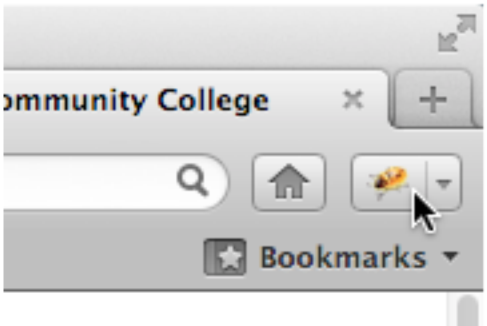
CIS 166AA – JavaScript Debugging Lab – 100 points

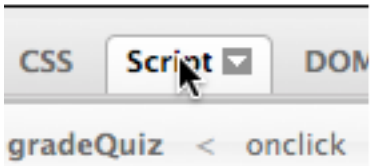
Instructions

For this lab, you will be using the code file 'TestDebugProject.html' that was used in the tutorial and demonstration in Module 2. Please download it and save it to your computer. To complete the lab, practice opening it up in the Mozilla Firefox browser and running the debugger as shown in the tutorial, using the following procedures: (this is verbatim from the online tutorial). To complete the tutorial you need to have installed the Firebug add-in to Mozilla Firefox as demonstrated in the tutorial.

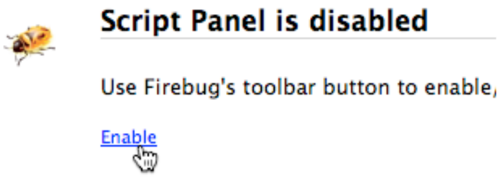
1. Take the JavaScript quiz and intentionally get the questions wrong.
2. Take the JavaScript quiz again and answer the questions correctly. Each question is worth a 'point' each. Since there are 3 questions a perfect score would be 3. Pay attention to the score does quiz gives you instead when you get all questions correct.
3. Activate the Firebug add-in by going to the menu bar and click on the Firebug Icon:



4. Click on the Script tab in the Firebug Interface:



You may have to click the 'Enable' link on this view in order to get the HTML/JavaScript code of the page to display:

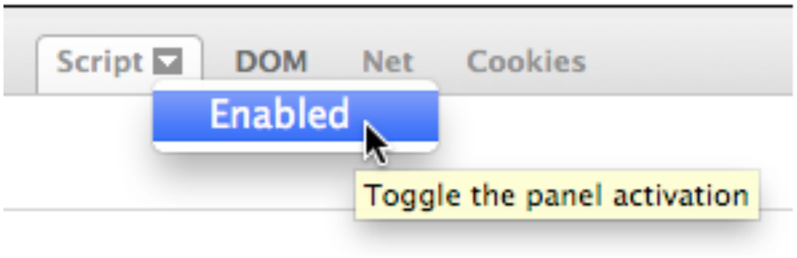


Script Panel is disabled

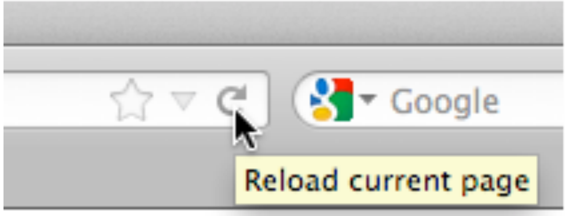
Use Firebug's toolbar button to enable,

Enable

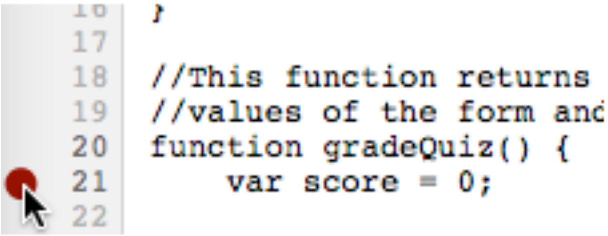
Or you can click on the 'Enabled' option in the Script Tab Dropdown:



If this still doesn't work, Reload the page in the browser:



5. Place a Breakpoint on the first executable line of the gradeQuiz() function so that the script will stop there when it is called:



```
16  }
17
18  //This function returns
19  //values of the form and
20  function gradeQuiz() {
21      var score = 0;
22
```

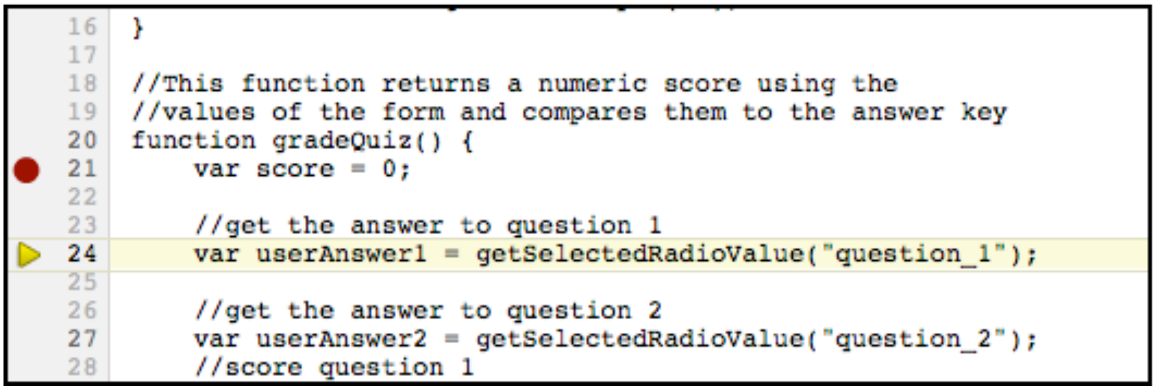
6. Take the quiz again and begin interacting with the debugger as shown in the tutorial. Now answer the following questions:

   a. What does the 'Watches' Tab do?

   b. How do you set a Watched Expression?

   c. Why might you want to use a Watched Expression vs. the list below it when debugging your scripts?

7. Completely run through the script so that it exits and the page displays your score. With the debugger still open, take the quiz again, but this time when the line of execution gets to line 24 (the entire line should be highlighted as shown):



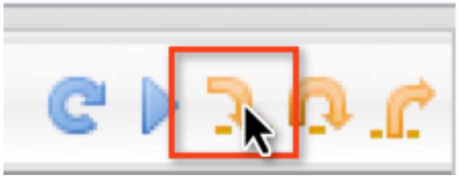
```
}

//This function returns a numeric score using the
//values of the form and compares them to the answer key
function gradeQuiz() {
    var score = 0;

    //get the answer to question 1
    var userAnswer1 = getSelectedRadioValue("question_1");

    //get the answer to question 2
    var userAnswer2 = getSelectedRadioValue("question_2");
    //score question 1
```

8. Instead of clicking the '**Step Over**' button click the '**Step Into**' button:



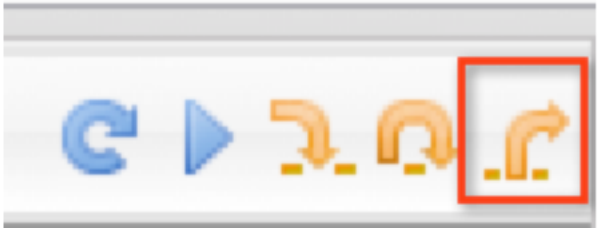
Now answer the following questions:

a. Explain in your own words what just happened.

b. Where is the point of execution of the script now?

c. What would be another way of getting the script to stop at this point in the execution?

d. What does the **Step Out** button do?



e. What line in the code does the debugger go to when this button is clicked?

9. Finish running through the script again as shown in the tutorial. Open up the html file in your text editor and fix the code so that it works correctly, and run it through the debugger again. Watch the variables as the script runs and make sure it is thoroughly bug-free.