Lab 1

Introduction to JavaScript

# Related Reading

It is assumed that you have worked through Chapter 1 of your course textbook before starting this lab.

# Setup

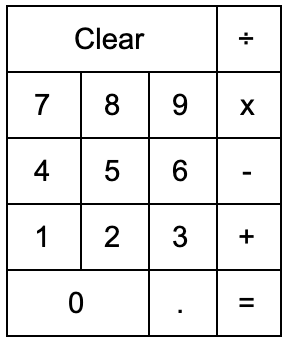
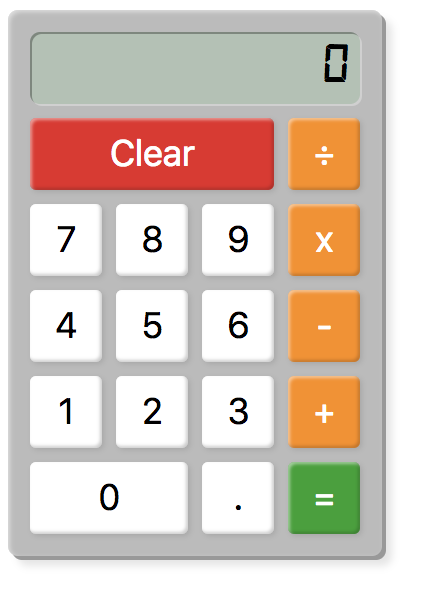
* Download the [Student Data Files](http://www.cengage.com/cgi-wadsworth/course_products_wp.pl?fid=M20b&product_isbn_issn=9781305078444&token=F2438DC6547578E4DC5310ADDA8192524B7E15334CF4AD8D1090D0CD1C4CFAAE9AF153E3CBB43B7E966C621C4E1F258DC0BA0751364144BA16C6AD6988C63D6B341343C5B9FB9283&template=NELSON) for the textbook
* Extract the Student Data Files into a directory of your choosing   
  (but NOT into your CSD212Labs folder)
* **IMPORTANT**: Copy all the Chapter## folders (located inside the Data Files folder of the unzipped Student Data Files). Paste these folders into your main CSD212Labs folder. Your folder should now have the following directories:
  + /Lab0
  + /Chapter01
  + /Chapter02
  + Etc
* Stage and commit these files to your git repository

# Hands-on Projects [50%]

* Complete all 5 Hands-on Project at the end of Chapter 1 in your textbook
* Do your work inside the corresponding folders that you copied into your CSD212Labs folder
* Make sure to commit your work to git

# Calculator Project [50%]

Over the course of the next several labs, you will develop a handy dandy little HTML/CSS/JS calculator. In this lab, you will create the basic HTML structure that you will be manipulating using JavaScript in future labs.

1. File Structure
   1. Make a new folder named ‘calc’ directly inside your CSD212Labs folder
   2. Create a new file named ‘index.html’ directly inside the new calc folder
2. Basic HTML
   1. In your new index.html file, create a basic HTML5 document. (Use the !<tab> Emmet shortcut that you learned in Lab 0!)
   2. Give your web page an appropriate title
3. Calculator HTML
   1. Use a <table> element to create the structure for a calculator
   2. Give the table the class ‘calculator’
   3. The table must have 4 columns and 6 rows
   4. The first row of the table must have a single cell with the following properties:
      1. It contains a single <div> element with the class ‘display’
      2. The <div> element contains the text ‘0’
   5. The remaining rows of the table must have the following structure:  
      
      1. Each cell contains a single <button> element with the appropriate text content. (These should NOT be inside of a <form> element)
      2. The clear button has the class ‘clear’
      3. ALL number buttons have the class ‘num’
      4. ALL operator buttons have the class ‘op’
      5. EACH operator button ALSO has the appropriate class ‘add’, ‘sub’, ‘mul’, or ‘div’
      6. The = button has the class ‘eq’
      7. The . button has the class ‘point’
4. Basic JavaScript
   1. Add the necessary JavaScript such that when ANY button on the calculator is pressed, an alert dialog pops up displaying the text of the corresponding button. (Eg. Clicking the = button causes the alert to say ‘=’; clicking the Clear button causes the alert to say ‘Clear’)
5. BONUS [5%]
   1. Use your CSS knowledge from CSD120 to make your calculator look more fun than the default browser styles. Have fun! Be creative!  
        
      Below, for example, is how the calculator in the sample solution looks, but you may style yours however you like with one caveat:   
        
      **IMPORTANT**: you MUST NOT change the basic HTML structure you created above  
        
      

# Submit to LMS

**IMPORTANT!** Pay close attention to filenames and directory structures given in the Lab and Textbook, and make sure the files you submit are correctly named and in the correct place. You may lose marks if your instructor needs to spend time figuring out where your answers are.

1. Validate & format your HTML, CSS, and JavaScript files
2. Make sure you have added and committed ALL the files for the Hands-on Projects AND the Calculator Project to your git repository
3. Push your changes to your GitHub remote
4. Verify that your GitHub remote contains your expected changes
5. In LMS, submit two pieces of information:
   1. your most recent commit ID, AND
   2. your GitHub clone URL