

CS 416

Web Programming

Javascript wrap up

Dr. Williams
Central Connecticut State University

Review from last class

- Forms and submission
- Write a form that has a textbox and a submit button
 - On submit the form should be **posted** to **response.jsp**
 - At submit the form should check
 - that at least 2 words were entered
 - The first character of the second word can not be a “4”
 - If either of the conditions fail the form should not post

Possible solution

```
<html>
<head>
  <title>Review of Lecture 5</title>
  <script type="text/javascript">
    function validate(){
      var myArray=document.myForm.entry.value.split(" ");
      if (myArray.length <2){
        alert("you need 2 words");
        return false;
      }
      if (myArray[1].charAt(0)=="4"){
        alert("first char 2nd word cannot be a 4");
        return false;
      }
      return true;
    }
  </script>
</head>
<body>
  <form name="myForm" action="response.jsp" method="POST">
    <input type="text" name="entry" />
    <input type="submit" value="submit" onclick="return validate();"/>
  </form>
</body>
</html>
```

Topics for wrap up

- Javascript files and libraries
- JQuery

Javascript extract source

- Best practice
 - BODY < HEAD defined < Separate source file
- Reason is usability
 - In BODY use where defined
 - HEAD defined use within page
 - Separate source can be used throughout site

Separate source inclusion

- Standard within “js” directory
- Define file with “.js” extension, all content interpreted as javascript
- Within page include file within HEAD of document

```
<script src="js/MyScriptFile.js" type="text/javascript" >  
</script>
```

- Code can then be referenced just as if it was defined in page

JQuery

- Source file just like one you would develop, but reference via where defined:
 - Either via library on web, or imported on your server
 - Via web, ex.

```
<script src="https://ajax.googleapis.com/ajax/libs/jquery/1.11.3/jquery.min.js">
</script>
```

- Advantage - possibility of bug fixes automatically incorporated
- Disadvantage – potential instability if you somehow were dependent on bug
- Via site
 - Import package/source into js directory (functionality built into most development environments)

```
<script src="js/libs/jquery/jquery.js" type="text/javascript"></script>
```

What is JQuery?

- Feature rich JavaScript library
 - Tag manipulation
 - Event handling
 - Animation (i.e. adding some flash to website)
 - Ajax integration
- Many JavaScript libraries out there feel free to explore, this one most used
 - 88% of all sites that use javascript libraries
 - Next closest MooTools less than 9%

JQuery class goals

- Simply put it can do a ton of things to give your site the look and feel you want – highly encourage you to explore, however...
- Goal of class is to go into design of successful web architecture so we will just skim surface

JQuery basics - syntax and selectors

- Coded anywhere you have Javascript, but different syntax starting with \$ sign
- Specify element you want to apply code to:
 - Select all tags of a specified type:
`$ ("p")`
 - Elements with specified id:
`$ (" #myId")`
 - Elements with specified class:
`$ (" .myclass")`
 - All INPUT elements of type...
`$ (" :button")`
 - Current element
`$ (this)`
 - All elements
`$ (" *")`

JQuery events

- Lots of events available, arguably much easier than coding events directly in HTML – big advantage is can be reused across site
- General syntax is element(s) you want to capture event for, event, code to run:

selector.event(javascript function defn to execute)

```
$(“h1”).click(  
    alert(“You clicked me!”);  
    $(this).hide();  
)
```

Most common events

- click
- dblclick
- hover

Forms

- focus (form element selected)
- blur (form element loses focus)
- submit

Common “Flashy” elements

- **css**

```
$ ("p").css ("background-color", "yellow");
```

- **hide/show/toggle**

```
$ ("#disappearingText").toggle();
```

- **fadeIn/fadeOut/fadeToggle**

```
$ ("#disappearingText").fadeToggle (1000);
```

- **animate**

```
$ ("#calvin").animate ({  
    left: '250px',  
    height: '+=150px',  
    width: '+=150px'  
});  
});
```