

CSI 3140 - Summer 2025

LAB 3: Introduction to JavaScript

Due Date: Monday Jun 9th at 11:59PM EST

Compress all your files and upload the Zip file to the Brightspace. Please name the file using the following format: CSI3140_Lab_<lab_number>_<student_id_1>_<student_id_2>.zip

In this lab, you will create a simple interactive calculator that performs basic arithmetic operations (+, -, *, /) using `prompt()` and `alert()` methods.

Instructions:

Create a simple **HTML page** (lab3.html) with the following elements:

- A `<title>` in the `<head>`
- A main heading (`<h1>`) with the page title
- In the `<style>` section or a separate CSS file:
 - Use `-webkit-text-` to create an outlined effect on the `<h1>`:

```
-webkit-text-stroke: 1px black;
-webkit-text-fill-color: white;
```
 - Add styles for the `.description` class to make the text appear in two columns

```
.description{
  column-count: 2;
  column-gap: 40px;
}
```
 - Define the `.calculator-icon` class

```
.calculator-icon {
  width: 100px;
  position: absolute;
  top: 20px;
  left: 20px;
  animation: floatAround 20s ease-in-out infinite;
}
```

- In the `<body>` section:
 - Add a `<div>` element with the `description` class. Inside this `<div>`, add two `<p>` elements: one with a summary of the page and another with your name and student number.
 - Animate a calculator icon using `@keyframes` rule so that it moves while fading in/out using opacity. The animation should run automatically on page load and loops continuously. Apply this animation to an `` tag with class `.calculator-icon`
 - Link the JavaScript file to your HTML: `<script src="script.js"></script>`

Create a **JavaScript file** (`script.js`) with the following functionalities:

1. Ask the user how many calculations to perform using the `prompt()` method.
2. Use a `while` loop and a counter (with `++`) to repeat the process for that many calculations.
 - Prompt the user for:
 1. Two numbers (use `parseFloat()` to convert to numbers)
 2. One operator (+, -, *, /)
 - Use nested `if-else` statements to:
 - Perform the correct operation
 - Handle division by zero
 - Handle invalid operator input
 - Handle invalid number input
 - Display each result using `alert()` method.
3. After the loop ends, show a final message with the total number of completed calculations.

Example:

This page says

How many calculations would you like to perform?

Cancel OK

This page says

Calculation 1 of 1

OK

This page says

Enter the first number:

Cancel OK

This page says

Enter an operator (+, -, *, /):

Cancel OK

This page says

Enter the second number:

Cancel OK

This page says

Result: 12

OK

This page says

You completed 1 calculation(s).

OK

Your webpage should look something like this:

Animated JavaScript Calculator

This demo shows how CSS animation of calculator icon floats around the page in a randomized path using keyframes and transform.

Include your name and student number in the description.

