Cumulative Exercise: LabVIEW Basics

Assess your “Basic” understanding of programming in LabVIEW by completing the LabVIEW Basics Exercise. This exercise is recommended after you complete the seven modules found in the LabVIEW Basics section.

Exercise Goal
Design a calculator in LabVIEW that will add, subtract, divide, multiply, divide, take the square root, and raise to a power.

Things to Consider
- Should this program run one time or continuously? Do you want to press the Run button every time you need to calculate something?
- You should have only two inputs to the calculator.
- You should perform only one operation at a time. What could you use to contain all of the different operations but run only one at a time?
- Can you think of a control in which you can store multiple text strings that the user can select during run time?
- Only take the square root of the first input.
- Should the two inputs allow for negative numbers? What if a user inputs a negative number for the square root? Can you think of a way to check if the number is negative and how to account for this in your program?
- Should you indicate an error if the user tries to take the square root of a negative number?
- Search for power to locate a function to raise X to the power of Y.
Exercise Solution (Don’t Cheat!)

Extra Credit

- Add functionality for trigonometric functions such as sine, cosine, and tangent.
- Add a conversion from angle in degrees to radians.
- Add a delay to the While Loop to decrease the CPU usage.