COMP4021
Internet Computing

More on CSS and jQuery

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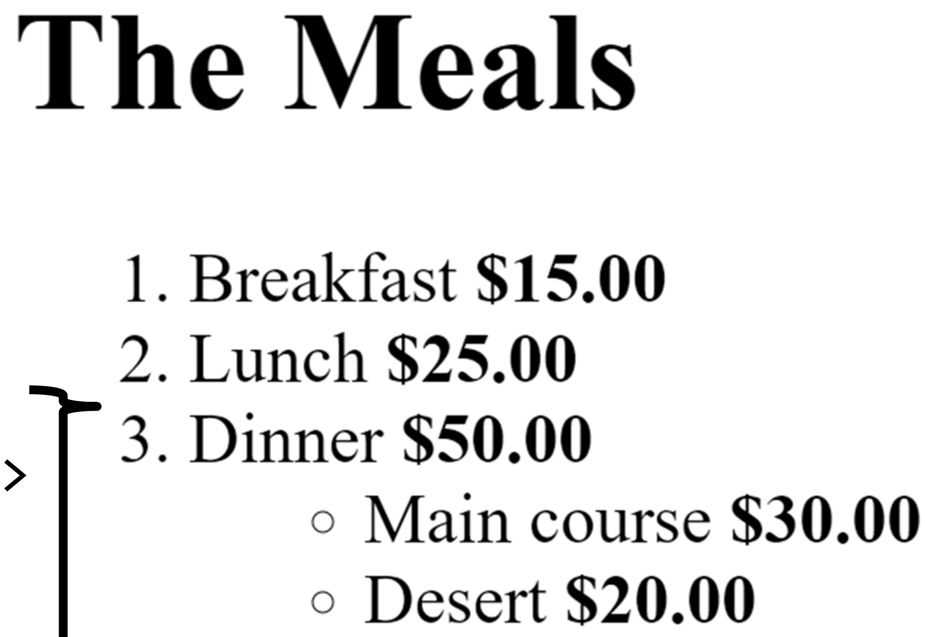
CSS and jQuery

- You have learned the basic CSS selectors:
  - Element selectors, i.e. `h1 { ... }`
  - id selectors, i.e. `#name { ... }`
  - Class selectors, i.e. `.highlight { ... }`
- You will learn a few other common CSS selectors in this presentation
- You will find them useful in both style sheets and selecting things in jQuery

The Meals Example

```
<!DOCTYPE html>
<html>
<head>
  <title>The Meals</title>
</head>
<body>
  <h1>The Meals</h1>
  <ol>
    <li>Breakfast <b>$15.00</b></li>
    <li>Lunch <b>$25.00</b></li>
    <li>Dinner <b>$50.00</b>
      <ul>
        <li>Main course <b>$30.00</b></li>
        <li>Desert <b>$20.00</b></li>
      </ul>
    </li>
  </ol>
</body>
</html
```



The Meals

1. Breakfast **$15.00**
2. Lunch **$25.00**
3. Dinner **$50.00**
    ○ Main course **$30.00**
    ○ Desert **$20.00**

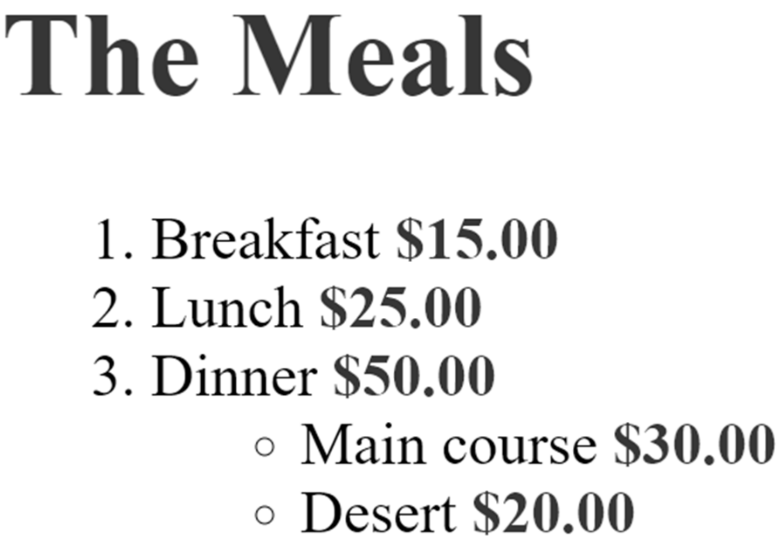
- You have seen a similar example before
- This page will be used by the examples later

Selecting Multiple Things

- You previously use only one selector in CSS rules
- You use multiple selectors by simply separating them using commas, i.e.:

```
h1, b { color: red; }
```

- This example changes **all** `<h1>` and `<b>` to use red colour



The Meals

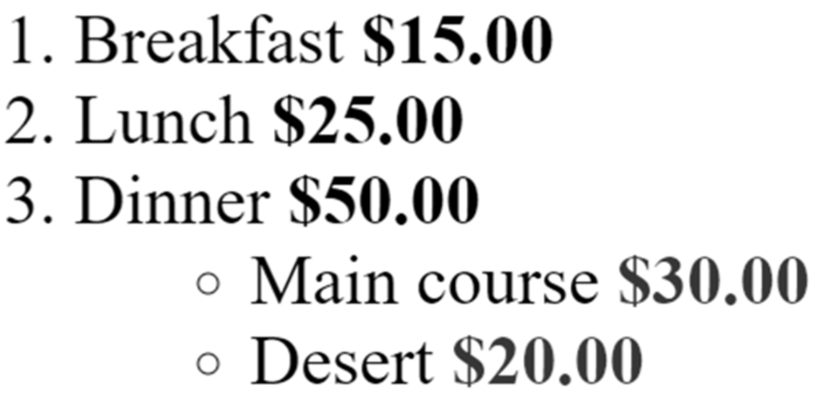
1. Breakfast **$15.00**
2. Lunch **$25.00**
3. Dinner **$50.00**
    - ○ Main course **$30.00**
    - ○ Desert **$20.00**

```
<h1>The Meals</h1>
<b>$15.00</b>
<b>$25.00</b>
<b>$50.00</b>
<b>$30.00</b>
<b>$20.00</b>
```

Selecting Things Under a Parent

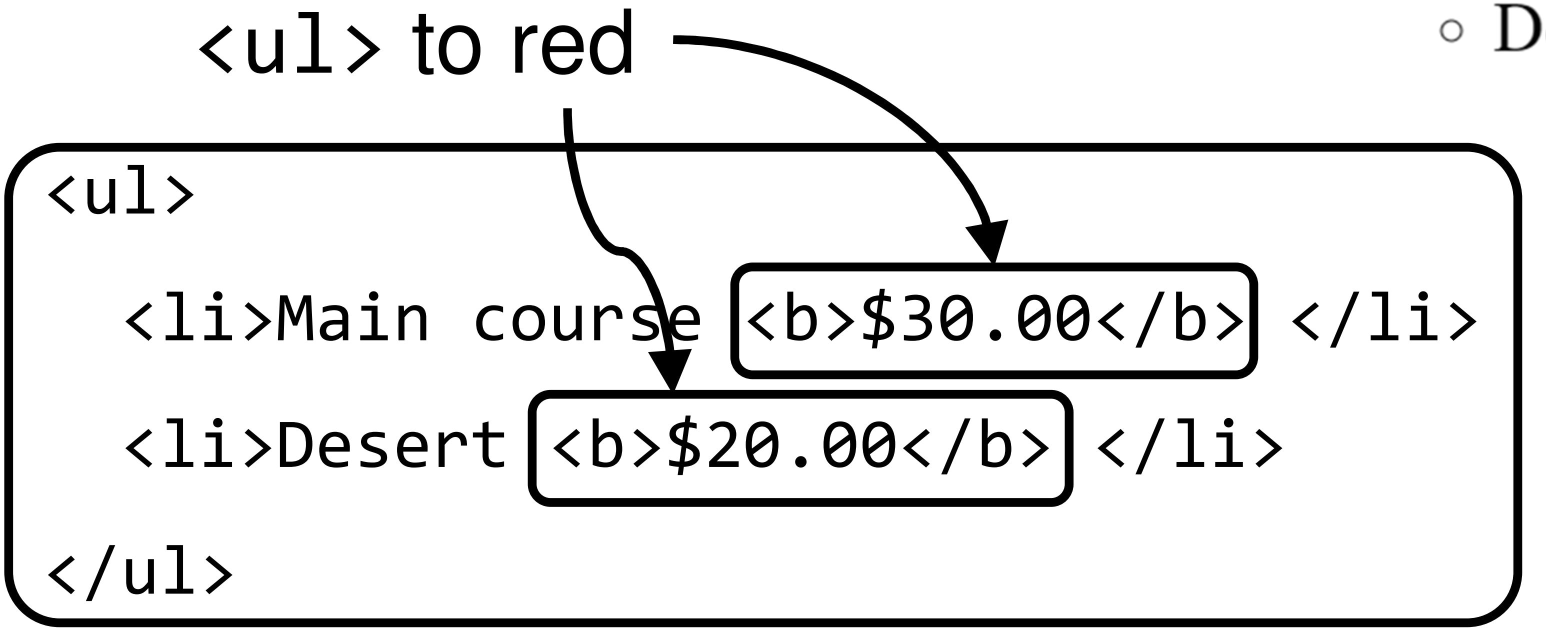
- You can change things under a parent using two selectors side by side (no comma), e.g.:

```
ul b { color: red; }
```



1. Breakfast **$15.00**
2. Lunch **$25.00**
3. Dinner **$50.00**
    - Main course **$30.00**
    - Desert **$20.00**

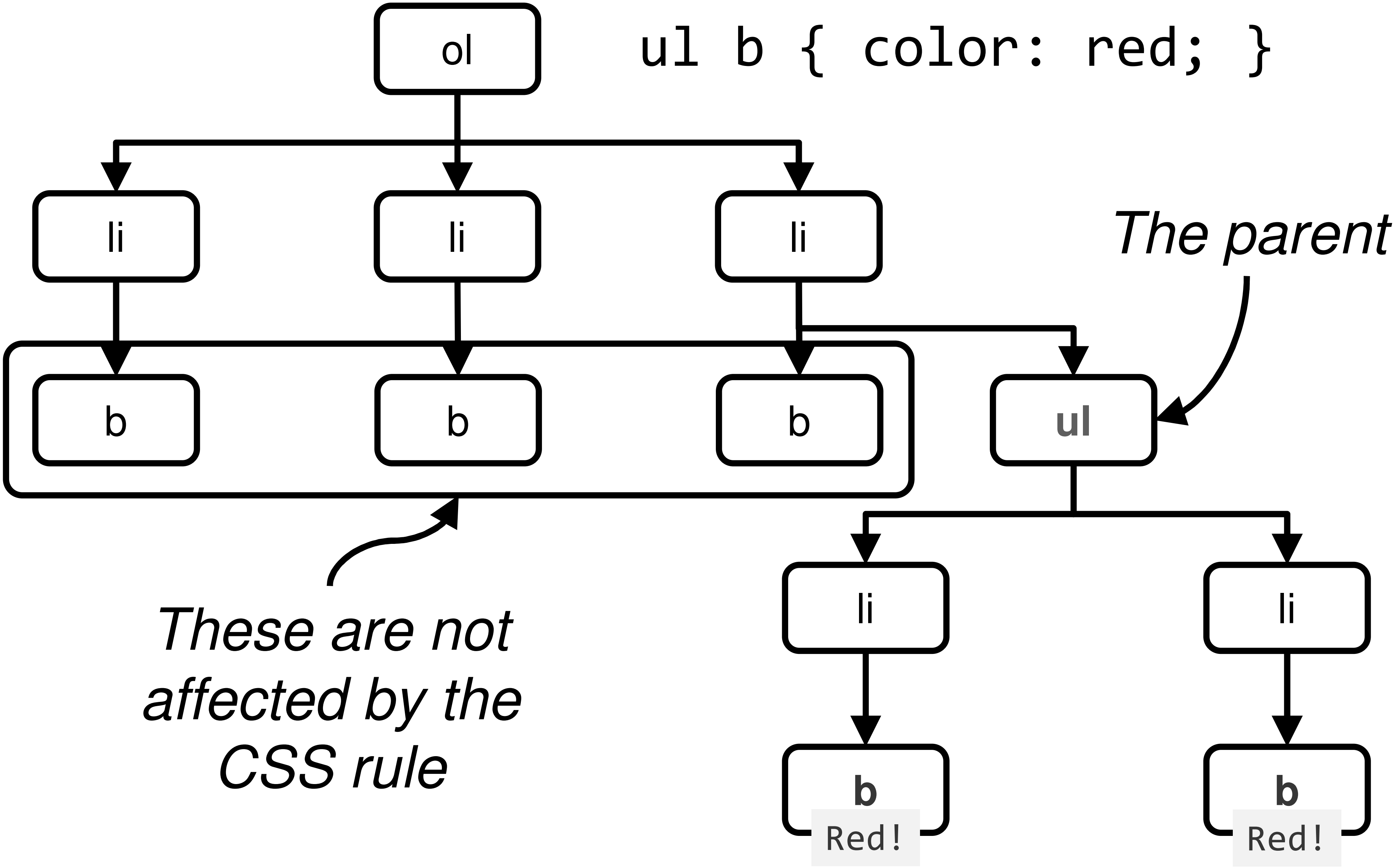
- The example changes all `<b>` that are under `<ul>` to red



```
<ul>
  <li>Main course <b>$30.00</b> </li>
  <li>Desert <b>$20.00</b> </li>
</ul>
```

Under a Parent – Example 1

```
ul b { color: red; }
```



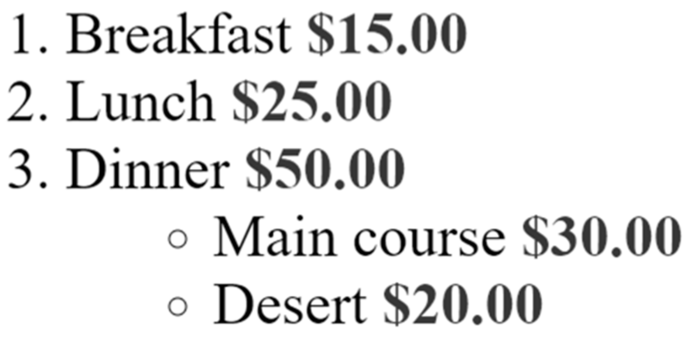
Be Careful!

- Be careful! The selector in the previous slide affects the children, grandchildren, grand grandchildren… under the parent so let's see another example:

```
ol b { color: red; }
```

- This rule affects **all** `<b>` under `<ol>`

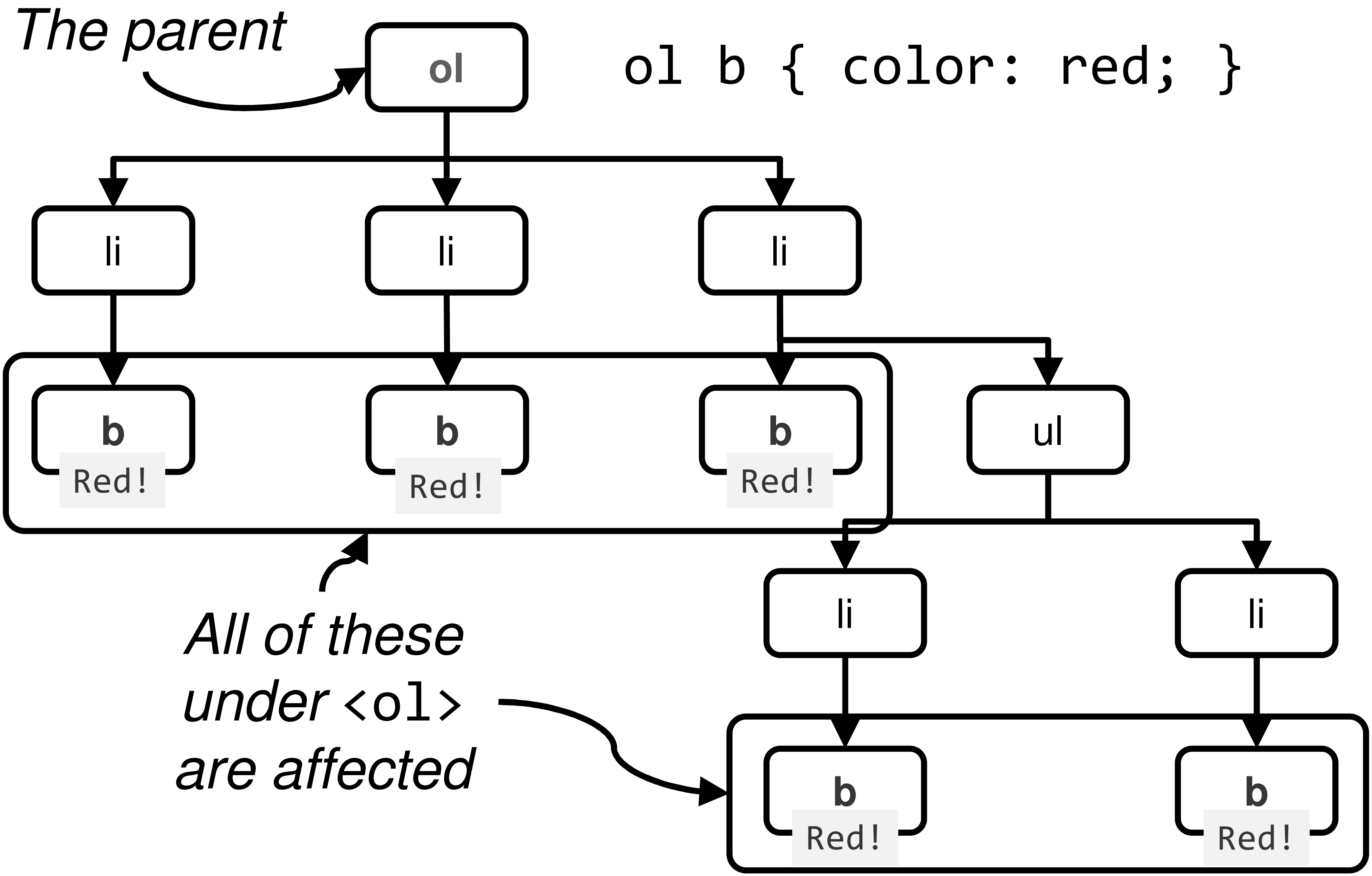
```
<ol>
  <li>Breakfast <b>$15.00</b></li>
  <li>Lunch <b>$25.00</b></li>
  <li>Dinner <b>$50.00</b>
    <ul>
      <li>Main course <b>$30.00</b></li>
      <li>Desert <b>$20.00</b></li>
    </ul>
  </li>
</ol>
```



1. Breakfast **$15.00**
2. Lunch **$25.00**
3. Dinner **$50.00**
    - Main course **$30.00**
    - Desert **$20.00**

Under a Parent – Example 2

```
ol b { color: red; }
```

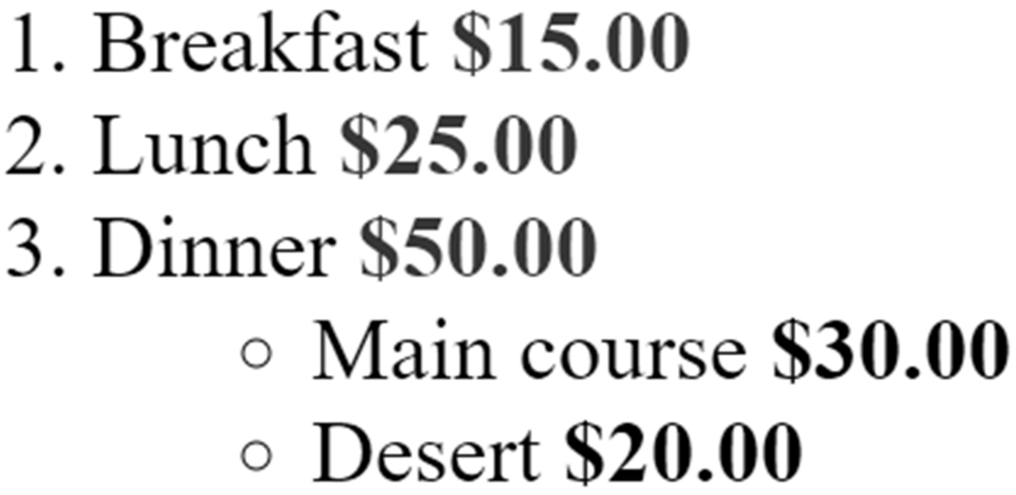


Selecting Immediate Children

- Sometimes you may want only immediate children, i.e. no grand or grand grandchildren
- You can insert a `>` sign between the selectors, like this:

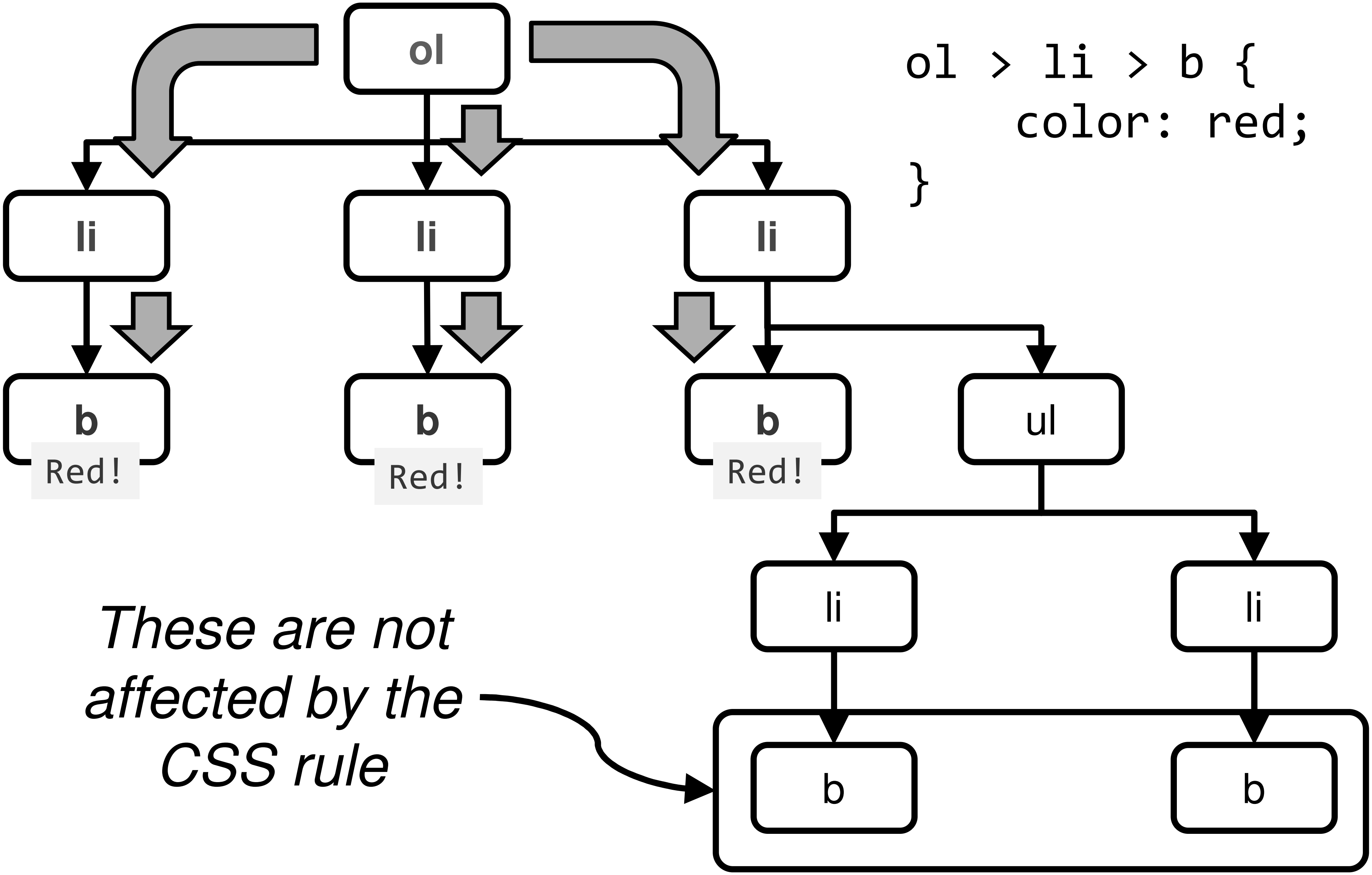
```
ol > li > b { color: red; }
```

This is all `<b>` *directly under a* `<li>`*, which is directly under a* `<ol>`



1. Breakfast **$15.00**
2. Lunch **$25.00**
3. Dinner **$50.00**
   - Main course **$30.00**
   - Desert **$20.00**

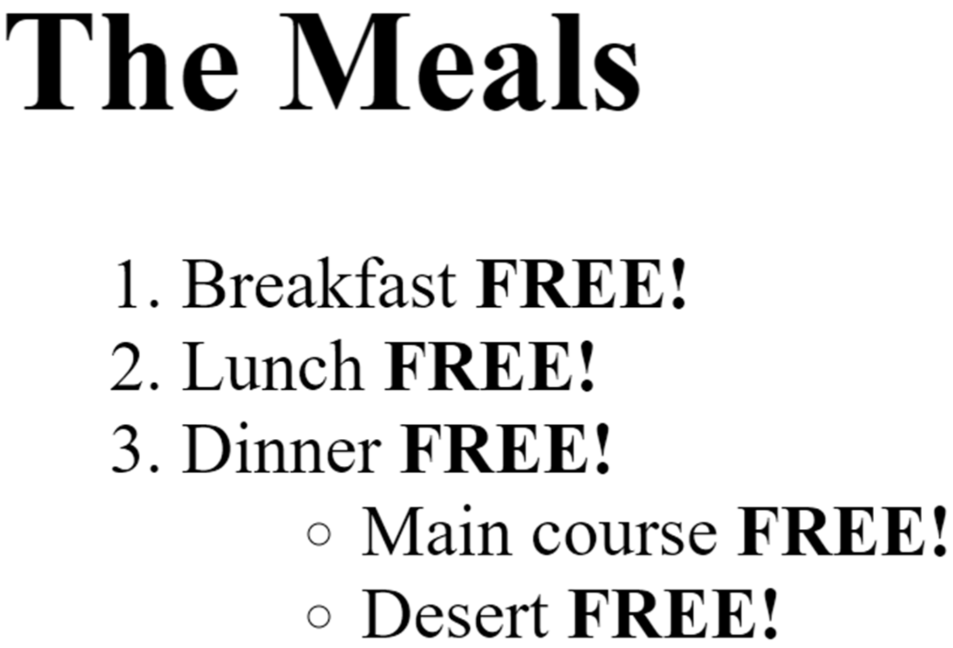
Immediate Children Example



```
ol > li > b {
    color: red;
}
```

These are not affected by the CSS rule

CSS Selectors in jQuery



The Meals

1. Breakfast **FREE!**
2. Lunch **FREE!**
3. Dinner **FREE!**
    - Main course **FREE!**
    - Desert **FREE!**

- You can use the CSS selectors in jQuery
- For example, this code changes the `<b>` to FREE!

```
$("ol b").html("FREE!");
```

Change the HTML content of all matching `<b>`

Using jQuery Events

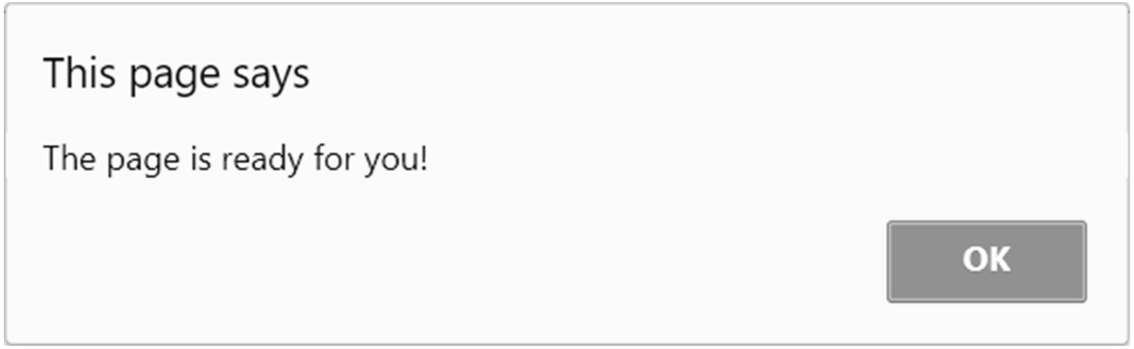
- jQuery code is typically run ‘inside’ events
- For example, you can use the `ready` event to do something when a web page finishes loading, like this:

```
<script>
$(document).ready(function() {
    alert("The page is ready for you!");
});
</script>
```

An alert message is shown when the page is ready, i.e. the content has finished loading

The Ready Event

- The document `ready` event is very similar to the `onload` event that you have seen before



This page says

The page is ready for you!

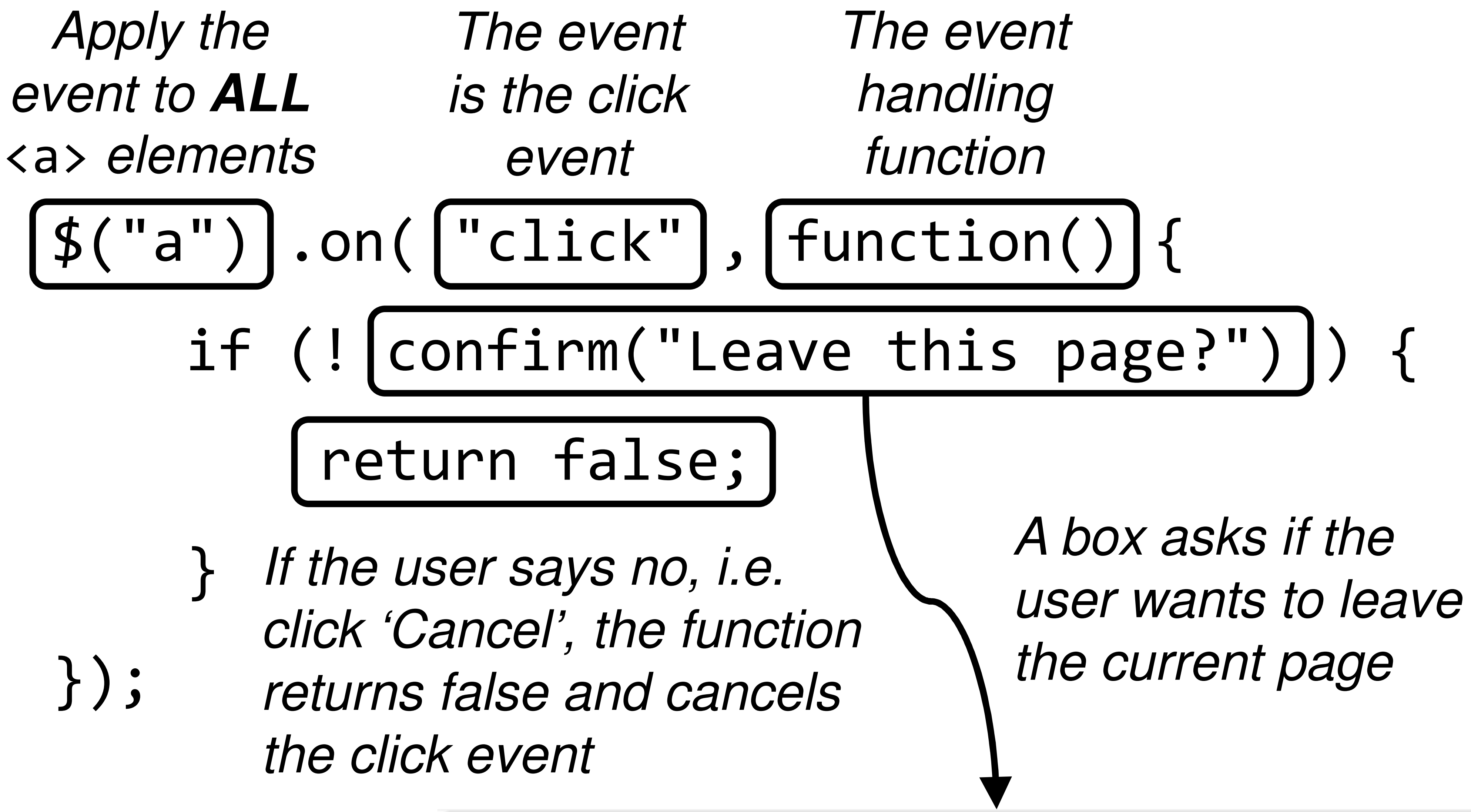
- You usually set things up for the web page inside this event in jQuery
- For example, you can set up other events inside the `ready` event

Using Other Events

- You can use events with event handling functions in jQuery easily
- You just provide the name of the event and some code to the `on()` function, like this:

```
$("a").on("click", function() {
    if (!confirm("Leave this page?")) {
        return false;
    }
});
```

- See next page



*Apply the event to **ALL*** `<a>` *elements*

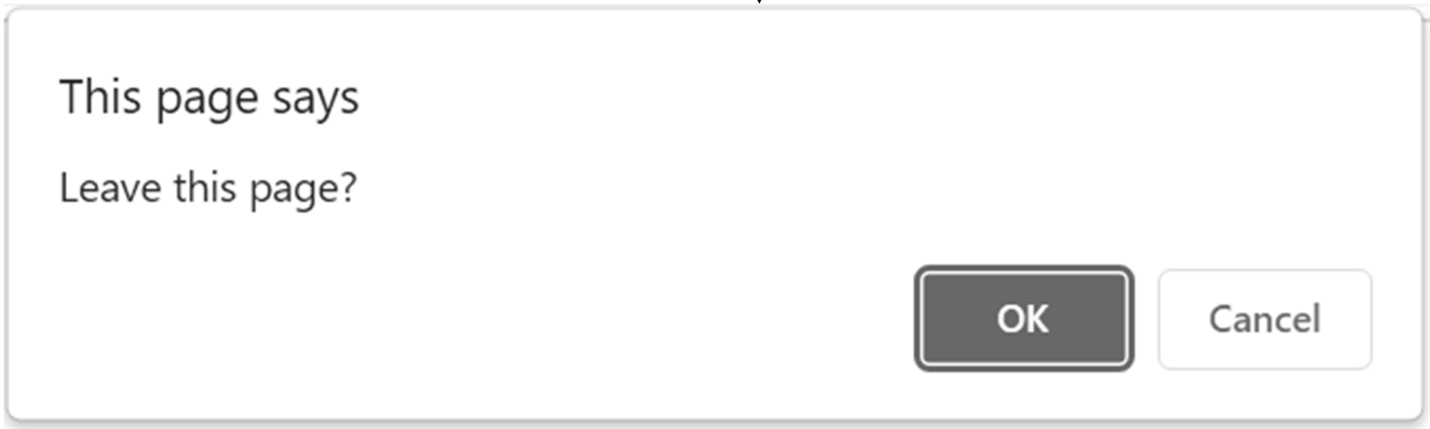
The event is the click event

The event handling function

```
$("a").on("click", function(){
    if (!confirm("Leave this page?")) {
        return false;
    }
});
```

If the user says no, i.e. click 'Cancel', the function returns false and cancels the click event

A box asks if the user wants to leave the current page

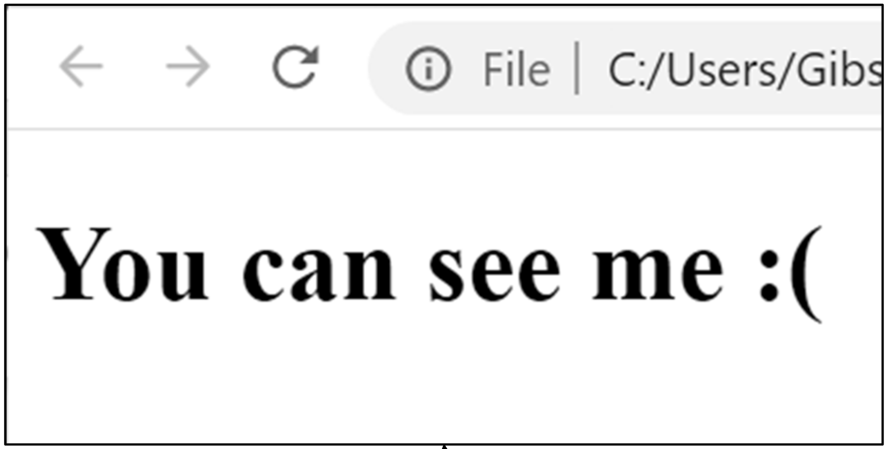


This page says

Leave this page?

Using the Display Property

- You can use the CSS `display` property to show or hide an HTML element
- Here is an example:



You can see me :(

```
<h1 style="display: none">
  You can’t see me!
</h1>
<h1 style="display: block">
  You can see me :(
</h1>
```

Effect Functions

- You can easily write your own code to show or hide things with the CSS property
- Or, you can do that using one of these jQuery functions:

  `.show()`, `.hide()` and `.toggle()`

- All of them work with the CSS `display` property and they can also give you some nice animations

.show() and .hide()

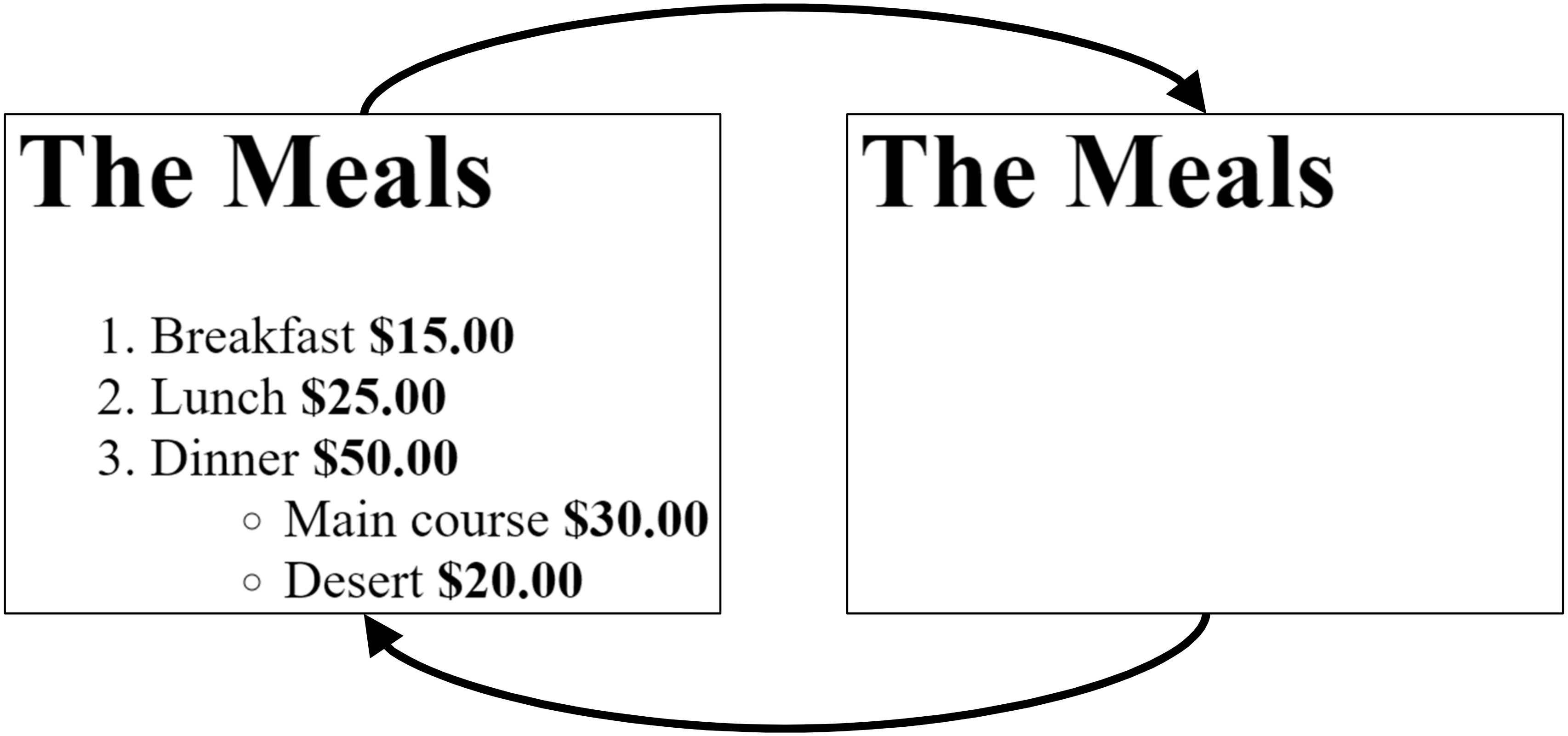
- Here is an example to show or hide part of a web page by clicking on the `<h1>` header:

```
$("h1").on("click", function() {
    let mylist = $("ol");
    if (mylist.css("display") == "none")
        mylist.show();
    else
        mylist.hide();
});
```

Show or hide the list when the header is clicked

Showing and Hiding Things

Click on the header



The Meals

1. Breakfast **$15.00**
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   - ○ Desert **$20.00**

The Meals

Click on the header

Using .toggle()

- You can further simplify the code by using `toggle()` only, replacing the if statement like this:

```
if (mylist.css("display") == "none")
    mylist.show();
else
    mylist.hide();
```

```
mylist.toggle();
```

- The function automatically toggles between showing and hiding of the element

Creating Animations

- jQuery can automatically use some nice animations when you show or hide elements
- Simply give a duration (in milliseconds) to `.show()`, `.hide()` or `.toggle()` , e.g.:

```
mylist.toggle(500);
```

- This code shows or hides the list using an animation that lasts for half a second

Changing the Animation

- The default animation fades / slides the content of the elements
- If you only want fading, you can use:

  `.fadeIn()`, `.fadeOut()` and `.fadeToggle()`

- If you only want sliding, you can use:

  `.slideDown()`, `.slideUp()` and `.slideToggle()`