

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!"

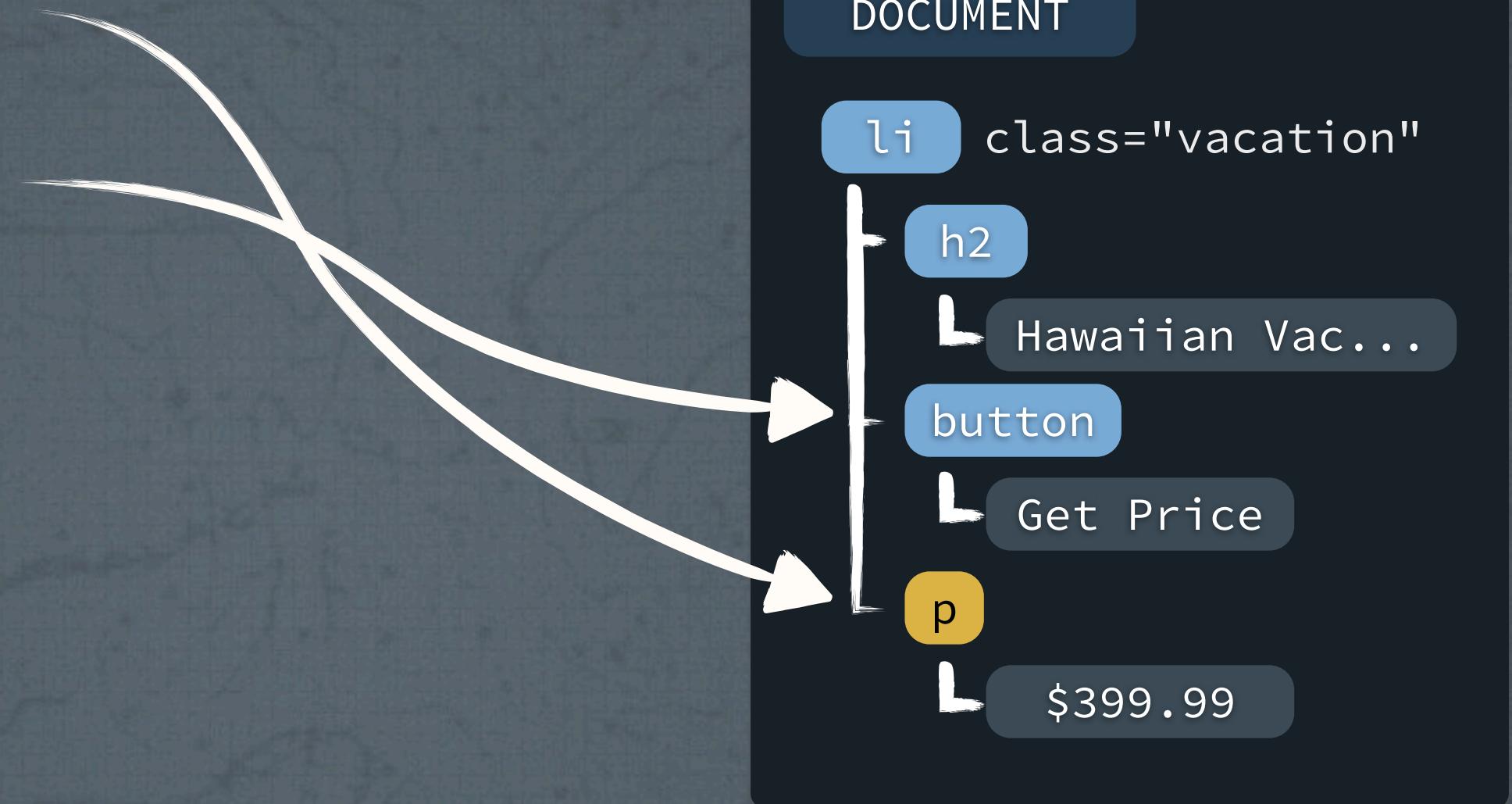
GET PRICE

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

');
```

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

DOCUMENT

li class="vacation"

h2

L Hawaiian Vac...

button

L Get Price

Price node (not in the DOM yet)

p

L \$399.99

Appending to the DOM

application.js

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

From $399.99

');  
});
```

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

\$399.99

Before

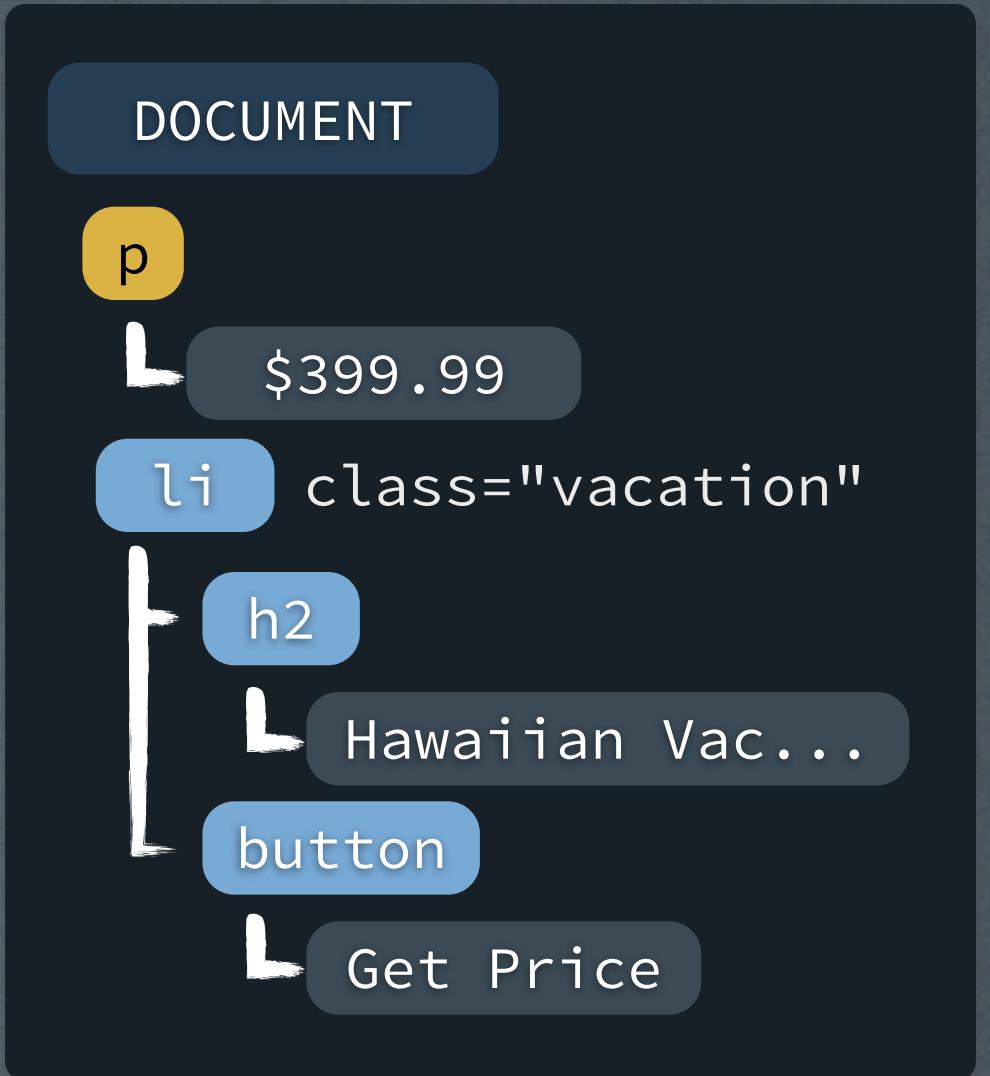
application.js

```
$(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

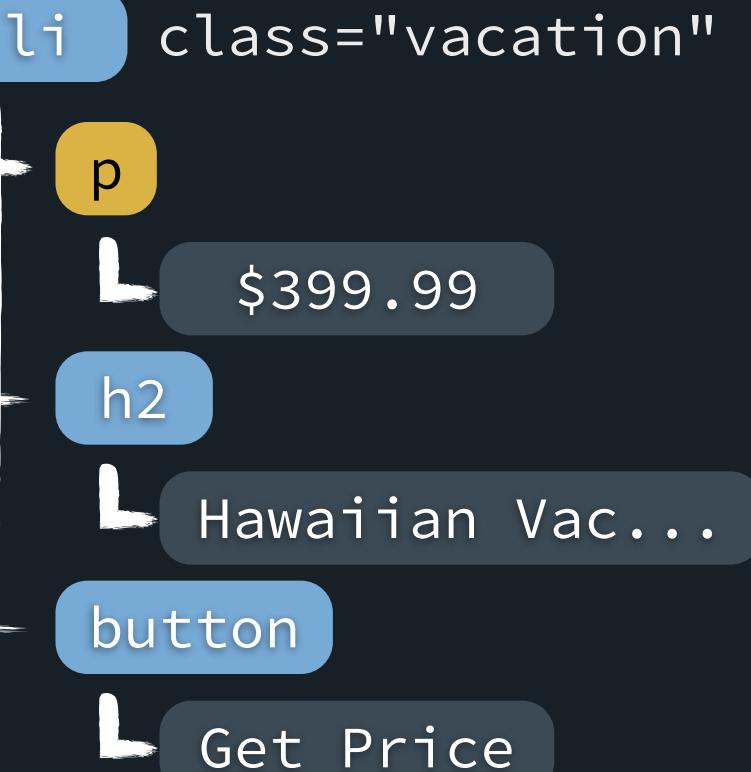
```
$(document).ready(function() {  
  var price = $('

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 = $('

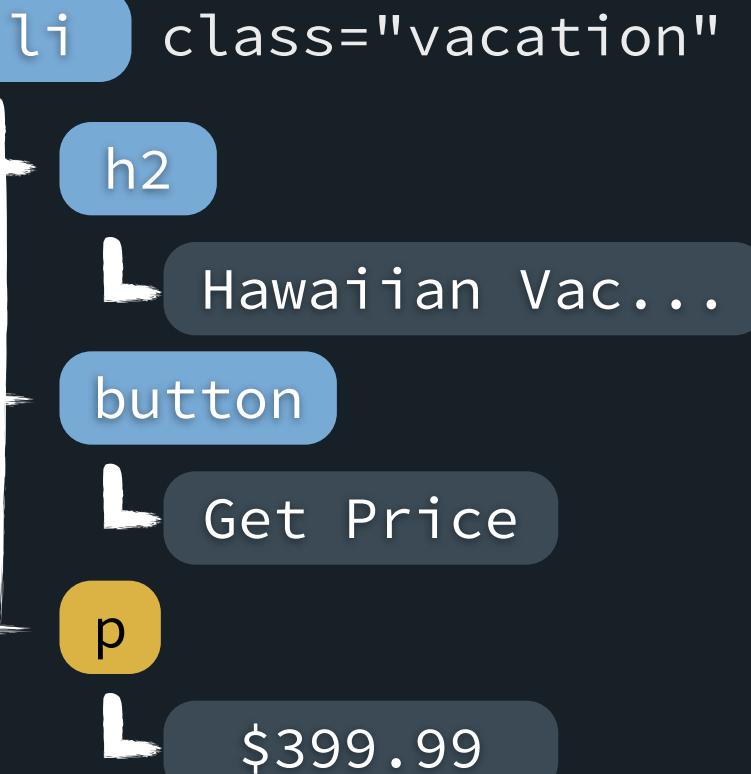
From $399.99</p>');  
  $('.vacation').append(price);  
});


```

Puts the price node at the bottom of .vacation



DOCUMENT



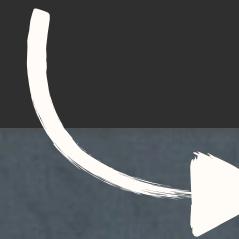
Removing from the DOM

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.

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  
    Get Price
```

jQuery Object Methods

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

Removing from the DOM

application.js

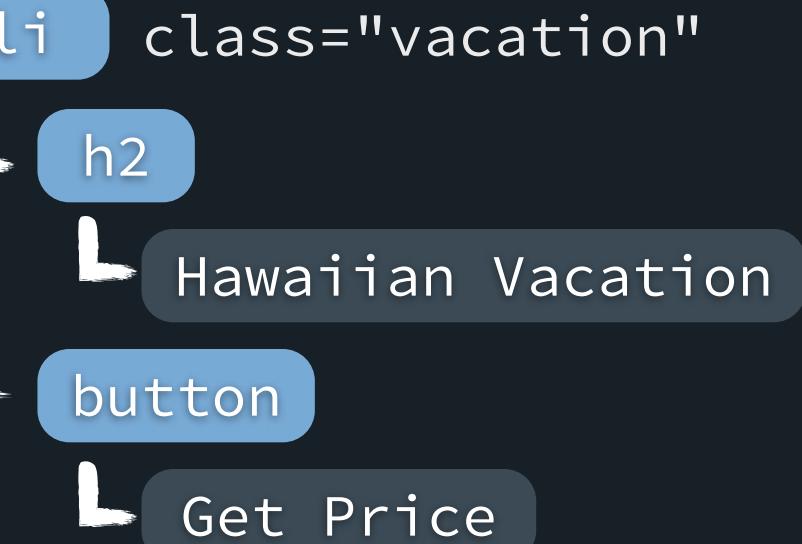
```
$(document).ready(function() {  
  $('button').on('click', function() {  
    // run this function on click  
  });  
});
```

runs when the DOM is ready



runs when a button is clicked

DOCUMENT



Removing from the DOM

application.js

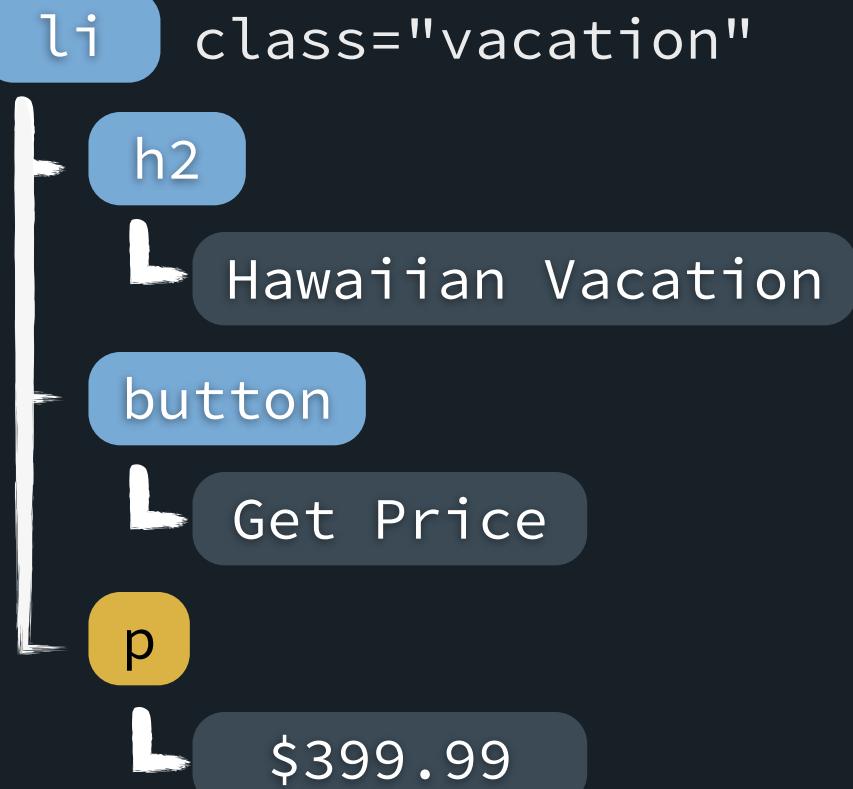
```
$(document).ready(function() {  
  $('button').on('click', function() {  
    var price = $('

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


```



DOCUMENT



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

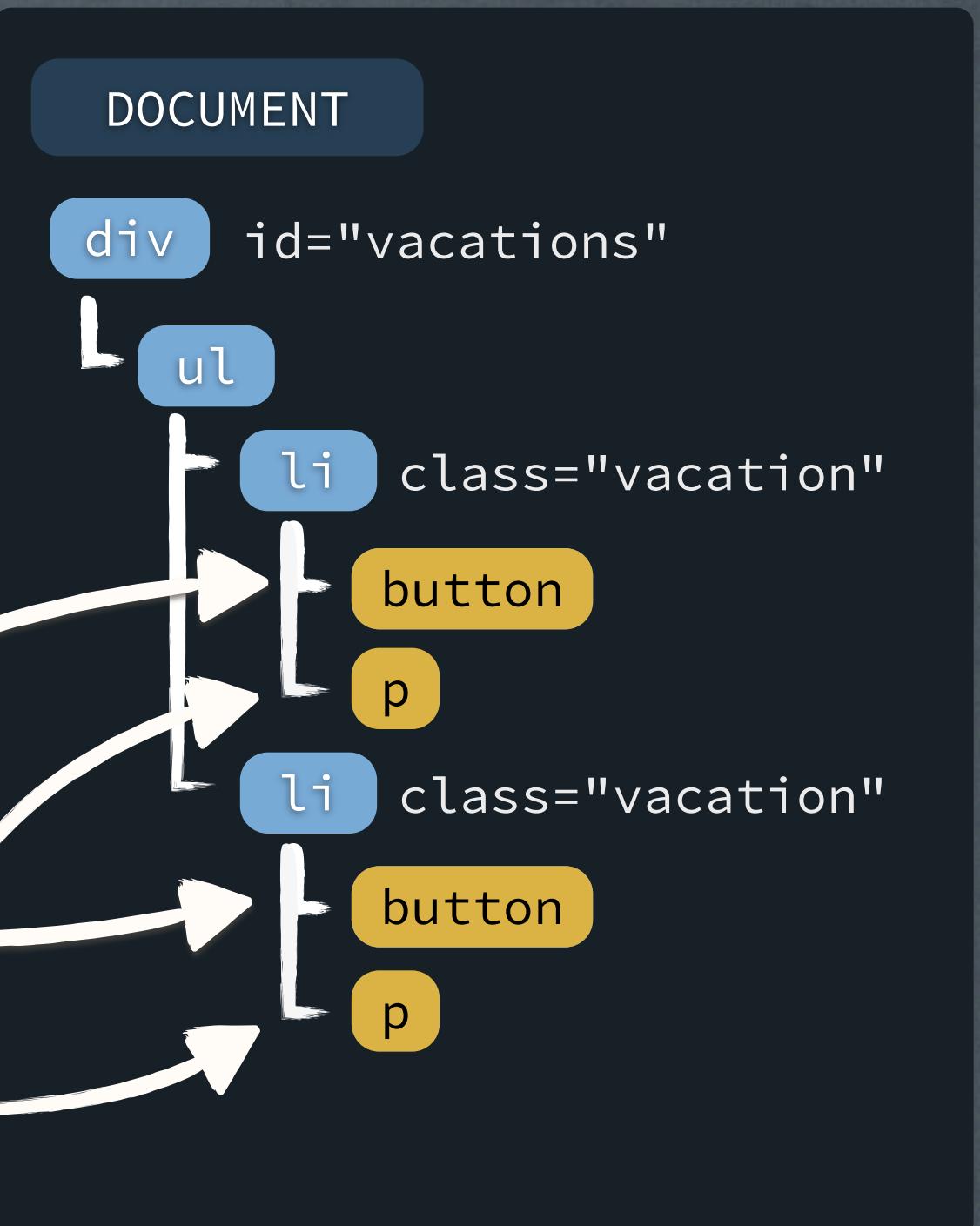
```
$(document).ready(function() {  
    $('button').on('click', function() {  
        var price = $('

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

TRYjQuery

Traversing from `$(this)`

application.js

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

From $399.99

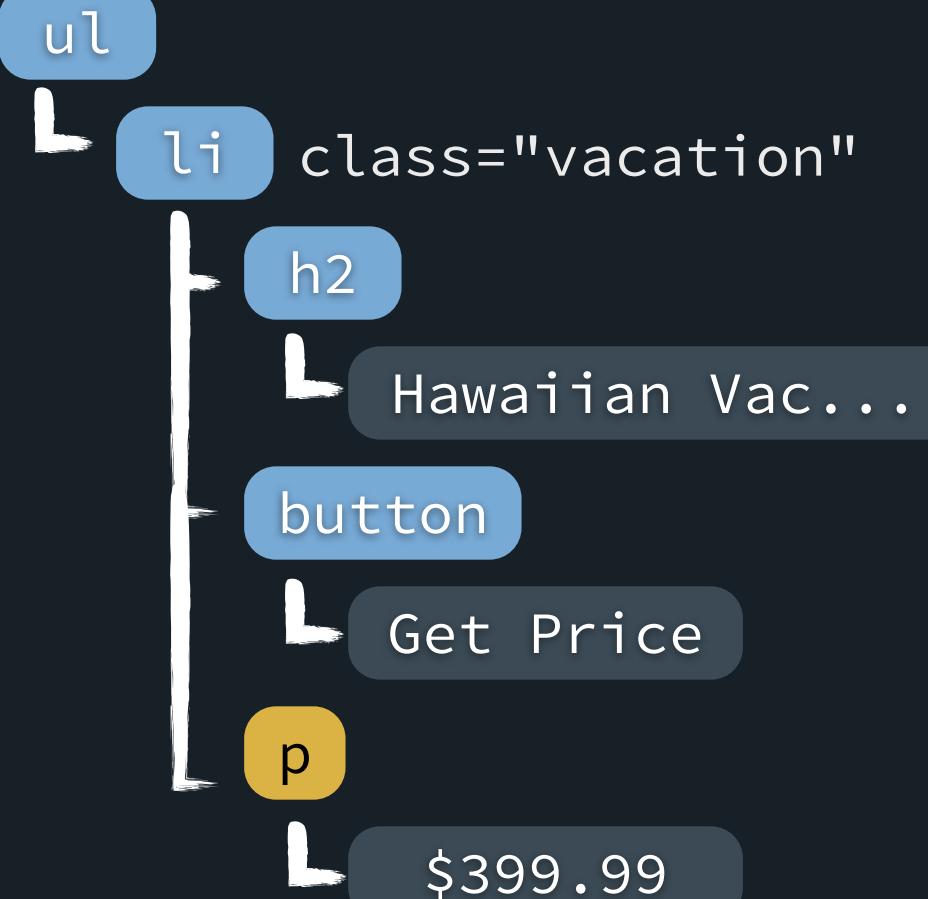
');
    $('.vacation').append(price);
    $(this).remove();
  });
});

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



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

DOCUMENT



Traversing from \$(this)

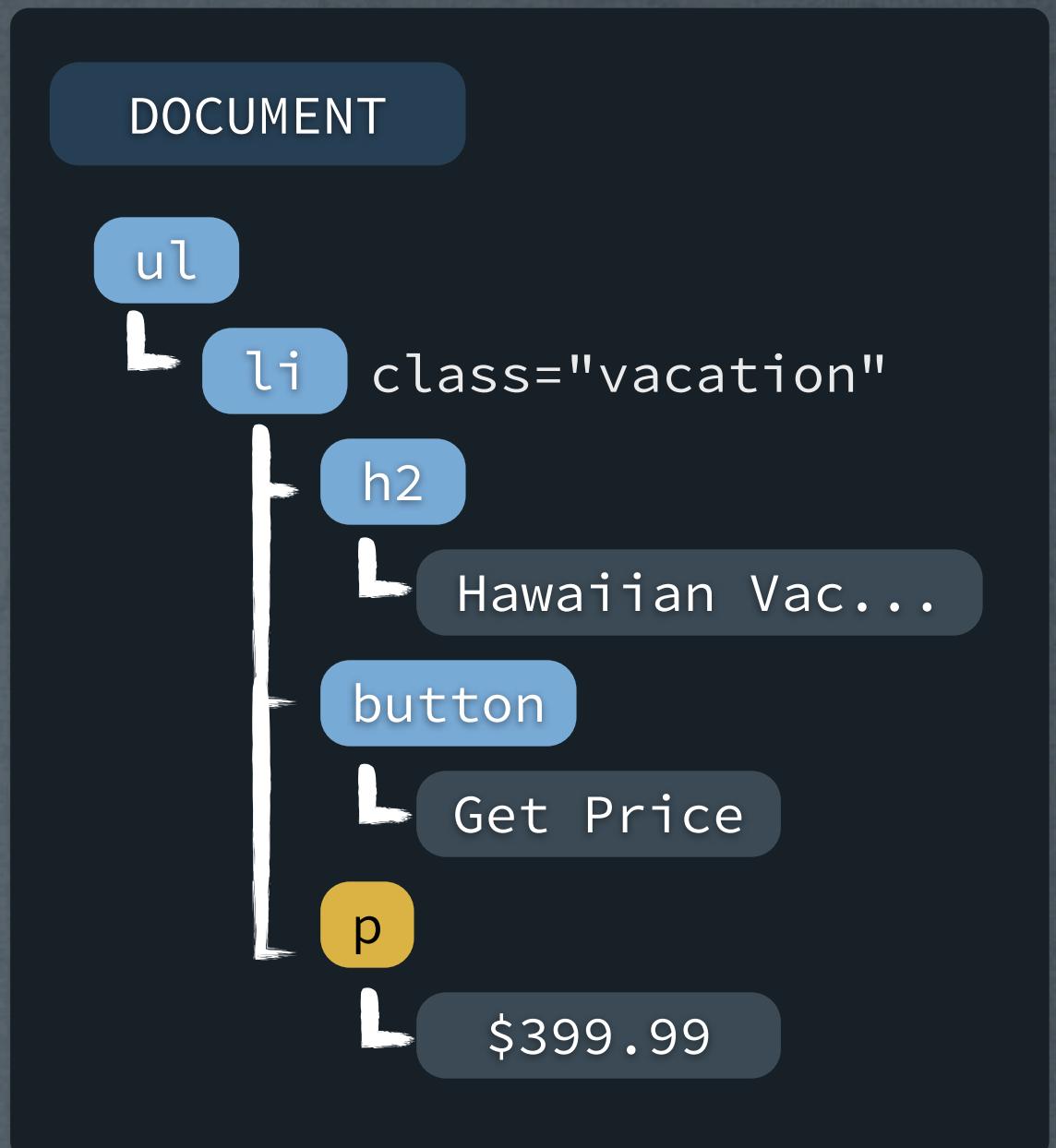
application.js

```
$(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



What if the button is moved?

application.js

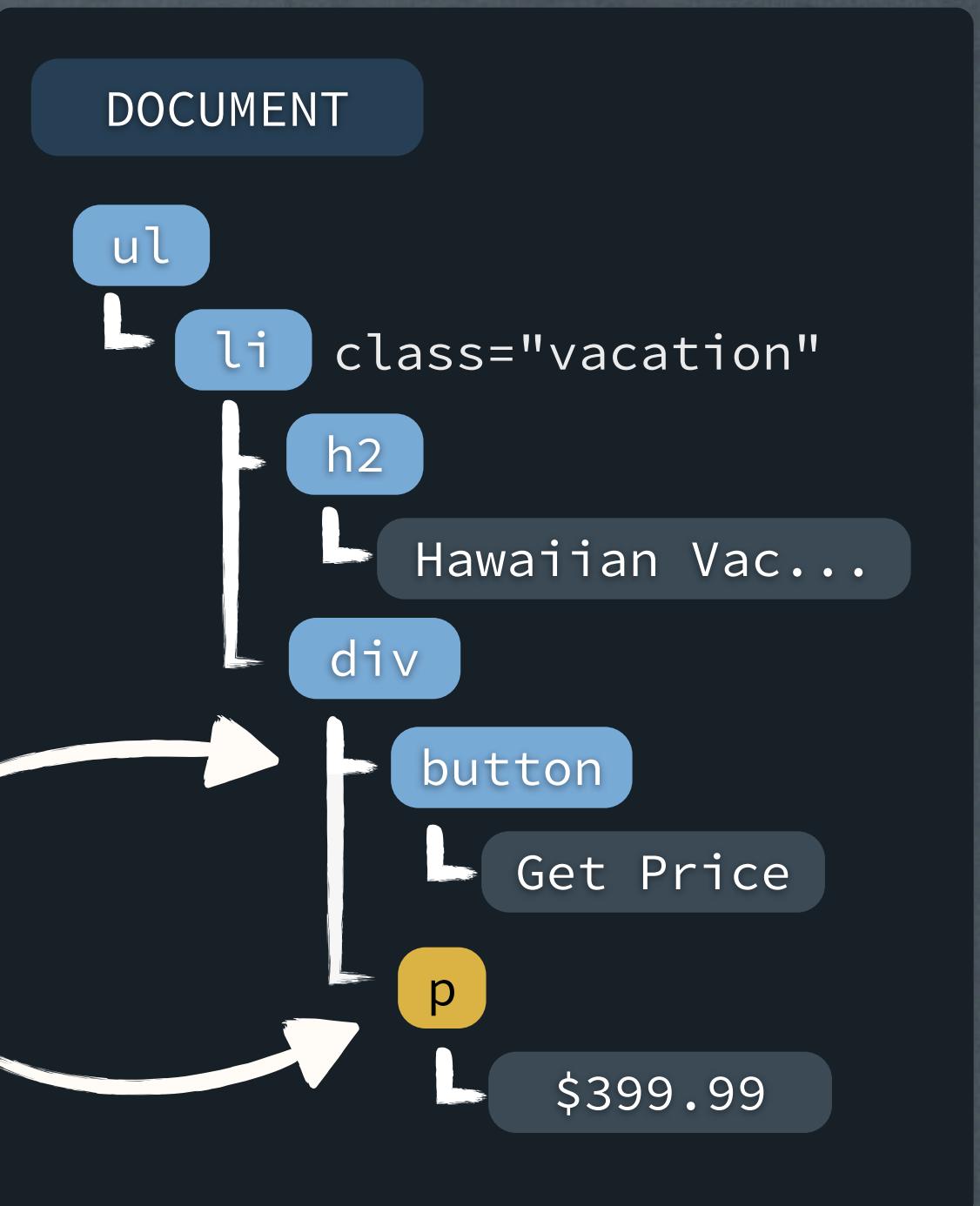
```
$(document).ready(function() {  
    $('button').on('click', function() {  
        var price = $('

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

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?

TRY **jQuery**

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');
```

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').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