JavaScript Week 5

Retrieving Data from a Web Service

Methods for Retrieving Data

- Get JSON data via a script include
- Get XML data using an XMLHTTPRequest

XHR Security Restrictions

- XMLHTTPRequest can only retrieve data from the same domain as your webpage
  - for a page at www.yourdomain.com (none of these will be legal!)
  - yourdomain.com
  - www2. yourdomain.com
  - 123.72.92.13

JSON - no security restrictions: yay!

- <script src="http://anywhere.com"></script>

JSON vs. XML

- JSON is much easier to read because it can be easily turned into javascript objects (because that's what it is!)
- XML is more widely used, but it more work because you have to parse the resulting XML document.

Methods for Sending Data

- Same domain
  - You can post data using an XHR, but only to the same domain
- Cross-domain
  - Image tag (for small bits of data)
  - Iframe and form post (for large amounts of data)

Cross-domain scripting - Image Tag

- You can send small bits of data to any domain using an image tag
  - <img width=”0” height=”0” src=”http://myservice.com?myData=12345” ></img>
- The character limit for a query string is 2083 (the limit imposed by IE)

Iframes

- Like a frame in a frameset it has it's own window object
- Iframes are subject to the same security restrictions as XHR

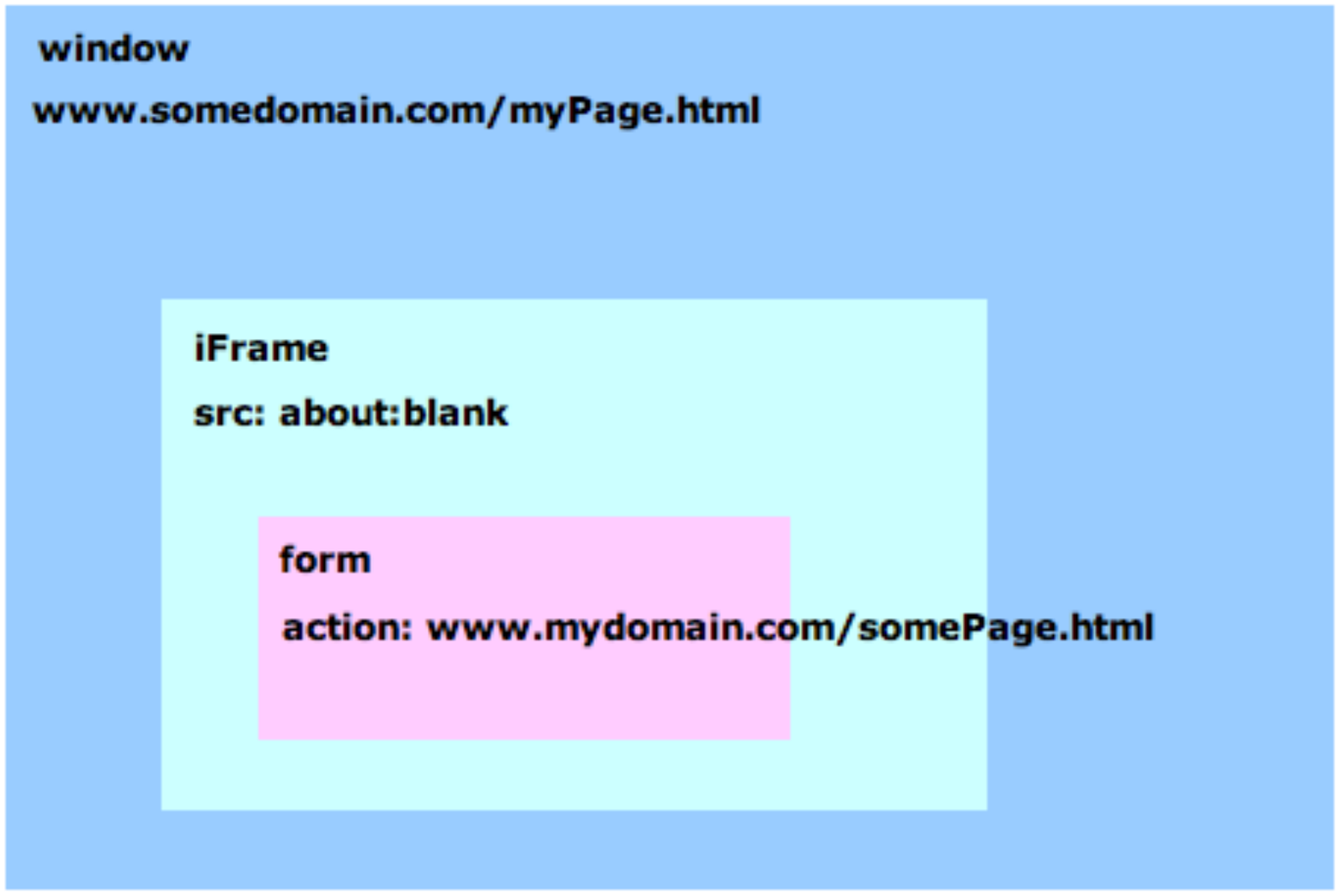
Cross-domain scripting - Form Post

- You can send large amounts of data by posting a form
- You can programatically:
  - append an iframe to your document
  - append a form to your iframe
  - submit the form
- Once your form has been submitted your iFrame's location will be in the other domain

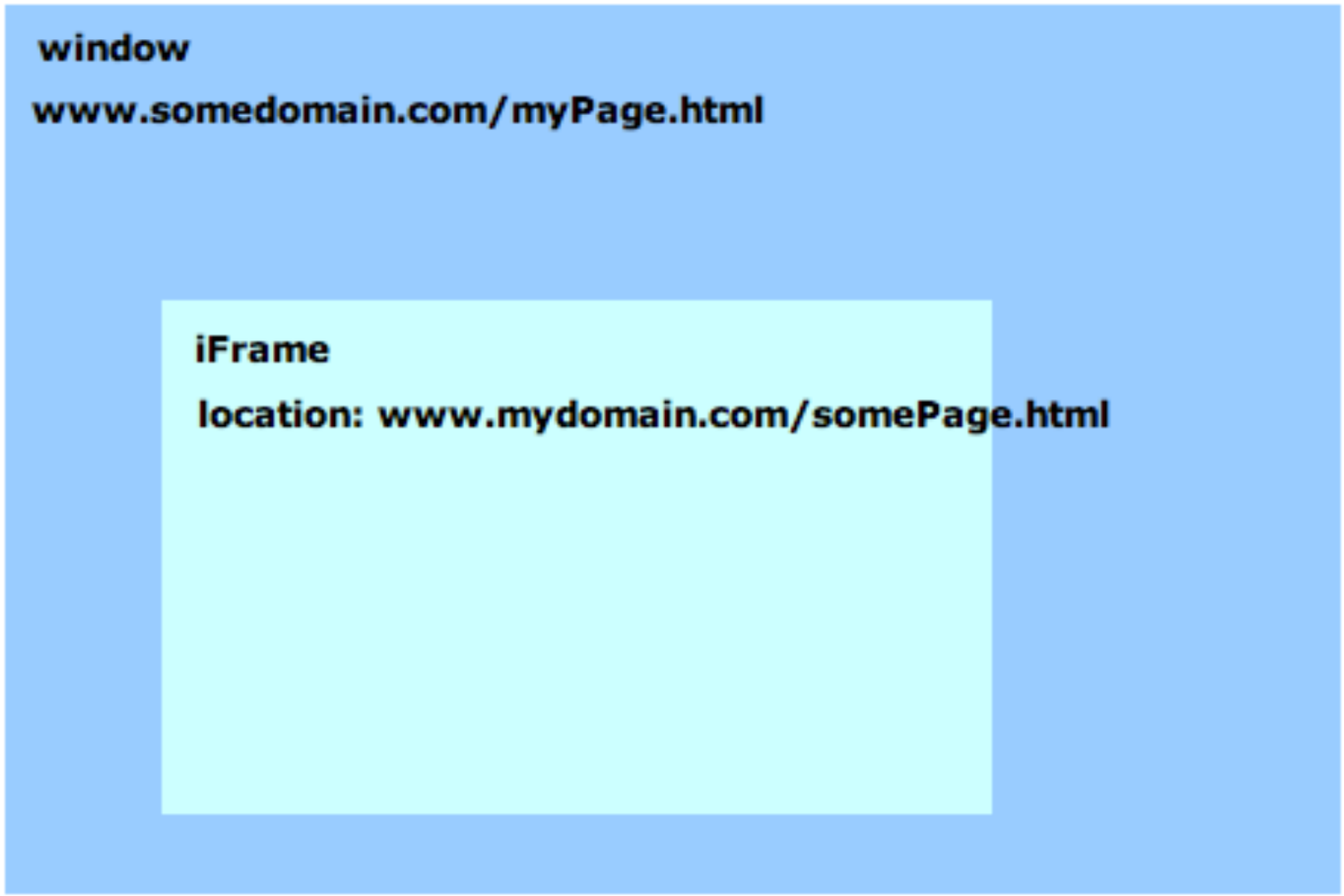
Cross domain scripting - URL Fragment

- You can use a URL fragment to set data on a frame
- Frame locations (in different domains) are *write* only. So you can append a fragment (#someData) to another frame to give it data
- You could use the form post method from the previous slide with this method to pass back some value

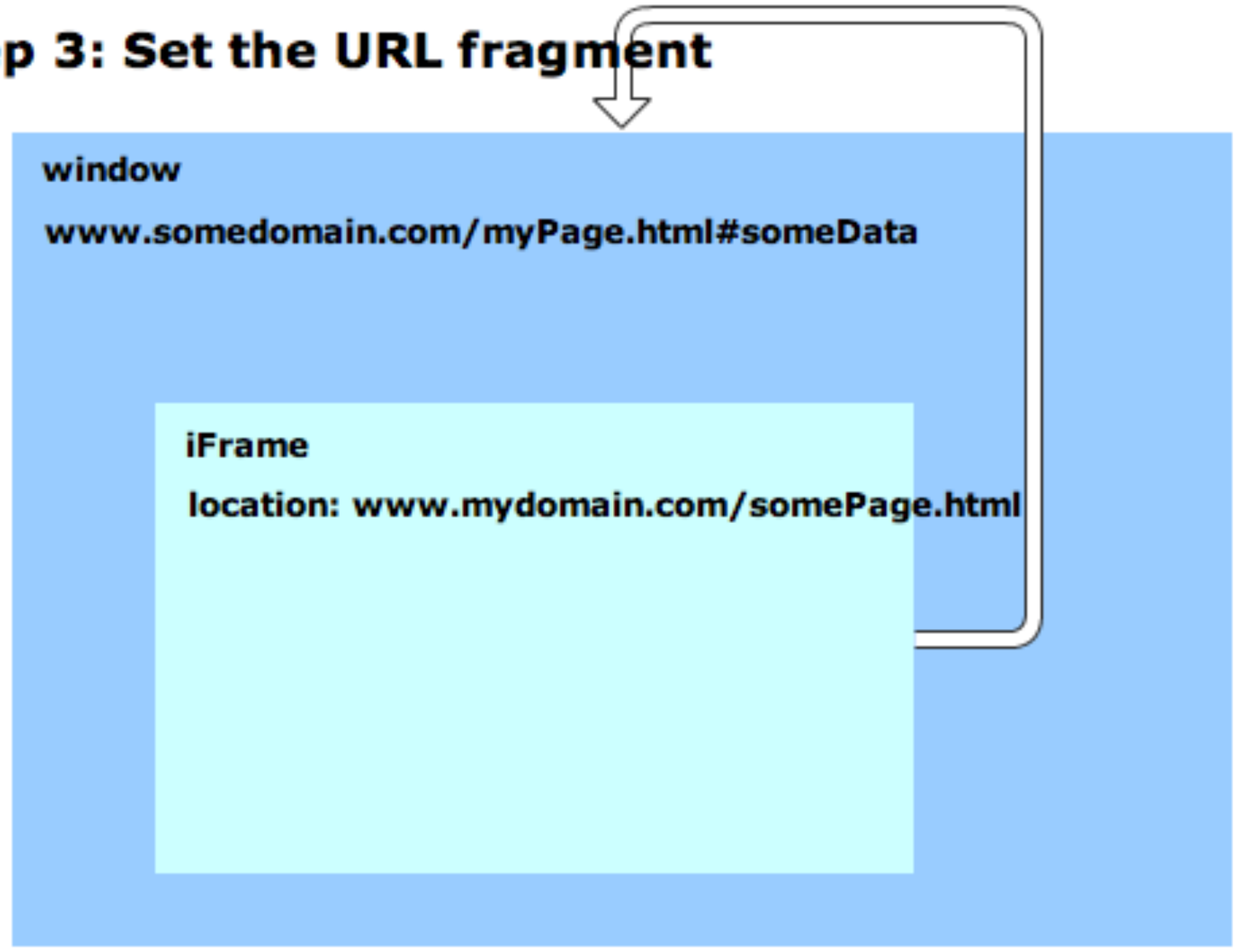
Step 1: Create the Frame and form



Step 2: Submit the form



Step 3: Set the URL fragment



Activity

- Implement a web page that retrieves the data from catalog.xml using an XHR (use the example in the book).
- Generate MagicalItem objects by parsing the XML

Homework

- Modify the magical store to pull its data from a web service. You may use either JSON or XML.
- Extra credit: Try the two cross-domain scripting methods for sending data to a different domain - the *image tag* and the *form post*

Makeup Class

- July 12