CSCI 4131 – Internet Programming
Homework Assignment 2

Due Friday September 28th at 2 pm (Afternoon)
Late Submission Date (with Penalty): Saturday September 29th at 2 am (Early Morning)

1. Description

The objective of this assignment is to expose you to client-side JavaScript, CSS and the Document Object Model elements. You will refactor and build upon your first homework assignment to accomplish this. This assignment is 4 pages long.

The following tasks are required by with this assignment:
1. Categorize the events in the calendar by location. Display a picture of the location and a pop-up image of the location upon hovering the event in the calendar. *Use your best judgment in selecting the pictures and do not use copyrighted material. Note, you can use pictures you create (take).*
2. Do basic validation for the calendar input form developed in the earlier assignment.
3. Add a Twitter Stream and a Tic-Tac-Toe widget to the My Widgets page.

2. Functionality

Once the Calendar page is loaded into the browser, it should display the calendar of the week's events as shown in the screenshots below. A placeholder image should be displayed below the calendar. When the text describing a location is hovered over, a small (thumbnail) image of the location should be displayed. A larger version of the image should be displayed below the calendar. The larger image should persist even on mouse-out. For instance, in the example below, we have hovered on an event which has the location of Walter Library.

As depicted in the previous figure, a small pop-up image is displayed on the calendar, and a larger version of the image is displayed below the calendar.

When hovering on the location text, the page should display a pop-up image of the location on the calendar as shown. For instance, in the event below, Walter Library is hovered on and a small pop-up image of it appears in the Table Cell of the event, that image disappears when the mouse moves off of the cell (or text specifying the location).
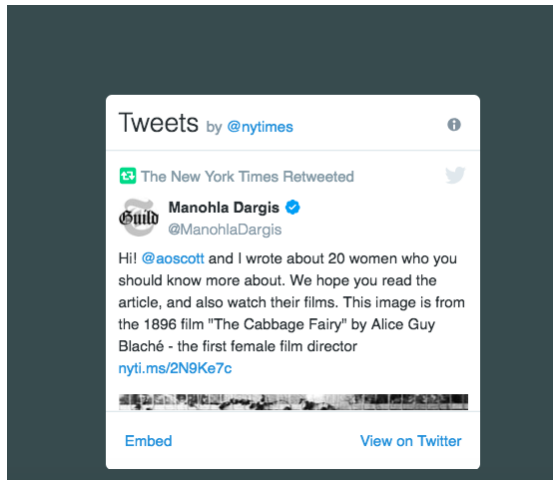

On the form page, add the following validations (using JavaScript and Regular Expressions) to the form fields
- Event Name, Start Time, End Time, Location, and Day of the week fields are mandatory.

- Event Name and Location should accept only alphanumeric characters. Acceptable Alphanumeric characters are specified in the following ranges: number: *0-9, lower case characters: a-z, and upper-case characters: A-Z. As shown in the figure below, a dialog box indicating an error should be displayed in the even non-alpha numeric characters are entered in the event name or event location on the form.*
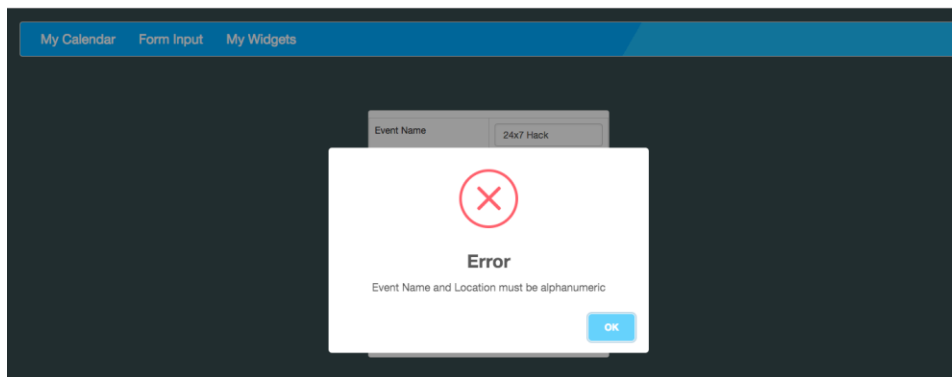
Next, replace the Tweet with the Twitter Timeline Stream widget on the **My Widgets** Page. See the link https://developer.twitter.com/en/docs/twitter-for-websites/timelines/overview.html to get details about how to accomplish this.

Tweets by @nytimes

The New York Times Retweeted

Manohla Dargis ✓
@ManohlaDargis

Hi! @aoscott and I wrote about 20 women who you should know more about. We hope you read the article, and also watch their films. This image is from the 1896 film "The Cabbage Fairy" by Alice Guy Blaché - the first female film director
nyti.ms/2N9Ke7c

Embed   View on Twitter

Finally, develop and add a Tic-Tac-Toe widget to the **My Widgets** Page using HTML, CSS, and JavaScript. The widget should enable 2 players or teams to play tic-tac-toe. (Red and Blue). You need to enter the name of the cell (one, two, three, ….) in the "Enter the Cell Name" field. Then you need to select the participant color from the "Select Cell Color" drop down list (Red and Blue in the example below) and hit Enter. This should change the background color of the cell to Red/Blue depending on your selection. The game ends when either of the participants/teams has placed their color in 3 cells across a row/column/diagonal, or all cells are selected and there is no winner. You should add a reset button (not pictured below) to reset the grid so that all cell background colors are reset to gray.

TIC TAC TOE

Enter Cell Name: two

Select Cell Colo ✓ Red(o)
                    Blue(x)
Enter

one	two	three
four	five	six
seven	eight	nine
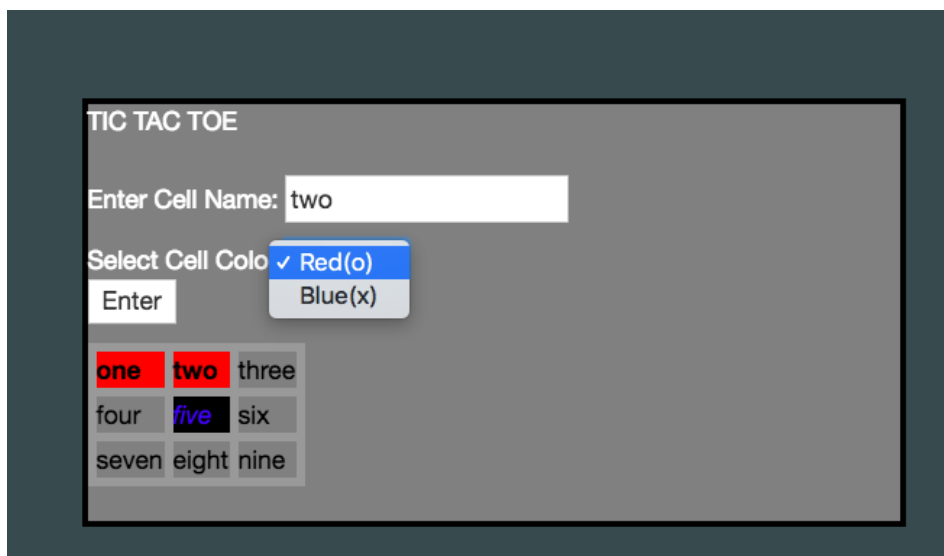
3. Evaluation

Your submission will be graded on the following items:

1. HTML and CSS files pass w3schools validators (http://validator.w3.org and https://jigsaw.w3.org/css-validator) without errors. Warnings are accepted. **10 points**

2. Dynamically display a large image of an event location below the calendar when hovering over an event location on the calendar. This large image should persist until the mouse hovers another location on the calendar. **20 points**

3. Dynamically display a pop-up (thumbnail) image of an event location on the calendar when hovering over text describing an event location on the calendar, and hide or delete the image when the mouse moves off of the text specifying the event location . **20 points**

4. Add the functionality described above necessary the form for any errors in user input and display relevant error messages. **10 points**

5. Embed the Twitter Timeline Stream in the My Widget Page. **10 points**

6. Develop and embed a Tic-Tac-Toe Widget in the My Widget Page. **20 points**

7. All CSS directives should specified in external style sheets. Note, CSS inline styling can be used to over-ride CSS directives in external style sheets if applied to a single element. **10 points**

SUBMISSION INSTRUCTIONS:

Your submission should be packaged in a tar file or zip file. When opened, it must create a directory titled '<UMN internet ID>' containing all of your files (HTML, CSS, Pictures, and additional external JavaScript (If used).   You will lose 10 points if you do not do this correctly.

Submit your homework via the class Moodle Page with the Homework 2 Submission Link.