

Lab Programming Exercise

Initial Setup: Create a directory to store the code of this lab exercise. Follow the instructions below to start a web server at the newly created directory.

Running web server on **Mac** using command:

```
python3 -m http.server [port-number] -d [web-directory]
```

For example, to run on port 50000 and directory /Users/jsmith/Desktop/myweb

```
python3 -m http.server 50000 -d "/Users/jsmith/Desktop/myweb"
```

The website will be at the address: <http://localhost:50000/>

Running web server on **Windows** using command:

```
python -m http.server [port-number] -d [web-directory]
```

For example, to run on port 8000 and directory "C:\Users\jsmith\Desktop\my web"

```
python -m http.server 8000 -d "C:\Users\jsmith\Desktop\my web"
```

The website will be at the address: <http://localhost:8000/>

This is a sample code for making AJAX call to get JSON:

```
// make ajax query
function makeAjaxQuery()
{
    // create an XMLHttpRequest
    var xhttp = new XMLHttpRequest();

    // create a handler for the readyState change
    xhttp.onreadystatechange = function() {
        readyStateChangeHandler(xhttp);
    };

    // making query by async call
    var queryUrl = "url-to-query-the-server";
    xhttp.open("GET", queryUrl, true);
    xhttp.send();
}

// handler for the readyState change
function readyStateChangeHandler(xhttp)
{
    if (xhttp.readyState == XMLHttpRequest.DONE)
    {
        if(xhttp.status == 200)
        {
            // status = 200 means OK
            handleStatusSuccess(xhttp);
        }
        else
        {
            // status is NOT OK
            handleStatusFailure(xhttp);
        }
    }
}
```

```
// XMLHttpRequest failed
function handleStatusFailure(xhttp)
{
    alert("AJAX request fail");
    alert("readyState = " + xhttp.readyState);
    alert("status = " + xhttp.status);
}

// XMLHttpRequest success
function handleStatusSuccess(xhttp)
{
    alert("AJAX request success");

    // get the response json
    var jsonText = xhttp.responseText;
    alert(jsonText);

    // parse the json into an object
    var obj = JSON.parse(jsonText);

    // display the object on the page
    display(obj);
}

// display the javascript object info on the webpage
function display(obj)
{
    // TODO
}
```