Building Interactive Prototypes with jQuery

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What is jQuery?

✦ An open source JavaScript library that simplifies the interaction between HTML and JavaScript.

Ideal for Prototyping

- ✦ Completely unobtrusive

- ✦ Uses CSS to layer functionality

- ✦ Easy to separate behavior

- ✦ Quick, terse, syntax

The Focus of jQuery

Find Some Elements   Do something with them

$("div").addClass("special");

jQuery Object

The jQuery Object

- ✦ Commonly named '$'

- ✦ Also named 'jQuery'

- ✦ Completely valid:
  - ✦ jQuery("div").addClass("special");

Find Some Elements...

- Full CSS Selector 1-3 Support

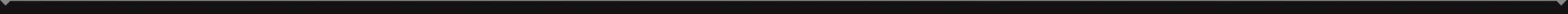- Basic XPath

- Better CSS Selector support than most browsers

$("div")

```
<div id="body">
    <h2>Some Header</h2>
    <div class="contents">
        <p>...</p>
        <p>...</p>
    </div>
</div>
```

$("#body")

```
<div id="body">
    <h2>Some Header</h2>
    <div class="contents">
        <p>...</p>
        <p>...</p>
    </div>
</div>
```

$("div#body")

```
<div id="body">
    <h2>Some Header</h2>
    <div class="contents">
        <p>...</p>
        <p>...</p>
    </div>
</div>
```

$("div.contents p")

```
<div id="body">
    <h2>Some Header</h2>
    <div class="contents">
        <p>...</p>
        <p>...</p>
    </div>
</div>
```

$("div > div")

```
<div id="body">
    <h2>Some Header</h2>
    <div class="contents">
        <p>...</p>
        <p>...</p>
    </div>
</div>
```

$("div:has(div)")

```html
<div id="body">
    <h2>Some Header</h2>
    <div class="contents">
        <p>...</p>
        <p>...</p>
    </div>
</div>
```

Do something with them

✦ DOM Manipulation (append, prepend, remove)

✦ Events (click, hover, toggle)

✦ Effects (hide, show, slideDown, fadeOut)

✦ AJAX (load, get, post)

DOM Manipulation

- $("a[target]")
    .append(" (Opens in New Window)");

- $("#body").css({
    border: "1px solid green",
    height: "40px"
  });

Events

- $("form").submit(function(){
    if ($("input#name").val() == "")
        $("span.help").show();
  });

- $("a#open").click(function(){
    $("#menu").show();
    return false;
  });

Animations

✦ $("#menu").slideDown("slow");

✦ Individual properties:

```
$("div").animate({
    fontWeight: "2em",
    width: "+=20%",
    color: "green" // via plugin
});
```

✦ Callbacks:

```
$("div").hide(500, function(){
    // $(this) is an individual <div> element
    $(this).show(500);
});
```

Ajax

- $("#body").load("sample.html div > h1");
  - Before:
  <div id="body"></div>
  - After:
  <div id="body">
  <h1>Hello, world!</h1>
  </div>

- $.getJSON("test.json", function(js){
  for (var name in js)
    $("ul").append("
" + name + "
");
});

Chaining

- You can have multiple actions against a single set of elements

- $("div").hide();

- $("div").hide().css("color","blue");

- $("div").hide().css("color","blue").slideDown();

Chaining (cont.)

- $("ul.open") // [ul, ul, ul]
  .children("li") // [li, li, li]
      .addClass("open") // [li, li, li]
  .end() // [ul, ul, ul]
  .find("a") // [a, a, a]
      .click(function(){
          $(this).next().toggle();
          return false;
      }) // [a, a, a]
  .end(); // [ul, ul, ul]

Why jQuery?

- Fully documented

- Great community

- Tons of plugins

- Small size (14kb)

- Everything works in IE 6+, Firefox, Safari 2+, and Opera 9+

jQuery Plugins

✦ Extend the jQuery system

✦ Add on extra methods:
$("div").hideRemove();

✦ Trivial to implement:
jQuery.fn.hideRemove = function(speed){
    return this.hide(speed, function(){
        jQuery(this).remove();
    });
};

Plugins

- Drag and Drop
- Sortables
- Modal Dialogs
- Tabbed Navigation
- Sortable Tables
- And hundreds more...

Prototyping Demos

Accordion Menu

http://jquery.com/files/apple/
http://jquery.com/files/apple/done.html

Social Networking

http://jquery.com/files/social/
http://jquery.com/files/social/done.php

Todo List

http://jquery.com/files/todo/
http://jquery.com/files/todo/done.php

Who uses jQuery?

- ✦ Google
- ✦ IBM
- ✦ NBC
- ✦ Amazon
- ✦ Wordpress
- ✦ Digg
- ✦ many others...

Community

- Very active mailing list
  - 108+ Posts/Day
  - 4000+ Members

- Technorati: Dozens of blog posts per day

Books

✦ 2 Books Released:
    ✦ Learning jQuery (Packt)
    ✦ jQuery Reference (Packt)

✦ 1 Book in Progress:
    ✦ jQuery in Action (Manning)

jQuery UI

- Full set of themed widgets and components

- Drag & Drop

- Tabs

- Table

- Modal Dialog

- etc.

jquery.com
docs.jquery.com - jquery.com/plugins

More:
ui.jquery.com
visualjquery.com
learningjquery.com