

## Homework Assignment 5: ASCIIimation EXTRA FEATURES

The following are **three extra features** you can complete to add new functionality to your program. Each optional feature you complete is worth **+1 late day**. These aren't worth points like in the last program because they are smaller and easier to implement. But the late days can still be valuable, and the features can be fun to write. If you choose to do any of these extra features, in your file's comment header, indicate which one(s) you did.

### Extra Feature #1. Turbo Speed

Add a field set to the GUI, right of the font size section, with a similar border and title of "Speed:", containing a checkbox labeled "Turbo". When the box is checked, it sets the speed of animation to use a 50ms delay instead of 200ms. When unchecked, the speed goes back to 200ms. Initially the box is unchecked and the delay is 200ms.

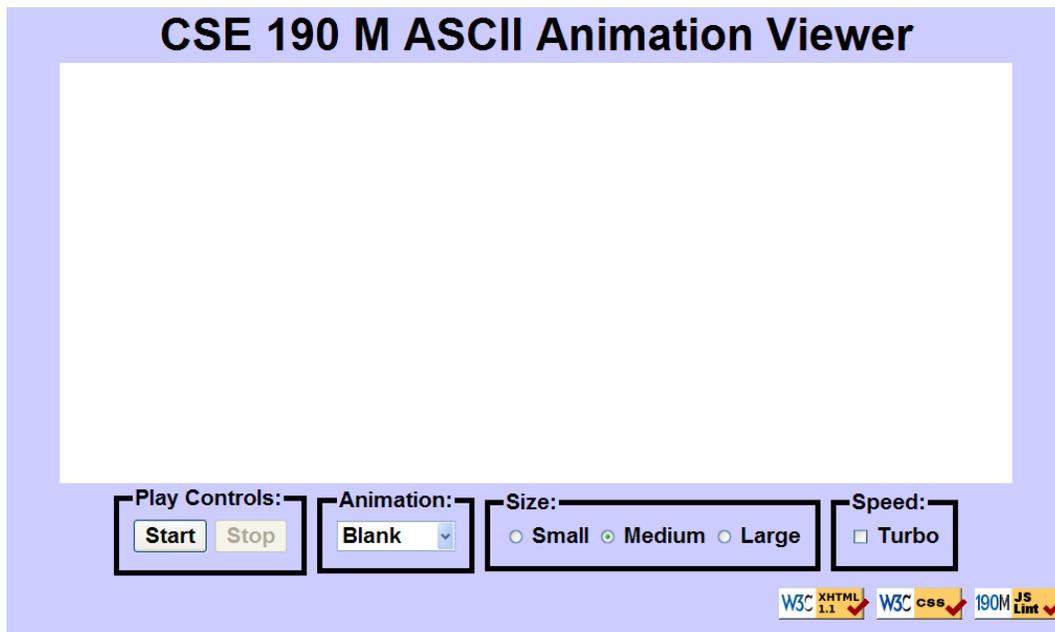
If the animation is playing and the box is checked/unchecked, the change should take effect immediately (the user shouldn't have to stop and restart the animation to see the change). Checking the box shouldn't cause the animation to start if it wasn't already started. It also shouldn't reset what frame is showing; it should just change the delay.

### Extra Feature #2. Control Enabling/Disabling

Modify your GUI to disable elements that the user shouldn't be able to click at a given time. Initially and whenever animation is not in progress, Stop should be disabled. When animation is in progress, Start and the select box of animations should be disabled. The Size buttons (and Turbo box, if you implement it) should always be enabled.

En/disable a control by changing its `disabled` property. For example, to disable a control with `id` of `customerlist`:  
`$("#customerlist").disabled = true;`

The following screenshot shows the appearance of your page with Extra Features #1 and #2 implemented:



### Extra Feature #3: Unobtrusive JavaScript

Modify your HTML file to contain no JavaScript code whatsoever, a process called "Unobtrusive JavaScript." (This concept is in textbook Chapter 8, section 8.1, and will also be discussed in lecture.)

If you do this extra feature, the only permitted JavaScript in your HTML file should be the link to your `.js` file in the page's header. In other words, no `onclick` or other event handlers should be embedded in the HTML. Instead, attach all event handlers using `window.onload` and the Document Object Model (DOM) as described in lecture.