## BU MET College Assignment 03 CS701 A1 Rich Internet Apps

### Handed out: 02/9/2022 Due by 6 PM EST on Tuesday, 02/16/2022

The objective of this assignment is to convince yourself that HTML5 Audio, Video and Geolocation work. We will also demonstrate operation of a simple HTML form. Those features are described in chapters 4, 5 and 8 of the book “Pro HTML Programming” by Lubbers et al, Apress, 2011 and the Study Guide for Module 1. <https://learn.bu.edu/bbcswebdav/pid-8742786-dt-content-rid-51442927_1/courses/21sprgmetcs701_a1/Course_Content/module1/allpages69780.htm>

**General Rules for Homework Assignments**

• You are strongly encouraged to add comments throughout the program.

• You must work on your assignments individually. You are not allowed to copy the answers from the others.

• Please submit by due date to avoid late penalty.

• When the term *lastName* is referenced in an assignment, please replace it with your last name.

Create a new folder/project named CS701\_HW3\_*lastName.* Place your HTML files (programs) in this folder.

**Part 1.** Please download any song of your liking Create a small HTML page with <audio> HTML element and demonstrate that your page can successfully play that song. **(15%)**

**Part 2.** Download any short video. Create a small HTML page with a <video> HTML element and demonstrate that your page can successfully play that video. **(15%)**

**Part 3.** Start from file ex01\_formSample.html provided as an illustration in Modul1.pdf. Remove reference to PHP scripts. Add a custom handler of invalid values as described in lecture notes on Forms. Similarly, add a JavaScript validator that will verify that two copies of an email address are identical. Demonstrate that both the handler and the validator work. Submit a working copy of the modified file.

**(20%)**

**Part 4.** Modify above HTML file. At the top add text field with a description of the form or an instruction to the person who is filling in the form. At the bottom add a region where you could drag and drop the text of that description. Could you modify the drop handler so that it remove the text from the top?

**(20%)**

**Part 5. – Geolocation (40%)**

Using the HTML5 Geolocation API, write the LocationTracker.html and the associated

Javascript file LocationTracker.js. You are free to use the html5.css from the samples.

The initial rendering of the HTML page is shown below with placeholders for the location

details and the Google map.



When the *Start* button is clicked, get the current position using the Geolocaiton API and

display the initial location in the map as shown below. After the initial location is

displayed, use the *setInterval* method to invoke your method *updateMyLocation* every 5

seconds. The *Start* button is disabled from now on.

The *updateMyLocation* method simulates the changes in the latitude and longitude as

follows. Generate two random numbers using Math.random() and divide each by 100.

These two numbers represent the changes in the latitude and longitude. Modify the

current location by adding the latitude value and subtracting the longitude value. This will

make the bird only fly in the NorthWest direction. If you are on the Northern border or the

Western border, feel free to keep the bird over the United States (or your country) by the

appropriate changes to the current location. Update the current location in the HTML display.

**Submission:** Save your CS701\_HW3\_*lastNameFirstName* folder as a zip file, with the appropriate index.html for the above files, and upload the zip file to the Assignment section on the class Blackboard.