Retrieving and Modifying element content

$(sel).html()
Returns the content of the first element that matches the selector. (Same as innerHTML)

$(sel).html(text)
Sets the content of all the elements matching the selector.
http://einstein.etsu.edu/~pittares/CSCI3110/examples/12a-1.htm
Retrieving and Modifying element content

\$\text{(sel).text()}

Retrieves the content of all the elements that match the selector as a single string.

\$\text{(sel).text(newText)}

Sets the content of all the elements matching the selector.

If the contents of newText contains < or > they are translated to HTML entities.

http://einstein.etsu.edu/~pittares/CSCI3110/examples/12a-2.htm

Removing and Emptying elements

\$\text{(sel).remove()}

Removes all elements matching the selector from the document.

http://einstein.etsu.edu/~pittares/CSCI3110/examples/12a-3.htm

\$\text{(sel).empty()}

Empties the contents of all elements matching the selector.

http://einstein.etsu.edu/~pittares/CSCI3110/examples/12a-4.htm
### Reading values within forms

\texttt{$(sel).val()$}

- Reads value from \textit{first element} that matches the selector.
- Must be careful with checkboxes or radio buttons as \textit{returns the first value} regardless of whether checked.

http://einstein.etsu.edu/~pittares/CSCI3110/examples/12a-5.htm

Solve the radio button or checkbox problem with the selector :checked

http://einstein.etsu.edu/~pittares/CSCI3110/examples/12a-6.htm

### Setting values within forms

\texttt{$(sel).val(text)$}

- Sets value of \textit{all elements} that matches the selector.

http://einstein.etsu.edu/~pittares/CSCI3110/examples/12a-7.htm
**AJAX with jQuery**

**Simplest method of asynchronous external content loading, directly into page content:**

```javascript
$(sel).load(URL, [parameters], [callback function])
```

- **Parameters**--if a string GET method is used. If a map of key/value pairs, POST is used.
- **Callback function**--runs after the load is accomplished (provides diagnostic response, etc.)

http://einstein.etsu.edu/~pittares/CSCI3110/examples/12a-8.htm

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**AJAX with jQuery**

**Alternate method of external content retrieval, loading or other processing under our control (function returns the XHLHttpRequest):**

```javascript
$.get(url, [data], [callback function], [response type])
```

- **Data**--set of key/value pairs in map format. Always sent as GET string.
- **Callback function**--takes response and processes
- **Type**--"xml", "html", "script", "json", "jsonp", "text"

http://einstein.etsu.edu/~pittares/CSCI3110/examples/12a-9.htm
AJAX with jQuery

Alternate method of external content retrieval, loading or other processing under our control (function returns the XMLHttpRequest):

$.post(url, [data], [callback function], [response type])

Data--set of key/value pairs in map format. Always sent as POST packet.

Callback function--takes response and processes

Type--"xml", "html", "script", "json", "jsonp", "text"

JavaScript Object Notation (JSON)

Provides a mechanism for storing and retrieving (serializing) object data.

http://www.json.org/

Useful with AJAX.

Rules:

Object members contained within { }.

Members consist of comma separated field:value pairs.

Arrays are contained within [ ].
Example JSON object representation

```
{
    "petType": "cat",
    "age": "7",
    "gender": "male",
    "name": "Marble",
    "favoriteToys": ["ball","string","fake mouse"]
}
```

Function library json2.js can be downloaded from http://www.json.org/json2.js

Working with JSON

Reconstituting an object from a JSON string:

```
JSON.parse(JSONstring);
```

Returns an object

http://einstein.etsu.edu/~pittares/CSCI3110/examples/12a-10.htm

Converting and object to a JSON string

```
JSON.stringify(object);
```

Returns a JSON string

http://einstein.etsu.edu/~pittares/CSCI3110/examples/12a-11.htm
Working with JSON in jQuery

Retrieving a JSON object via AJAX request
$.getJSON(url, [data], [callback function])
  Data-- if a string, GET method is used. If a map of
  key/value pairs, POST is used.
  Callback function--takes response and processes
http://einstein.etsu.edu/~pittares/CSCI3110/examples/12a-12.htm
http://docs.jquery.com/Utilities/jQuery.each#objectcallback
http://einstein.etsu.edu/~pittares/CSCI3110/examples/12a-13.htm
http://einstein.etsu.edu/~pittares/CSCI3110/examples/12a-14.htm

Ajax with the most control
$.ajax(options) takes in an object that consists of
key/value pairs and returns the XHLHttpRequest
object.
  Allows specifying payload, type of response, target
  URL, timeout values, functions on success, functions
  on error, functions done before sending, etc.
http://docs.jquery.com/Ajax/jQuery.ajax#options