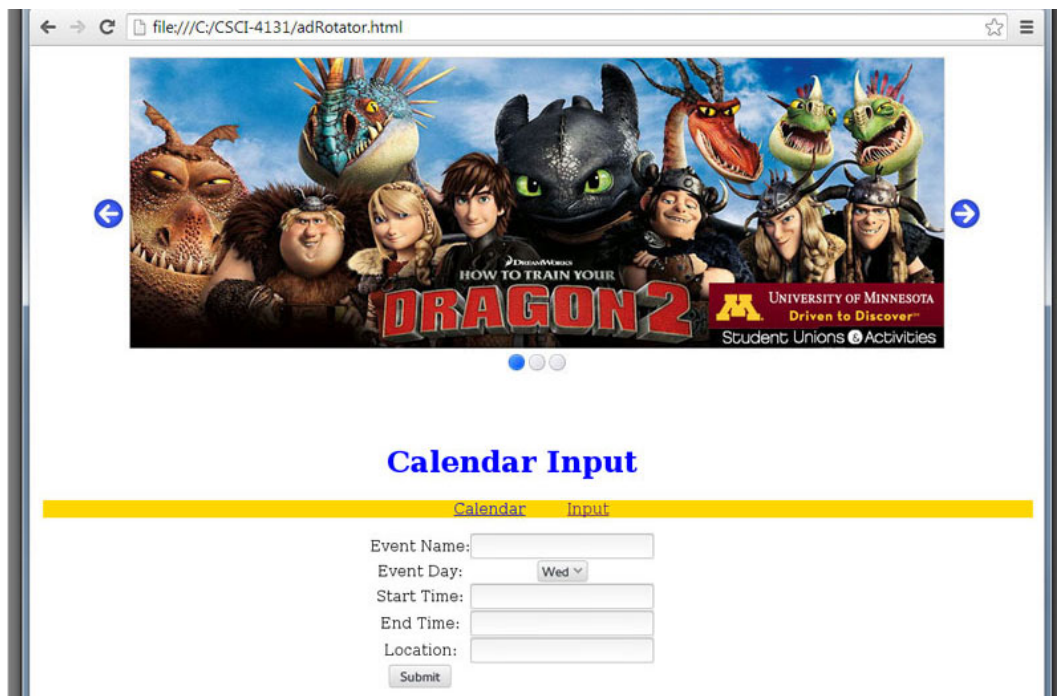


FALL 2014: CSci-4131 Internet Programming

Assignment3: Programming with JavaScript

Issued: 9/18, Due: 10/3



Task: The purpose of this assignment is to illustrate the use of JavaScript programming and DOM (Document Object Model) in HTML document. Ad Rotation is a feature of many high ranking websites to produce revenue or forward traffic to other websites. In this assignment, you will create an interactive HTML page that will show an advertisement banner of upcoming movies at Coffman Union Theater on top of the previous assignment's form page (second webpage of Assignment 2). The ads are weighted, so you have to show each ad for specific amount of time provided below before going to the next one. This page will support two major modes of operations:

- *Rotating Slideshow mode:* by default, the webpage will automatically keep on changing each ad based on the given duration.
- *Manual direct access mode:* the webpage will provide individual bullet buttons underneath the main banner for accessing each ad directly.

Problem Statement: You will have to write JavaScript code to create an interactive Ad Rotator for your HTML page. The HTML page should contain the following:

- An *Image*: to display the banner image at the top and to display the “tooltip”.
- A *Hyperlink*: to open the current ad URL in a new window.
- *Buttons or Hyperlinks*: Next, Previous, and individual Bullet buttons.
- *Window Timer*: to change the ads based on the given durations.

Functionality:

- There are three ads to rotate:
 - First Ad: How to Train your Dragon 2
 - * *File*: dragon.jpg
 - * *URL*: <http://sua.umn.edu/events/calendar/event/14015/>
 - * *Show Time*: Sat, Sep 27 7:00pm
 - * *Duration*: 5 seconds
 - Second Ad: Transformers: Age of Extinction
 - * *File*: transformers.jpg
 - * *URL*: <http://sua.umn.edu/events/calendar/event/14017/>
 - * *Show Time*: Thu, Oct 2 7:00pm
 - * *Duration*: 10 seconds
 - Third Ad: Planes: Fire & Rescue
 - * *File*: planes.jpg
 - * *URL*: <http://sua.umn.edu/events/calendar/event/14023/>
 - * *Show Time*: Thu, Oct 9 7:00pm
 - * *Duration*: 3 seconds
- After loading the page, the first ad needs to be displayed on the banner area, and the URL and “tooltip” values need to be set.
- Loading the page also activates the Automatic Ad Rotation functionality.
- After each ad’s stated time limit, the next ad needs to be displayed. If it is the last ad in the list, it should go back to the first ad.
- “Next” button overrides the slideshow/rotation functionality, and shows next ad on the list. The time needs to be reset according to the new ad’s duration.
- “Previous” button overrides the rotation functionality and shows previous ad on the list. If it is the first ad, it should go to the last one on the list. The time also needs to be set for the new ad.
- Individual “Bullet buttons” override the rotation functionality and have a one-to-one relationship to each ad’s banner. Clicking on these buttons will show the corresponding ad and resets the timer.
- Clicking on the banner will open the related event’s page URL.
- The banner size is 800 by 285 pixels, and each individual ad is provided in the assignment files.

- The buttons and bullet images are provided in the assignment files.

You can download the images for ads and buttons from the class moodle website under assignment3 files. We are giving you information about three future movies for the Coffman Union Theater here, and you should use the following order while displaying the ads: How to Train your Dragon 2, Transformers: Age of Extinction, Planes: Fire & Rescue. We also provide the following screenshots demonstrating the Ad Rotator HTML page corresponding to above functionalities as a guide:

- *Screenshot 1*: This is the initial screen shot showing the first ad.
- *Screenshot 2*: This is the screen after the Ad Rotator automatically changed the first ad after 5 seconds of being idle.
- *Screenshot 3*: This is the screen after the Ad Rotator automatically changed the second ad after 10 seconds of being idle.
- *Screenshot 4*: This is the screen shot after “Next” button is clicked on the last ad.
- *Screenshot 5*: This is the screen shot after “Previous” button is clicked while displaying the first ad.
- *Screenshot 6*: This is the screen shot right before the second bullet on the middle is going to be pressed.
- *Screenshot 7*: This is the screen shot right after the second bullet on the middle is pressed.
- *Screenshot 8*: This is the screen shot after holding the mouse over the second ad to show the tooltip.
- *Screenshot 9*: This is the screen shot after clicking on the banner while the second ad was showing.

Design Guidelines:

- You can assume that the images are stored in the same directory as your HTML files.
- When the “Next” button is pressed on the last ad, it should loop back to the first ad’s image.
- When the “Previous” button is pressed on the first ad, it should loop back to the last ad’s image
- The individual bullets for each ad need to be updated to reflect the current ad with highlighted state. The selected bullet no longer can change the banner nor change the rotation functionality. Other bullets need to be active and working.
- Use the provided images: “bullet_blue.png” for selected and inactive bullet, “bullet_gray.png” for the active but not selected bullets, “bullet_orange.png” for hovering over active bullets but not on selected one.

Submission Instructions:

Include the following files in your submission:

- adRotator.html: HTML file containing your code.
- adRotator.js: a file containing your javascript code.
- adRotator.css: a CSS stylesheet containing your code.
- README file: includes your student ID, name, and x500 ID.

Grading Criteria (out of 200 points):

1. Ad Rotation is added to the top of Assignment 2's form page - **5 points**
2. HTML file pass w3schools validator (<http://validator.w3.org>) without errors. Warnings are accepted - **10 points**
3. CSS files pass w3schools validator (<http://jigsaw.w3.org/css-validator/>) without errors. Warnings are accepted - **5 points**
4. HTML tags, JavaScript codes, and CSS files are properly indented and are easy to read and evaluate - **15 points**
5. Ad Rotation successfully and automatically rotates all three advertisements - **30 points**
6. Ad Rotation's timings and delays are correct for all three advertisements - **15 points**
7. Appropriate URL opens up in a new browser window by clicking on each ad - **15 points**
8. Appropriate tool-tip box appears on top of each ad when the mouse pointer is idle on them - **15 points**
9. Functionality of Control Buttons: Next, Previous, and all three individual one-to-one Bullets - **25 points**
10. Pressing Control Buttons appropriately resets the timing and delays
For example, pressing [Next] when 2nd ad is displaying, should set the delay to 3 seconds - **25 points**
11. Control Buttons appropriately show highlight states on mouse movements - **25 points**
12. Pressing [Next] button on last ad goes to the first ad - **5 points**
13. Pressing [Previous] button on first ad goes to the last ad - **5 points**
14. When an ad is displaying, the associate bullet no longer responds to mouse movements and clicking interactions (disabled state) - **5 points**