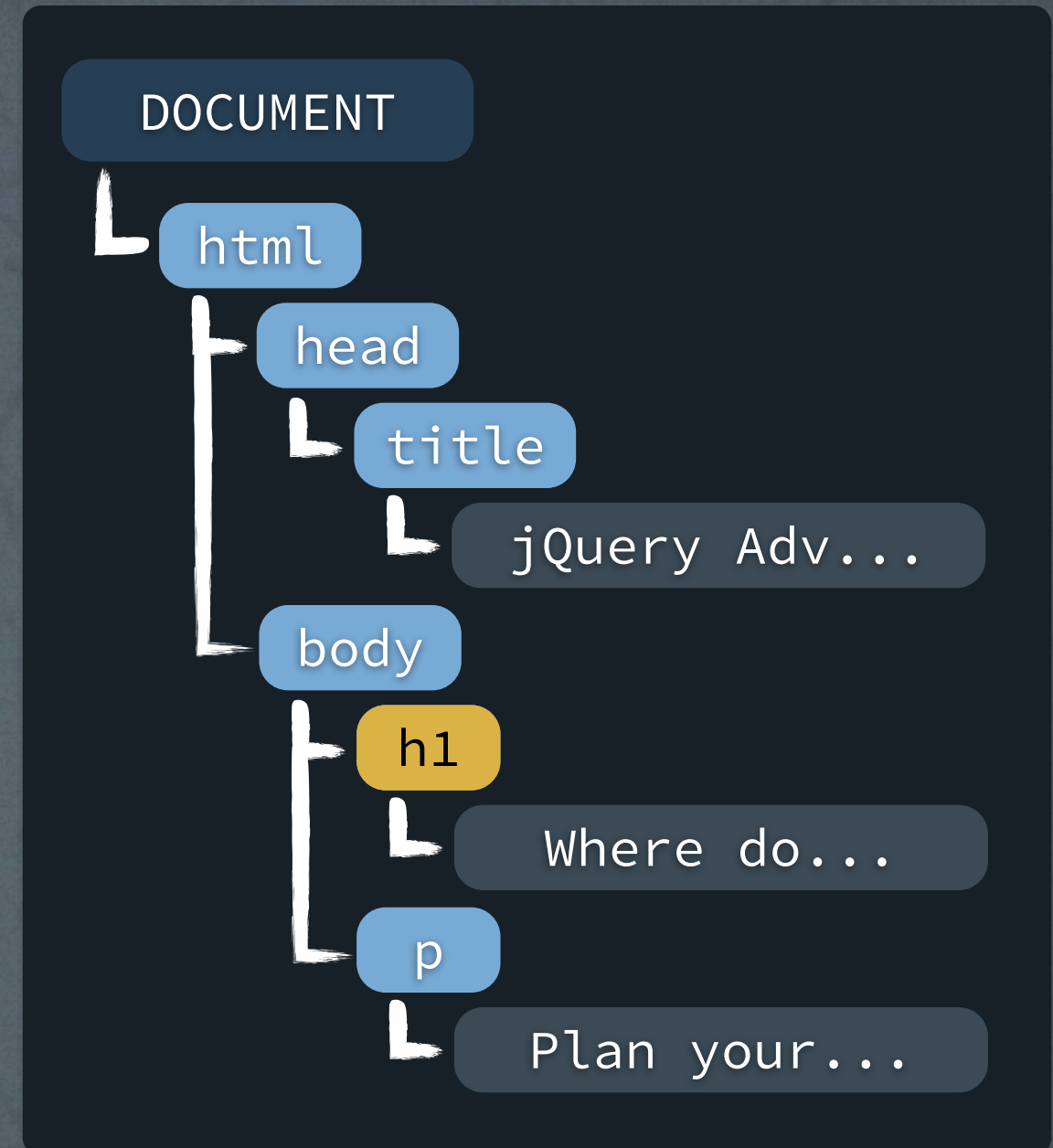


# Selecting by HTML element name

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



## DOM representation of the document



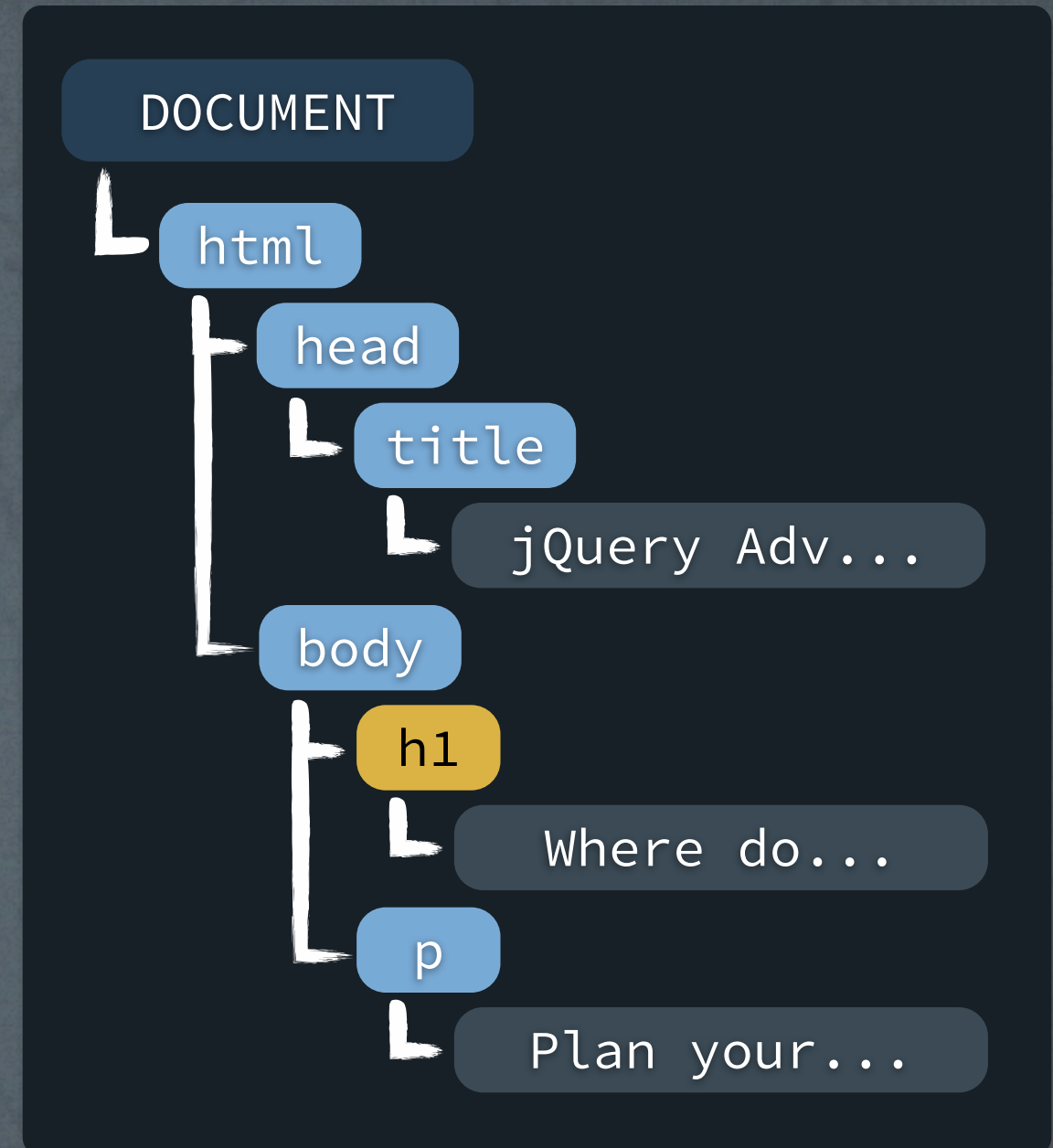
# Fetching an element's text

*text()* is a method offered by jQuery

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

```
"Where do you want to go"
```

## DOM representation of the document

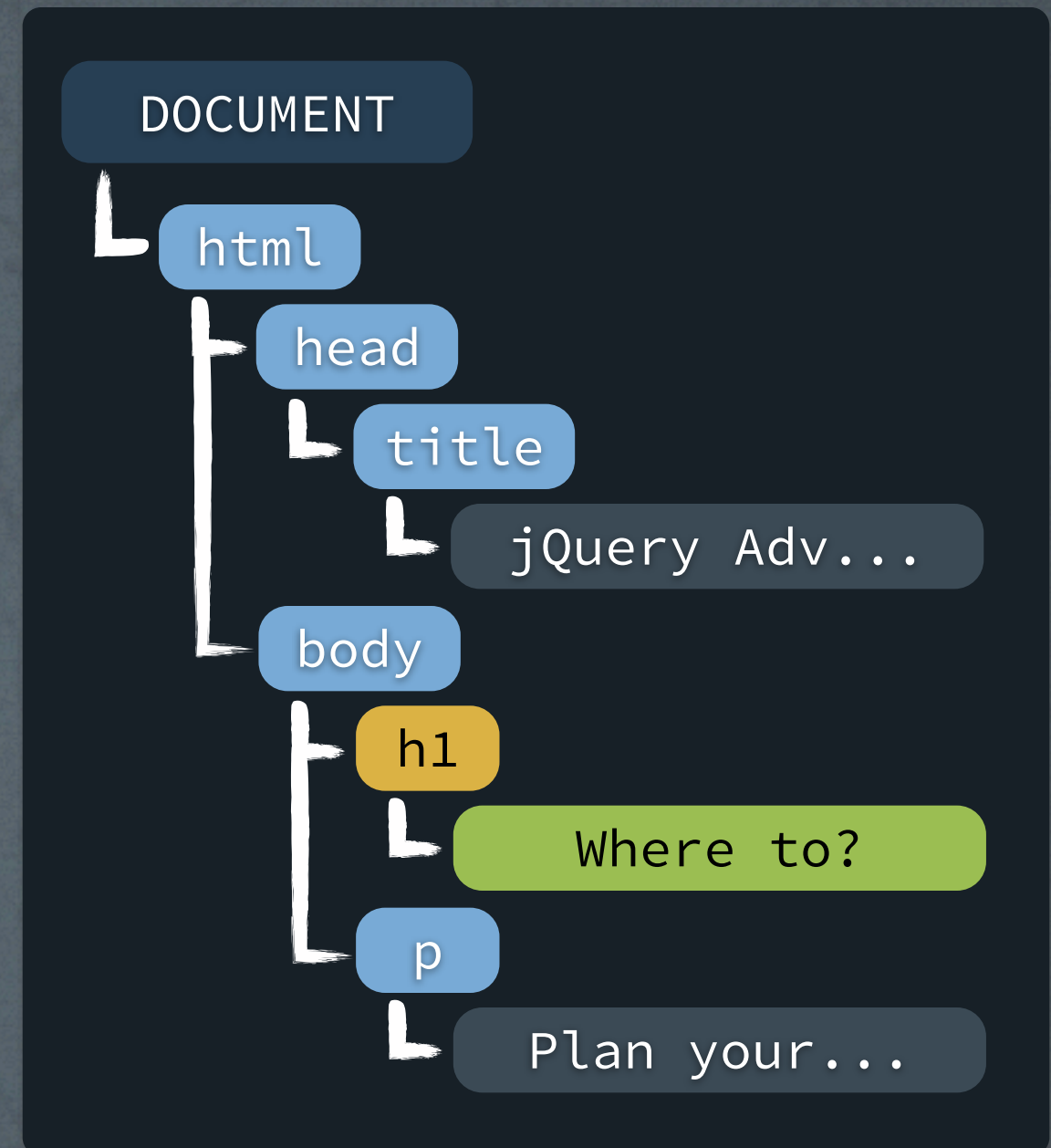


# Modifying an element's text

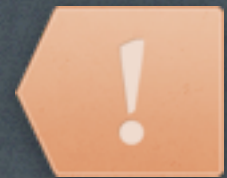
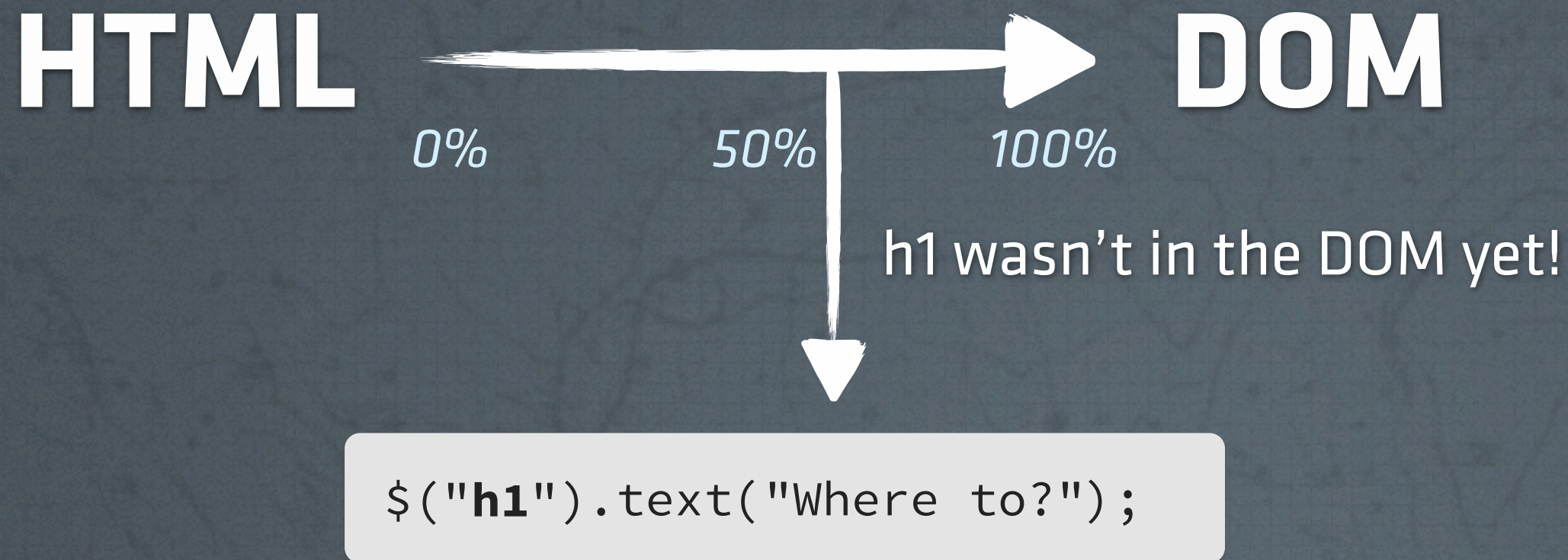
*text() also allows to modify the text node*

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

## DOM representation of the document

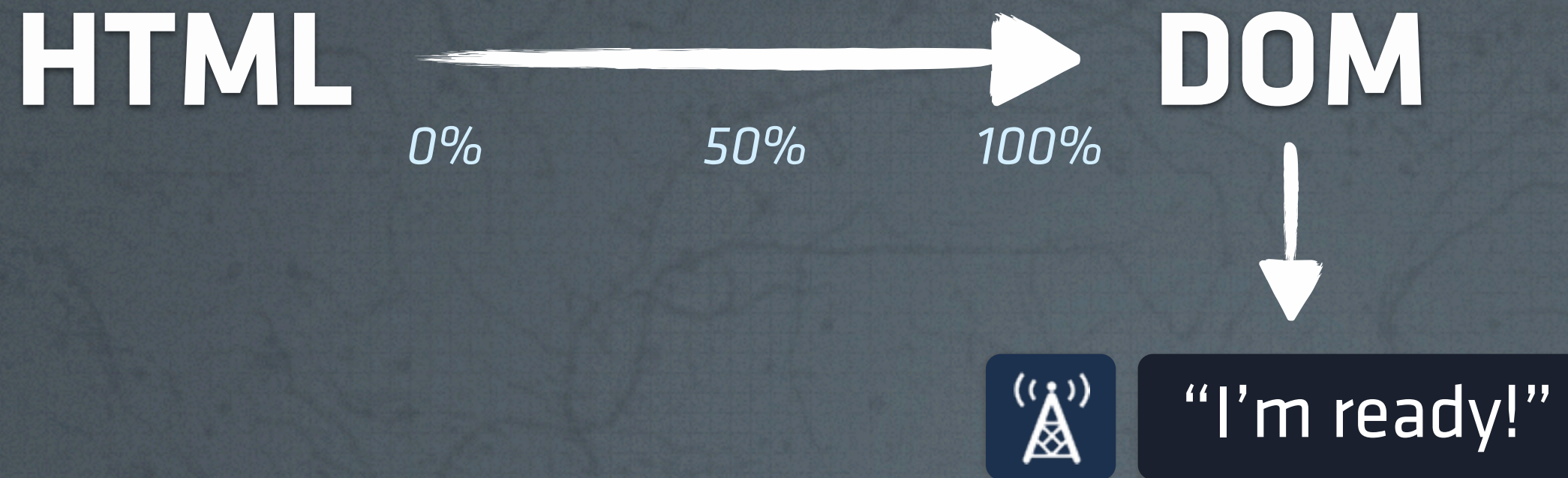


# JavaScript may execute before the DOM loads



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

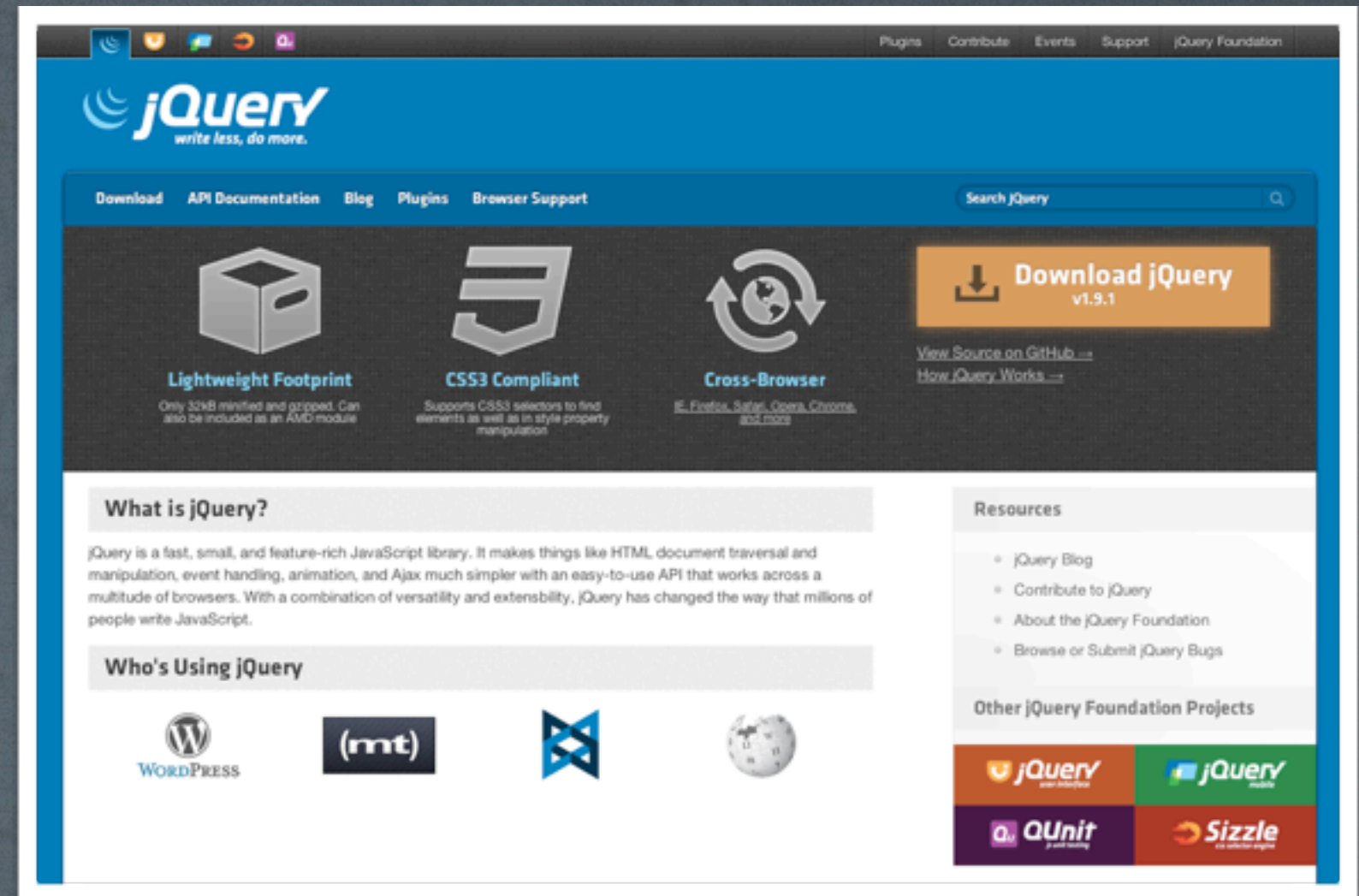
1 download jQuery

2 load it in your HTML document

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

3 start using it

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



## 1.2 Using jQuery

# 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 `<li>` in this page?



find them

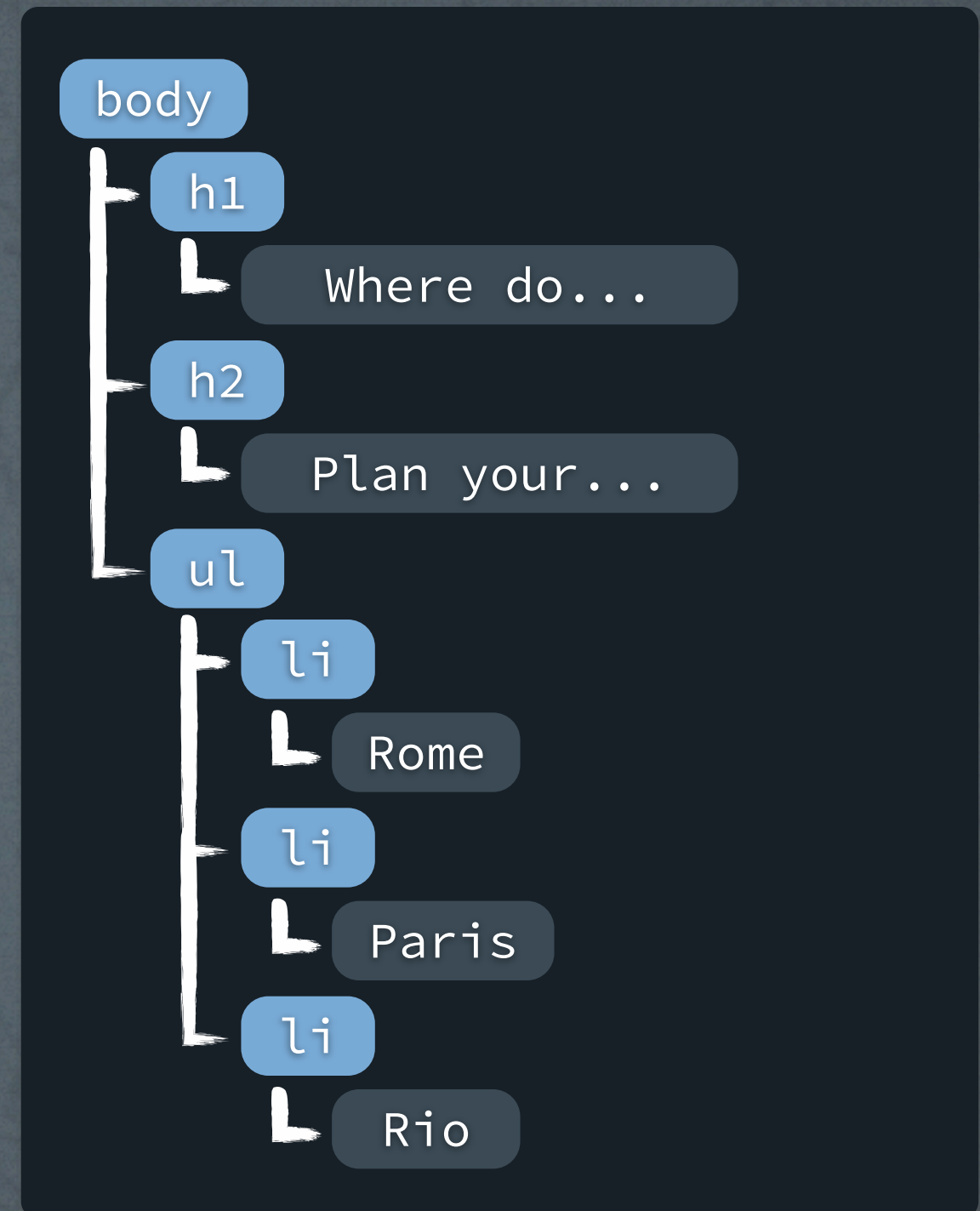
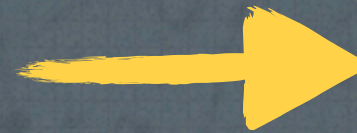


modify their text

# 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>
```

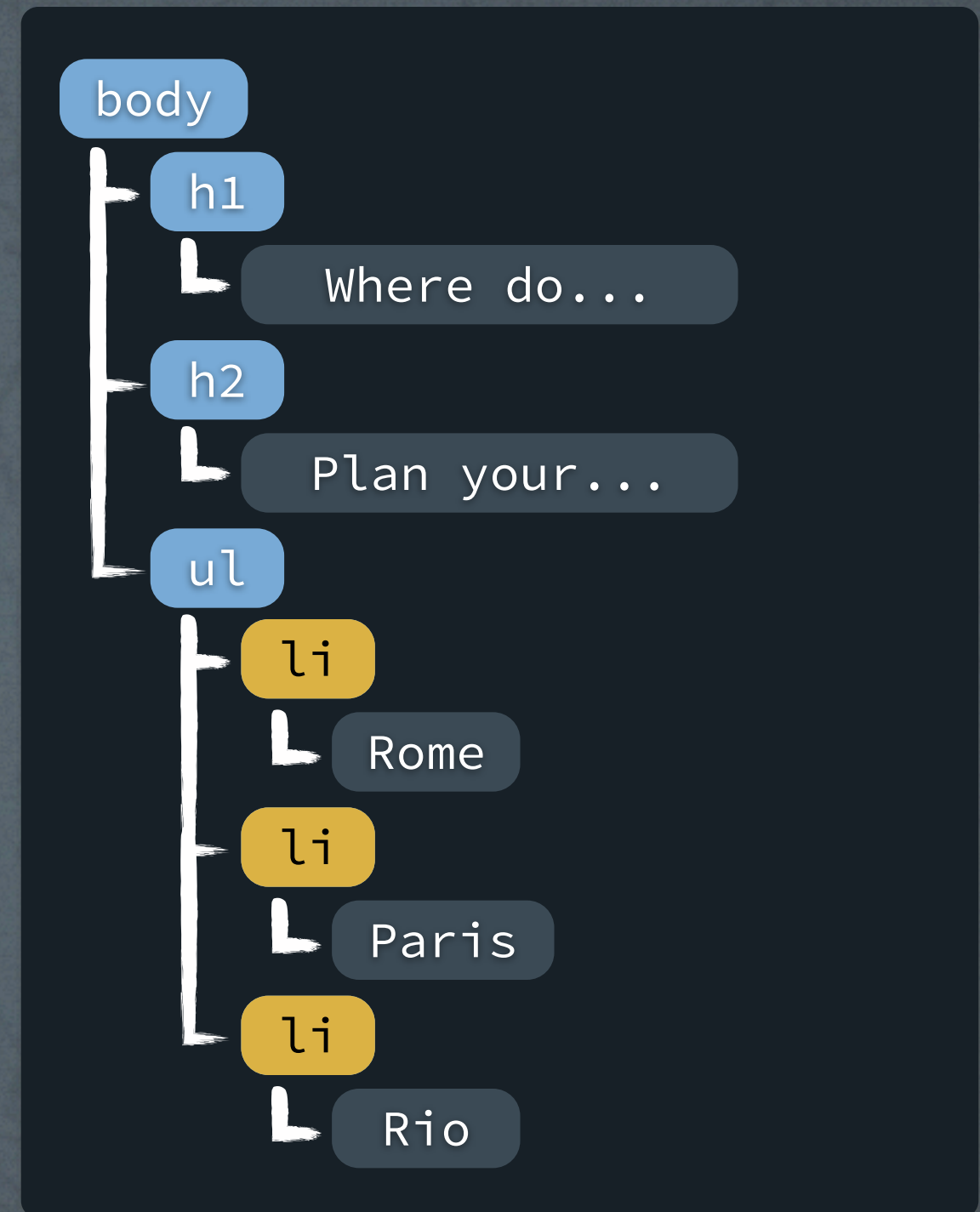


# Selecting multiple elements

## 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");
```

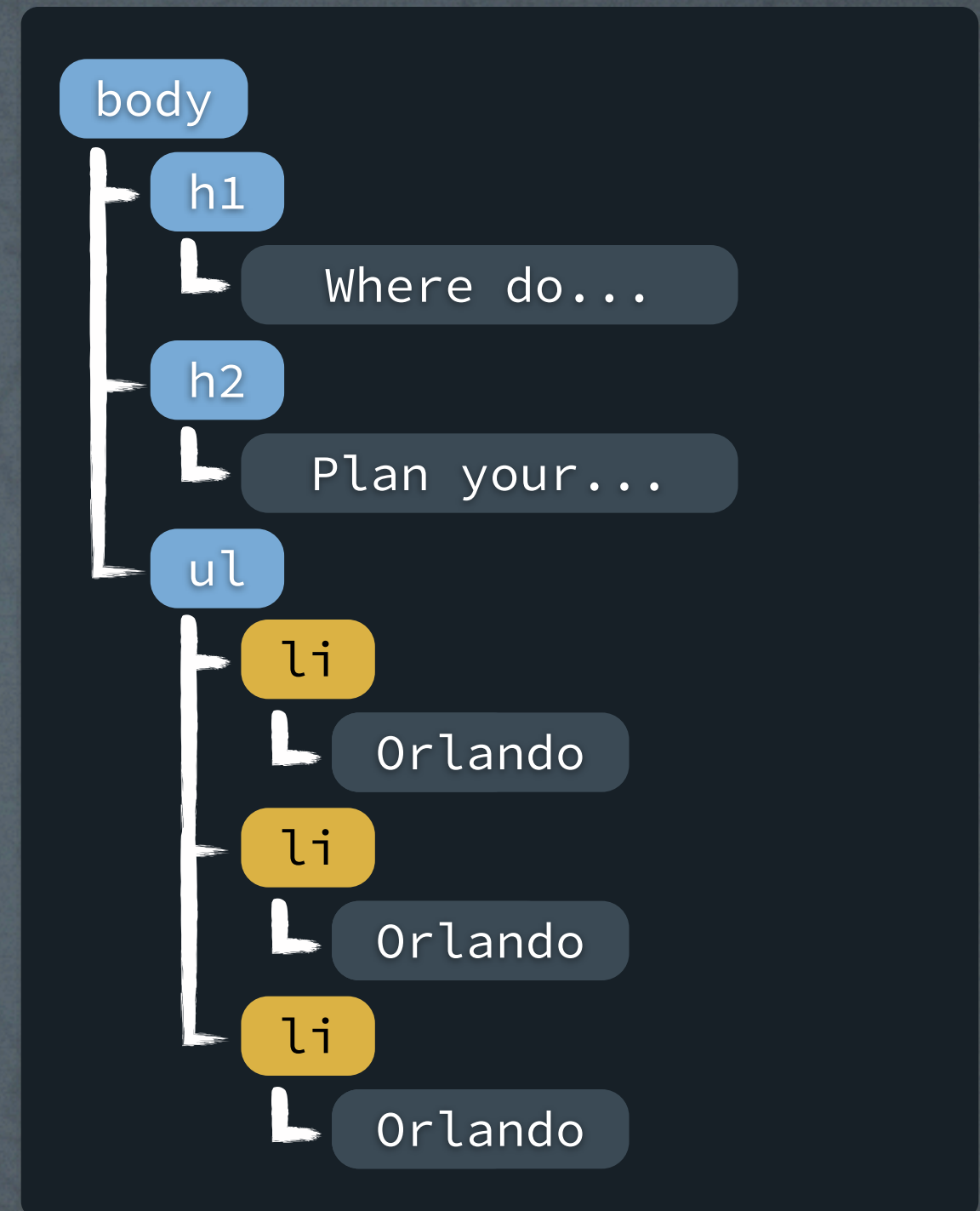


# Modifying each of their text nodes

## 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");
```



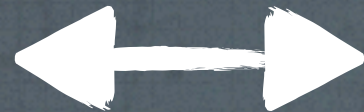
# We can find elements by ID or Class

## 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 `<ul>` that has a “destinations” ID?



find it using the ID

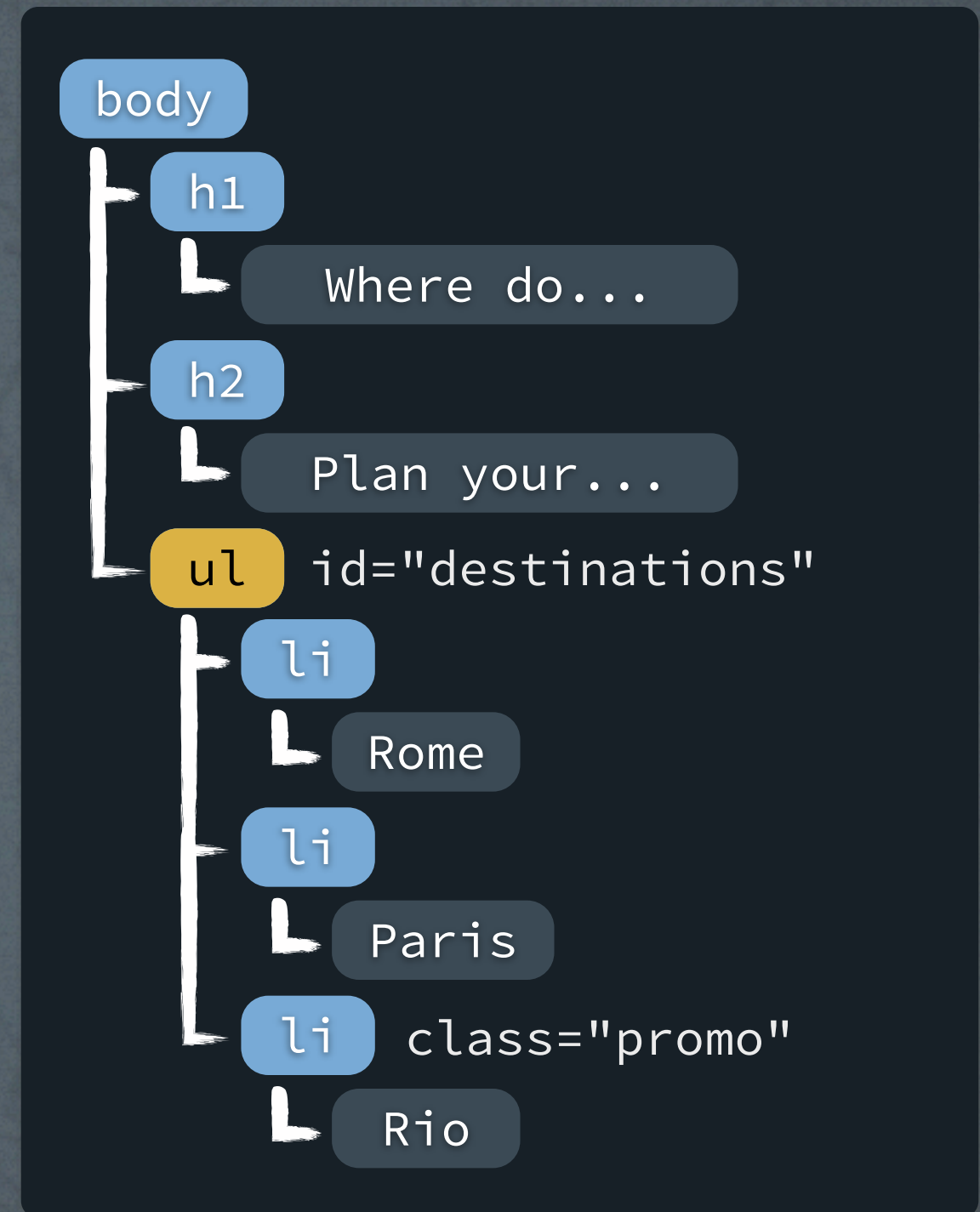


# Selecting by unique ID

## 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 `<li>` that has a “promo” class attribute?



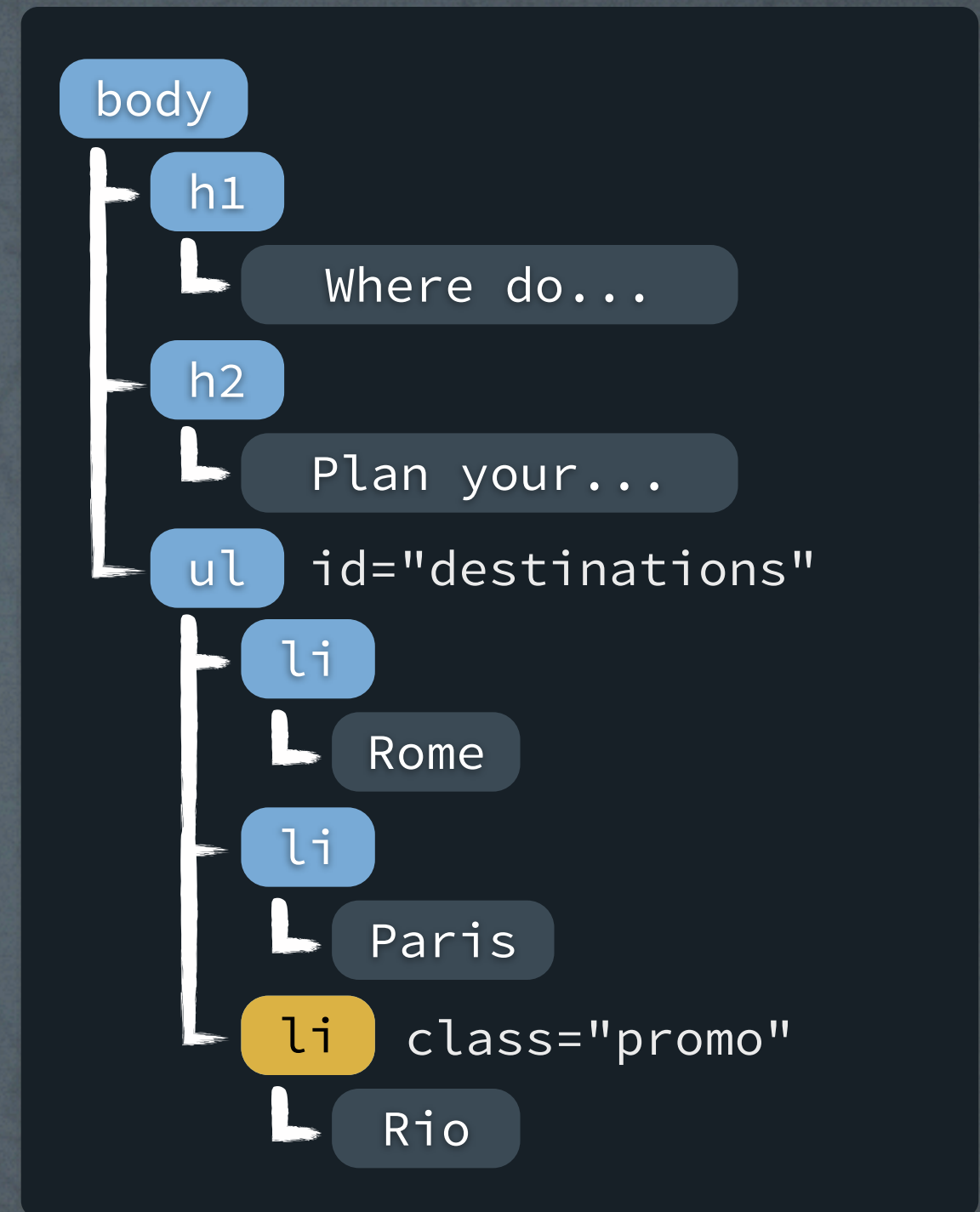
find it using the class

# 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 `<li>` elements that are inside of the `<ul>` with a “destinations” ID?



descendant selector

# Using the descendant selector

## HTML document

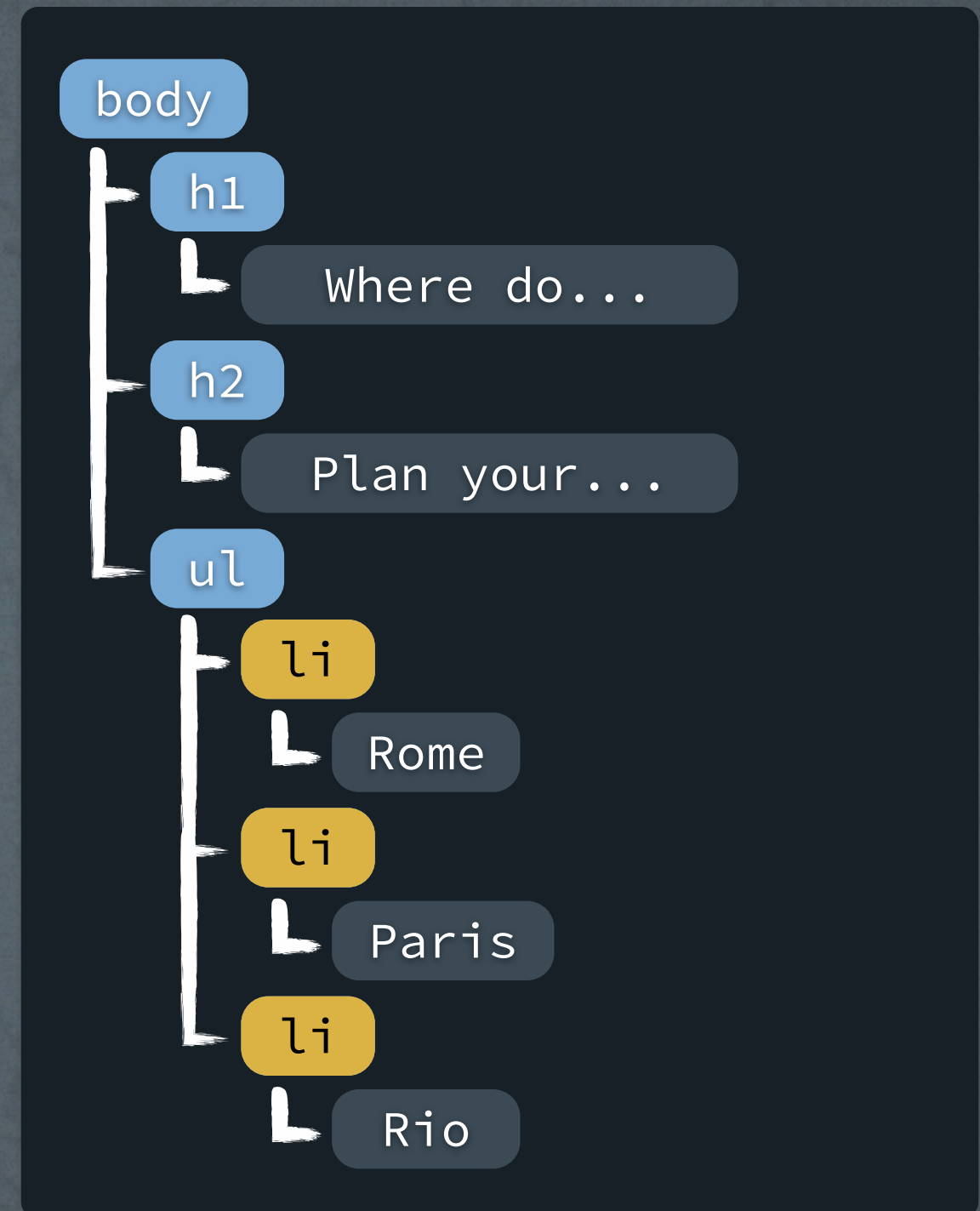
```
<h1>Where do you want to go?</h1>
<h2>Travel Destinations</h2>
<p>Plan your next adventure.</p>
<ul id="destinations">
  <li>Rome</li>
  <li>Paris</li>
  <li class='promo'>Rio</li>
</ul>
```

*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 `<li>` elements that are children of the “destinations” `<ul>`?



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 `<li>` elements that are **direct** children of the “destinations” `<ul>` then?



child selector

# Selecting only direct children

## HTML document

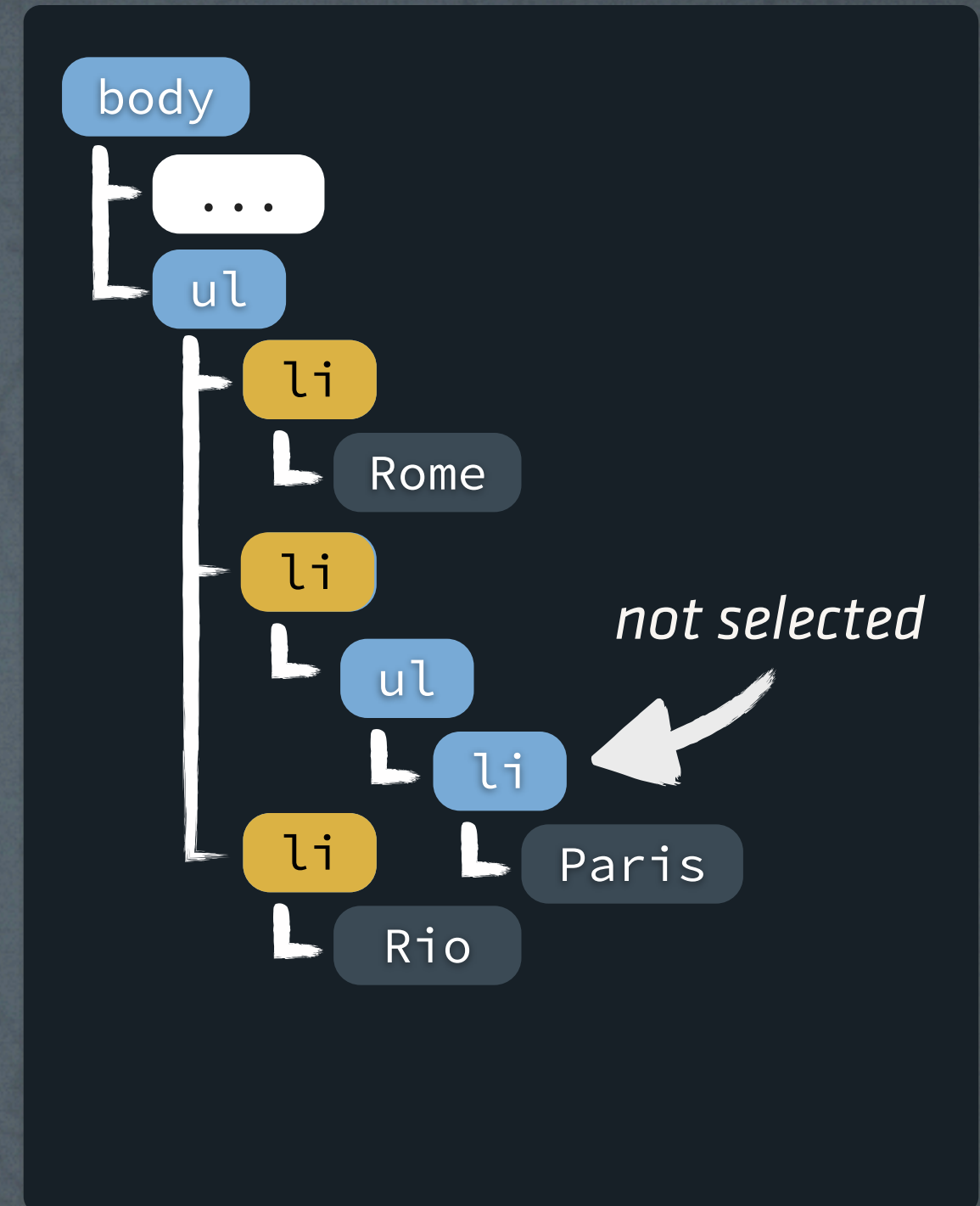
```
<h1>Where do you want to go?</h1>
<h2>Travel Destinations</h2>
<p>Plan your next adventure.</p>
<ul id="destinations">
  <li>Rome</li>
  <li>
    <ul id="france">
      <li>Paris</li>
    </ul>
  </li>
  <li class='promo'>Rio</li>
</ul>
```

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

*the sign matters*

*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

## 2.1 Searching the DOM

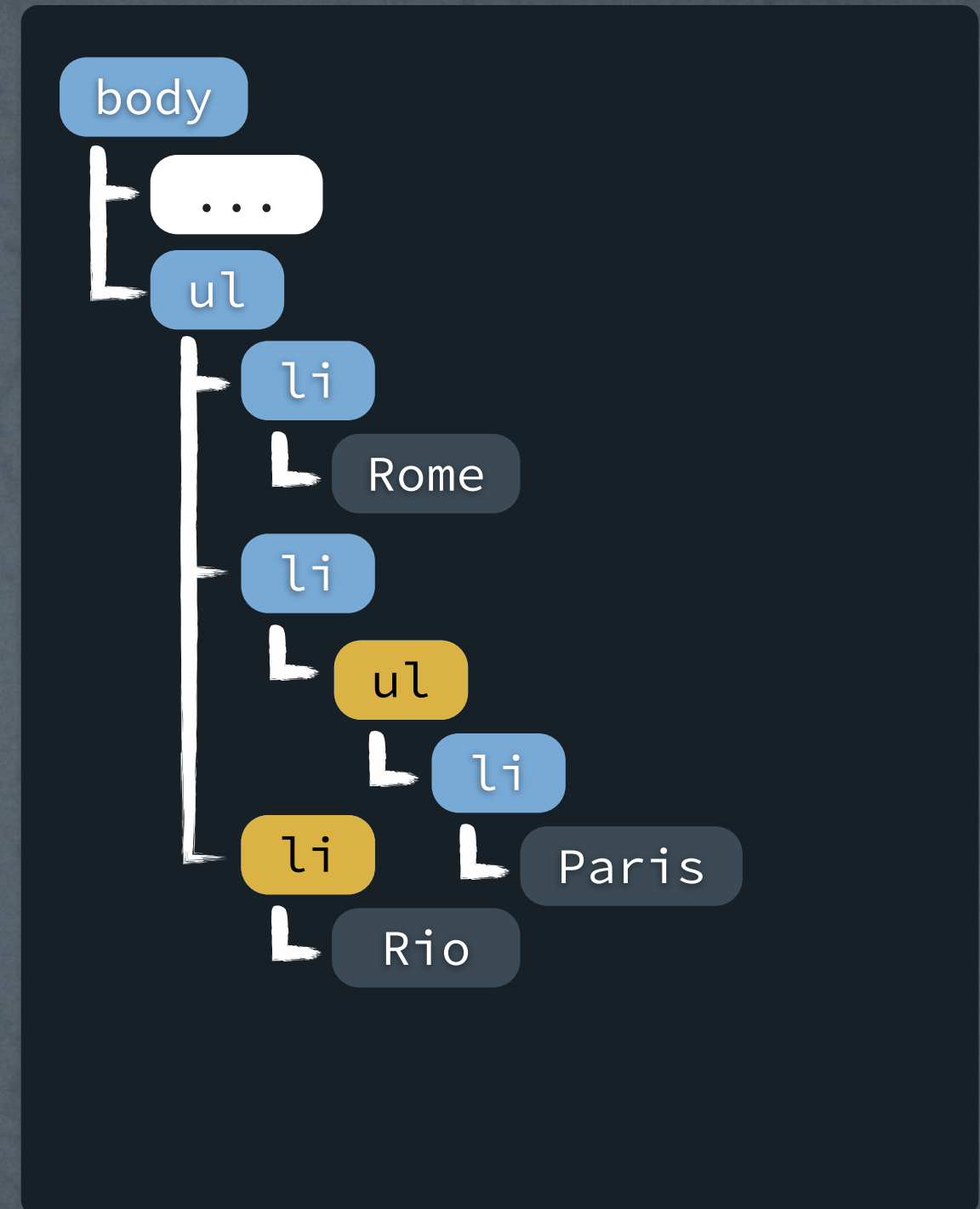
# Selecting multiple elements

## 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");
```

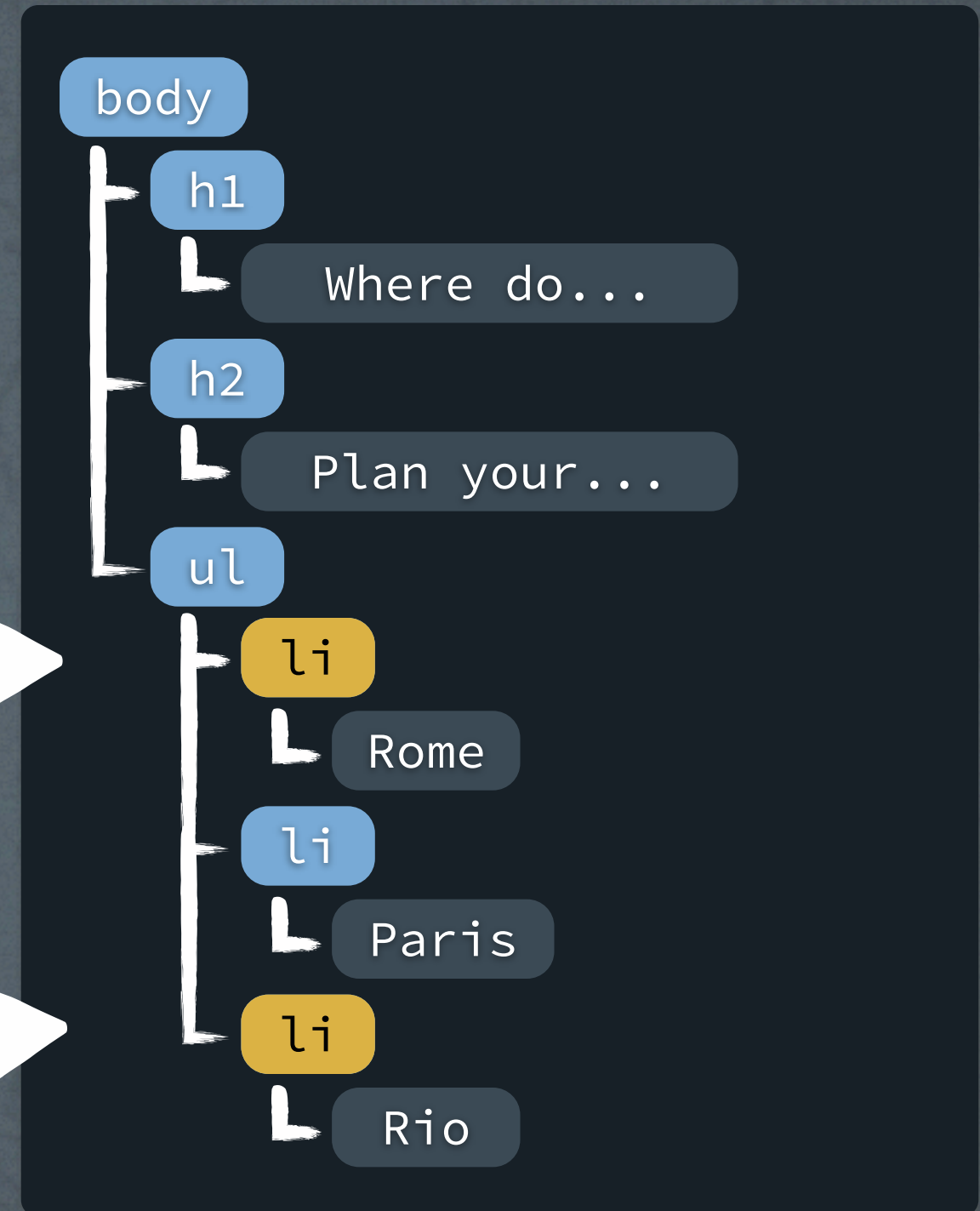


# CSS-like pseudo classes

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

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

*filter* 

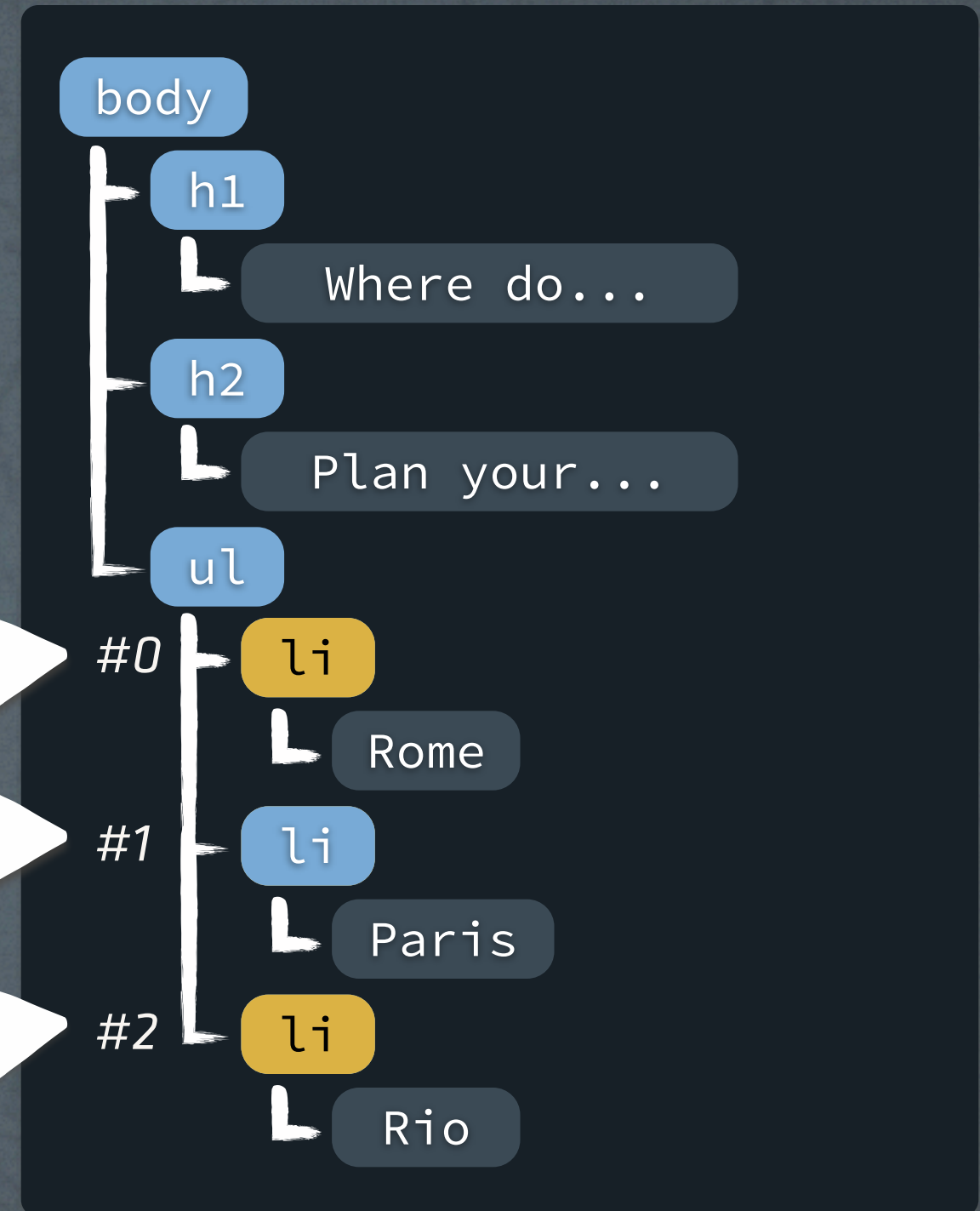


## 2.1 Searching the DOM

# CSS-like pseudo classes

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

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



⚠ watch out, the index starts at 0

## 2.1 Searching the DOM



# 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 `<li>` elements that the “destinations” list contains without using a descendant selector?



filter by traversing

# Filtering by traversing

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



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



selection

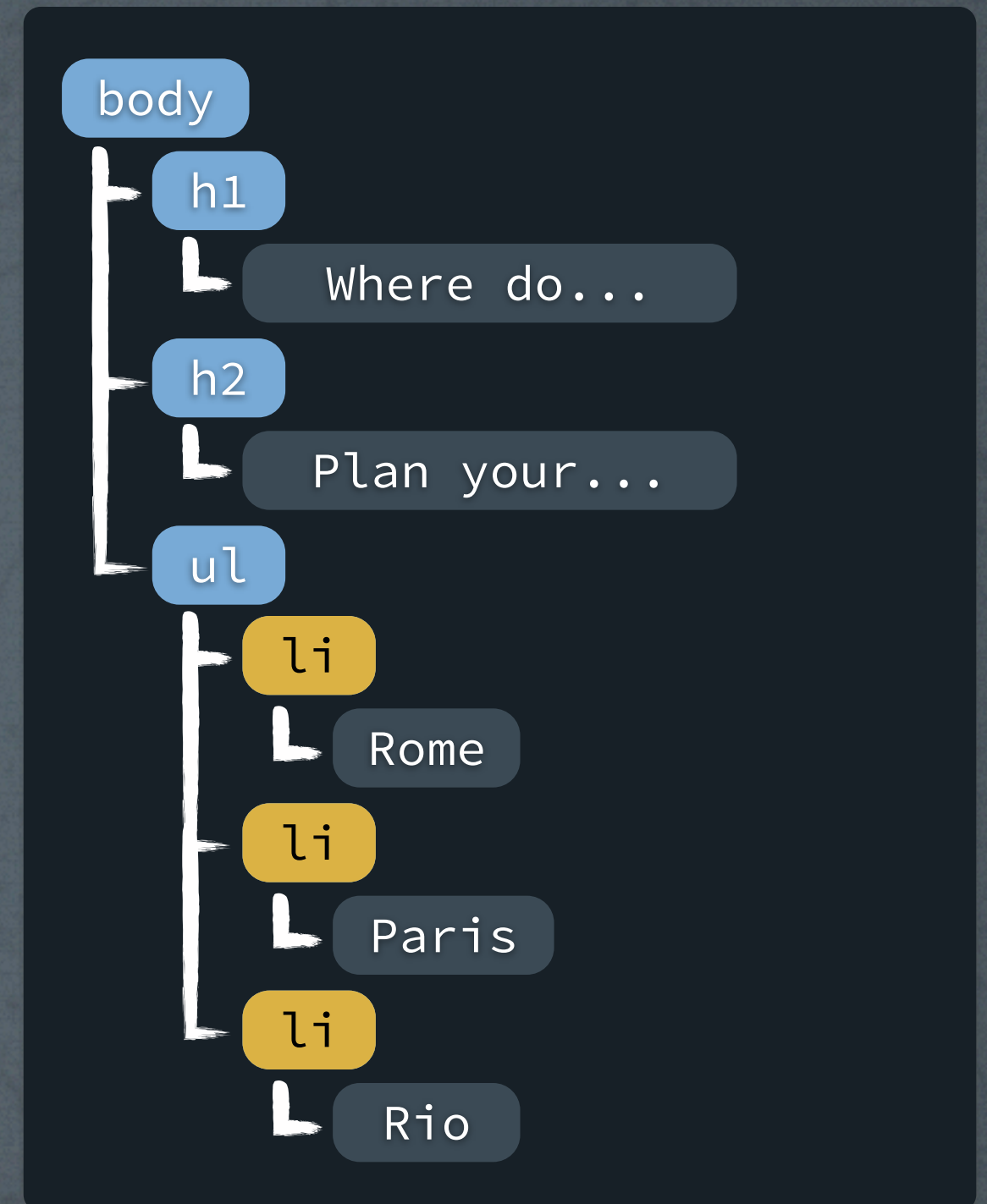


traversal



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

## 2.2 Traversing

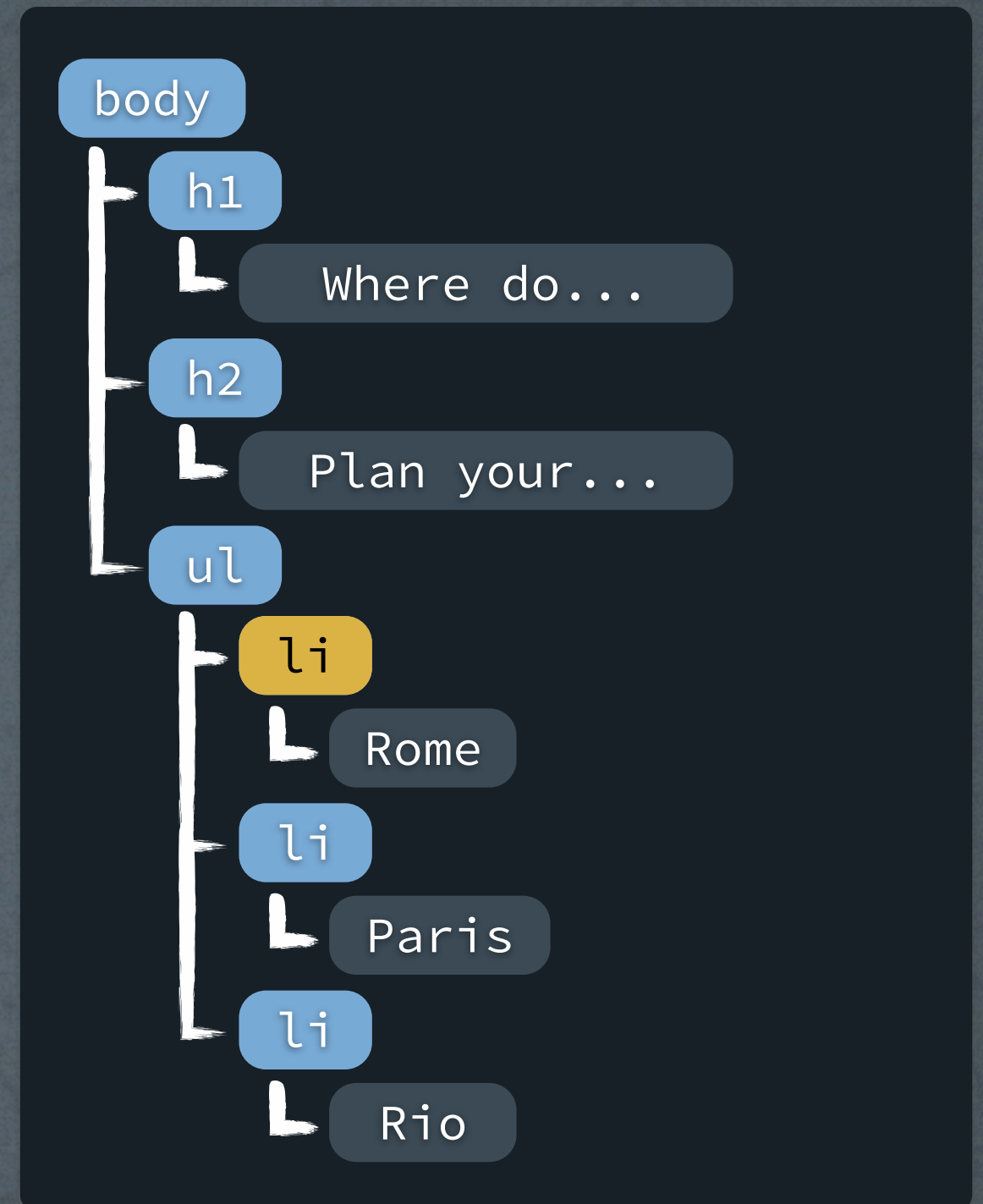


# Filtering by traversing

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



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

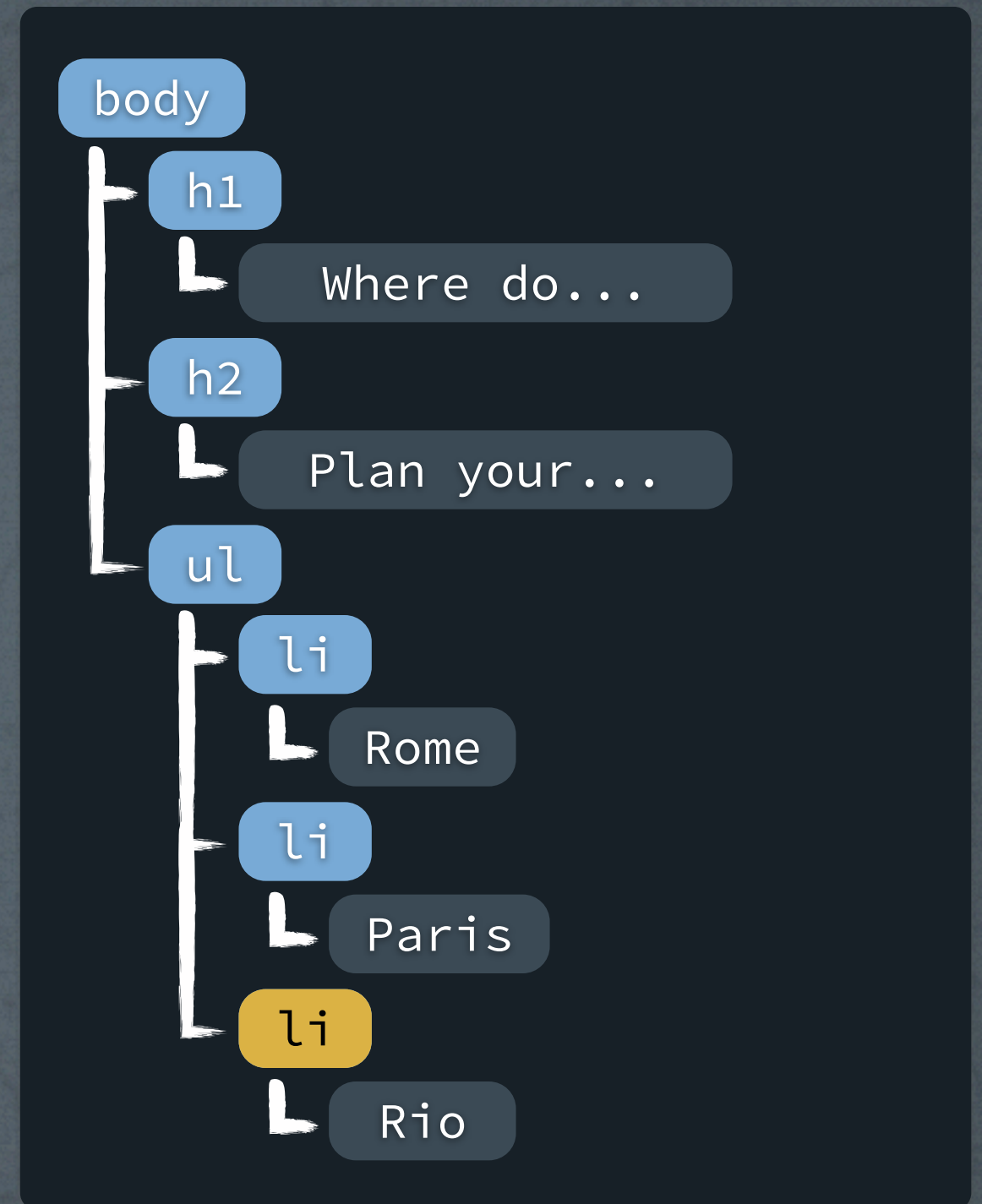


# Filtering by traversing

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



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



# 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>
```

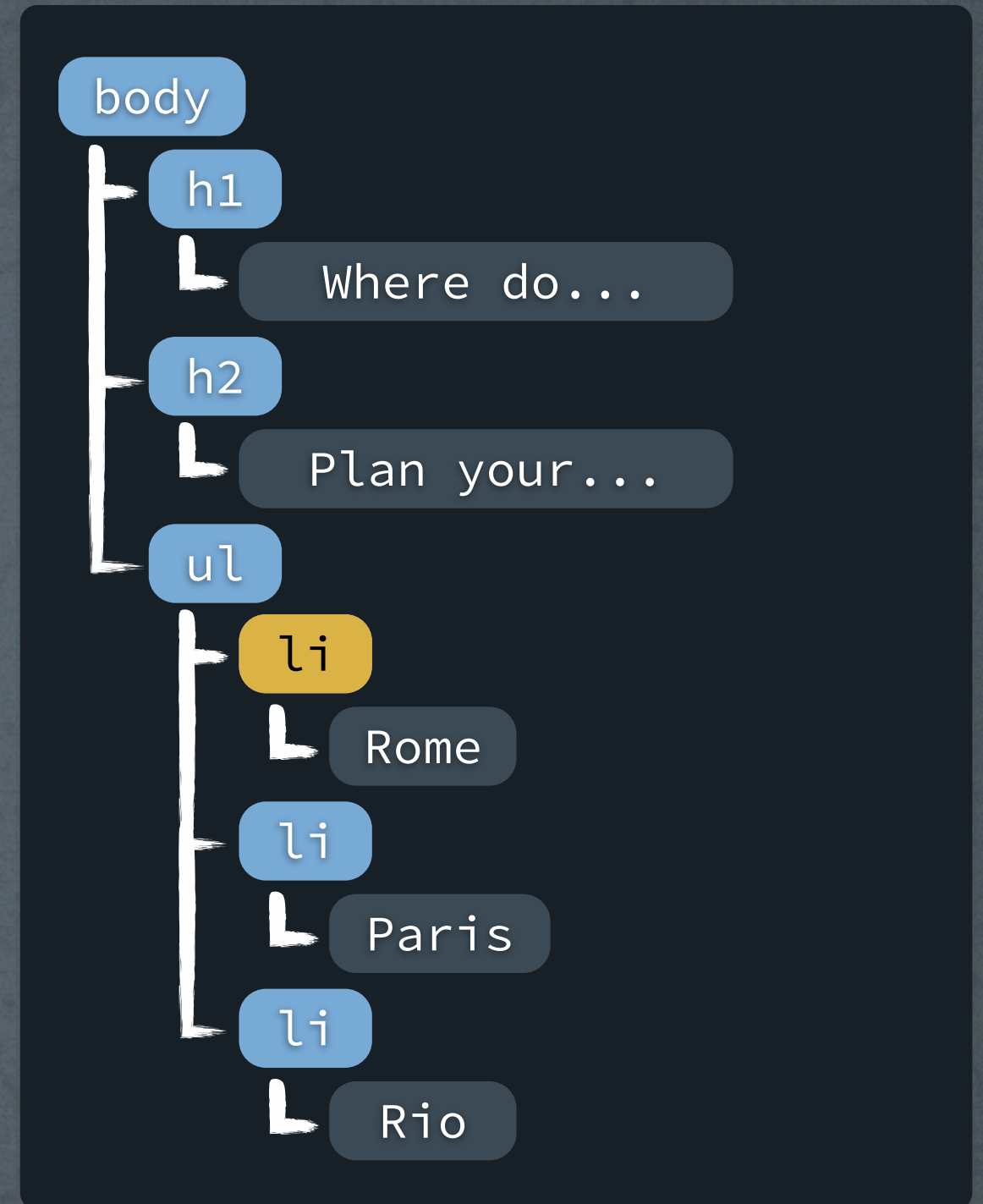
Can we find the middle list item, knowing there is no filter to find it unlike **:first** or **:last**?



traversing

# Walking the DOM

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

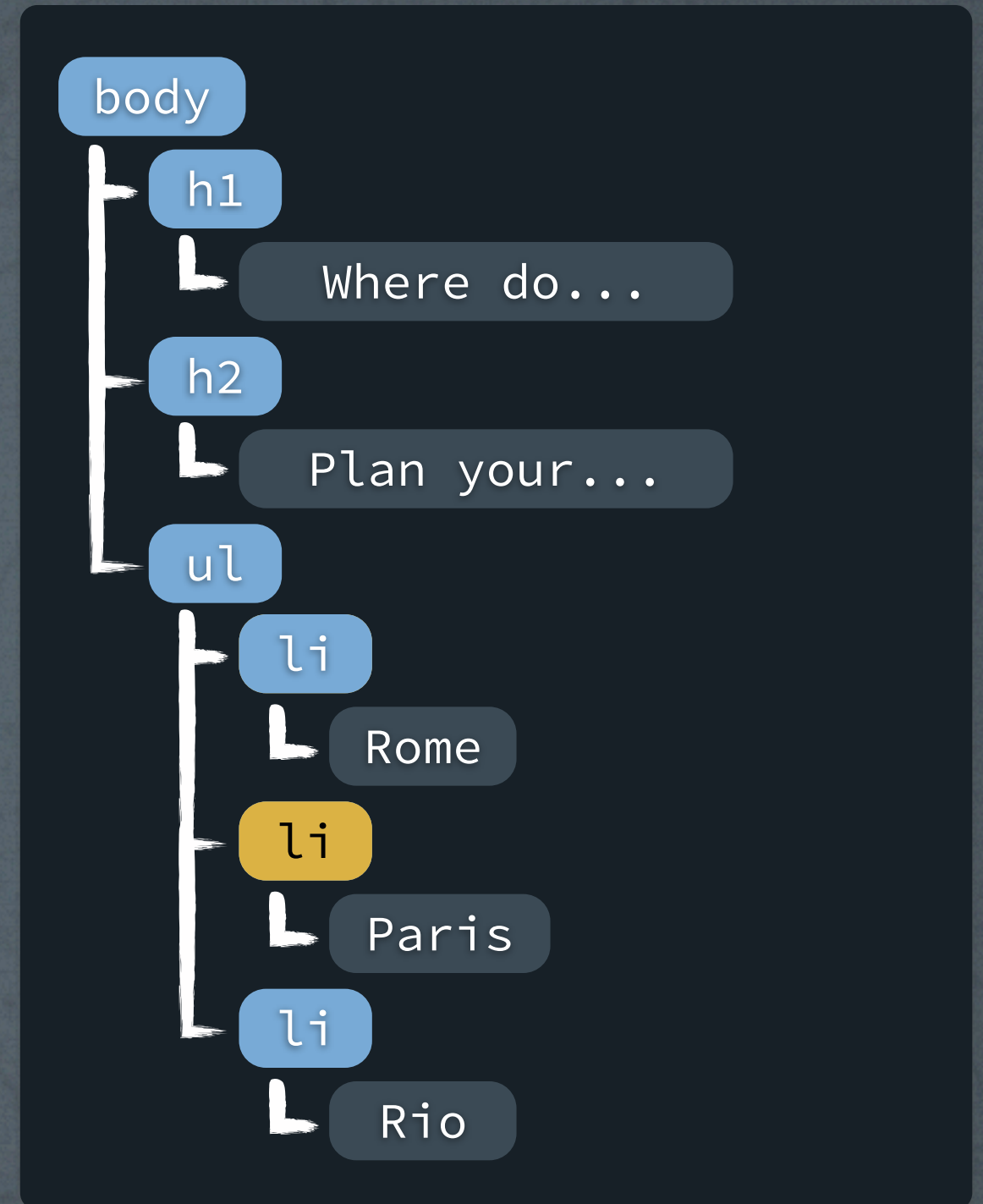


## 2.2 Traversing

# Walking the DOM

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

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



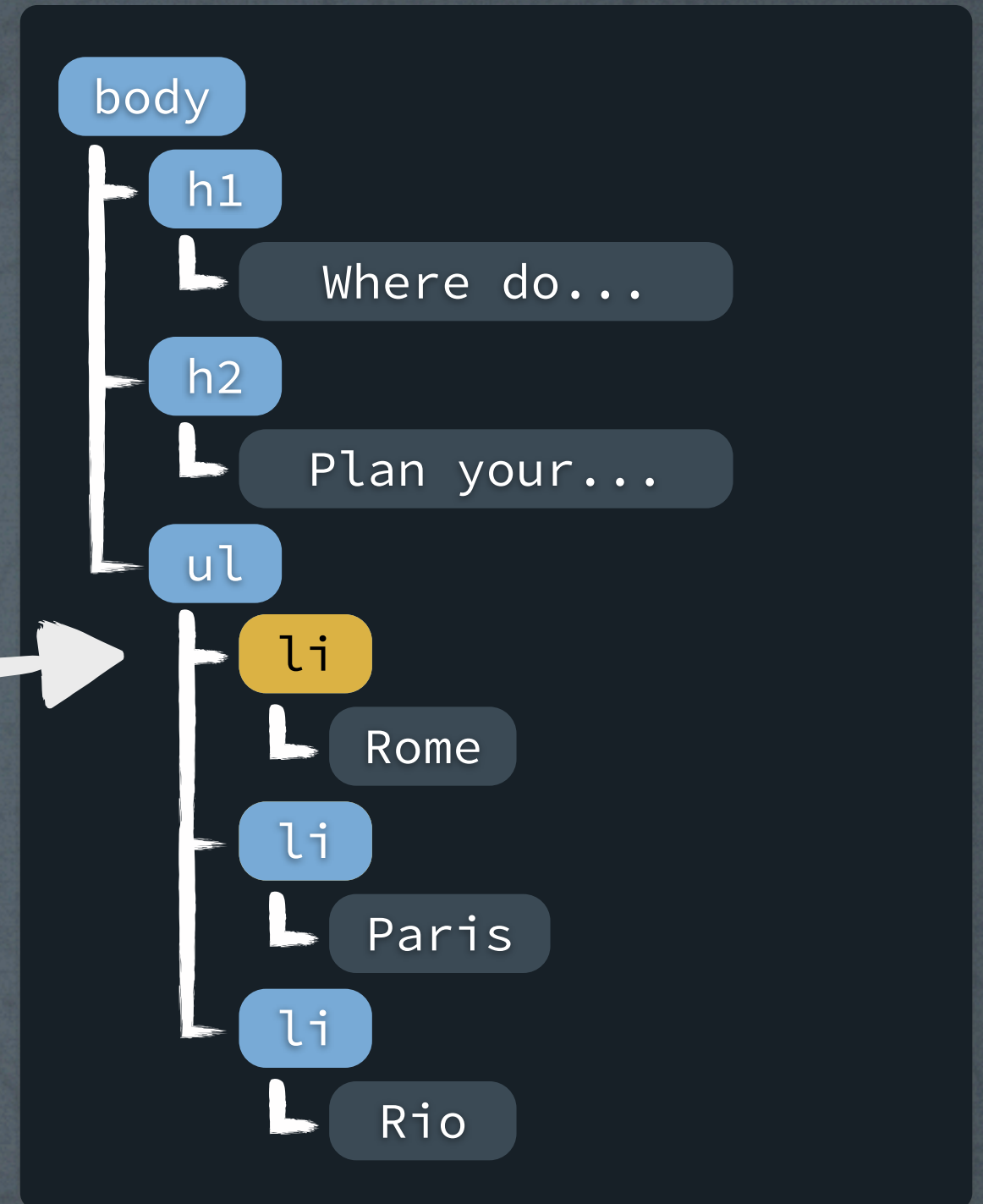
## 2.2 Traversing

# Walking the DOM

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

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

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





# 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>
```

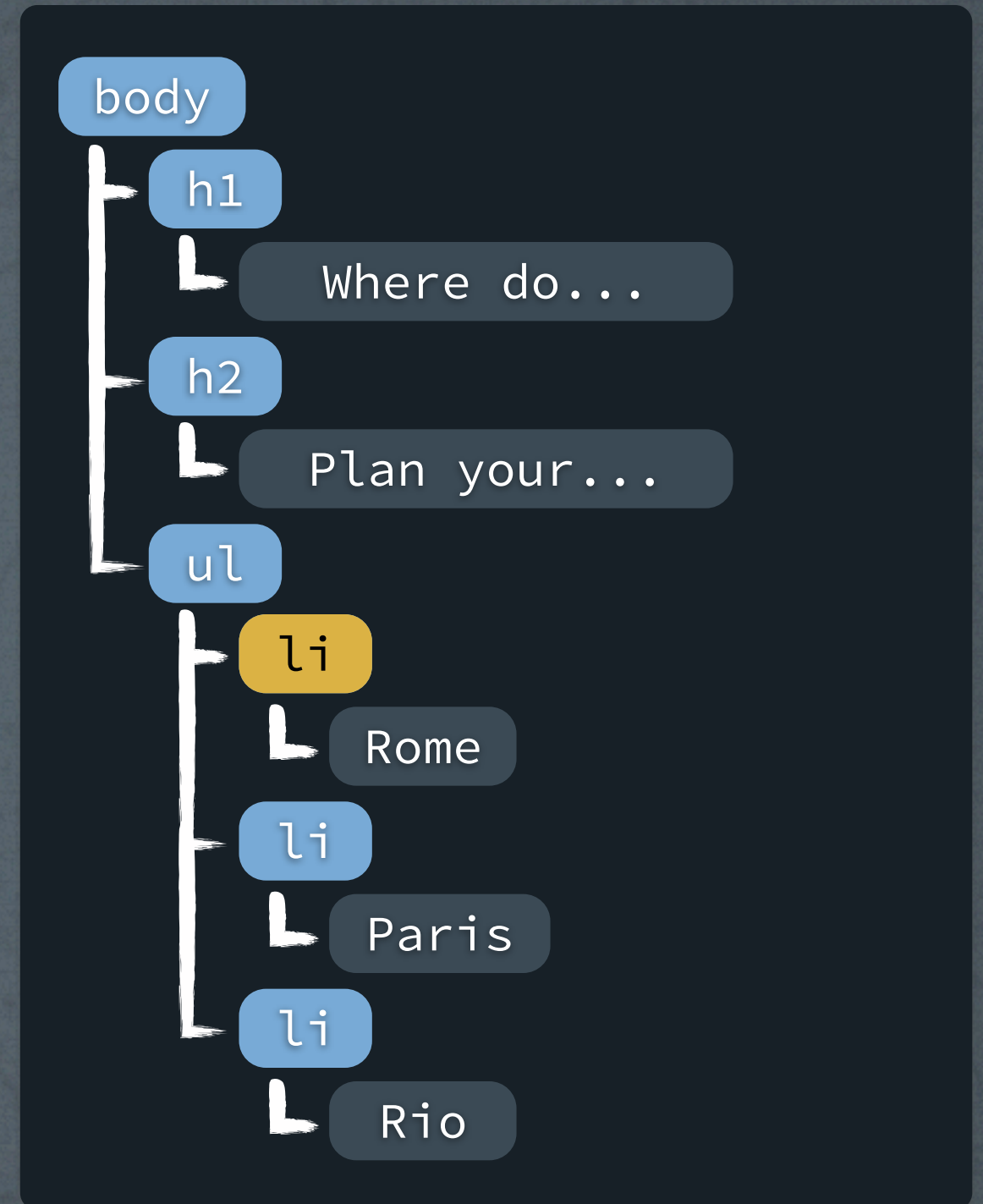
If we started by selecting a child, can we figure out what element is its direct parent?



traversing up

# Walking up the DOM

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

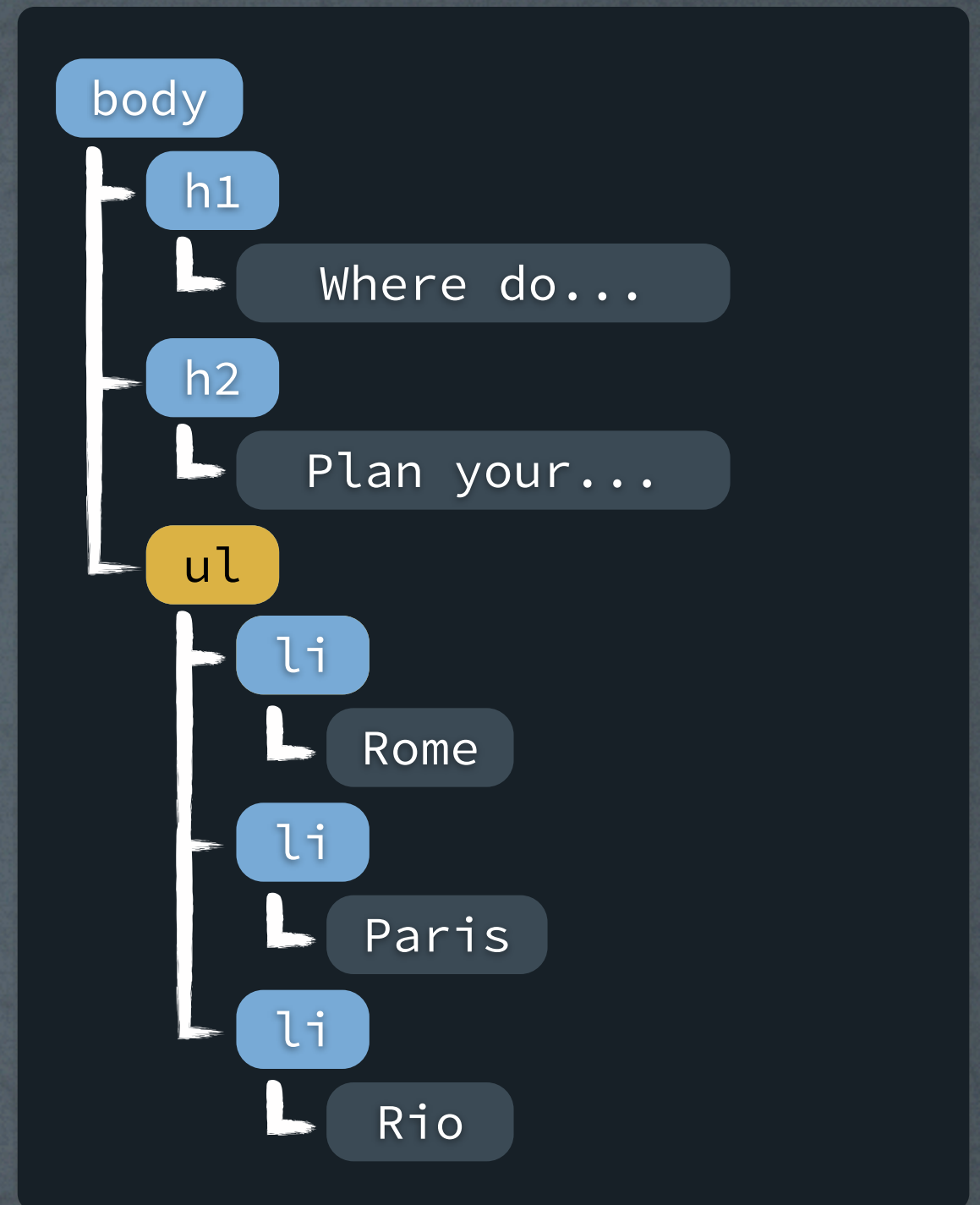


## 2.2 Traversing

# 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?

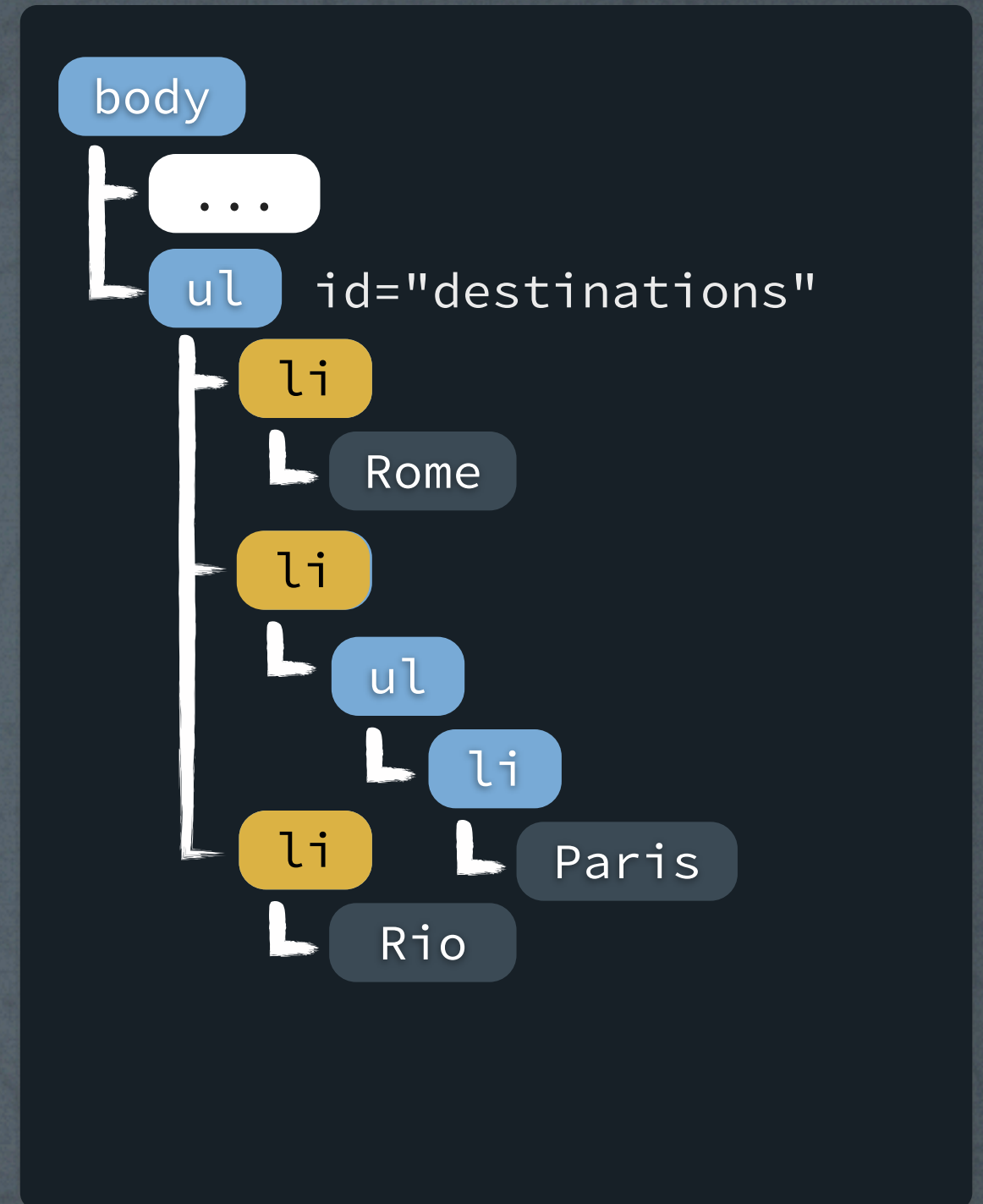


traversing down

# 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

**1** append a new DOM node

**2** remove a DOM node

## DOM representation of the document

DOCUMENT

li class="vacation"

h2

Hawaiian Vac...

button

Get Price

p

\$399.99

# 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 = $('<p>From $399.99</p>');
```



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

DOCUMENT

li class="vacation"

h2

Hawaiian Vac...

button

Get Price

Price node (not in the DOM yet)

p

\$399.99

## 3.1 Manipulating the DOM

# Appending to the DOM

application.js

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

Hawaiian Vac...

button

Get Price

Price node (not in the DOM yet)

p

\$399.99

## 3.1 Manipulating the DOM

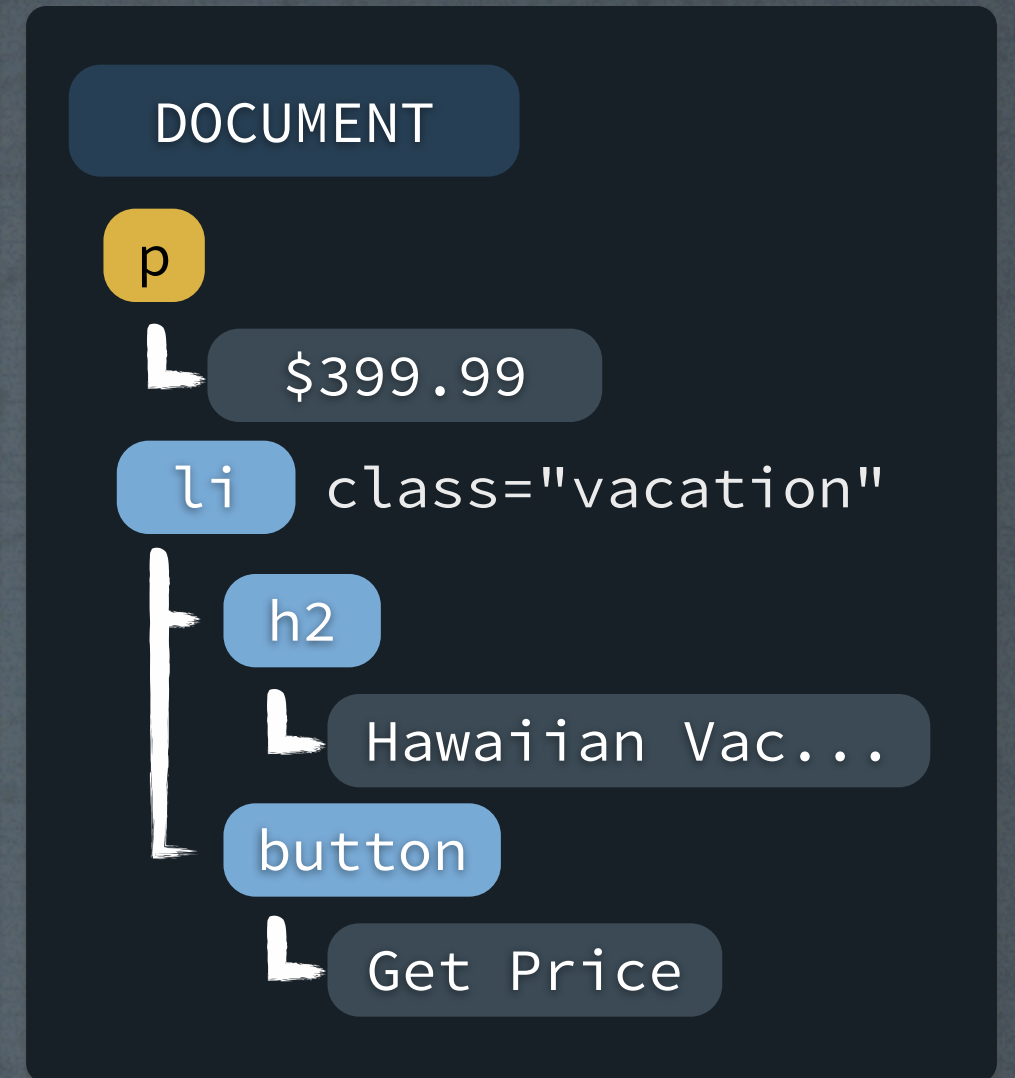
# Before

application.js

```
$(document).ready(function() {  
  var price = $('<p>From $399.99</p>');  
  $('.vacation').before(price);  
});
```



*Puts the price node before .vacation*



# After

application.js

```
$(document).ready(function() {  
  var price = $('<p>From $399.99</p>');  
  $('.vacation').after(price);  
});
```



*Puts the price node after .vacation*

DOCUMENT

li class="vacation"

h2

Hawaiian Vac...

button

Get Price

p

\$399.99

# Prepend

application.js

```
$(document).ready(function() {  
  var price = $('<p>From $399.99</p>');  
  $('.vacation').prepend(price);  
});
```



*Adds the node to the top of .vacation*

DOCUMENT

li class="vacation"

p

\$399.99

h2

Hawaiian Vac...

button

Get Price

# Prepend and Append

application.js

```
$(document).ready(function() {  
  var price = $('<p>From $399.99</p>');  
  $('.vacation').append(price);  
});
```



*Puts the price node at the bottom of .vacation*

DOCUMENT

li class="vacation"

h2

Hawaiian Vac...

button

Get Price

p

\$399.99

# Removing from the DOM

application.js

```
$(document).ready(function() {  
  var price = $('<p>From $399.99</p>');  
  $('.vacation').append(price);  
  $('button').remove();  
});
```



Removes the **<button>** from the DOM

DOCUMENT

li class="vacation"

h2

Hawaiian Vac...

button

Get Price

p

\$399.99



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!**

## 3.1 Manipulating the DOM

# Appending to the DOM

application.js

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

## 3.1 Manipulating the DOM



# 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.*

## 3.2 Acting on Interaction

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!**

## 3.2 Acting on Interaction

# Watching for Click

application.js

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

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

Target all buttons

Watch for any clicks

Run the code inside of this function

DOCUMENT

li class="vacation"

h2

Hawaiian Vacation

button

Get Price

jQuery Object Methods

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

## 3.2 Acting on Interaction

# 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

li class="vacation"

h2

Hawaiian Vacation

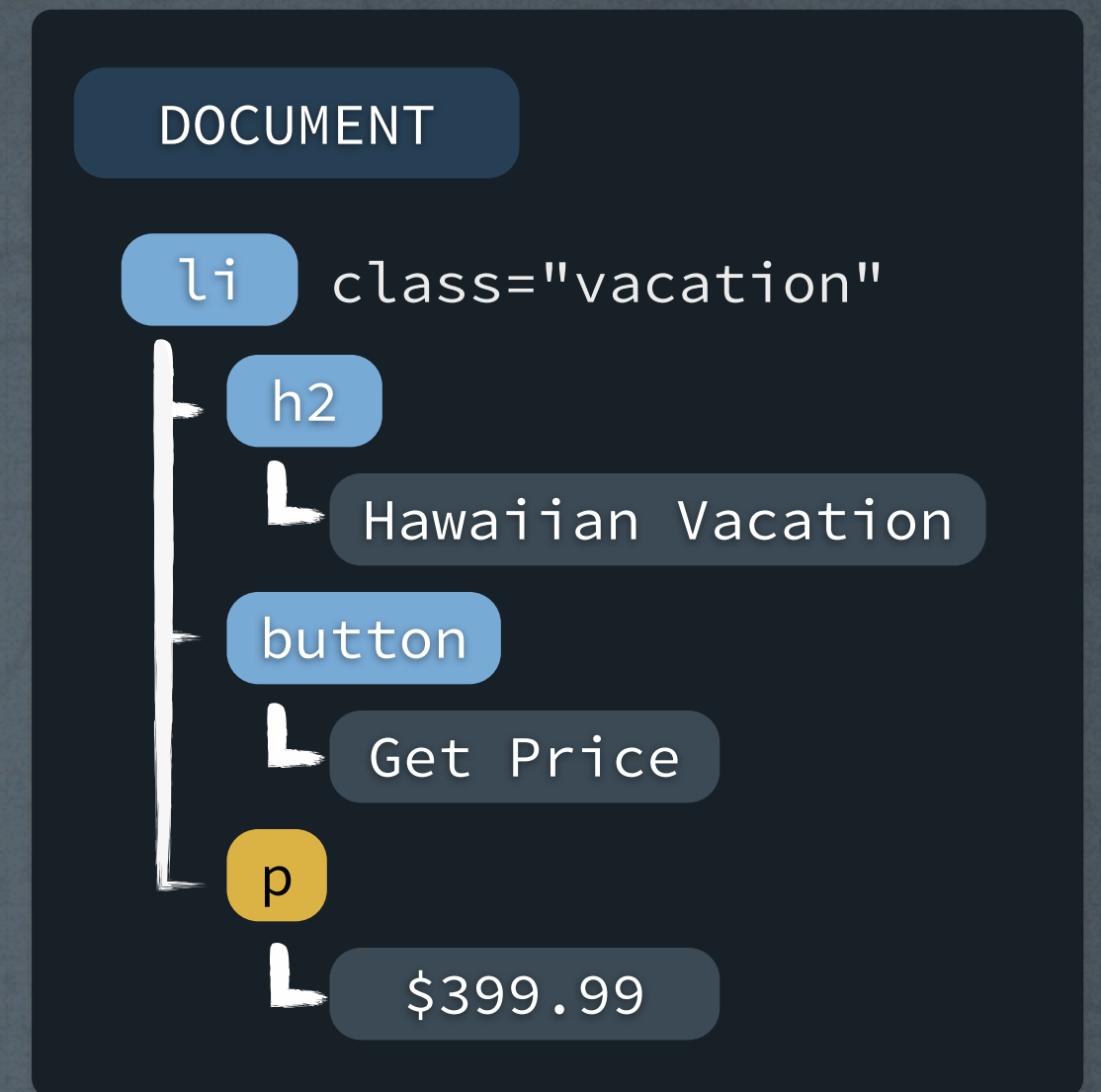
button

Get Price

# Removing from the DOM

application.js

```
$(document).ready(function() {  
  $('button').on('click', function() {  
    var price = $('<p>From $399.99</p>');  
    $('.vacation').append(price);  
    $('button').remove();  
  });  
});
```





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

Rendered HTML:

# 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**

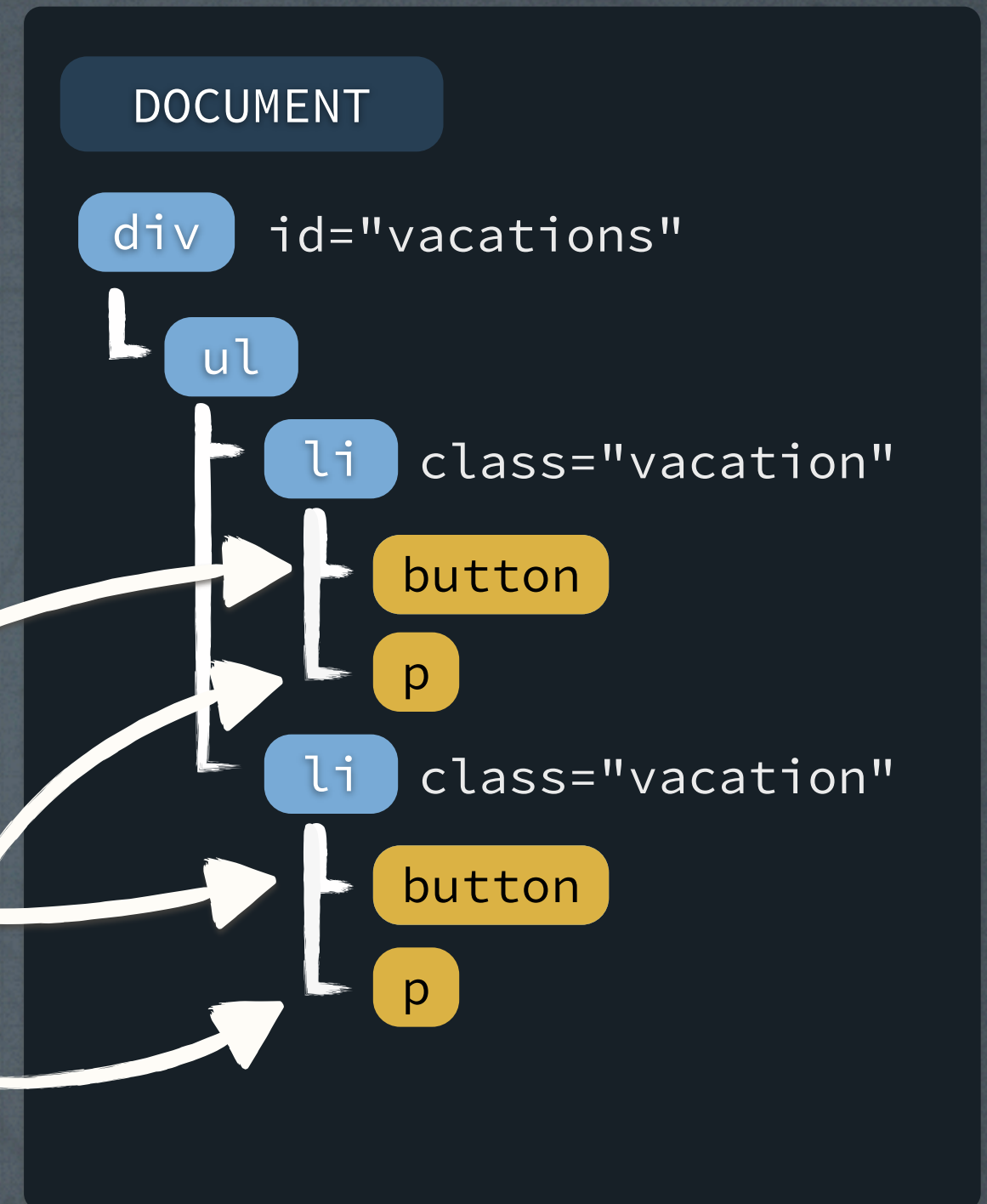
**Call us at 555-2593 to make a reservation today!**

*What if there are multiple vacation packages?*

# Working, but with Errors

application.js

```
$(document).ready(function() {  
  $('button').on('click', function() {  
    var price = $('<p>From $399.99</p>');  
    $('.vacation').append(price);  
    $('button').remove();  
  });  
});
```



*Every button will be removed*

*The price will be appended to both .vacation elements*

## 3.3 Refactor Using Traversing

# An Introduction to \$(this)

application.js

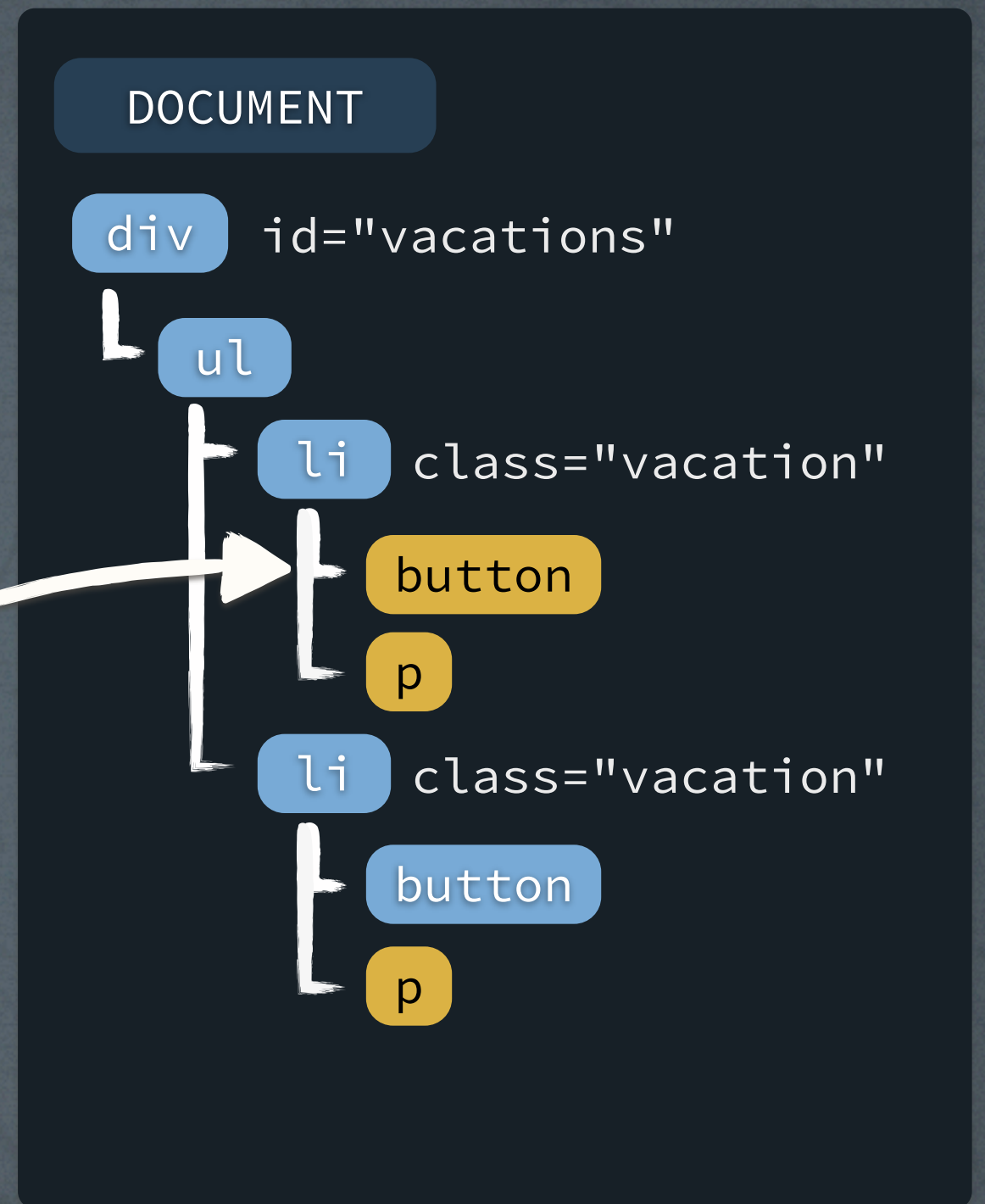
```
$(document).ready(function() {  
  $('button').on('click', function() {  
    var price = $('<p>From $399.99</p>');  
    $('.vacation').append(price);  
    $('#button').remove();  
  });  
});
```

*If clicked, the button will be 'this'*

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

*Not a jQuery object, needs to be converted*

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



## 3.3 Refactor Using Traversing

# An Introduction to \$(this)

application.js

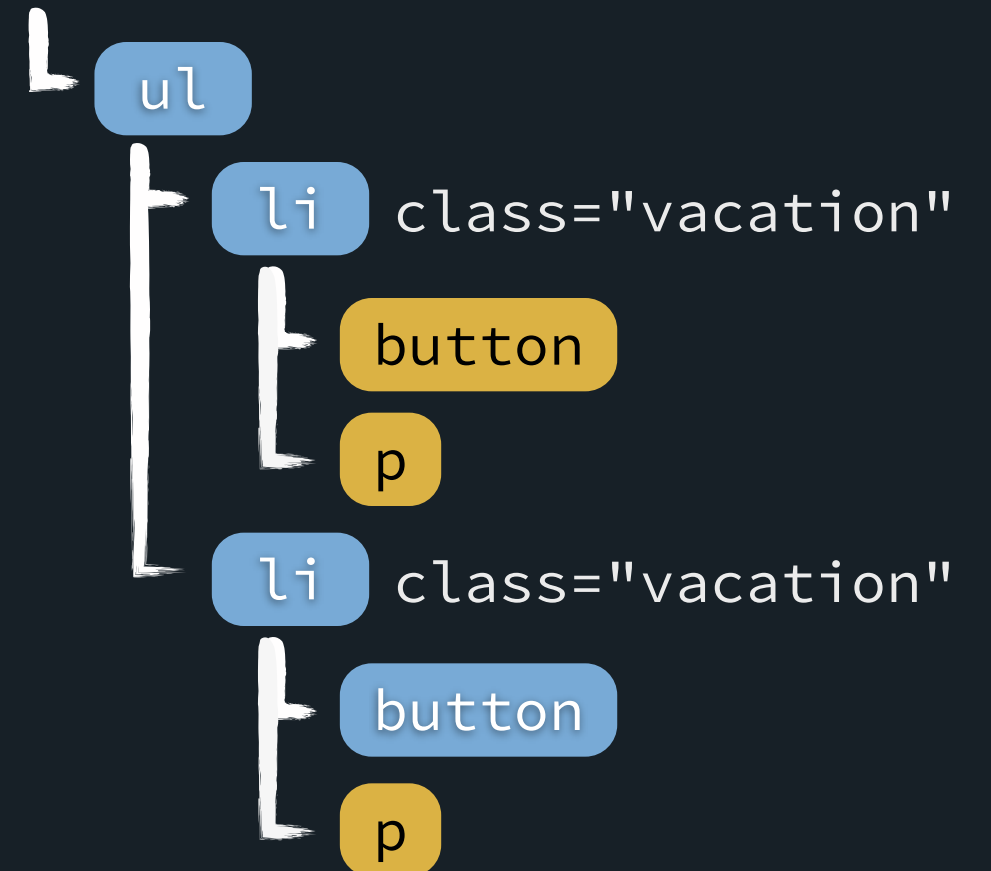
```
$(document).ready(function() {  
  $('button').on('click', function() {  
    var price = $('<p>From $399.99</p>');  
    $('.vacation').append(price);  
    $(this).remove();  
  });  
});
```



Only removes whichever button was clicked

DOCUMENT

div id="vacations"



## 3.3 Refactor Using Traversing

Rendered HTML:

# 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*

# Traversing from \$(this)

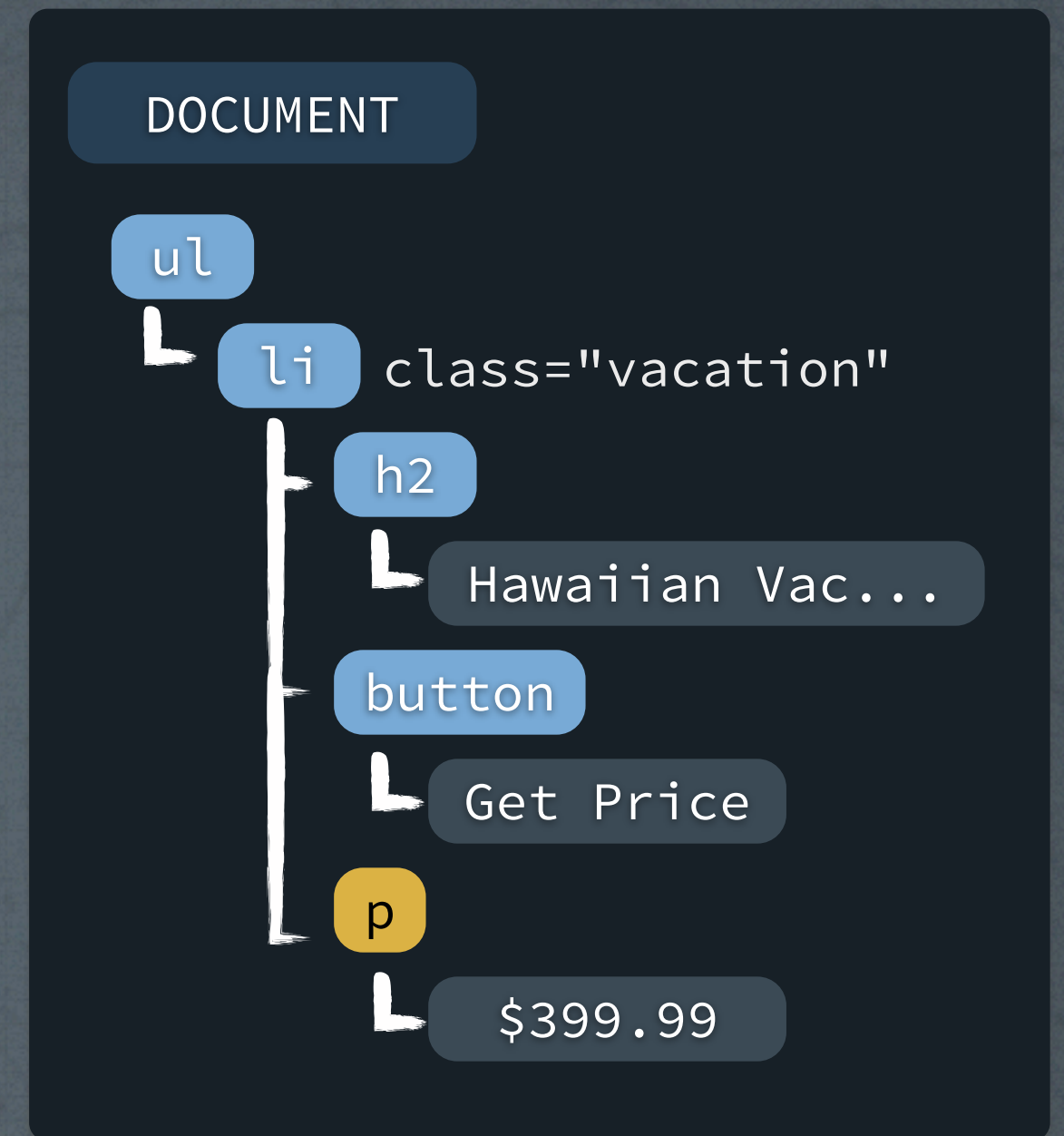
application.js

```
$(document).ready(function() {  
  $('button').on('click', function() {  
    var price = $('<p>From $399.99</p>');  
    $('.vacation').append(price);  
    $(this).remove();  
  });  
});
```

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



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



## 3.3 Refactor Using Traversing



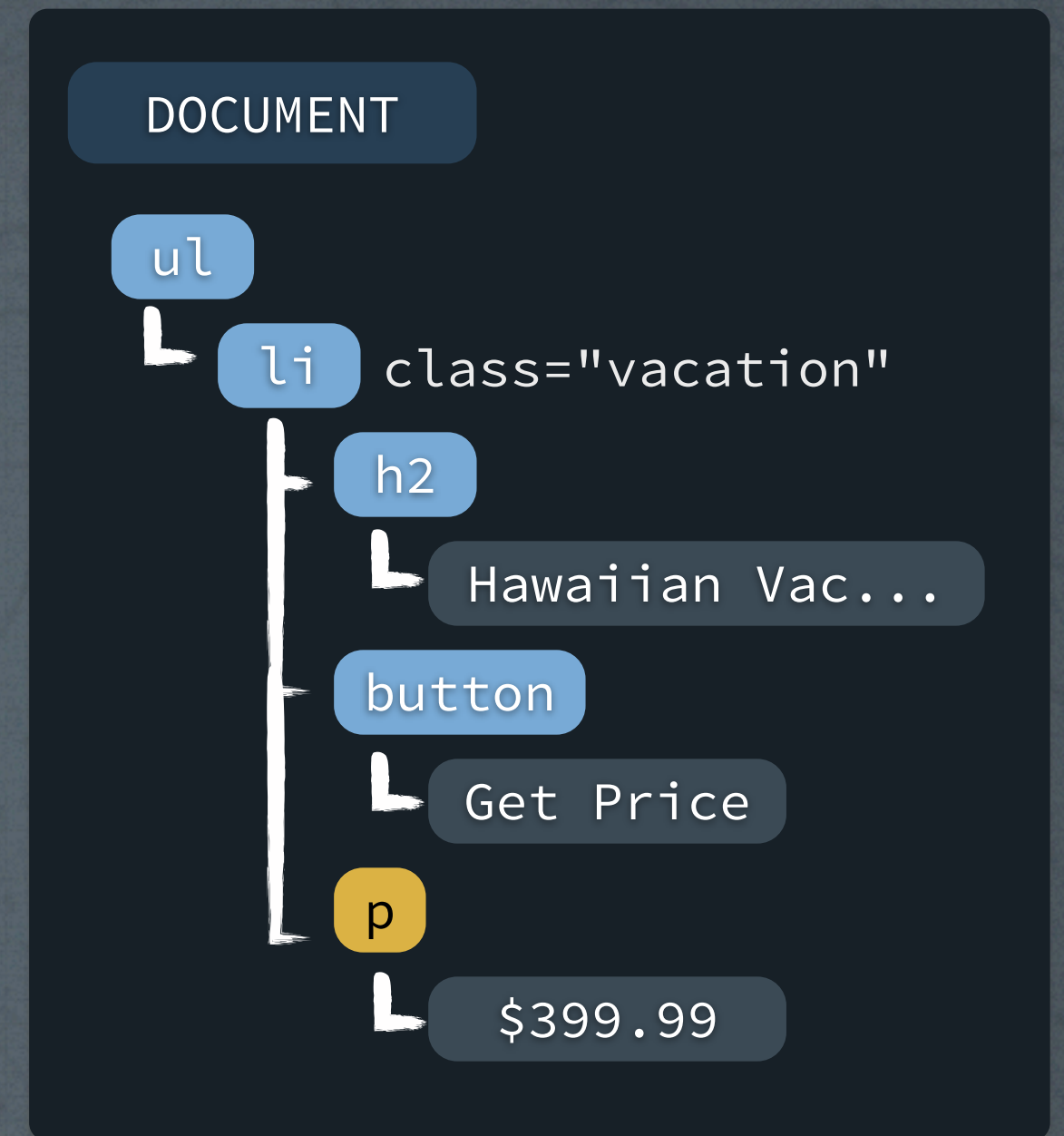
# Traversing from \$(this)

application.js

```
$(document).ready(function() {  
  $('button').on('click', function() {  
    var price = $('<p>From $399.99</p>');  
    $(this).after(price);  
    $(this).remove();  
  });  
});
```



*Add the price as a sibling after button*



## 3.3 Refactor Using Traversing

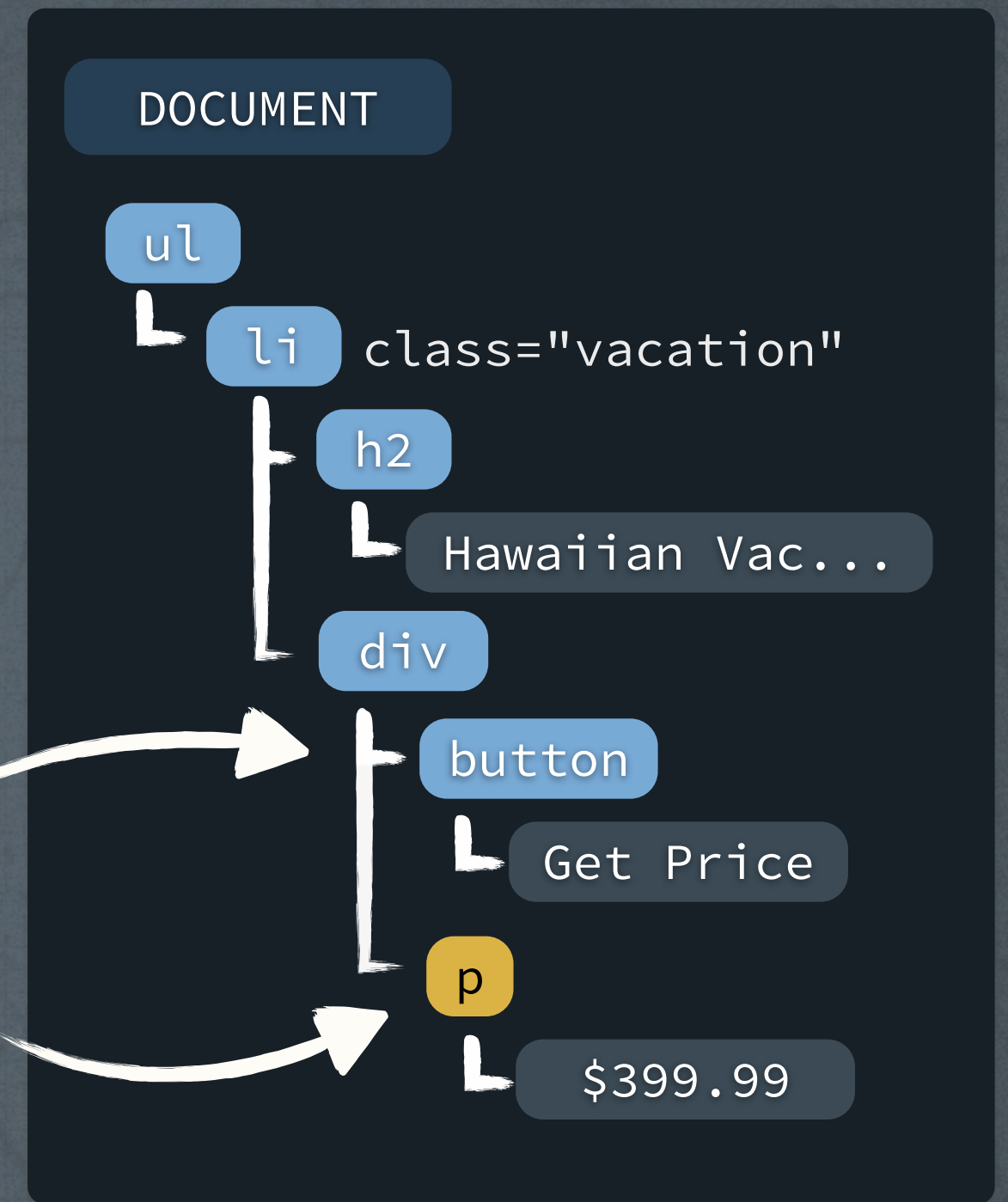
# What if the button is moved?

application.js

```
$(document).ready(function() {  
  $('button').on('click', function() {  
    var price = $('<p>From $399.99</p>');  
    $(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 <li>?*



## 3.3 Refactor Using Traversing

# 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

## 3.3 Refactor Using Traversing

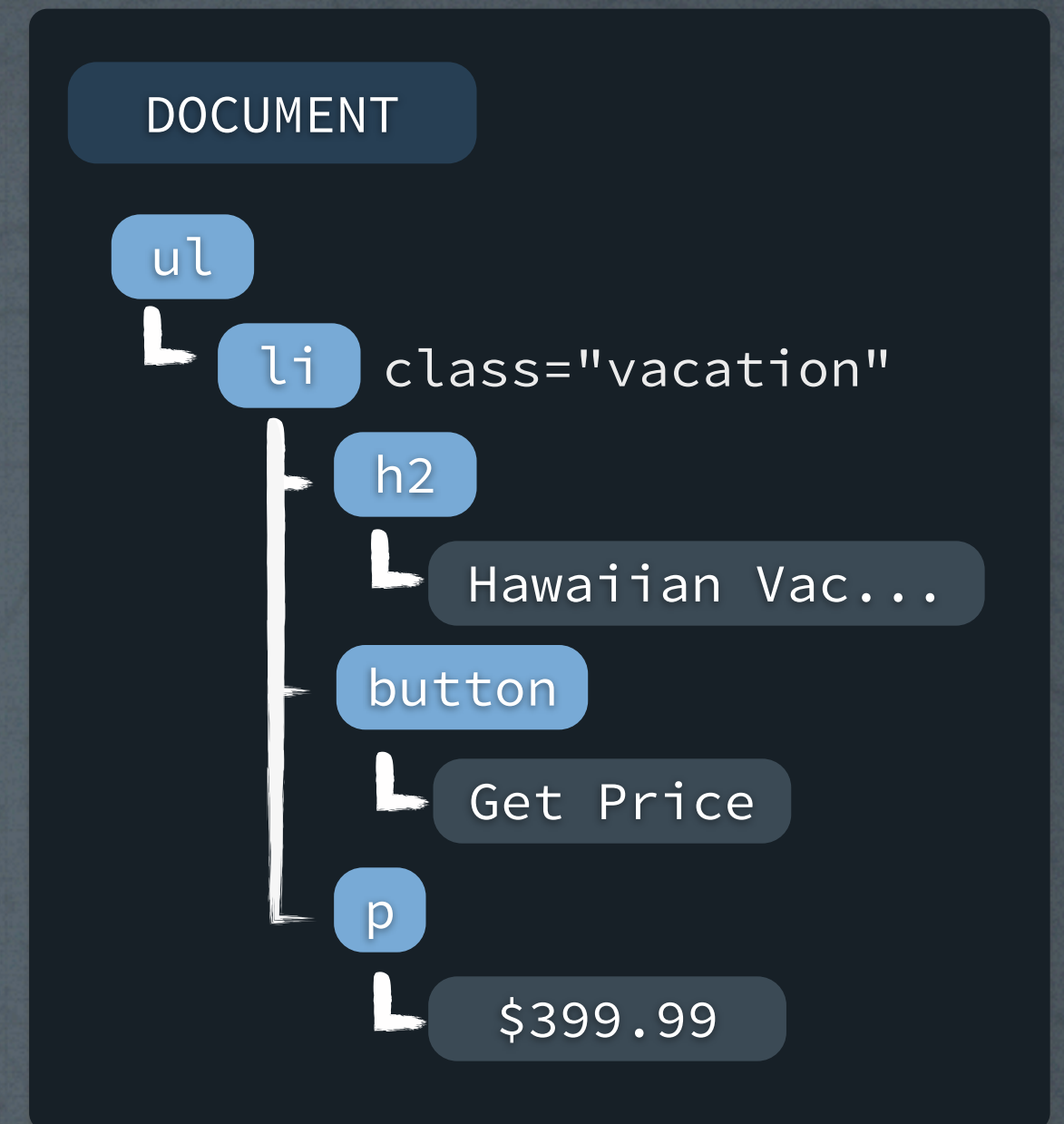
# Our Finished Handler

application.js

```
$(document).ready(function() {  
  $('button').on('click', function() {  
    var price = $('<p>From $399.99</p>');  
    $(this).closest('.vacation').append(price);  
    $(this).remove();  
  });  
});
```



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



## 3.3 Refactor Using Traversing

Rendered HTML:

# 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

Rendered HTML:

# 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>)
```

## 3.4 Traversing & Filtering



# Refactoring 'Get Price'

application.js

```
$(document).ready(function() {  
  $('button').on('click', function() {  
    var price = $('<p>From $399.99</p>');  
    $(this).closest('.vacation').append(price);  
    $(this).remove();  
  });  
});
```

*Reads from the data-price attribute*

```
var amount = $(this).closest('.vacation').data('price');  
var price = $('<p>From $'+amount+'</p>');
```

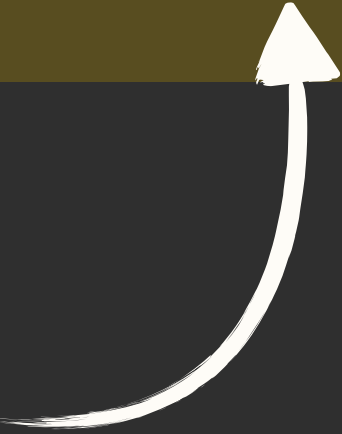

*Joins two strings to create the price*

# Refactoring 'Get Price'

application.js

```
$(document).ready(function() {  
  $('button').on('click', function() {  
    var amount = $(this).closest('.vacation').data('price');  
    var price = $('<p>From $'+amount+'</p>');  
    $(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 = $('<p>From $'+amount+'</p>');  
    $(this).closest('.vacation').append(price);  
    $(this).remove();  
  });  
});
```



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



## 3.4 Traversing & Filtering

# Reusing jQuery Objects

application.js

```
$(document).ready(function() {  
  $('button').on('click', function() {  
    var vacation = $(this).closest('.vacation');  
    var amount = vacation.data('price');  
    var price = $('<p>From $'+amount+'</p>');  
    vacation.append(price);  
    $(this).remove();  
  });  
});
```

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

Rendered HTML:

# 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'*

Rendered HTML:

# 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

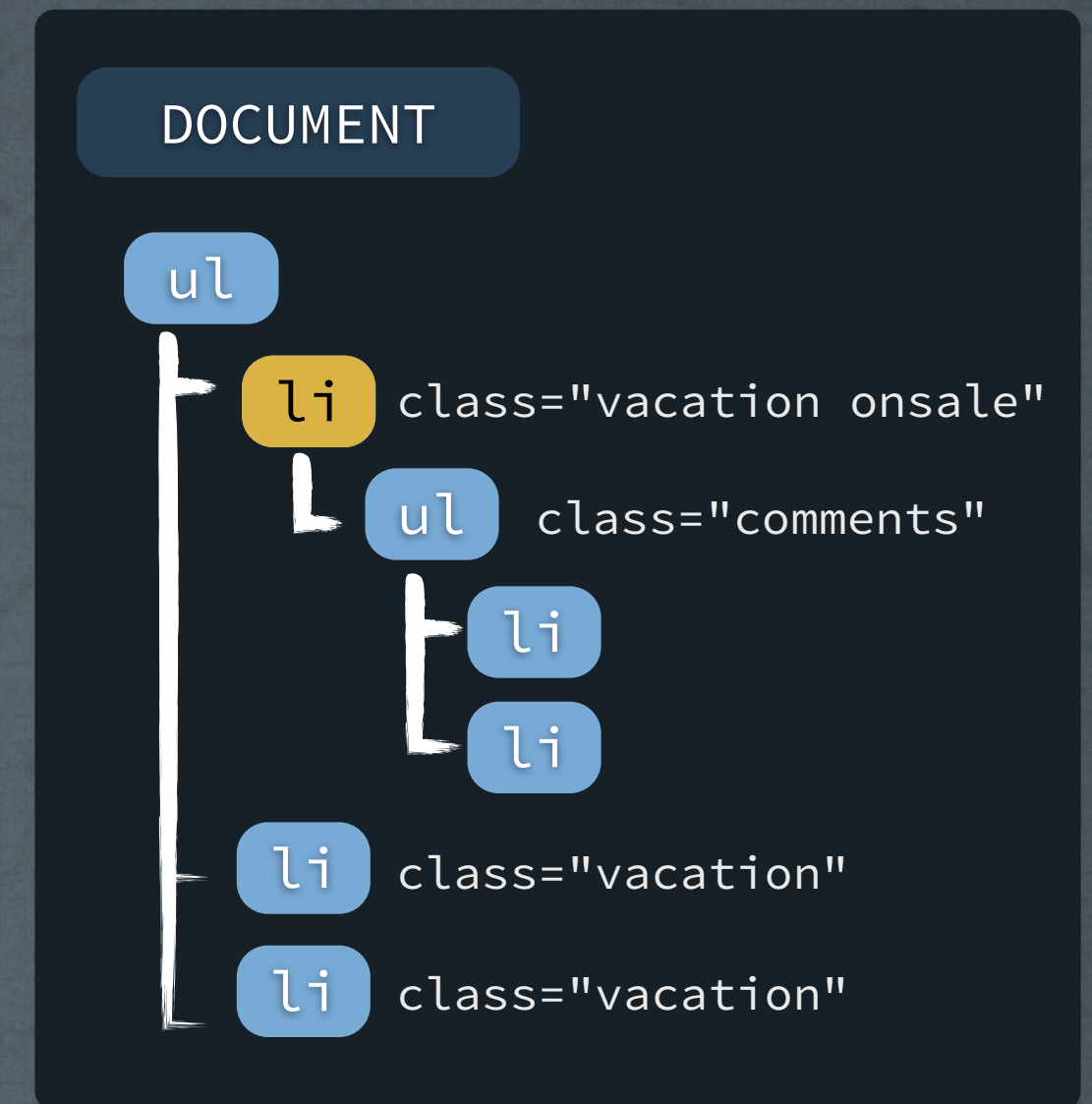
application.js

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

`$('.vacation.onsale')` 

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

*Finds elements with a class  
of **.vacation** and **.onsale***



## 3.4 Traversing & Filtering

# Filtering for Vacations On sale

application.js

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

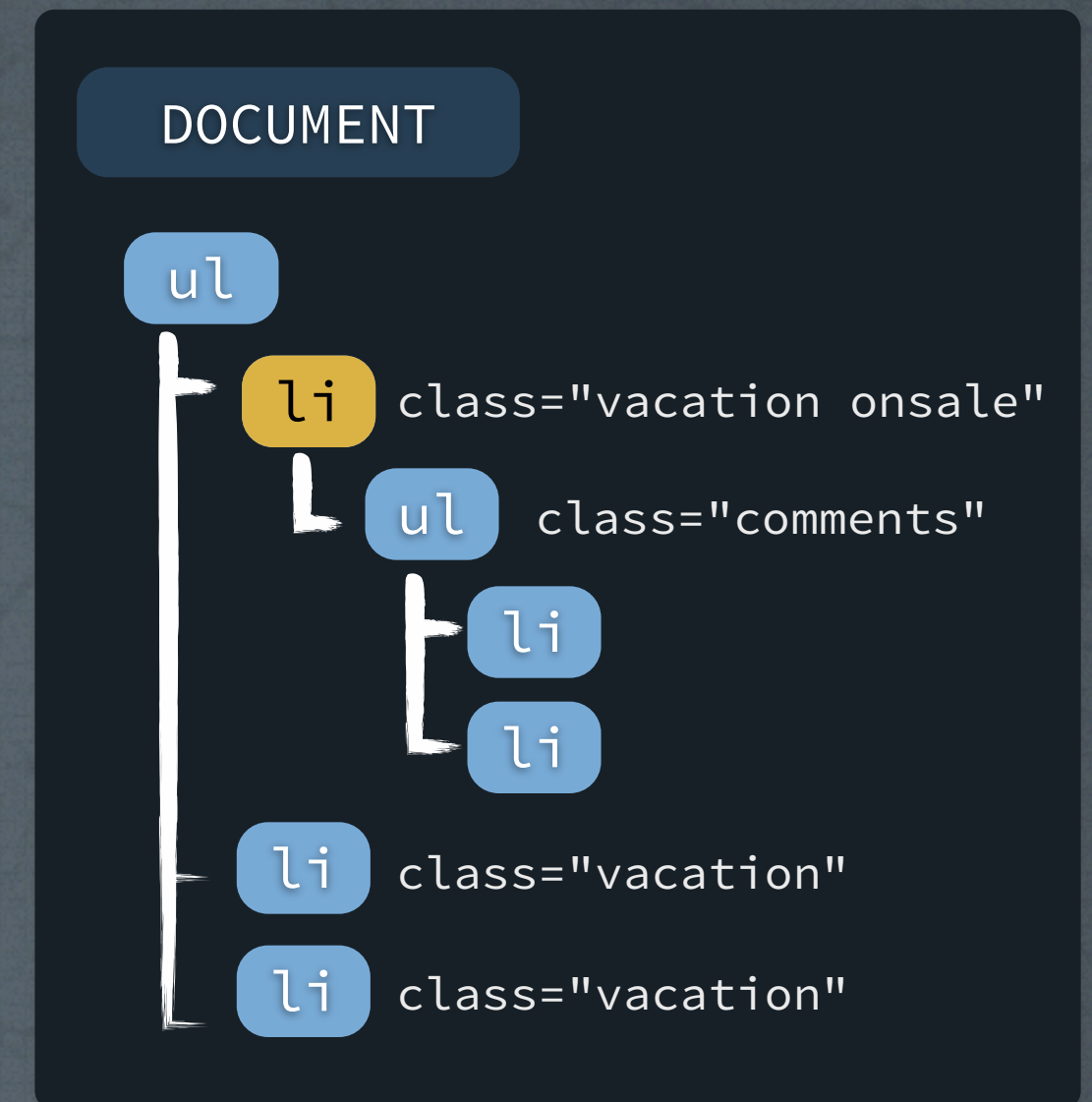
## Class Manipulation

.addClass(<class>)



.removeClass(<class>)

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



# 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');  
});
```



Rendered HTML:

# 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*

Rendered HTML:

# 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*

# 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*



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**

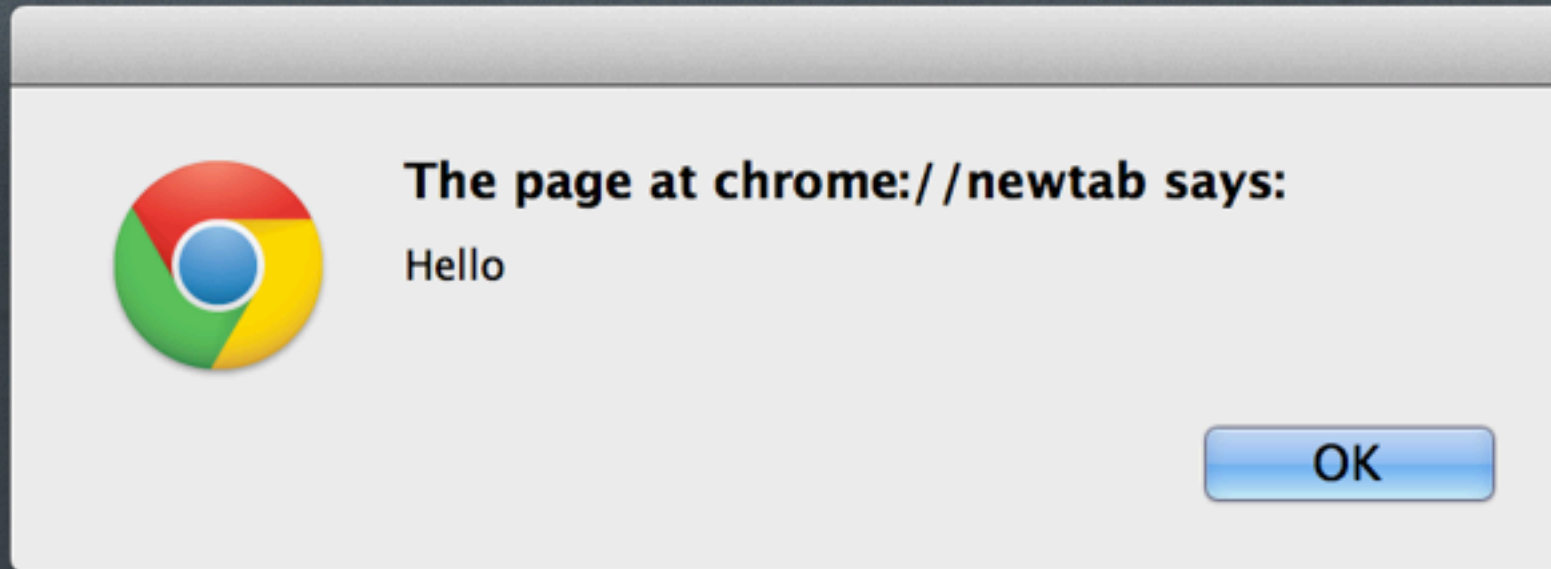


**Call us at 555-25937 to make a reservation today!**

*Why doesn't the button work?*

# Alert and Length

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



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

↳ 3

To query how many nodes are on a page.

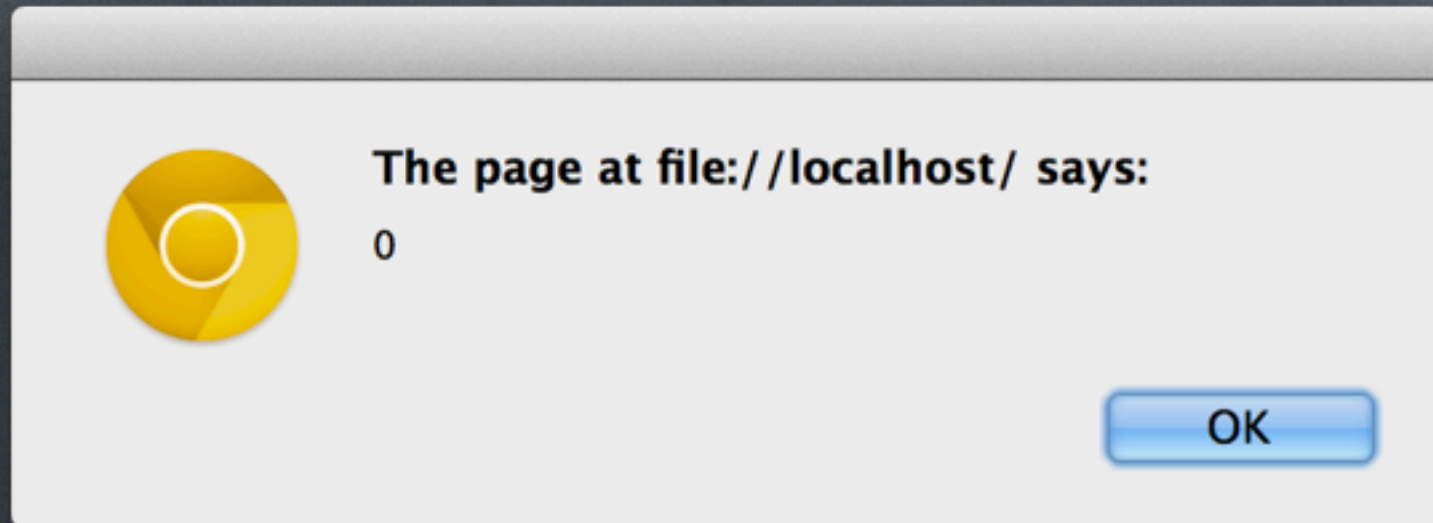
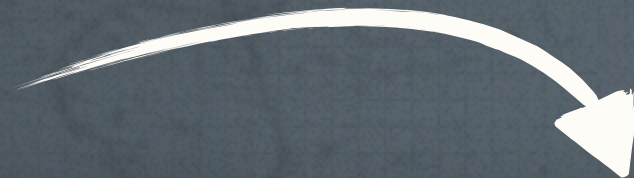
# Debugging with Alert

application.js

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



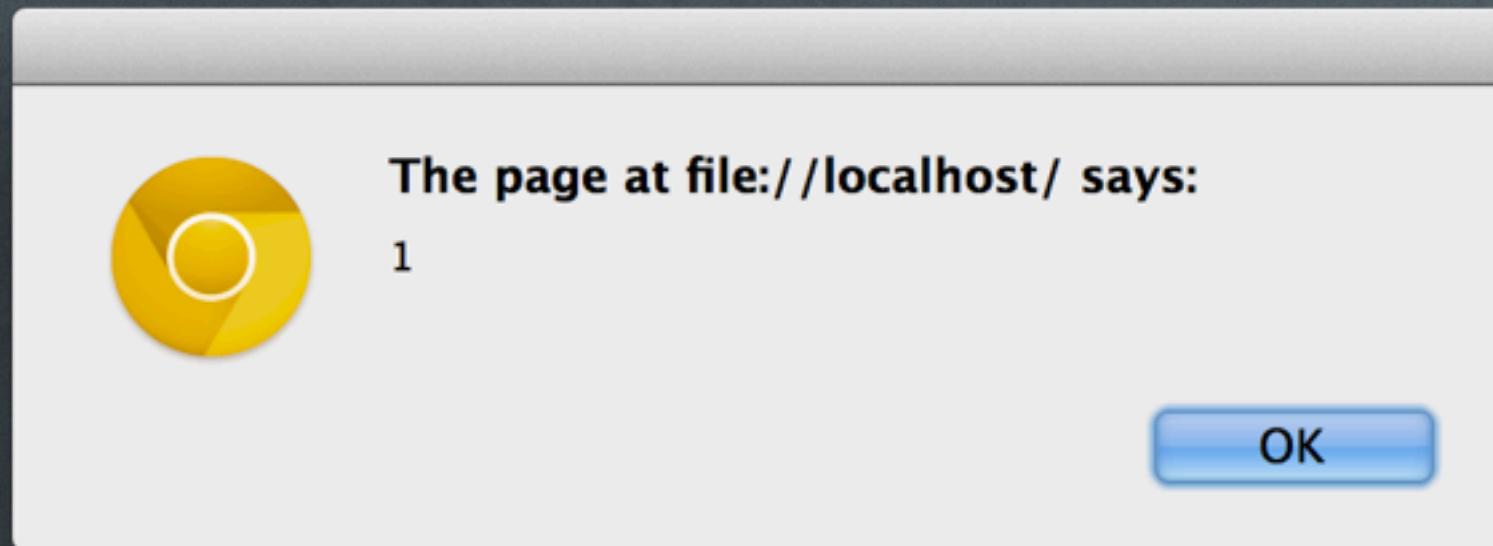
*The alert dialog*



# 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

## 4.2 Expanding on on()

# 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*

## 4.2 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!

*We have two ways of showing the ticket now*

# 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*

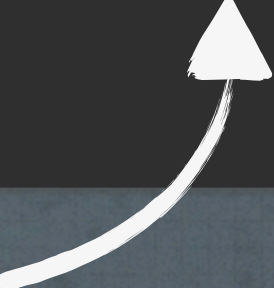
```
function showTicket () {  
  $(this).closest('confirmation').find('ticket').slideDown();  
}
```

## 4.2 Expanding on on()

# 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*


## 4.2 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!**

*Now the exact same code is run for both events*



# Keyboard Events

# jQuery Travels - Trip Planner

## Packages

### Hawaiian Vacation

\$399.99 per ticket

Tickets:

Total Price: \$399.99

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

*Changing this "Tickets" input field should recalculate the total*

# 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*

## 4.3 Keyboard Events

# Keyboard and Form Events

application.js

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

Which event should we use?

## 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/>

## 4.3 Keyboard Events

# Writing our Event Handler

## application.js

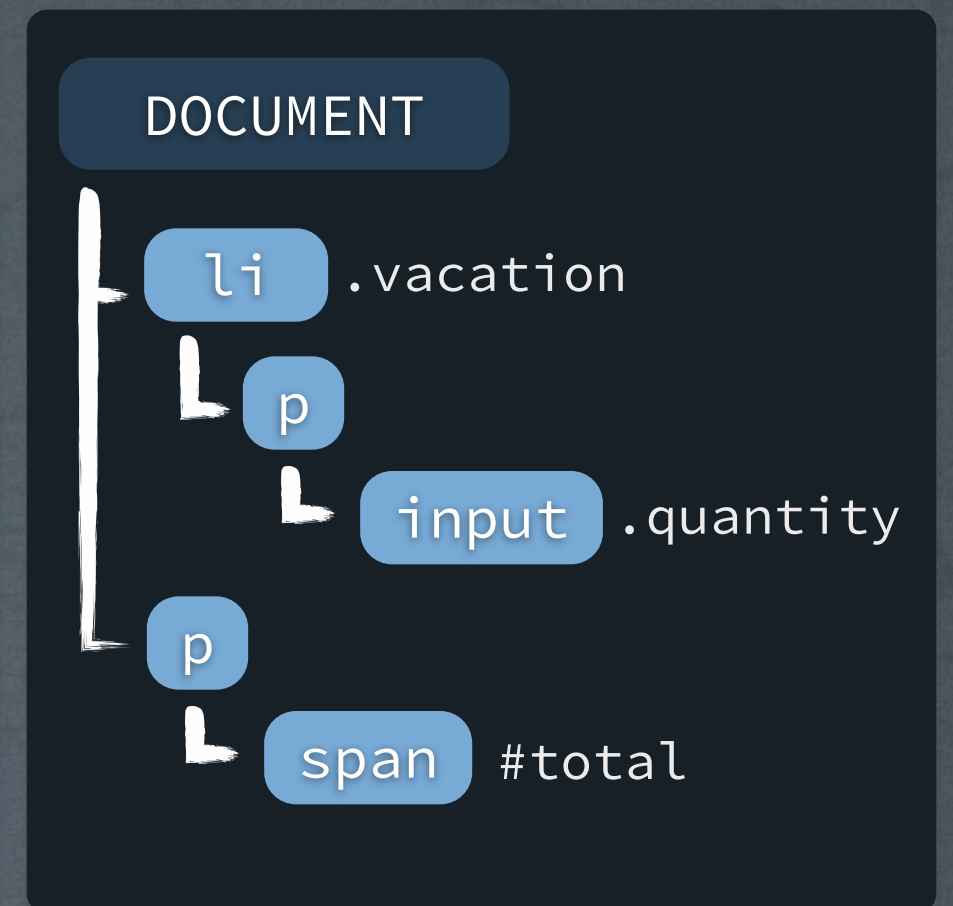
```
$(document).ready(function() {  
  $('.vacation').on('keyup', '.quantity', function() {  
    // Get the price for this vacation  
    // Get the quantity entered  
    // Set the total to price * quantity  
  });  
});
```

```
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*



# 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

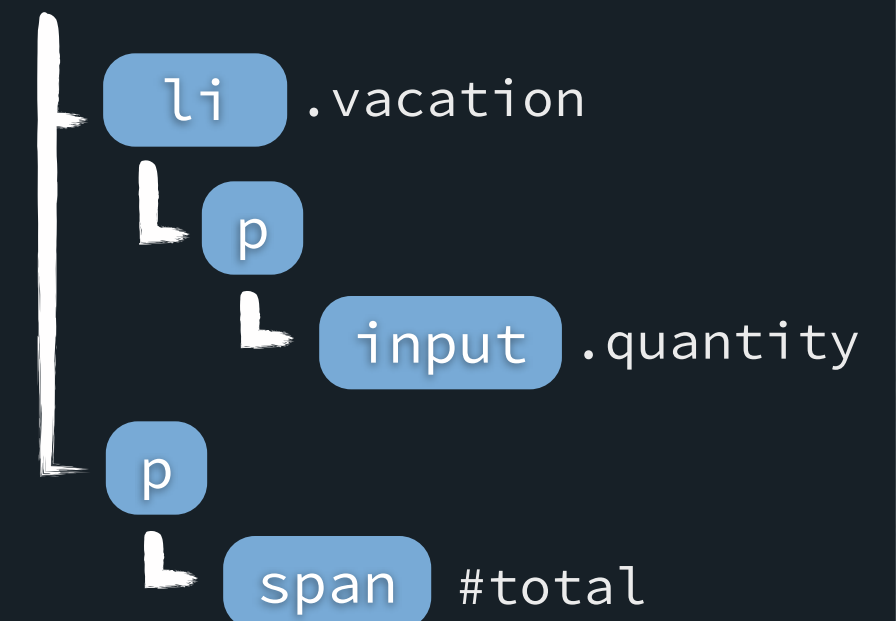
```
var quantity = +$(this).val();
```

```
↳ 2
```



Sets quantity to a number

DOCUMENT



## jQuery Object Methods

.val(<new value>)

.val()

# Setting the Total Price

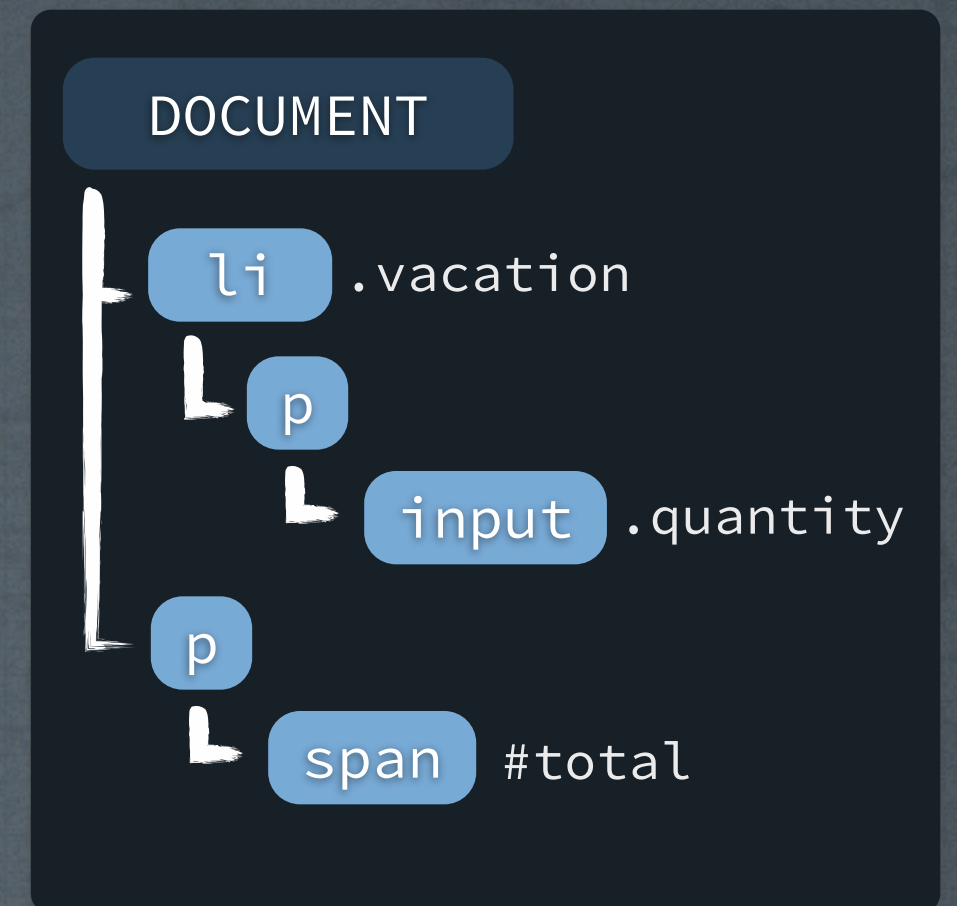
application.js

```
$(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*



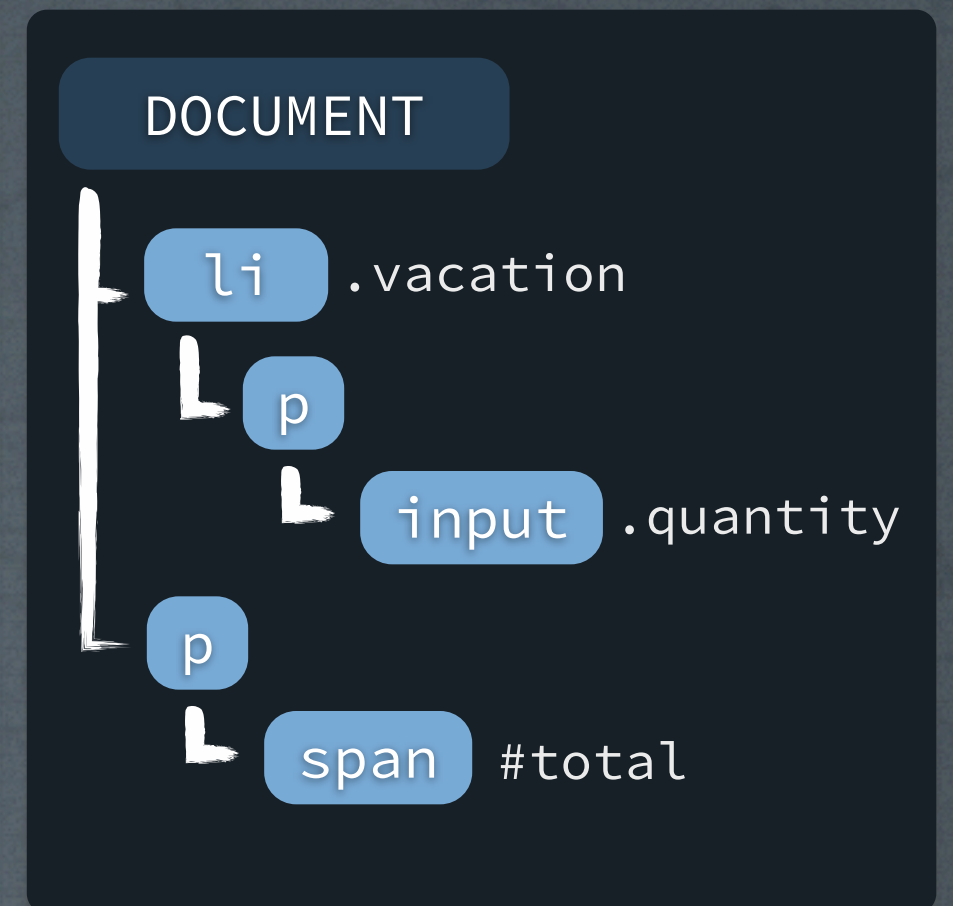


# The Completed Event Handler

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:



*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](#)



European Getaway

GET PRICE

Visit Japan

GET PRICE

[Show Comments](#)

Orlando

GET PRICE

Denver

GET PRICE

Portland

GET PRICE

[Show Comments](#)

# Preparing for Flight

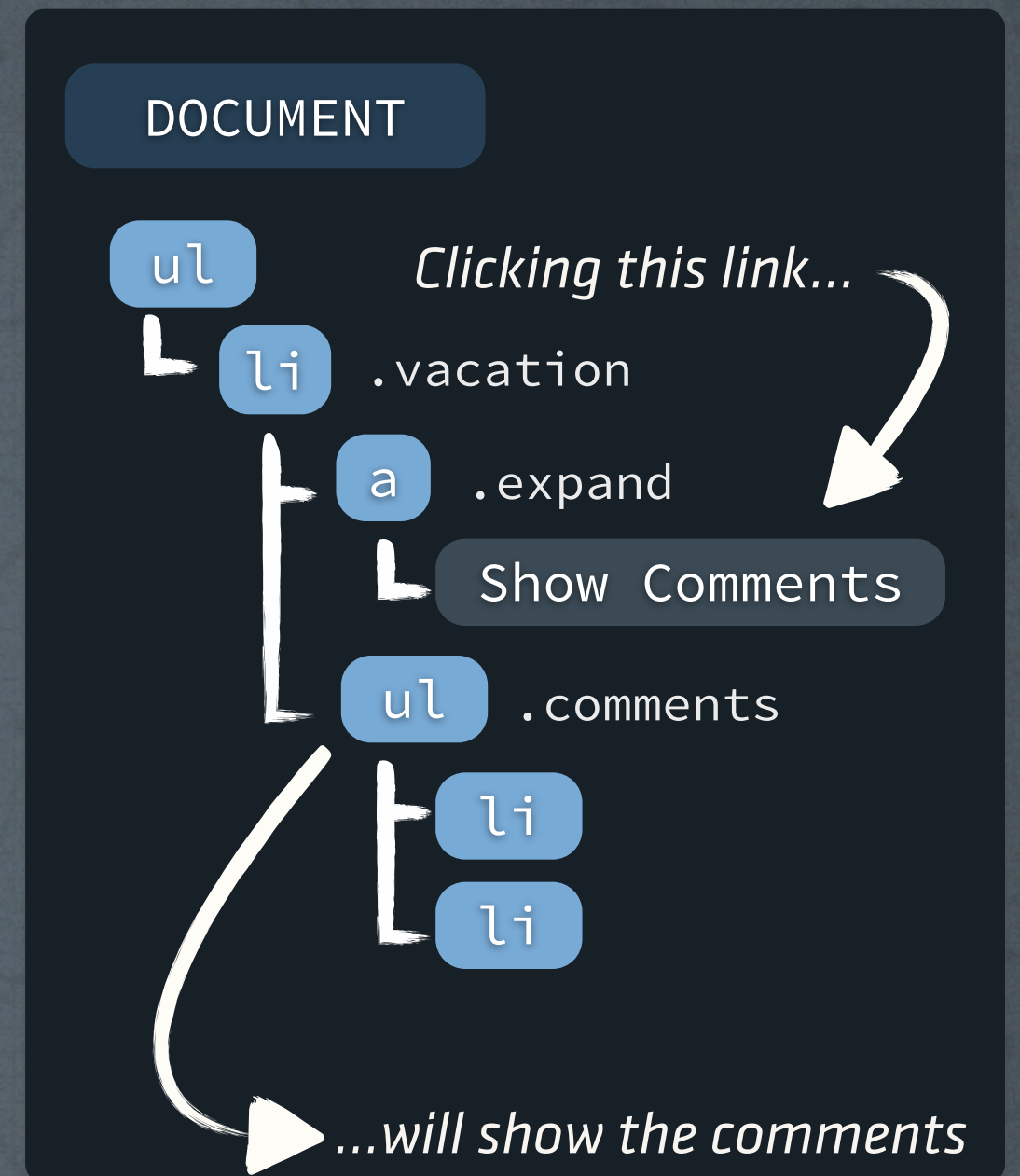
## application.css

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

## application.js

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

*We need to write the event handler*



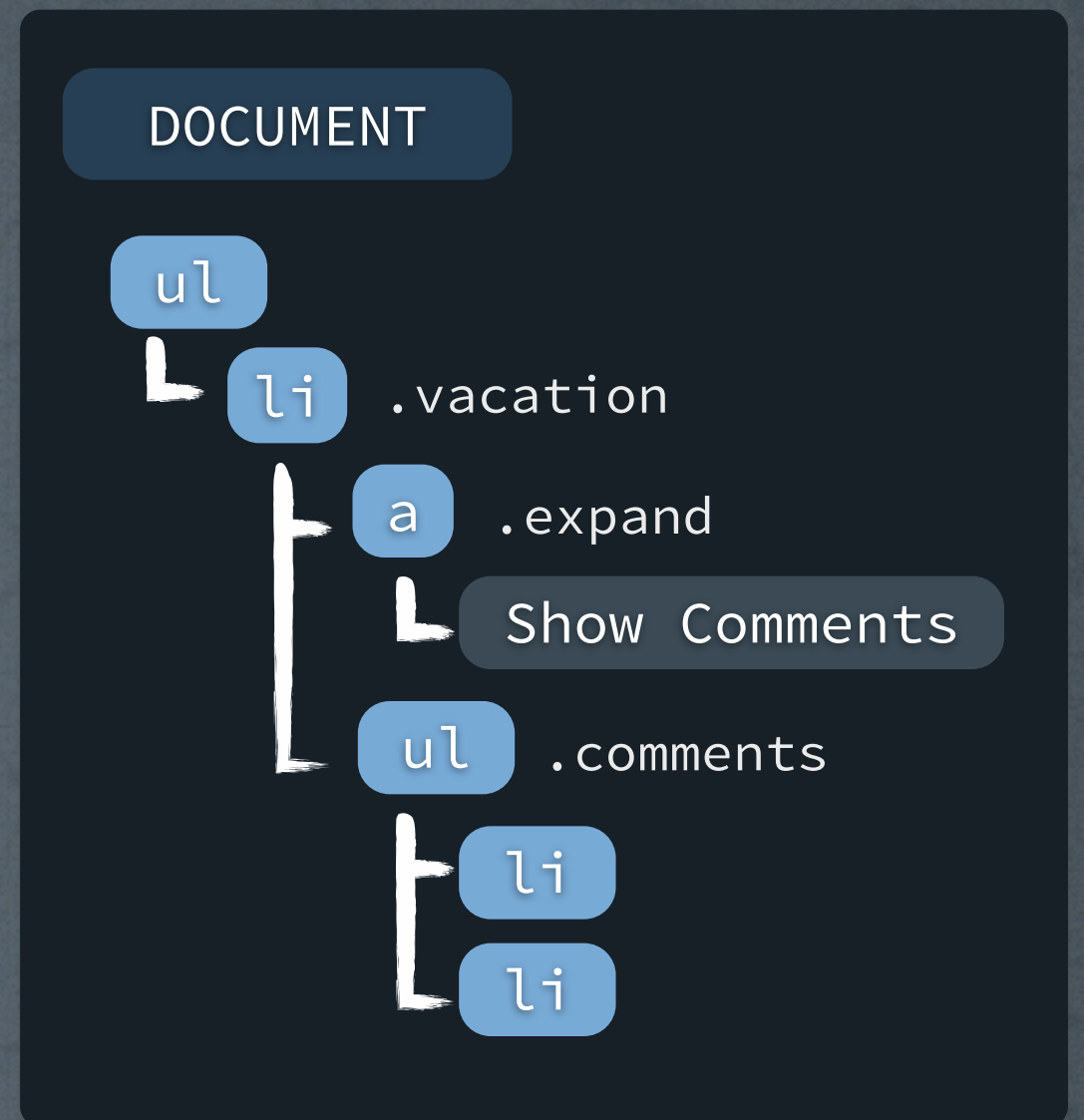
# Preparing for Flight

application.js

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

```
$(this).closest('<strong>.vacation</strong>').find('<strong>.comments</strong>')
```

*Find the .comments ul using traversing*



# Preparing for Flight

application.js

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

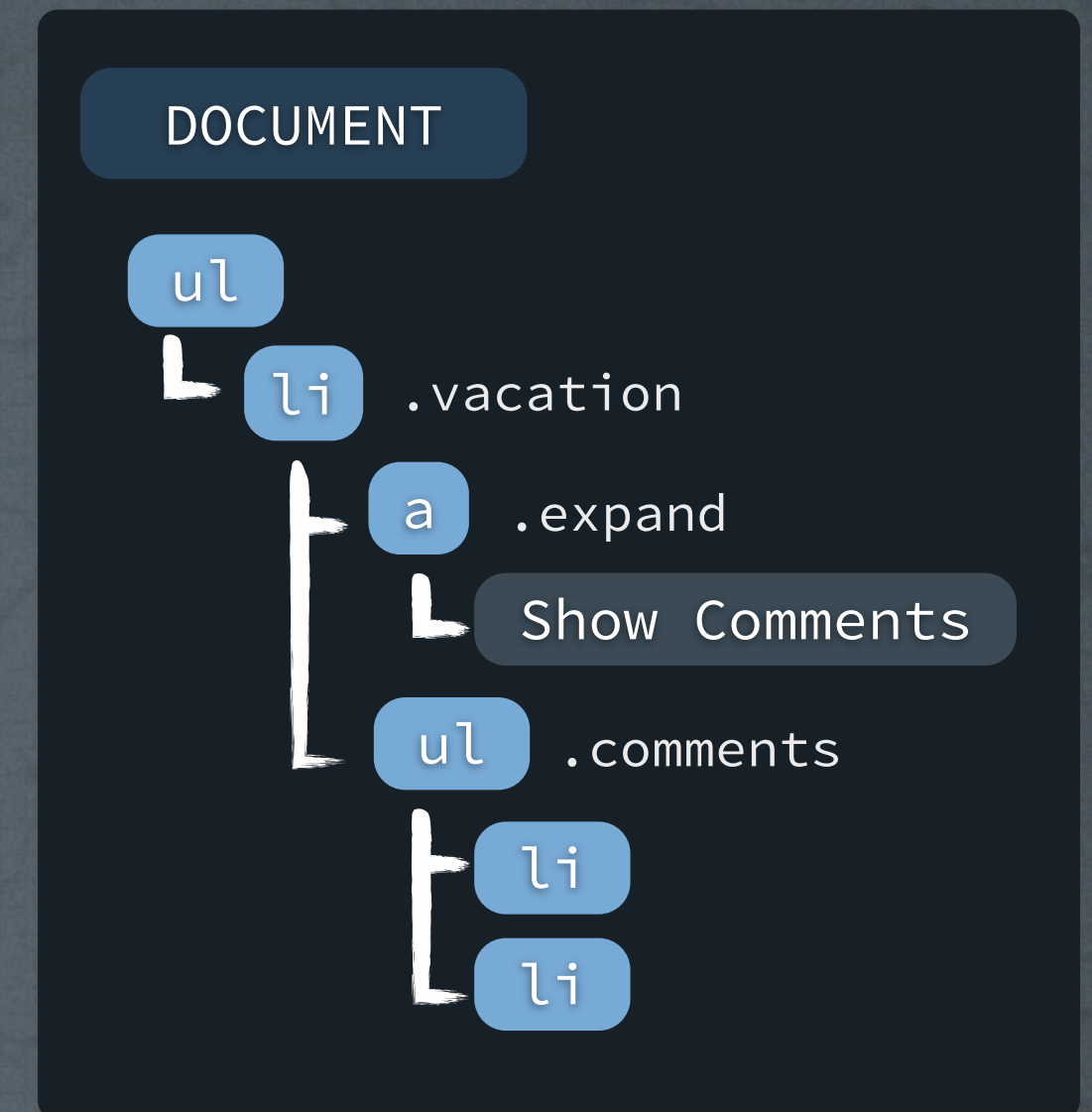
## jQuery Object Methods

.fadeIn()

.fadeOut()

.fadeToggle()

*These are similar to the slide methods*



## 4.4 Link Layover

# Handling the Click

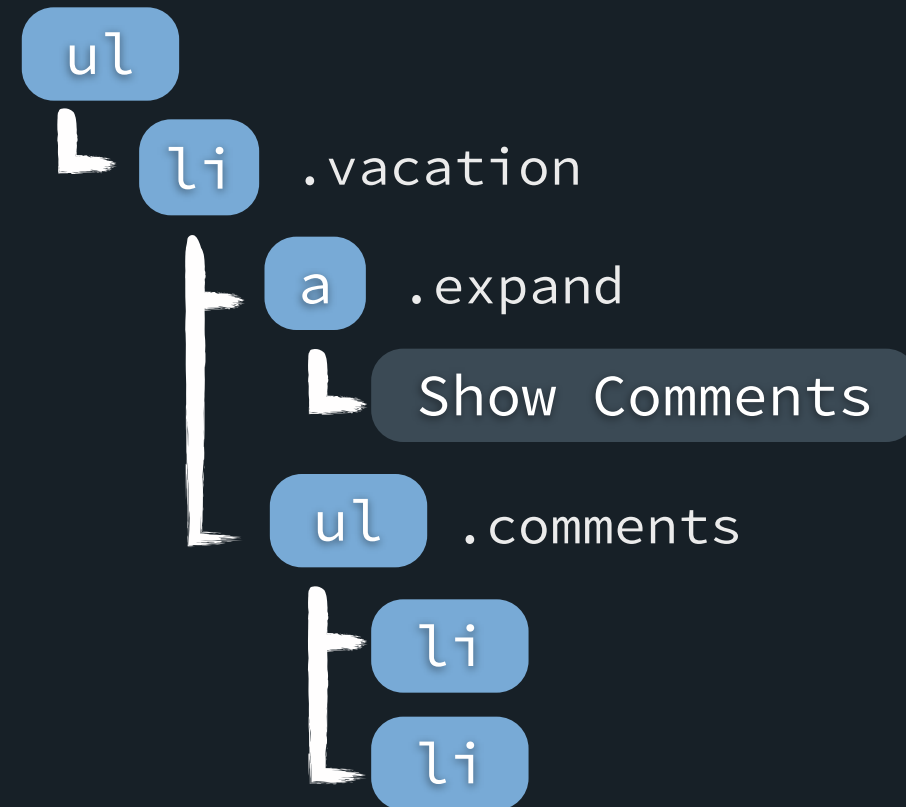
application.js

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



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

DOCUMENT





# jQuery Travels - Vacation Packages

**Packages** *Why does the page jump to the top?*

Hawaiian Vacation

GET PRICE

[Show Comments](#)



European Getaway

GET PRICE

Visit Japan

GET PRICE

[Show Comments](#)

Orlando

GET PRICE

Denver

GET PRICE

Portland

GET PRICE

[Show Comments](#)

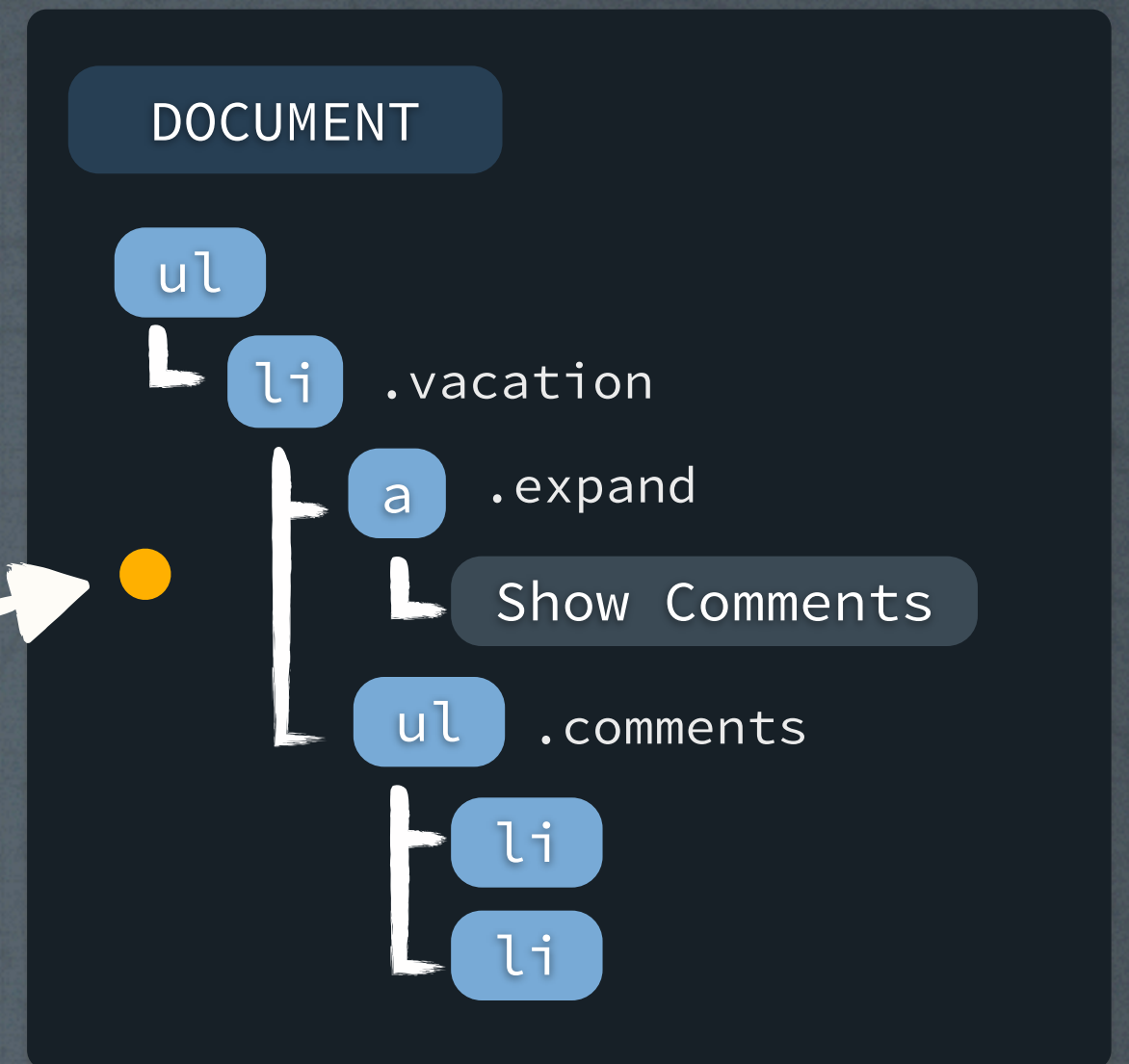
# How the Browser Handles the Click

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*



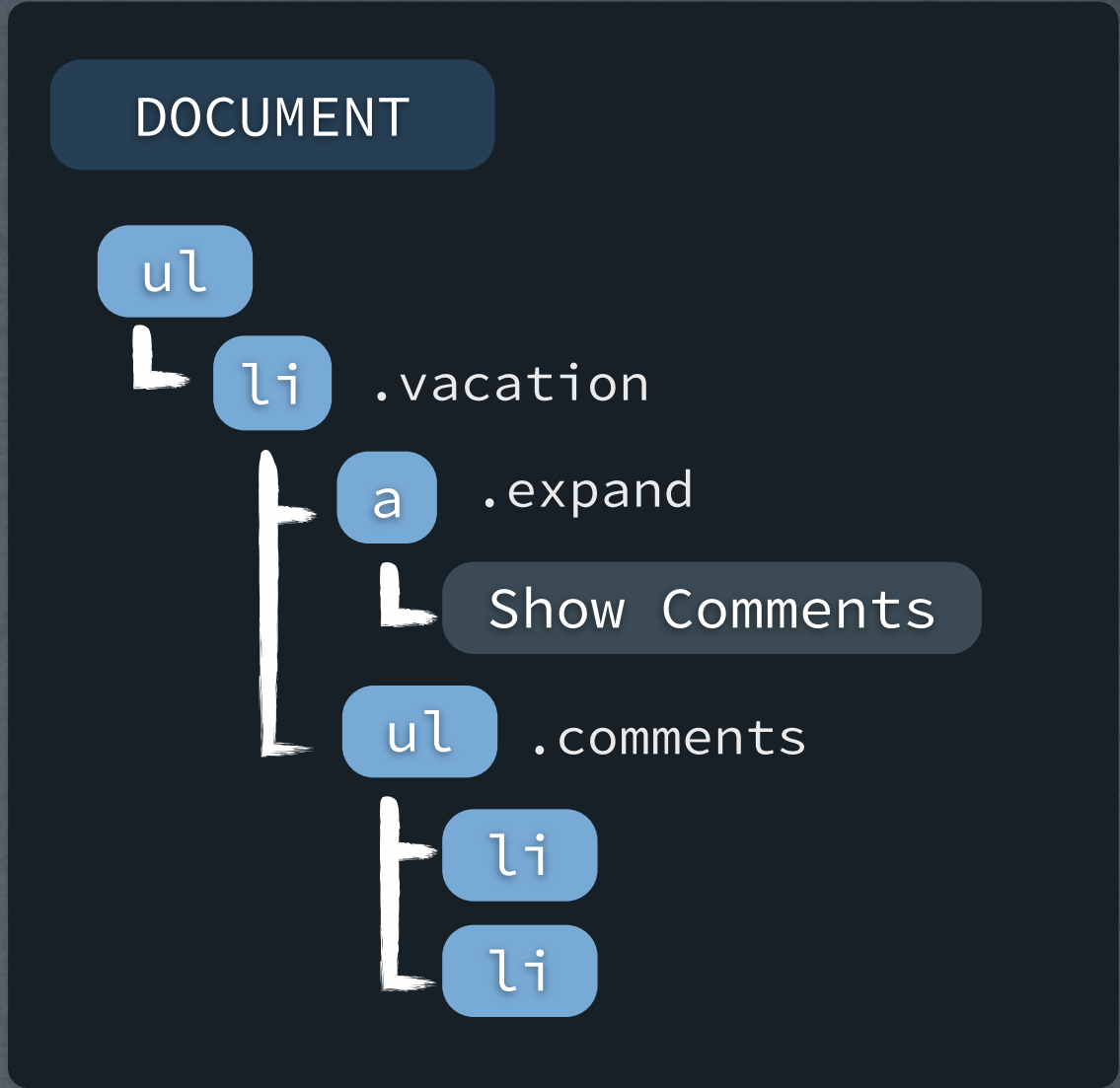
# The Event Object

application.js

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



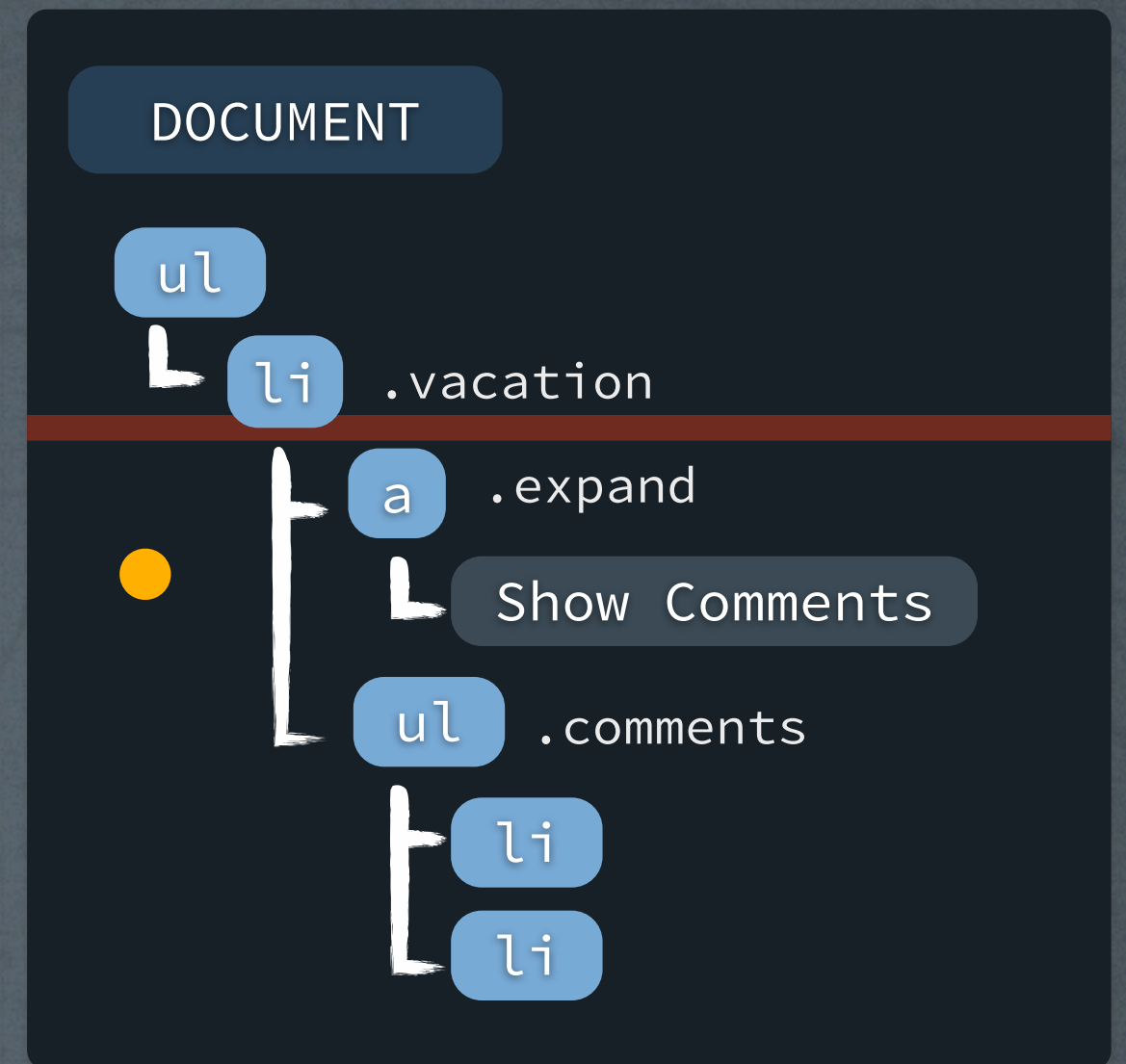
▶ Add the event parameter



# event.stopPropagation()

application.js

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

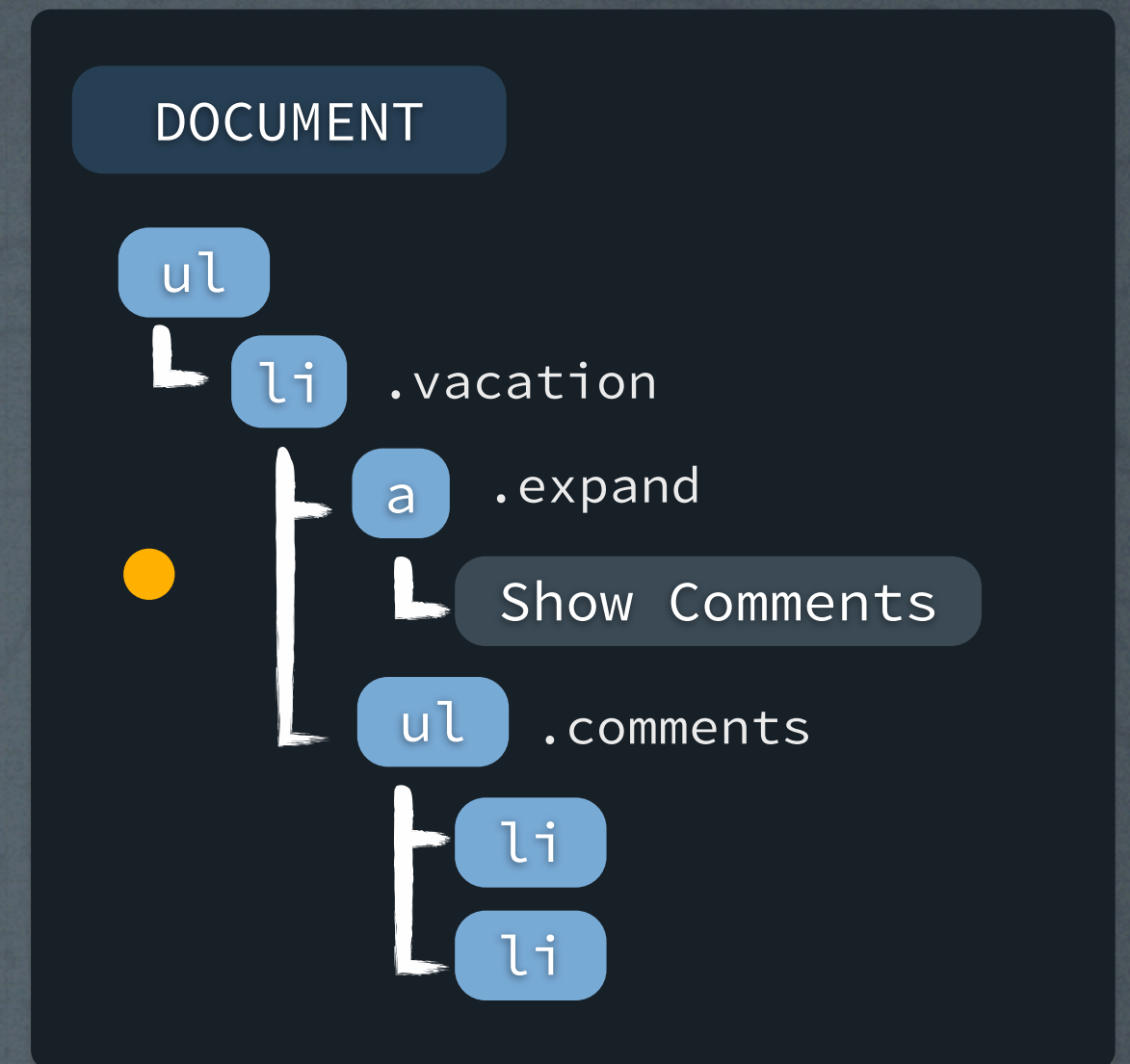


*The browser will still handle the click event but will prevent it from “bubbling up” to each parent node.*

# event.preventDefault()

application.js

```
$(document).ready(function() {  
  $('<code>.vacation</code>').on('click', '<code>.expand</code>',  
    function(event) {  
      event.preventDefault();  
      $(this).closest('<code>.vacation</code>')  
        .find('<code>.comments</code>')  
        .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](#)

European Getaway

GET PRICE

Visit Japan

GET PRICE

[Show Comments](#)

Orlando

GET PRICE

Denver

GET PRICE

Portland

GET PRICE

[Show Comments](#)

# level 5



# Taming CSS




# Separation of Concerns

**HTML**  
*content*

**CSS**  
*style*

**JavaScript**  
*behavior*

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



The diagram illustrates the separation of concerns in web development. It lists three technologies: HTML (content), CSS (style), and JavaScript (behavior). A question, "To style something based on user interaction, which would we use?", is posed. Two blue arrows originate from this question: one points to CSS and the other points to JavaScript, indicating that both are used for styling based on user interaction.

# 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

DOCUMENT

div #vacations

ul

li .vacation

p .price

...and allow people to click on the `<li>` 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

└─ ul

└─ li .vacation

└─ 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*

# 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

*Can we move these to a CSS stylesheet?*

## application.css

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



```
$(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

DOCUMENT

div #vacations

└─ ul

└─ li .vacation

└─ p .price



# 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*

# 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?*

# 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'});
```



## DOM representation

DOCUMENT

div #vacations



ul



li

.vacation



p

.price

## 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*



# 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  
}
```

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

## DOM representation

DOCUMENT

div #vacations



ul



li .vacation



p .price

# 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



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'});  
    }  
  });  
});
```



*Our vacation package will move up and down*

DOM representation



# 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.*

# 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*

# 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



*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;  
}
```



*Will only work with browsers that implement **CSS transitions***

## DOM representation

DOCUMENT

div #vacations

└─ ul

└─ li .vacation

└─ p .price

# 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;  
}
```



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

## DOM representation

DOCUMENT

div #vacations



ul



li

.vacation



p

.price

# 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*