

How to Use Shift Registers Tutorial

Embedded in Loop Structures

A Shift Register is usually part of some type of Loop Structure and is used to store values across loop iterations so that the values computed in one iteration are not discarded and can be used in the next iteration.

To make a shift register, you will first need to have constructed a Loop Structure of some sort (ex. For Loop or While Loop Structures).

Once you have a loop, right click on the left or right side of the frame and select “Add Shift Register” as shown in Figure 2.

This will add two boxes, one on the left side and one on the right side of the frame with a down arrow and up arrow respectively as illustrated in Figure 1.

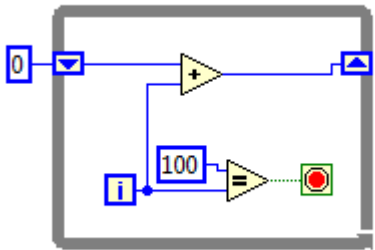


Figure 1

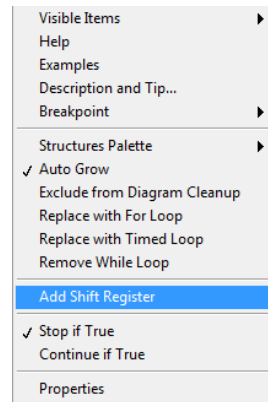


Figure 2

On the first iteration, the shift register on the left will provide 0 on the first run unless a constant is wired as a default value.

Make sure to connect a constant to the left shift register to guarantee that the register is initialized to the same value for each run. If you do not wire a default value to the shift register, subsequent program executions will use the last value calculated in the previous execution.

During the execution of each iteration, a value will be computed and put into the right shift register. This value will then be stored in the left shift register on the next iteration.

Note that if the shift registers are not wired properly before you try and Run your VI, the LabView compiler will catch the error and not let you Run the VI until you have corrected any errors you may have made.