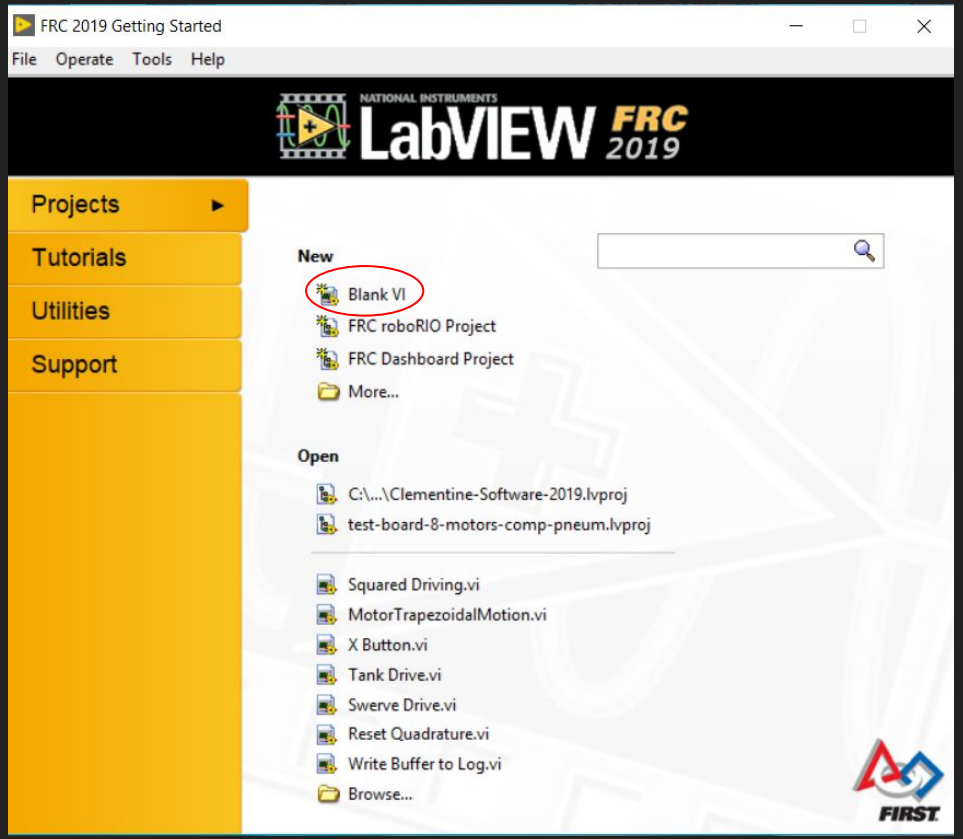
Intro to LabVIEW

Software Team

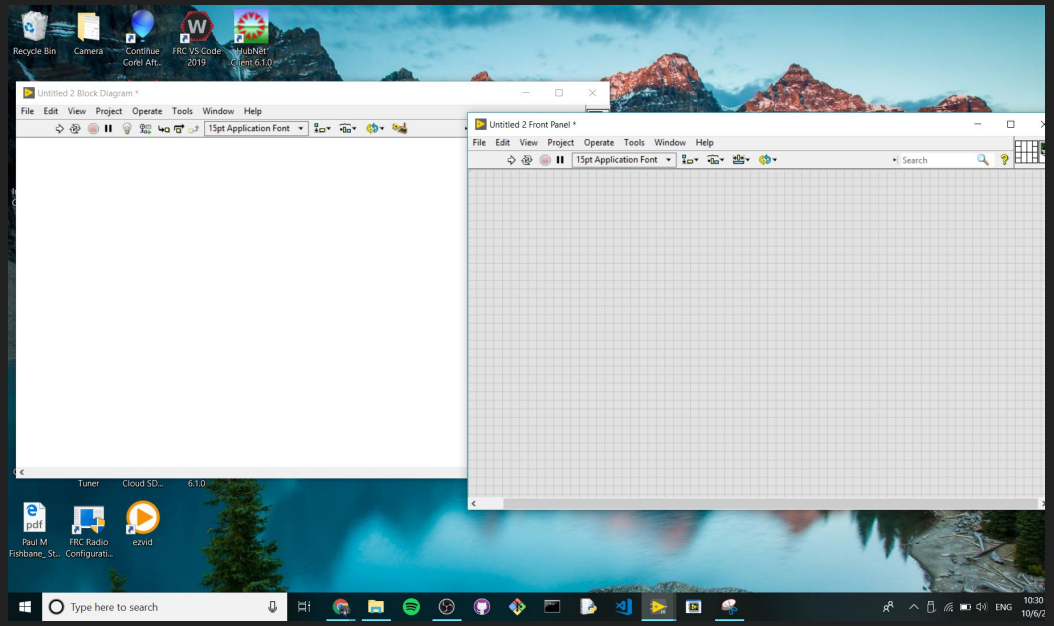
Opening LabVIEW

- Find and open LabVIEW
- Click on “Blank VI”



Basics

- Front Panel and Block Diagram
  - Ctl+E to toggle windows
- Ctl+SPACE for search
- “Control” = input
- “Indicator” = output
- White arrow in top left to run



Adding 2 Numbers Example

Practice 1: Toggle

Have a push button on the front panel and a string indicator. Have the indicator display one message when the button is on and a different message when the button is off. (Does not have to continuously run)

Key concepts:

Types

Case Structures

Practice 2: Fibonacci Numbers

Have an indicator that continuously displays the Fibonacci numbers, moving to the next number in the sequence each second.

(The Fibonacci sequence starts with 1 and 1, every subsequent number is the sum of the previous 2 numbers: 1, 1, 2, 3, 5, 8, 13…)

Key concepts:

While loops

Shift registers

Practice 3: Flipping Array Elements

Start with an array constant of random 1’s and 0’s on the block diagram. Output an array that has every element flipped. (for example, the array [1,0,0,0,1,1,0] will output [0,1,1,1,0,0,1])

Key Concepts:

Arrays

For loops