

WEB304 Assignment 1

Due: November 19, 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 imputed numbers through the pythagorean theorem and output the hypotenuse.

Design:

The image shows two identical wireframe designs of a web application titled "Pythagorean Theorm". Each design is contained within a light gray frame. At the top of each frame is a dark blue header bar with the title "Pythagorean Theorm" in white. Below the header, a right-angled triangle is depicted. The vertical side of the triangle has a small input field to its left containing the number "3". The horizontal side has a small input field below it containing the number "4". The hypotenuse of the triangle is labeled with the number "5" in green. Below the triangle, there are two buttons: a blue button labeled "Calculate!" and a red button labeled "Reset".

Independent Research requirement:

- You will have to look up how to use the ngModel directive and set it up to capture form data. Look up template-driven forms:
<https://angular.io/guide/forms-overview#setup-in-template-driven-forms>

Requirements:

- Include a header component with CSS styling
- There must be a results component that calculates and holds the calculated result
- There must be a demonstration of passing the input values to the results component
- There must be a demonstration of using event handlers (use it on the inputs)
- The calculated value should not show up until the user clicks calculate
- The reset button should clear all the fields and also hide the calculated value
- There must be some custom CSS applied
- Bootstrap is not required, but is a nice addition
- Follow the design mockup provided
- There is a long edge and a short edge on the triangle. Add in conditional logic to prevent users from entering the smaller value on the long edge or a larger value on the short edge.