Activity 5: Implementing a Calculator

The goal of this activity is to introduce you to Javascript. The provided HTML and Javascript code will help you to start to implement a simple calculator. To gain experience with debugging Javascript, you will first find and fix several errors in the code to make it run. To see the runtime errors, use the dugger tool in your browser. Then you will complete more of the functionality, using the existing functions as guides.

Part 0: Download the starting code

1. From Canvas, download ***Activity5.html, Activity5css*** and ***Activity5.js*** and save it in your **Exercise** folder**.**
2. Rename them to ***Lastname-Activity5.html*** , ***.css*** and ***.js*.** Change the name of the ***.js and .css*** files in the html *head* element to match your new filename. Verify the URL.
3. Read the files and understand what the current code is doing before proceeding.

Part 1: Find and fix errors and add following functionalities

1. There are several syntax errors in the code that are preventing this calculator from working, find and fix those errors. When they are fixed, the number buttons will all work, as well as the **+ (add)** and **-- (decrement)** buttons.
    a. To find the errors, open up the Developers Tool of the browser (F12) and look at the console.
    b. Find the line number of the file and click on it to see the source code and find the error
    c. There are 3 errors in the JavaScript file and 1 error in HTML file
2. Verify the add functionality works. For a binary operator, you must click on the buttons in the following order:
    a. Hit a number button
    b. Hit the '+' button
    c. Hit a number button
    d. Hit the '***Calculate***' button
3. Verify the decrement operator works. For a unary operator, you must click the buttons in the following order:
    a. Hit the number button
    b. Hit the '—' button
4. Implement subtraction in a similar fashion to addition:
    a. Create a subtract function. To subtract, the user must hit a number button, then the '**-**' button, another number button and then the '***Calculate***' button. The function should store the first number in a global variable, similar to the add function.
    b. Add code in the calculate button which will perform the subtraction when the '***Calculate***' button is clicked.
    c. Call the subtract function from the HTML file.
5. Implement the ***sqrt()*** button. Similar to the decrement function, the ***sqrt()*** button will take the value of the number and display the square root. Use the ***Math.sqrt*** function to calculate the square root.
6. Validate any HTML, CSS and JavaScript errors.

Part 2: Implement 2 or more buttons

7. Pick any two additional buttons and make them work. When you turn in your lab put in the **'*Comments*' section of Canvas**, which two buttons you implemented.
8. Validate for any HTML, CSS and JavaScript errors. To validate your HTML/CSS you can use either of the three methods- "By URI" (copy paste specific file path on the server), "By file upload" (uploading the file), or "By direct input"(copy paste the content of the file) on the validation link.

9.

Part 3: Upload files to your Exercise folder in your webpages account
Verify that your final webpage is accessible by going to
https://webpages.uncc.edu/yourUsername/Exercise/Lastname-Activity5.html

Part 4: Turn in your activity

1. Log in to Canvas.
2. Go to the Activity #5 Submission assignment on the Canvas page. Upload the upload the .html, .css and .js files to the submission page.
3. In the Comments textbox provide:
    a. the URL of your html file on the web server. You must provide the correct URL to get credit.
    b. Also, the two additional buttons implemented in **Part 2.**

N.B. For 2 extra credit points, implement all buttons on the calculator