

level 3

TRY **jQuery**



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!

3.1 Manipulating the DOM

TRYjQuery

Appending to the DOM

1 append a new DOM node

2 remove a DOM node

DOM representation of the document



3.1 Manipulating the DOM

TRYjQuery

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
```

3.1 Manipulating the DOM

TRY jQuery

Appending to the DOM

application.js

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

From $399.99

');  
});
```

ways to add this price node 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
```

3.1 Manipulating the DOM

TRY jQuery

Before

application.js

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

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


```

Puts the price node before .vacation



3.1 Manipulating the DOM

TRYjQuery

After

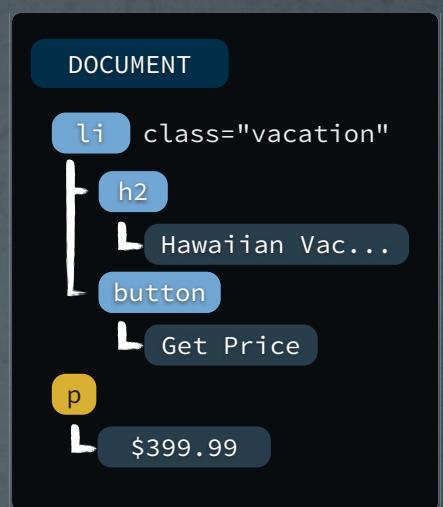
application.js

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

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


```

Puts the price node after .vacation



3.1 Manipulating the DOM

TRYjQuery

Prepend

application.js

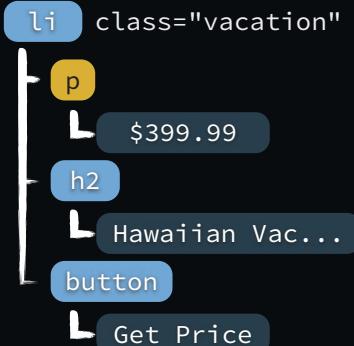
```
$(document).ready(function() {  
    var price = $('

From $399.99

');  
    $('.vacation').prepend(price);  
});
```

Adds the node to the top of .vacation

DOCUMENT



3.1 Manipulating the DOM

TRYjQuery

Prepend and Append

application.js

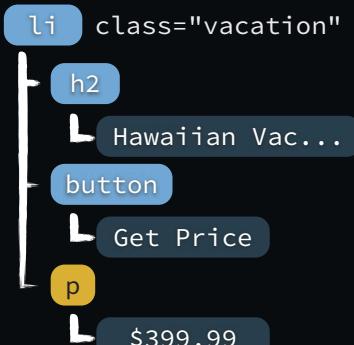
```
$(document).ready(function() {  
    var price = $('

From $399.99

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

Puts the price node at the bottom of .vacation

DOCUMENT



3.1 Manipulating the DOM

TRYjQuery

Removing from the DOM

application.js

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

From $399.99

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

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

DOCUMENT

```
li class="vacation"  
  h2 Hawaiian Vac...  
  button  
  p $399.99
```

3.1 Manipulating the DOM

TRY jQuery

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

TRY jQuery

Appending to the DOM

application.js

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

From $399.99

');  
  $('.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
 L Hawaiian Vac...
 button
 L Get Price

Price node (not in the DOM yet)

p
 \$399.99

3.1 Manipulating the DOM

TRY jQuery



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

TRY **jQuery**

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

TRY **jQuery**

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  
  L Hawaiian Vacation  
  button  
  L Get Price
```

jQuery Object Methods

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

3.2 Acting on Interaction

TRYjQuery

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  
  L Hawaiian Vacation  
  button  
  L Get Price
```

3.2 Acting on Interaction

TRYjQuery

Removing from the DOM

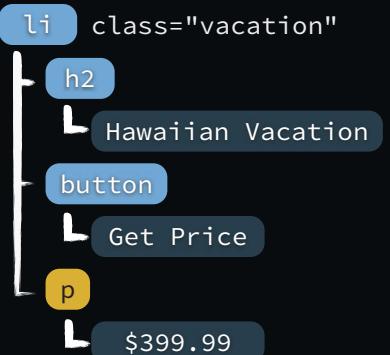
application.js

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

From $399.99

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

DOCUMENT



3.2 Acting on Interaction

TRY jQuery

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

TRY jQuery



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?

TRYjQuery

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

DOCUMENT

div id="vacations"

ul

li class="vacation"

button

p

li class="vacation"

button

p

The price will be appended to both .vacation elements

TRYjQuery

3.3 Refactor Using Traversing

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();
```

Not a jQuery object, needs to be converted

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



DOCUMENT

div id="vacations"

ul

li class="vacation"

button

p

li class="vacation"

button

p

3.3 Refactor Using Traversing

TRYjQuery

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

3.3 Refactor Using Traversing

TRY jQuery

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

TRY jQuery

Traversing from `$(this)`

application.js

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

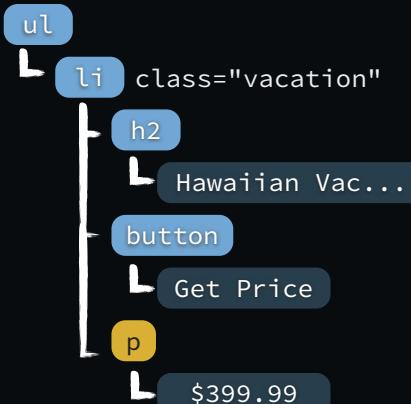
From $399.99

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

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

Adds the <p> node after the <button>

DOCUMENT



3.3 Refactor Using Traversing

TRYjQuery

Traversing from `$(this)`

application.js

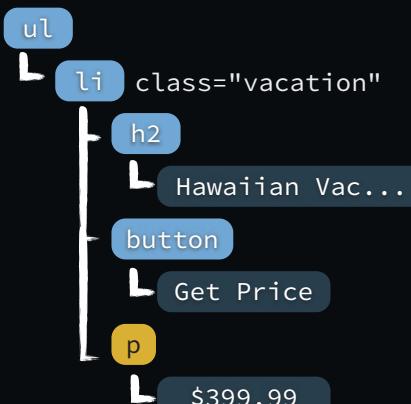
```
$(document).ready(function() {
  $('button').on('click', function() {
    var price = $('

From $399.99

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

Add the price as a sibling after button

DOCUMENT



3.3 Refactor Using Traversing

TRYjQuery

What if the button is moved?

application.js

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

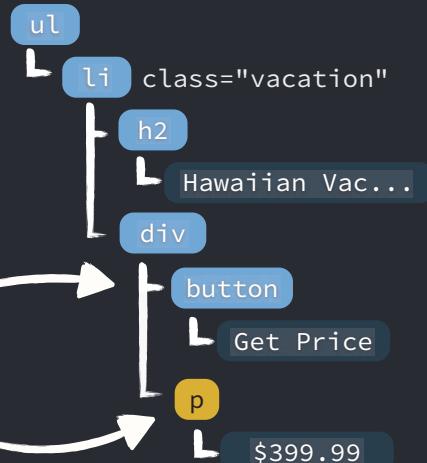
From $399.99

');  
        $(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 ?

DOCUMENT



3.3 Refactor Using Traversing

TRYjQuery

Using .closest(<selector>)

application.js

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



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



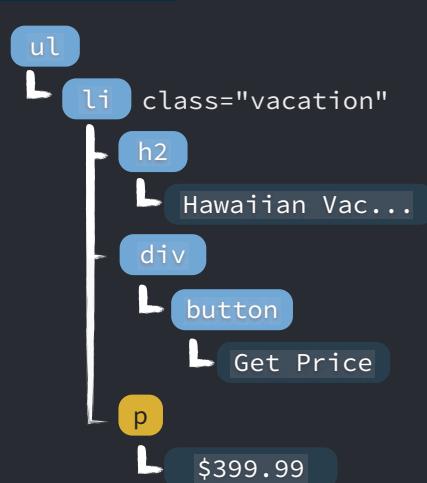
```
$(this).parents('.vacation').append(price);
```



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



DOCUMENT



3.3 Refactor Using Traversing

TRYjQuery

Our Finished Handler

application.js

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

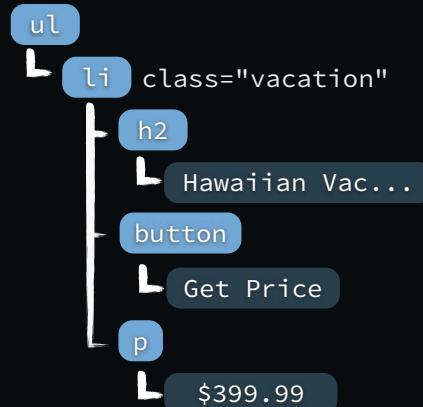
From $399.99

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

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



DOCUMENT



3.3 Refactor Using Traversing

TRYjQuery

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

TRYjQuery



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>)

3.4 Traversing & Filtering

TRY jQuery

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

3.4 Traversing & Filtering

TRY jQuery

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



3.4 Traversing & Filtering

TRYjQuery

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);
```



3.4 Traversing & Filtering

TRYjQuery

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

3.4 Traversing & Filtering

TRYjQuery

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

TRYjQuery

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'

3.4 Traversing & Filtering

TRYjQuery

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

TRYjQuery

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

3.4 Traversing & Filtering

TRYjQuery

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"
```

3.4 Traversing & Filtering

TRYjQuery

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`

DOCUMENT



3.4 Traversing & Filtering

TRYjQuery

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>)`

DOCUMENT



`$('.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');  
});
```



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

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

3.4 Traversing & Filtering

TRYjQuery

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?

TRYjQuery

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

3.4 Traversing & Filtering

TRYjQuery

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

TRYjQuery