Asynchronous, JavaScript, And, XML

Server Response <=> Client Request

XHR: XML HTTP Request (XMLHttpRequest Object)

1. Create an XMLHttpRequest object (for each AJAX request)
2. Create a callback function (runs after server returns response)
3. Open a request: method browser uses to send request (GET, POST) and URL
4. Send the request

Callbacks run in the order in which the responses return

Each step in the AJAX process (opening or sending request) triggers a state change

[http://website.com/employees.php?firstName=Rita&lastName=Jones](http://website.com/employees.php?lastName=Jones) (part after ? is query string of property and value sent to web server)

& = %26, Space = +, + = %2B

GET: Information passed through URL shows up browser and server logs and is limited to 2083 characters.

POST: Information passed in body of request. More secure and can send more info.

XML (Extensible Markup Language) and JSON (JavaScript Object Notation)

* AJAX only works with own server (same-origin policy), but that server can access other servers (web proxy) through PHP or Ruby on Rails.
* JSONP (JSON with Padding) allows cross domain linking of JavaScript files, also how CDN (content delivery network) work. $.getJSON() is JSONP.
* CORS (Cross-Origin Resource Sharing) allows servers to accept requests from other domains.

JSON as array notation or object notation or array of objects: [ ] or { } or [ { }, { } ]

API (Application Programming Interface) defines what you get from a web server and how you get it

<https://api.flickr.com/services/feeds/photos_public.gne?format=JSON> (?format=JSON to access JSON)

jQuery’s $.each() method accepts two parameters: an array or object, a callback function to process the array items or object’s property names and values.