

CSE 3302 Lab Assignment 6

Due May 2, 2013

Goal:

Understanding of prototypal inheritance in JavaScript.

Requirements:

1. Write a JavaScript program to maintain a set of boxes (like lab 3) whose properties may be inherited *prototypically* from their ancestors in the containment hierarchy:
 - a. While in “rectangle” (e.g. drawing) mode, there will be an additional “Inherit” radio-box option for each of “Fill Color”, “Stroke Color”, and “Stroke Thickness” to indicate that a box should *prototypically inherit* the property from its parent in the containment hierarchy. The inheritance for the property may be for an arbitrary number of levels through the prototype chain.

When “rectangle” mode is left, the radio-box options are “cut”.
 - b. While in “selection” mode, the radio boxes (for the three box properties) should be disabled. As the smallest containing box changes, the radio boxes should indicate the properties of the highlighted box.

If the user clicks (on the canvas) while in this mode, the properties of the selected box are “cut”. (An `alert` is useful while debugging.) When a transition to “rectangle” or “set properties” mode is made, the radio boxes should be “pasted” (set) to the most recently cut properties and enabled.
 - c. The new “set properties” mode:
 1. Highlights the containing box of the mouse position - like “selection” mode.
 2. Keeps the radio boxes (for the three box properties) enabled and changeable *only* by the user (not by mouse moves).
 3. Reacts to a mouseclick by changing the properties of the containing box (to those indicated by the radio buttons). If a property has the “Inherit” radio button indicated, the containing box will now inherit from its *immediately containing box*. (JavaScript `delete` for a property should be used.)
 4. When “set properties” mode is left, the radio-box options are “cut”.
2. Email your program to `mehra.nourozborazjany@mavs.uta.edu` by 10:45 a.m. on May 2, 2013.

Getting Started:

1. `document.getElementById().disabled=true` is convenient for disabling html elements.
2. `document.getElementById().checked=true` is convenient for changing radio boxes.
3. My html for this assignment and the solution to lab 3 are on the webpage
4. `Object.create()` is the simplest way to establish prototypal inheritance.

Turn this over to see some important announcements!!!!!!

As approved by Mehra ...

1. I have added *.code files in the lab 4 web directory. These are output from plzero.argstack.
I will discuss a few of these in class.
2. Lab 4 deadline is now April 16 at 10:45 am. Early submissions get a 5 point bonus per 24-hour period, no fractions. Bonus is limited to 25 points for hitting the original deadline. Does not apply to submissions that are not substantially complete.
3. Students only need to do two of the remaining labs. Everyone gets 5 points for the missing lab in the final grade computation.
4. If a student completes all three of the remaining labs, the one with the lowest score will be a bonus.
5. All bonuses are outside the final grade cut-off decision.