

**CSE 264 – Web Systems Programming – Spring 2016**  
**Homework Assignment 2 - Calculator**  
**Due Wednesday, 2/22/17 at 11:00 pm.**

**Objective**

To gain a better understanding of HTML DOM programming with JavaScript.

**Description**

You will create a simple four function calculator in html.

**Instructions**

1. Create a single html page that implements a simple four function calculator in the style of the old HP calculators. You perform calculations by entering numbers, pushing them on the stack and then selecting operations (+-\*/) which pop the top 2 operands off the stack, perform the operation, display the result and push it on the stack.
  - (a) Create a new HTML5 NetBeans project.
  - (b) Display
    - i. The calculator display should always be right justified. (style: text-align)
    - ii. It should initialize with a 0 in the display.
  - (c) Keys
    - i. The numbers on the digit keys, 0-9, should be red; all the others, black.
    - ii. The **Push** button should take the current number in the display and push it on the stack.
    - iii. The four function keys (+ - \* /) should pop the top 2 values from the stack perform the operation and push the result.
  - (d) As each digit key is pressed, the digit should be concatenated to the right end of the display. If the result of a calculation is being show in the display, then the first digit pressed should replace the result with that digit.
  - (e) The calculator should not have any notion of operator precedence.
  - (f) The +/- key should flip the sign of the number in the display (and internally).
  - (g) The C key should clear out the calculator, as if it had just been turned on.
  - (h) The calculator should ignore any attempt to key a 2nd decimal point for the number in the display.
  - (i) All the keys are used by clicking on them with the mouse.
  - (j) The display should be read only.
  - (k) All internal arithmetic should be floating point.
  - (l) Make sure the calculator works in Chrome. Don't worry about other browsers.
  - (m) Coding Style
    - i. Use a linked style sheet for *all* your styles. There should be no style declarations in your html file.
    - ii. Use unobtrusive JavaScript (*all* your JavaScript should be placed in a separate file).
  - (n) Visual Style
    - i. Styling should look professional: no really wide buttons or ones that aren't fully filled in, adequate margins around text, etc.
2. Submission
  - (a) Zip up the project and submit to Coursesite.