

# JQuery & SharePoint

Like **MILK & OREOS**

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# Agenda

- What is JQuery?
- Why Should I (A SharePoint Dude) Care?
- What Can I Do With It?
- Kicking It Up A Notch
- SharePoint & JQuery Tools & Libraries
- Best Options For Implementing JQuery
- Resources & QA

# What is JQuery?

- JQuery is a javascript library (a small JS File)
- You add a reference to the library on any web page and you have access to the functions
- High level features include:
  - Cross Browser Support for functions
  - Small Footprint
  - Very powerful selector syntax
  - Huge supporting community
  - Add In Support

# Why Should I (a SharePoint Dude) Care?

- JQuery can be utilized to manipulate the HTML returned by SharePoint.
- This can be of interest when we want to implement some client side logic or manipulation without requiring a heavy server side deployment footprint.
- The simple AJAX tools can be helpful in building web better user interactions that don't require a postback
- With the advent of more locked down servers (including hosted SharePoint scenarios) JQuery can be a huge help in building better apps

# JQuery & SharePoint

- JQuery can be utilized to manipulate the HTML returned by SharePoint.
- This can be of interest when we want to implement some client side logic or manipulation without requiring a heavy server side deployment footprint.
- The simple AJAX tools could be helpful in building web interactions that won't require a postback.
- A good real world example is the support site. They would like some fields to not appear for customers and to do this would require...

# Detail Key Features of JQuery

- DOM Element Selectors – JQuery provides concise and performant syntax for selecting DOM elements in several different ways.
- Wrapped Set Operations – Once a set of elements has been returned you can then run chained operations against the entire set.
- Simplified Event Handling – When working with DOM element events JQuery provides a more advanced cross-browser event handling pattern.
- Small Footprint - JQuery has a small footprint for a lot of functionality (16k compressed/ 98 k uncompressed)
- Plug In Extensibility - JQuery has an active community that have written several plug ins to extend JQuery with various features.

# DOM Selectors

- JQuery selectors use a syntax similar to CSS to allow you to select sets of DOM elements for manipulation.
- You can select elements by:
  - Type
  - ID
  - CSS Class
  - Attributes
  - Relationship to other elements
  - Filter Conditions
- All selections begin by referencing the JQuery object through the \$

# Selection Examples

- General Syntax = `$("#selector string").%jQuery Function%`
- Element Tag
  - `$("#a").hide();`
  - The name of the element tag (img, a, div, tr, td, etc...) is placed in quotes
- ID
  - `$("#mydiv").css("border", "solid 1px navy");`
  - The # is used before the ID the returned item is a JQuery object not the DOM element
- CSS Class
  - `$(".bodydata").css("background", "lightsteelblue ");`
  - The "." is placed before the CSS class
- Descendants
  - `$("#mydiv > input")`
  - The first selector is the parent and the second is the desired child. The ">" seperates the. The above reads for the element with and id of mydiv get me all input elements within it.
- Filter
  - `$("#div:contains('discounted price')").hide();`
  - The selector is a div tag combined with the contains function specifying the text discounted price. So this would read: Find all divs which contain the text "discounted price" and hide them.

# So I got a JQuery object, what can I do with it?

- JQuery provides several nice functions including:
  - `addClass` – adds a CSS class
  - `removeClass` – removes a CSS class or all CSS classes
  - `hide` – hides the object(s)
  - `css` – applies a custom style string to the object(s)
  - `click`, `mouseover`, `keydown` – binds your own function to that event for the object(s)
  - `toggle` – switches between two or more function calls between clicks

Selectors

# **SIMPLE DEMO 1**

# Manipulating Wrapped Sets

- The power of JQuery shines when you want to manipulate sets of elements
- JQuery allows you to query for multiple items and then execute functions on all the returned items.
- These functions can be chained as each function typically returns a JQuery object
- Common Examples of where this is helpful:
  - Dynamically styling a series of table rows or divs
  - Attaching a single click handler to multiple elements
  - Locking/Freezing multiple elements during certain operations

Chain, Chain, Chain... Chain of Fools

# **WRAPPED SETS DEMO**

# JQuery Scenario: Registration

- Goal take the registration like features of a SharePoint Survey and make them better
- What it does:
  - Re-label the form
  - Provide survey form resume/continue functions
  - Provide a back button
  - Provide a final confirmation screen

A better SharePoint Survey Experience

# **REGISTRATION SYSTEM**

# JQuery AJAX Operations

- JQuery provides several functions for making AJAX calls.
- These functions are helpful as they work across browsers and support varying methods for making the server side call. Including:
  - Load HTML from a remote file and inject it into the DOM
  - Issue an HTTP Get
  - Issue an HTTP Post
  - Load JSON data through an HTTP Get
- JQuery also provides several AJAX events that you can pass your own functions to for handling. These Include:
  - Send – before the AJAX call is made
  - Start – when the AJAX call begins
  - Error – when an AJAX call fails
  - Success – when an AJAX call completes successfully
  - Complete – when an AJAX call completes
  - Stop – when all AJAX calls are complete

# JQuery UI Plugin

- This plugin provides a whole series of UI tools and operations to JQuery.
- The plugin (js files) can be downloaded on a whole or you can selectively choose to get a download that only includes the elements you need for your project.
- Interactions included:
  - Draggable
  - Dropable
  - Sortable
  - Selectable
  - Resizable
- Widgets Include
  - Accordion
  - Date Picker
  - Dialog
  - Slider
  - Tabs
- Effects Include
  - Pulsate
  - Clip
  - Puff
  - Explode
  - Slide
  - Drop
  - Scale

UI Control in JQuery

**SILLY DEMO**

# Implementing JQuery

- Will vary based on you scenario but here are some guidelines
  - For a single page Using JQuery references in a Content Editor Web Part for a single page is fine
  - Multiple pages using JQuery should lead you to include it in your masterpage
  - Pointing to a hosted link (Google) is not always a great idea especially when you are running HTTPS
  - JQuery.js, JQueryUI.js & etc... are best stored in the layouts folders

# SharePoint & JQuery Tools & Libraries

- JQuery UI – add on library that adds some great visual UI affects & helpers
- SmartTools JQuery Loader – CodePlex project from Jan Tielens that loads JQuery (careful on non root site collections)
- JQuery Library for SharePoint Web Services – a library to access web services using JQuery AJAX calls
- JPoint – another more extensive library for calling SharePoint objects, methods & etc from JQuery

# Questions

- JQuery.com – great resource
- Codeplex – great sample projects
- Fiddler for IE, Nexpert Add On
- Firebug for FireFox
- Email – [krw@tcsc.com](mailto:krw@tcsc.com)