Exercise 9-2: Executing Code Conditionally Based on a User Setting/ Parameter/ Configuration (Optional)

Goal

- Explore a DAQmx example that sets the triggering behavior based on a user-input.

Hardware Setup/Scenario

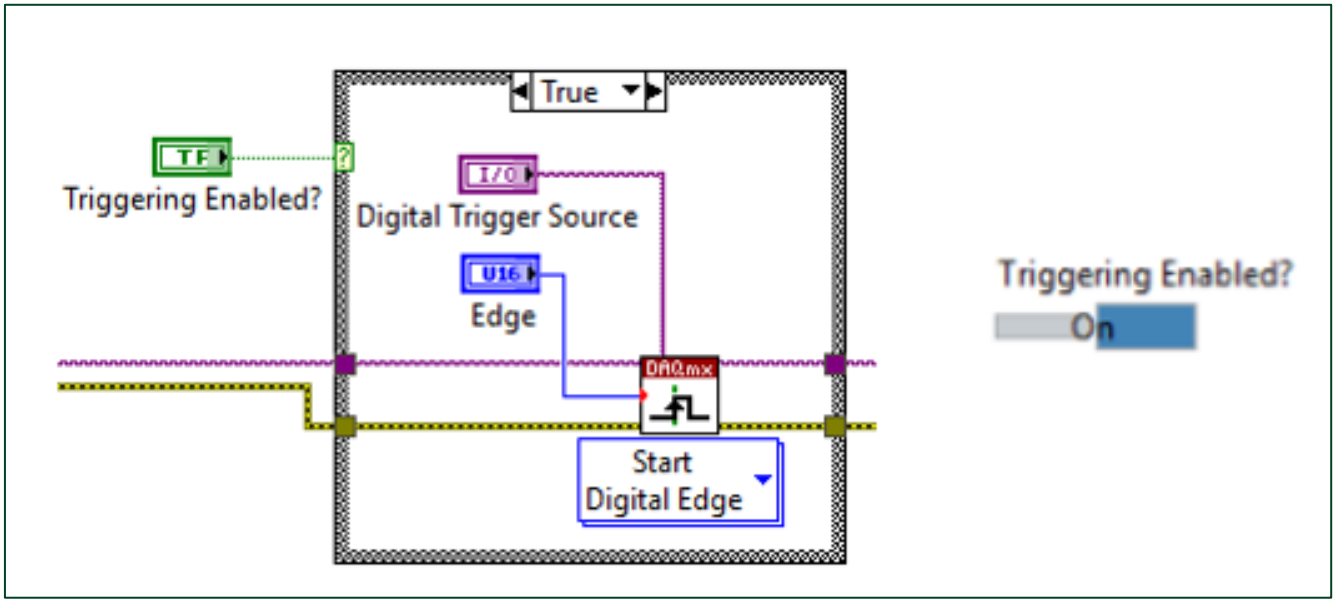
BNC 2120 option

- Make sure, that the **Quadrature Encoder's UP/DN** terminal is connected to the **PFI1** input.

Instructions

1. Open `C:\Exercises\LabVIEW Core 1\Execute Conditional Code Based on User Input\Execute Conditional Code Based on User Input.lvproj`.
2. From the **Project Explorer** window open the Condition based on User Input (Triggering) VI.
3. Explore the block diagram.

- Notice that the Case structure executes code based on the value of the **Triggering Enabled** control.



4. Test the VI.
   - Set the following control values:

Physical Channel	PCI-6221/ai1
Digital trigger Source	PCI-6221/PFI1
Edge	Rising
Trigger Enabled	On

   - Run the VI.
     - The VI is now waiting on the PCI-6221/PFI1 line to detect a rising edge from a digital signal.
   - **(BNC 2120)**Rotate the Quadrature Encoder clockwise. The VI should immediately return data on the Graph indicator. If you set the **Triggering Enabled** control to Off on the front panel and run the VI again, you will see that VI immediately returns data and no longer waits for a trigger.
   - **(Simulated hardware)** Because you are using a simulated DAQ device, the PCI-6221/PFI1 line randomly changes between True and False. When this line goes from False to True, the VI detects this as a rising edge, which triggers the VI to acquire data.
   - On the block diagram, use execution highlighting to observe how the **Triggering Enabled** control value determines which case the Case structure executes.
4. Close the VI when finished.

On the Job

In your own applications, do you need to execute code conditionally based on a user input (e.g. Boolean On/Off button)? If so, describe it below.

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End of Exercise 9-2