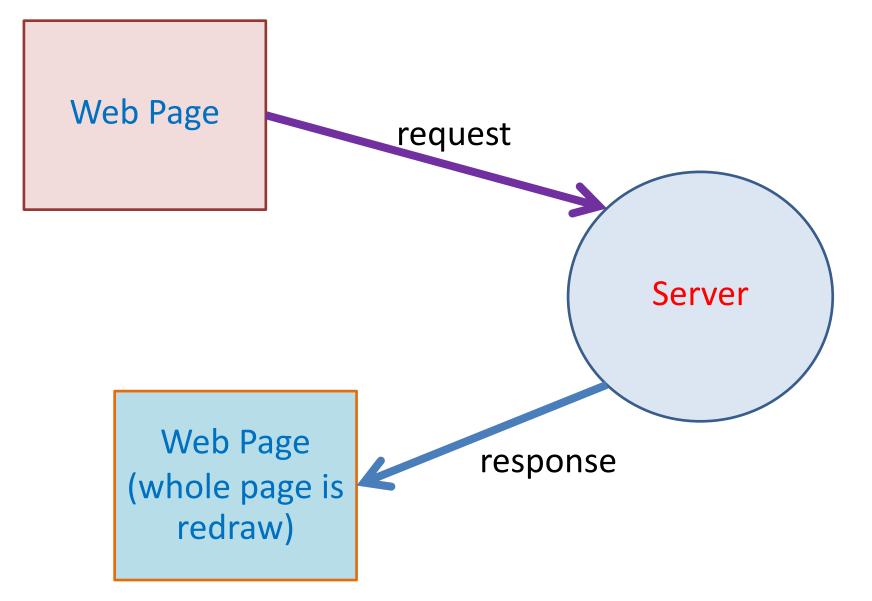
AJAX

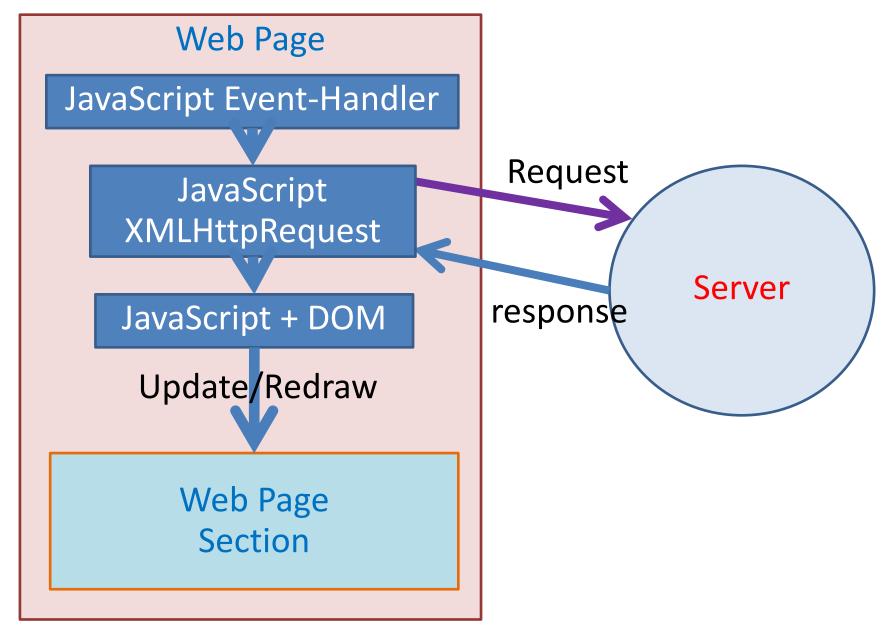
Asynchronous JavaScript and XML

- A technology based on:
 - JavaScript
 - DOM
 - Server side script
- Concept: Client-Driven Communication,
 Server-Side Processing

Classical case



Ajax case



Client-Side Communication

- Achieved by
 - XMLHttpRequest Object
 - XMLHttpRequest Object Methods

Method	Description
abort()	Cancels the current request
<pre>getAllResponseHeaders()</pre>	Returns all HTTP headers as a String type variable
<pre>getResponseHeader()</pre>	Returns the value of the HTTP header specified in the method
open()	Specifies the different attributes necessary to make a connection to the server; allows you to make selections such as GET or POST (more on that later), whether to connect asynchronously, and which URL to connect to
setRequestHeader()	Adds a label/value pair to the header when sent
send()	Sends the current request

• XMLHttpRequest Object Properties

Property	Description
onreadystatechange	Used as an event handler for events that trigger upon state changes
readyState	Contains the current state of the object (0: uninitialized, 1: loading, 2: loaded, 3: interactive, 4: complete)
responseText	Returns the response in string format
responseXML	Returns the response in proper XML format
status	Returns the status of the request in numerical format (regular page errors are returned, such as the number 404, which refers to a not found error)
statusText	Returns the status of the request, but in string format (e.g., a 404 error would return the string Not Found)

Cross Browser Usage

- IE and non-IE

```
var xmlhttp = false;
try {
      xmlhttp = new ActiveXObject("Msxml2.XMLHTTP");
      alert ("You are using Microsoft Internet Explorer.");
} catch (e) {
      xmlhttp = false;
   (!xmlhttp && typeof XMLHttpRequest != 'undefined') {
      xmlhttp = new XMLHttpRequest();
      alert ("You are not using Microsoft Internet Explorer");
```

```
var xmlhttp;

if (window.ActiveXObject) {
        xmlhttp = new ActiveXObject("Microsoft.XMLHTTP");
} else {
        xmlhttp = new XMLHttpRequest();
}
```

Sending a request to Server

The .innerHTML is useful for returning or replacing the content of HTML elements

.innerHTML is not part of W3C DOM but it is supported by all major browser

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"</pre>
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
  <head>
    <title>Sample 2 1</title>
    <meta http-equiv="Content-Type"</pre>
      content="text/html; charset=iso-8859-1" />
    <script type="text/javascript">
    <!--
        var xmlhttp = false;
        try {
             xmlhttp = new ActiveXObject("Msxml2.XMLHTTP");
             alert ("You are using MS IE.");
        } catch (e) {
             xmlhttp = false;
        if (!xmlhttp && typeof XMLHttpRequest != 'undefined') {
             xmlhttp = new XMLHttpRequest();
             alert ("You are not using MS IE");
```

```
function makerequest(serverPage, objID) {
      var obj = document.getElementById(objID);
      xmlhttp.open("GET", serverPage);
      xmlhttp.onreadystatechange = function() {
           if (xmlhttp.readyState == 4 && xmlhttp.status == 200)
                    obj.innerHTML = xmlhttp.responseText;
      xmlhttp.send(null);
    //-->
    </script>
  </head>
```

```
<body onload="makerequest ('content1.html','hw')">
    <div align="center">
      <h1>My Webpage</h1>
      <a href="content1.html" onclick=</pre>
             "makerequest('content1.html','hw');
             return false;"> Page 1</a> |
      <a href="content2.html" onclick=</pre>
             "makerequest('content2.html','hw');
             return false; ">Page 2</a> |
      <a href="content3.html" onclick=</pre>
             "makerequest('content3.html','hw');
             return false; ">Page 3</a> |
      <a href="content4.html" onclick=</pre>
             "makerequest('content4.html','hw');
             return false;">Page 4</a>
      <div id="hw"></div>
    </div>
  </body>
</html>
```

Elle Edit View Go Bookmarks Tools He	eb	
	ocalhost/mybooks/prophpandajax/chapter2/code/sample2_1.html	
🗋 post to del.icio.us 📲 del.icio.us/babinz 🌑 BabinPlanet.ca 💌 Gmail 🗀 Game News 🗀 Blogs 🗀 Game Related 🗀 Dev Related 🗀 Arime 🗀 Artwork 🛂 Mechanical Turk 📋 GameFAQs: Mess		
Sample 2_1		

My Webpage

Page 1 | Page 2 | Page 3 | Page 4

Page 3

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ASP.Net Core MVC & Ajax Example

Controller

```
Oreferences
public IActionResult Index()
{
    return View();
}

Oreferences
public IActionResult Message01()
{
    string msg = "Hello,This is a test Ajax message";
    return Content(msg, "text/html", Encoding.UTF8);
}

Oreferences
public IActionResult Message02()
{
    string msg = "ul>vli>topic01vli>topic03vli>topic04vli>topic05return Content(msg, "text/plain", Encoding.UTF8);
}
```

ASP.Net Core MVC & Ajax Example

```
<html>
<head>
                                                                                                  View
   <meta name="viewport" content="width=device-width" />
   <title>Ajax testing</title>
   <script>
       var xmlhttp = new XMLHttpRequest();
       function MakeReq(serverpage, objID) {
           let obj = document.getElementById(objID);
           xmlhttp.open("GET", serverpage);
           xmlhttp.onreadystatechange = function () {
               if (xmlhttp.readyState == 4 && xmlhttp.status == 200) {
                    obj.innerHTML = xmlhttp.responseText;
           xmlhttp.send(null);
   </script>
</head>
(body>
       <h2>Part I</h2>
       click here ==>
       <a href="" onclick="MakeReq('https://localhost:5001/Ajax/Message01', 'p01'); return false;">Hello</a>
       <div id="p01"></div>
   </div>
       <h2>Part II</h2>
       click here ==>
       <a href="" onclick="MakeReq('https://localhost:5001/Ajax/Message02', 'p02'); return false;">Test</a>
       <div id="p02"></div>
   </div>
 /bodv>
 /html>
```