

Unit 10: Topic Report on Ajax

Ajax Introduction: http://www.w3schools.com/ajax/ajax_intro.asp

- AJAX = Asynchronous JavaScript and XML
- Behind the scene action makes it possible to update parts of web page without reloading the entire page; widespread use in Google Maps and Facebook
- How AJAX works:
 1. In the browser, an event occurs and request objects are created
 2. Request is sent to the server which creates a response to send back to the browser
 3. The browser then uses JavaScript to process the response and updates the content of the page accordingly
- XMLHttpRequest objects are what let us exchange data behind the scenes and make small changes to our webpage → `variable = new XMLHttpRequest();`
- The two methods of sending a request to a server are:
 1. `open (method, url, async)` → specifies GET or POST for method
 2. `send (string)` → sends the request to server (only uses string for POST requests)
- Example of a GET request:

```
xmlhttp.open("GET","demo_get.asp?t=" +  
Math.random(),true);  
xmlhttp.send();
```
- The two properties used to receive a response are:
 1. `responseText` → retrieves the response data as a string
 2. `responseXML` → retrieves the response data as XML
- Example of using the `responseText` property:

```
document.getElementById("myDiv").innerHTML+xmlhttp.responseText;
```

Ajax Tutorial: <http://www.learn-ajax-tutorial.com/ajax-basics.cfm>

- AJAX can refer to all methods of communicating with a server via JavaScript
- Ajax was included in specifications starting with HTML5
- Synchronous calls force the browser to wait for a response from the server
- If using asynchronous calls, must include code that waits till data arrives and handles it when it finally does → accomplish this using a callback function (functions that are triggered by some event)
- How can we tell if we have received our data yet? By using the `readyState` property
 0. uninitialized
 1. loading
 2. loaded
 3. interactive
 4. complete
- How do we use this information? With the `onreadystatechange` event handler

```
xmlhttp.onreadystatechange = function() {  
    //Do something here }
```