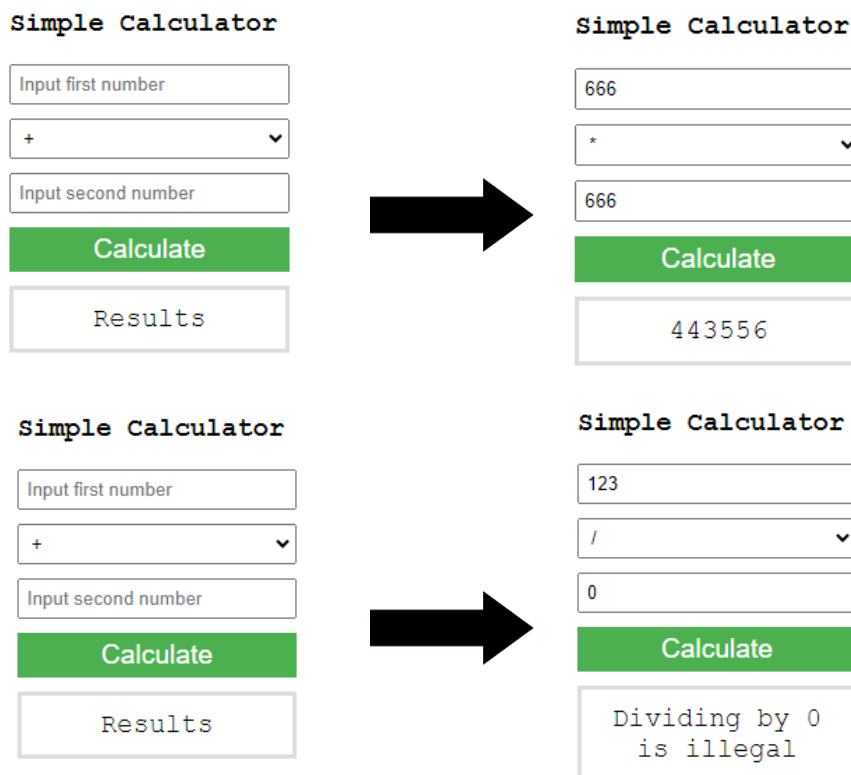


Exercise 5

1. Please create a simple calculator application that allows the user to input two numbers and select an operator (addition, subtraction, multiplication, division). Upon clicking the "Calculate" button, the application should display the result on the interface. The application should include the following features:
 - (1) Two input boxes for entering the operands.
 - (2) A select box (dropdown menu) is used to select the operator.
 - (3) A "Calculate" button that performs the computation when clicked.
 - (4) An area to display the calculation result, presented clearly.
 - (5) The “divide by 0” error should be detected.

Please use HTML, CSS, and JavaScript to accomplish this application, ensuring the code is well-structured, readable, and fully functional.

Expected User Interfaces:




Hint:

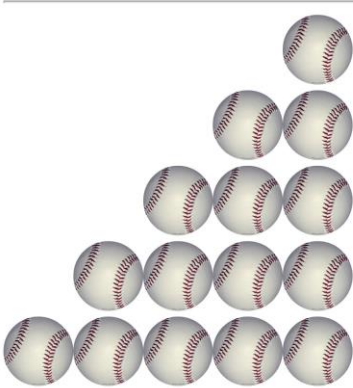
- Please check the provided CSS to write appropriate HTML and JavaScript.
- Please study how to get/set values from/to a DOM element.

2. Please develop a simple application that displays the images of baseball based on the user's input (type: number). The user can input the side length and choose to draw a triangle, square, or special square. The expected user interfaces are as follows: (The image files are *baseball.jpg*, *baseball-x.jpg*, and *blank.png*. Should re-size the images to 50x50px)

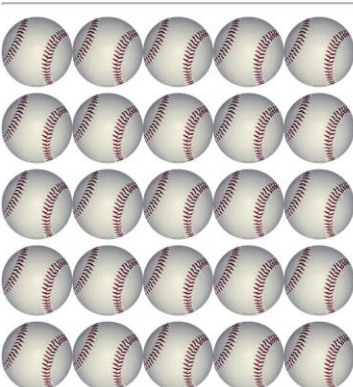
On the initial page:

Side Length (<=10):	<input type="text" value="5"/>	<input type="button" value="Draw Baseball Triangle"/>	<input type="button" value="Draw Baseball Square"/>	<input type="button" value="Draw Special Square"/>
				

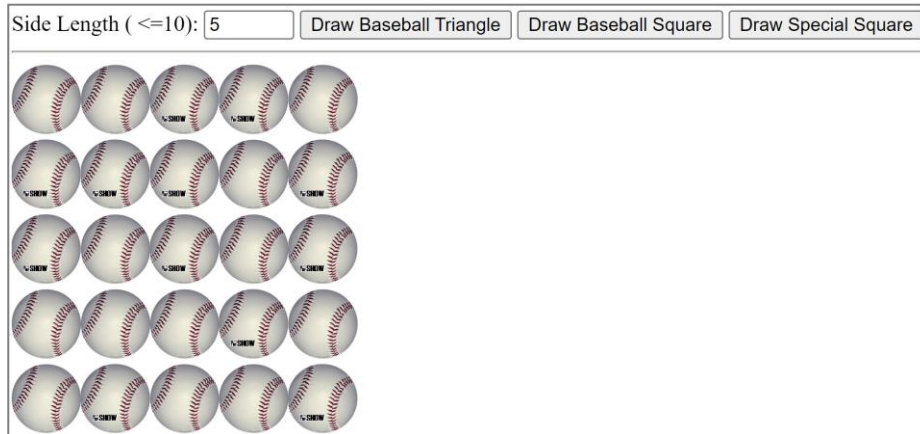
If choosing “Draw Baseball Triangle”:

Side Length (<=10):	<input type="text" value="5"/>	<input type="button" value="Draw Baseball Triangle"/>	<input type="button" value="Draw Baseball Square"/>	<input type="button" value="Draw Special Square"/>
				

If choosing “Draw Baseball Square”:

Side Length (<=10):	<input type="text" value="5"/>	<input type="button" value="Draw Baseball Triangle"/>	<input type="button" value="Draw Baseball Square"/>	<input type="button" value="Draw Special Square"/>
				

If choosing “Draw Special Square”:



Note that 1/3 of baseball images may be replaced by the special image, baseball-x.jpg, in the special square mode.

Besides, if the user inputs an invalid value (< 0 or > 10), this program will show a popup dialog, and set the input value as the default value 5.

Hint:

- The images are suggested to be shown in a *div* element.
- Suggest using "blank.png" to leave spaces to build the correct triangles.
- Math.random(): https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Math/random.