

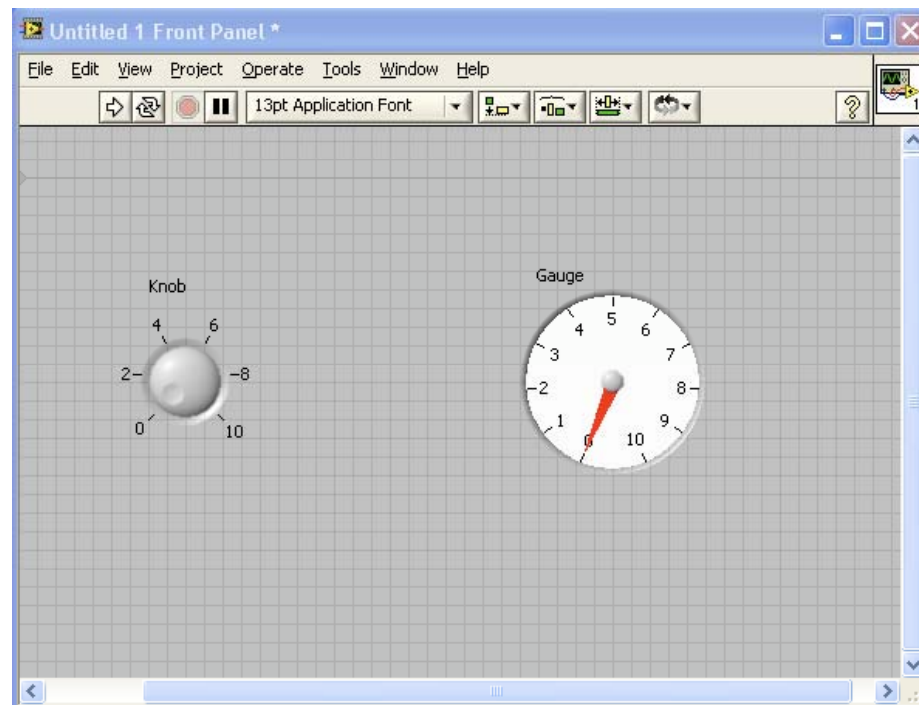
LabVIEW Basics

Overview

- LabVIEW modules are broken down into Visual Instruments (VIs).
- The ***Front Panel*** provides the GUI front end to the program.
- The ***Block Diagram*** contains the logic behind the scenes connecting the ***Front Panel*** components.

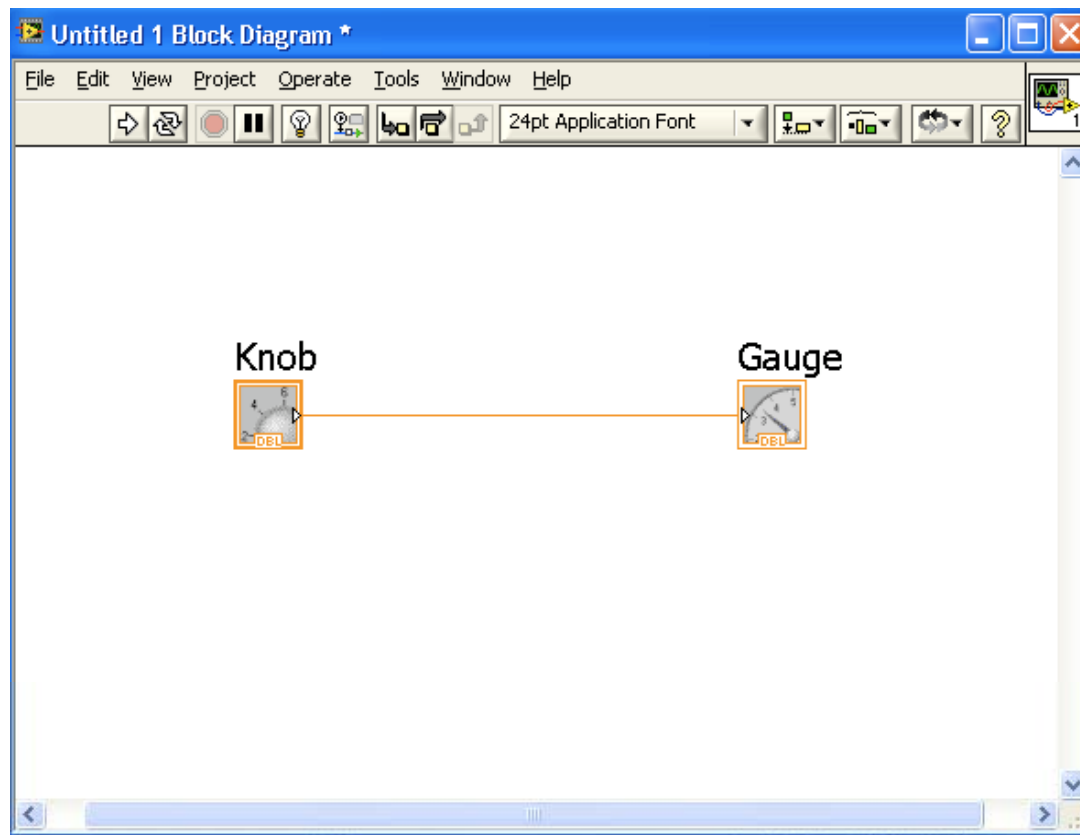
Front Panel

- Contains input and output elements
 - Ex. Dial, switches, thermostat, speedometer
- Very easy to create front ends.



Block Diagram

- Flow of data in LabVIEW is done by connecting blocks together with wires.



Running Code

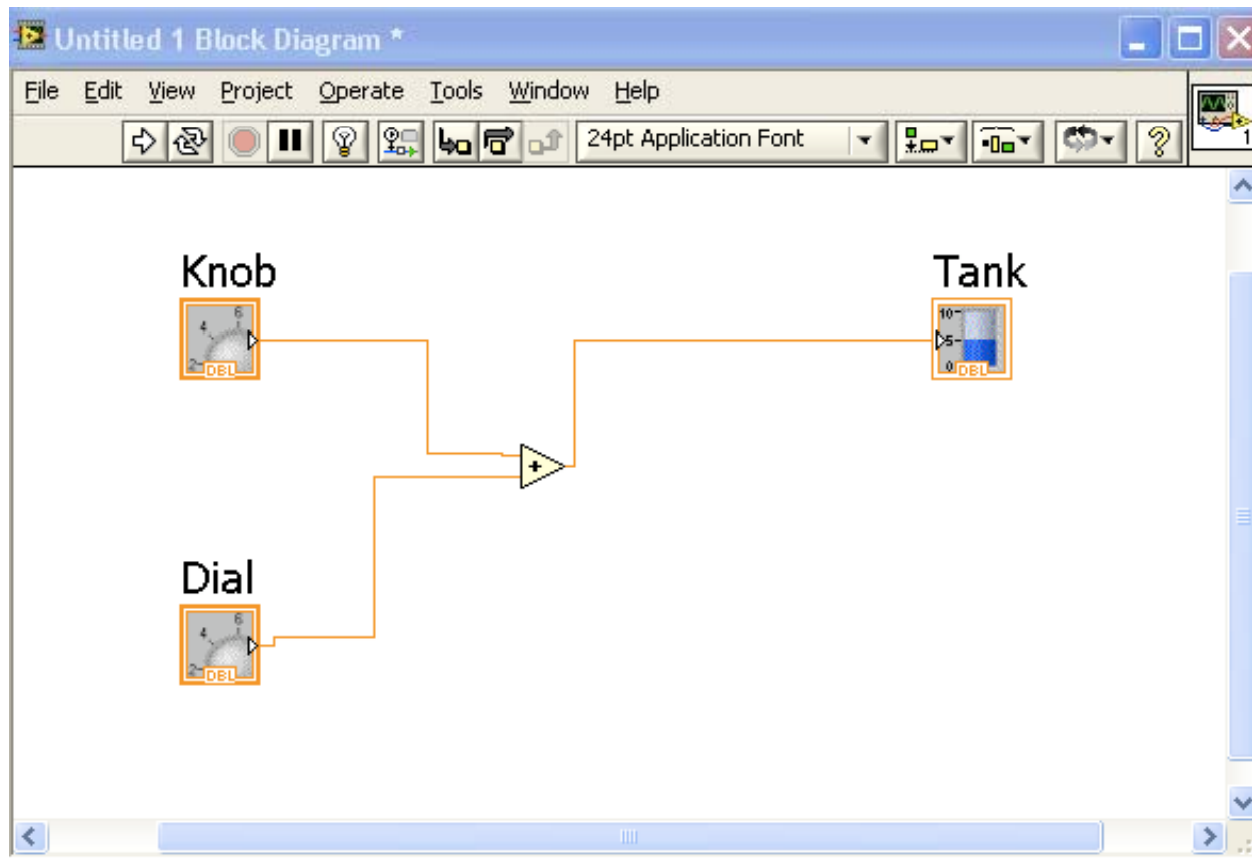
- There are two options for running code:
 - Run (arrow):
 - code executes through once.
 - The inputs will flow through wires to the outputs one time.
 - Run Continuous (two arrows looping around):
 - Code executes repeatedly.
 - Input -> output flow executes over and over.

Highlighting Execution

- The light bulb
- Shows the flow and values of data through the wires.
- Code runs slowly, shows that a block will not generate output until it receives all inputs.

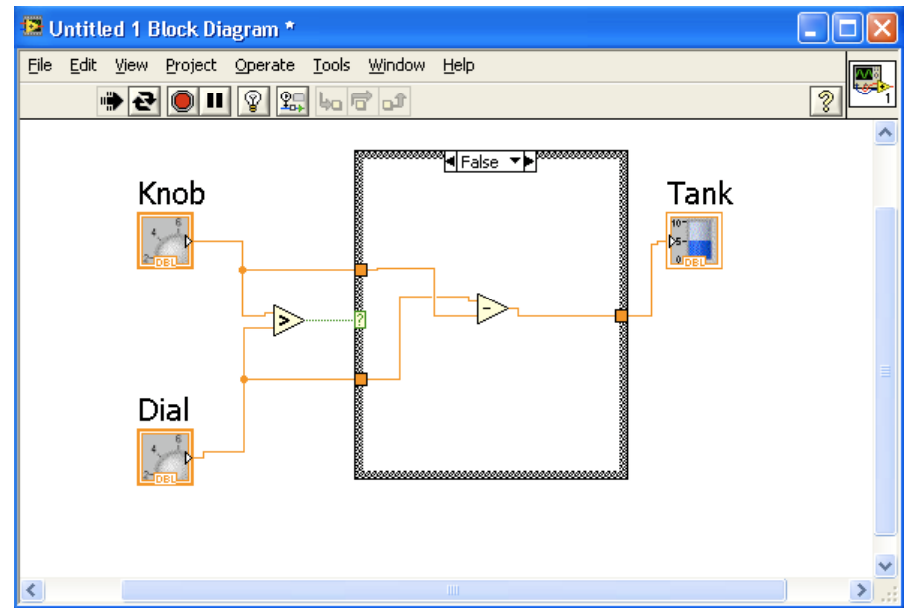
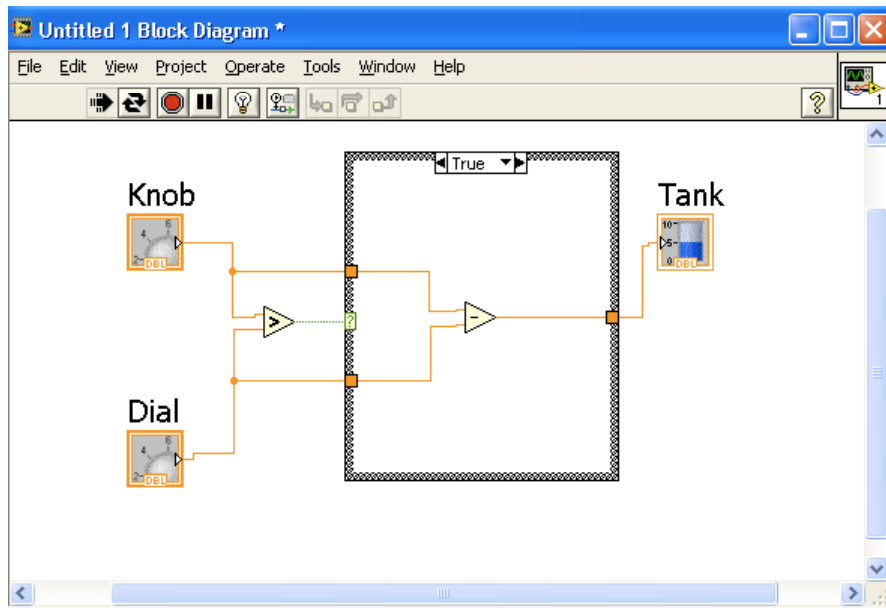
Basic Arithmetic

- There are many built-in functions (VIs)



Cases

- Condition for the case statement is wired to the '?'
- There is a different tab for each possible case.



While Loops

- Everything in the while block will execute continuously as long as the condition is true.

