WEB304 Major Assignment 1 (25%)

Due: March 3, 2020

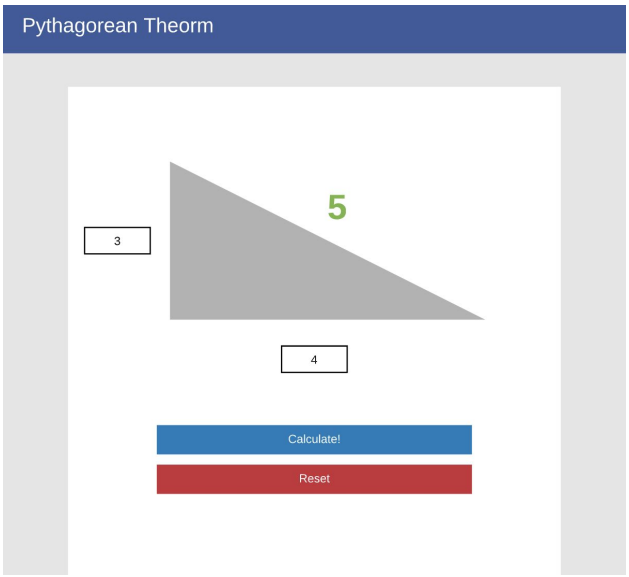
Summary:

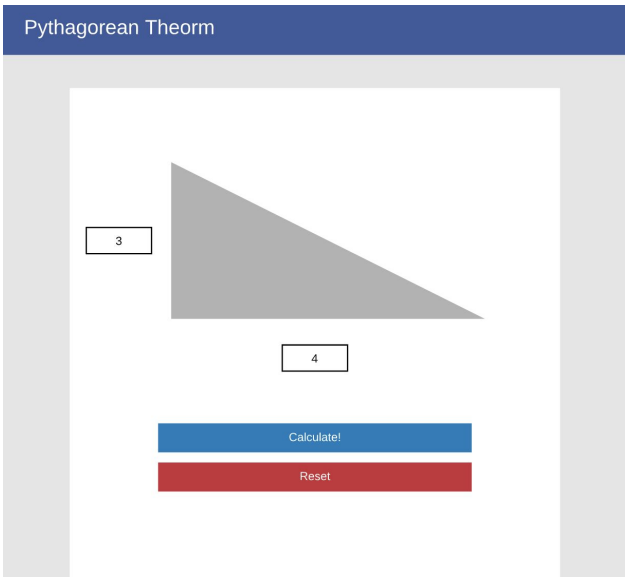
You have been contracted to build a simple web application that will allow users to find the hypotenuse of a triangle when the values of the other two sides are given. In order to do this you will have to convert the pythagorean theorem into a usable function for this purpose.

$$a^2 + b^2 = c^2.$$

The application will need to have a form that has 2 input fields that will allow the user to enter in the 2 sides of the triangle. You will have to include a “calculate” button that will process the 2 inputed numbers through the pythagorean theorem and output the hypotenuse.

Design:





The left mockup shows the basic design of the application before the “Calculate!” button is pressed. The right mockup shows the design of the application after the “Calculate!” button is pressed.

Requirements:

- There must be a header component to hold the blue header
- There must be a results component that holds the calculated result
- There must be a demonstration of passing data into a component
- There must be a demonstration of using event handlers
- There must be a demonstration of the *ngIf and ngModel directives
- There must be usage of the FormsModule
- There must be some usage of custom CSS to achieve the design
- Bootstrap is not required, but is a nice addition
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Evaluation:

- Design the application as closely to the mock up as possible (10%)
- Place the input fields on the sides of the triangle using CSS (5%)
- The hypotenuse value should not be visible upon first visiting the app and will only show after the calculate button is pressed (25%)
- The reset button will clear the input fields and remove the hypotenuse value, resetting the app to the initial state (25%)
- The Pythagorean Theorem is captured in a single function (10%)
- The HTML and CSS are formatted properly and consistently (5%)
- The Javascript is well organized and easy to read (5%)
- All the requirements were fulfilled (15%)