09. AJAX Examples.

9.1. A Simple AJAX Example

Create a simple XMLHttpRequest, and retrieve data from a TXT file.

Example:

```
<!DOCTYPE html>
<html>
<body>

<div id="demo">
<h2>The XMLHttpRequest Object</h2>
<button type="button" onclick="loadDoc()">Change Content</button>
</div>

<script>
function loadDoc() {
  var xhttp = new XMLHttpRequest();
  xhttp.onreadystatechange = function() {
    if (this.readyState == 4 && this.status == 200) {
      document.getElementById("demo").innerHTML =
      this.responseText;
    }
  };
  xhttp.open("GET", "ajax_info.txt", true);
  xhttp.send();
}
</script>

</body>
</html>
```

9.2. An AJAX example with a callback function

Create a XMLHttpRequest with a callback function, and retrieve data from a TXT file.

Example:

```
<!DOCTYPE html>
<html>
<body>

<div id="demo">

<h2>The XMLHttpRequest Object</h2>

<button type="button"
onclick="loadDoc('ajax_info.txt', myFunction)">Change Content
</button>
</div>

<script>
function loadDoc(url, cFunction) {
  var xhttp;
  xhttp=new XMLHttpRequest();
  xhttp.onreadystatechange = function() {
    if (this.readyState == 4 && this.status == 200) {
      cFunction(this);
    }
  };
  xhttp.open("GET", url, true);
  xhttp.send();
}
function myFunction(xhttp) {
  document.getElementById("demo").innerHTML =
  xhttp.responseText;
}
</script>
</body>
</html>
```

9.3. Retrieve all header information of a resource (file)

Retrieve all header information of a resource (file).

Example:

```
<!DOCTYPE html>
<html>
<body>
```

```
                <h2>The XMLHttpRequest Object</h2>

                <p>The getAllResponseHeaders() function returns all the
                header information of a resource, like length, server-type,
                content-type, last-modified, etc:</p>

                <p id="demo"></p>

                <script>
                var xhttp = new XMLHttpRequest();
                xhttp.onreadystatechange = function() {
                  if (this.readyState == 4 && this.status == 200) {
                    document.getElementById("demo").innerHTML =
                    this.getAllResponseHeaders();
                  }
                };
                xhttp.open("GET", "ajax_info.txt", true);
                xhttp.send();
                </script>

                </body>
                </html>
```

9.4. Retrieve specific header information of a resource (file)

Retrieve specific header information of a resource (file).

Example:

```
                <!DOCTYPE html>
                <html>
                <body>

                <h2>The XMLHttpRequest Object</h2>

                <p>The getResponseHeader() function is used to return specific
                header information from a resource, like length, server-type,
                content-type, last-modified, etc:</p>

                <p>Last modified: <span id="demo"></span></p>

                <script>
                var xhttp=new XMLHttpRequest();
                xhttp.onreadystatechange = function() {
                  if (this.readyState == 4 && this.status == 200) {
```

```
        document.getElementById("demo").innerHTML =
        this.getResponseHeader("Last-Modified");
    }
};
xhttp.open("GET", "ajax_info.txt", true);
xhttp.send();
</script>

</body>
</html>
```

9.5. Load an XML file with AJAX

Create an XMLHttpRequest to retrieve data from an XML file.

Example:

```
<!DOCTYPE html>
<html>
<body>

<h2>The XMLHttpRequest Object</h2>

<h2>Retrieve data from XML file</h2>

<p><b>Status:</b> <span id="A1"></span></p>
<p><b>Status text:</b> <span id="A2"></span></p>
<p><b>Response:</b> <span id="A3"></span></p>

<button onclick="loadDoc('note.xml')">Get XML data</button>

<script>
function loadDoc(url) {
  var xhttp = new XMLHttpRequest();
  xhttp.onreadystatechange = function() {
    if (this.readyState == 4 && this.status == 200) {
      document.getElementById('A1').innerHTML = this.status;
      document.getElementById('A2').innerHTML = this.statusText;
      document.getElementById('A3').innerHTML = this.responseText;
    }
  };
  xhttp.open("GET", url, true);
  xhttp.send();
}
</script>

</body>
```

```
            </html>
```

9.6. Retrieve the content of an XML file

Create an XMLHttpRequest to retrieve data from an XML file and display the data in an HTML table.

Example:

```html
<!DOCTYPE html>
<html>
<style>
table,th,td {
  border : 1px solid black;
  border-collapse: collapse;
}
th,td {
  padding: 5px;
}
</style>
<body>

<h2>The XMLHttpRequest Object</h2>

<button type="button" onclick="loadDoc()">Get my CD
collection</button>
<br><br>
<table id="demo"></table>

<script>
function loadDoc() {
  var xhttp = new XMLHttpRequest();
  xhttp.onreadystatechange = function() {
    if (this.readyState == 4 && this.status == 200) {
      myFunction(this);
    }
  };
  xhttp.open("GET", "cd_catalog.xml", true);
  xhttp.send();
}
function myFunction(xml) {
  var i;
  var xmlDoc = xml.responseXML;
  var table="<tr><th>Artist</th><th>Title</th></tr>";
  var x = xmlDoc.getElementsByTagName("CD");
  for (i = 0; i <x.length; i++) {
    table += "<tr><td>" +
    x[i].getElementsByTagName("ARTIST")[0].childNodes[0].nodeValue
```

```
+
    "</td><td>" +
    x[i].getElementsByTagName("TITLE")[0].childNodes[0].nodeValue +
    "</td></tr>";
  }
  document.getElementById("demo").innerHTML = table;
}
</script>

</body>
</html>
```

9.7. Retrieve the content of a PHP file

How a web page can communicate with a web server while a user type characters in an input field.

Example:

```
<!DOCTYPE html>
<html>
<body>

<h2>The XMLHttpRequest Object</h2>

<h3>Start typing a name in the input field below:</h3>

<p>Suggestions: <span id="txtHint"></span></p>

<p>First name: <input type="text" id="txt1"
onkeyup="showHint(this.value)"></p>

<script>
function showHint(str) {
  var xhttp;
  if (str.length == 0) {
    document.getElementById("txtHint").innerHTML = "";
    return;
  }
  xhttp = new XMLHttpRequest();
  xhttp.onreadystatechange = function() {
    if (this.readyState == 4 && this.status == 200) {
      document.getElementById("txtHint").innerHTML =
this.responseText;
    }
  };
  xhttp.open("GET", "gethint.php?q="+str, true);
  xhttp.send();
```

```
      }
   </script>

   </body>
   </html>
```

9.8. Retrieve Database Information

How a web page can fetch information from a database with AJAX.

Example:

```
      <!DOCTYPE html>
      <html>
      <style>
      table,th,td {
        border : 1px solid black;
        border-collapse: collapse;
      }
      th,td {
        padding: 5px;
      }
      </style>
      <body>

      <h2>The XMLHttpRequest Object</h2>

      <form action="">
      <select name="customers" onchange="showCustomer(this.value)">
      <option value="">Select a customer:</option>
      <option value="ALFKI">Alfreds Futterkiste</option>
      <option value="NORTS ">North/South</option>
      <option value="WOLZA">Wolski Zajazd</option>
      </select>
      </form>
      <br>
      <div id="txtHint">Customer info will be listed here...</div>

      <script>
      function showCustomer(str) {
        var xhttp;
        if (str == "") {
          document.getElementById("txtHint").innerHTML = "";
          return;
        }
        xhttp = new XMLHttpRequest();
        xhttp.onreadystatechange = function() {
```

```
            if (this.readyState == 4 && this.status == 200) {
                document.getElementById("txtHint").innerHTML =
        this.responseText;
            }
        };
        xhttp.open("GET", "getcustomer.php?q="+str, true);
        xhttp.send();
    }
    </script>

    </body>
    </html>
```