








How to Use the Compound Arithmetic Function Tutorial

Functions -> Programming -> Numeric  -> Compound Arithmetic 

The compound arithmetic allows you to implement a basic math operations Add  , and Multiply  , and the Boolean functions And  , Or  , and Xor  , with more than two inputs as opposed to the Basic Numeric Operators and Basic Boolean Operators which have a limited number of inputs.

To place a Compound Arithmetic function, first open up the Functions palette and navigate to the Programming palette. Under Programming, open up the Numeric palette  where you will find the Compound Arithmetic function  .

Once you place the Compound Arithmetic function in the block diagram, you will notice that the default number of inputs to the Compound Arithmetic function is 2, to change this, simply resize the function until you have the desired number of inputs as shown in Figure 1.

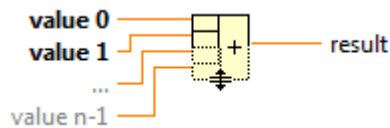


Figure 1

In addition you will also notice that the default operation is Add. To change this, simply right click on the Compound Arithmetic function and navigate to the “Change Mode” option as shown in Figure 2. Under “Change Mode”, we will find the five different operations that the Compound Arithmetic function can perform.

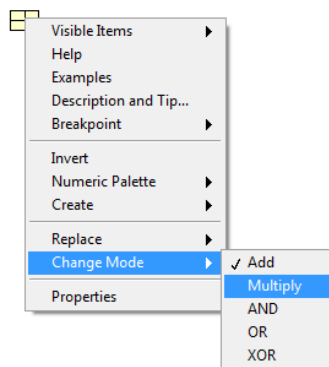


Figure 2

For example, say we wanted to add up the first 5 positive integers. We would simply wire up the Compound Arithmetic function as shown in Figure 3. If we wanted to multiply the first 5 positive integers, then we would simply change the operation to Multiply as shown in Figure 4.



Figure 3

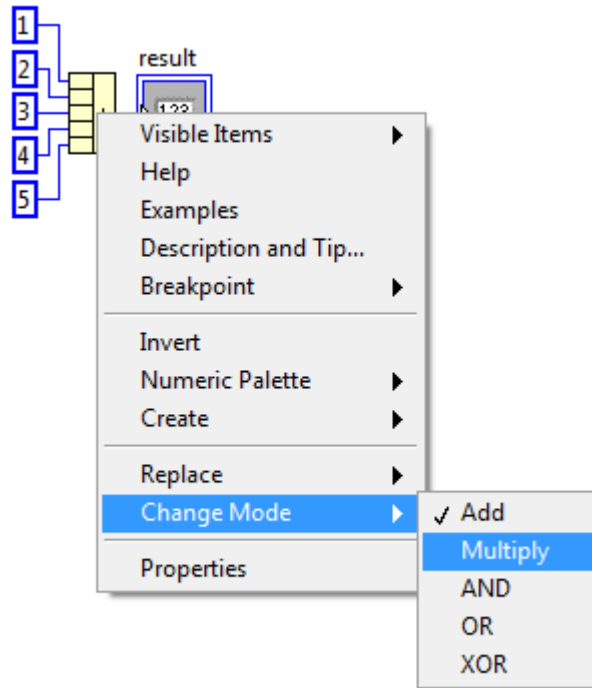


Figure 4

Note that the Compound Arithmetic function does NOT implement the Divide and Subtract functions. In addition, notice that the equivalent functions for the add operation in Figure 3 is equivalent to the functions in Figure 5.

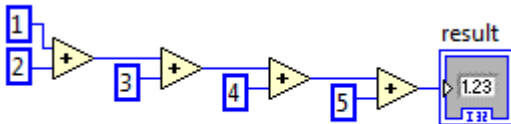


Figure 5