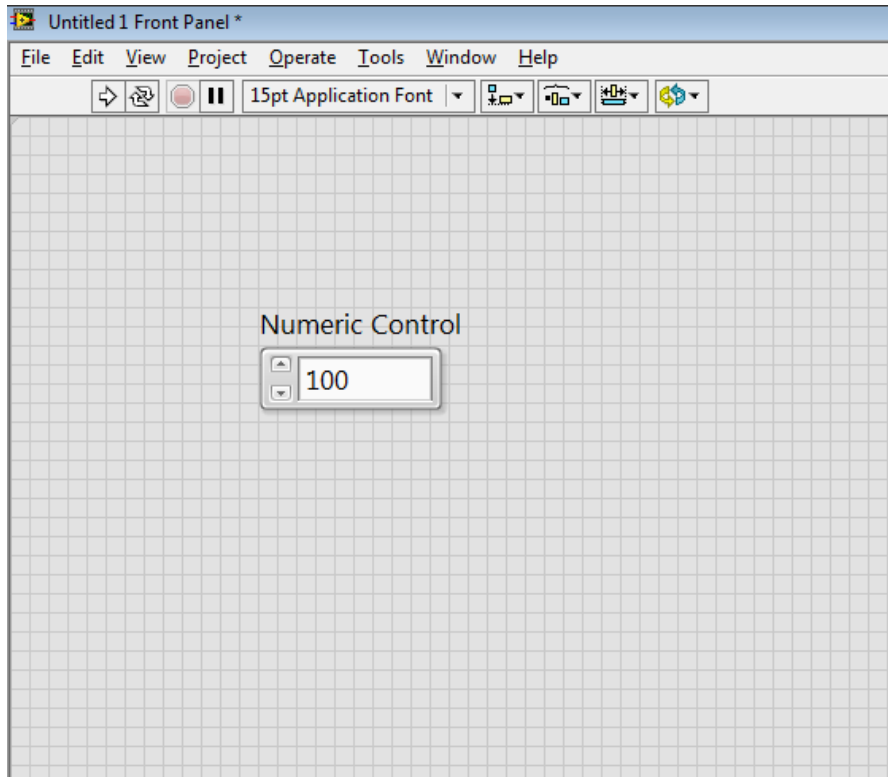
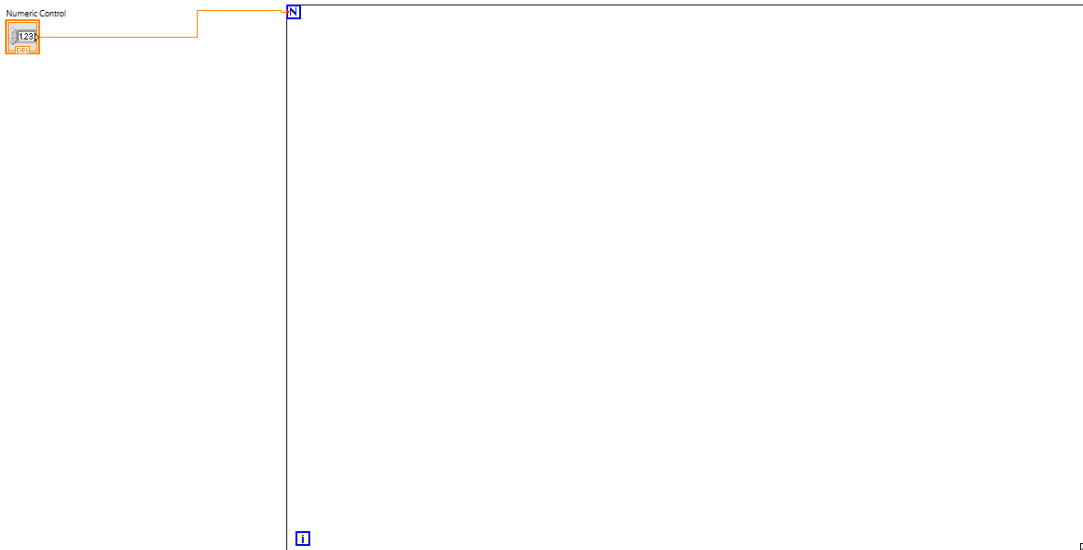


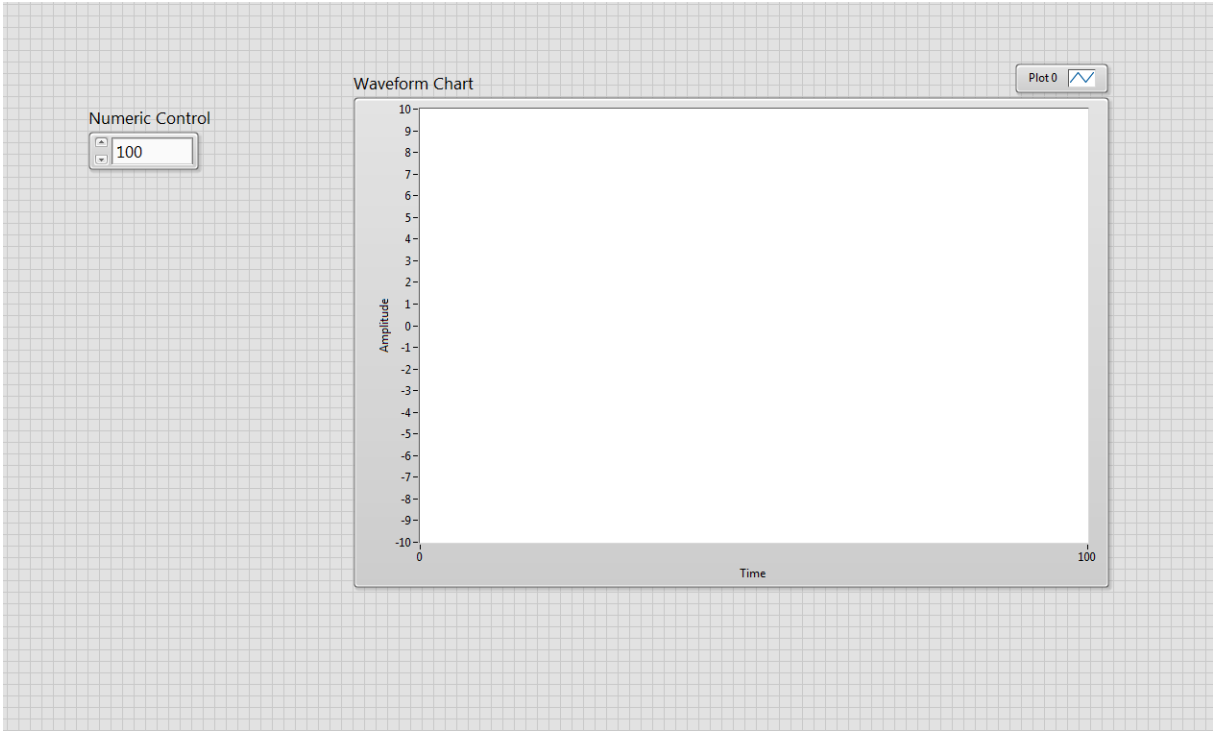
Part 1. Labview programming



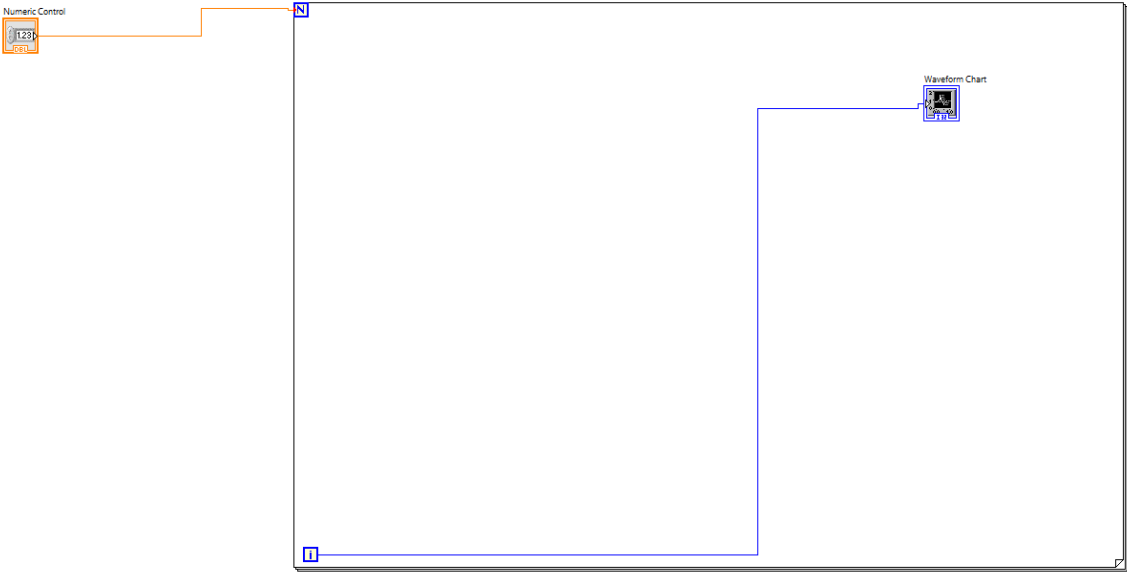
Place a numeric control on the front panel



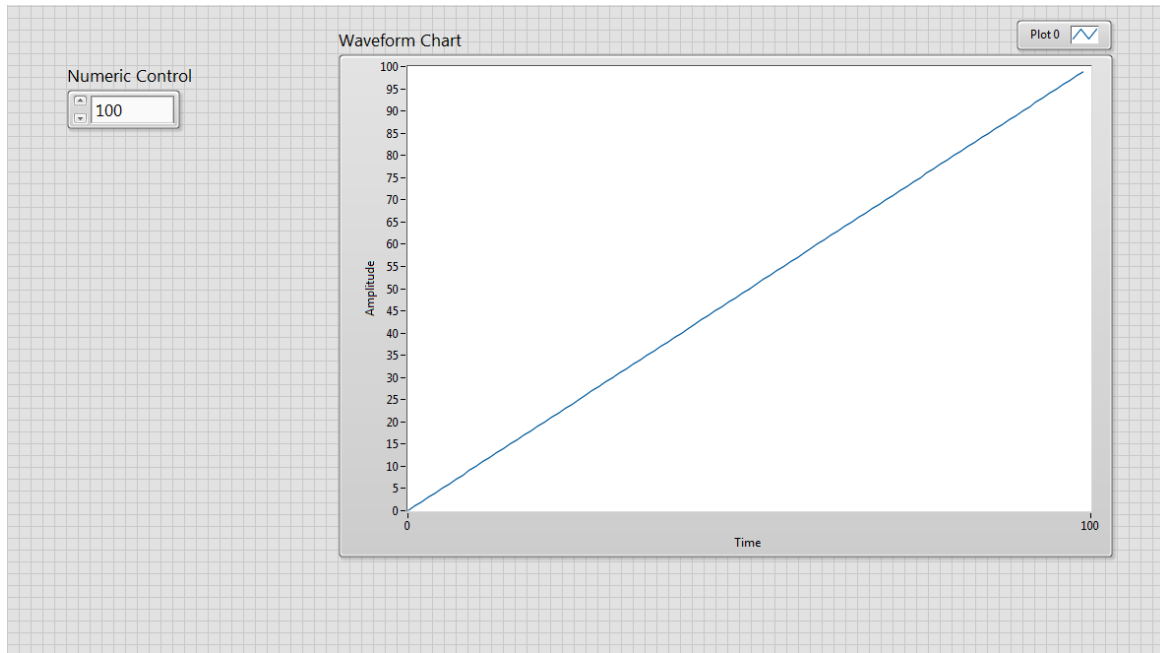
Create a FOR LOOP in the Block Diagram and connect the numeric control



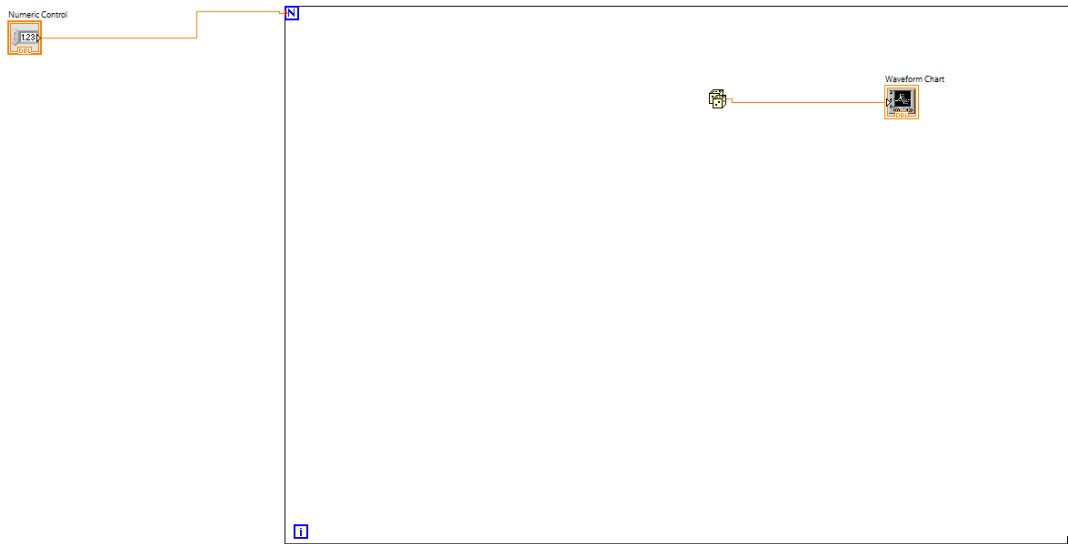
Create a Waveform Chart on the front panel



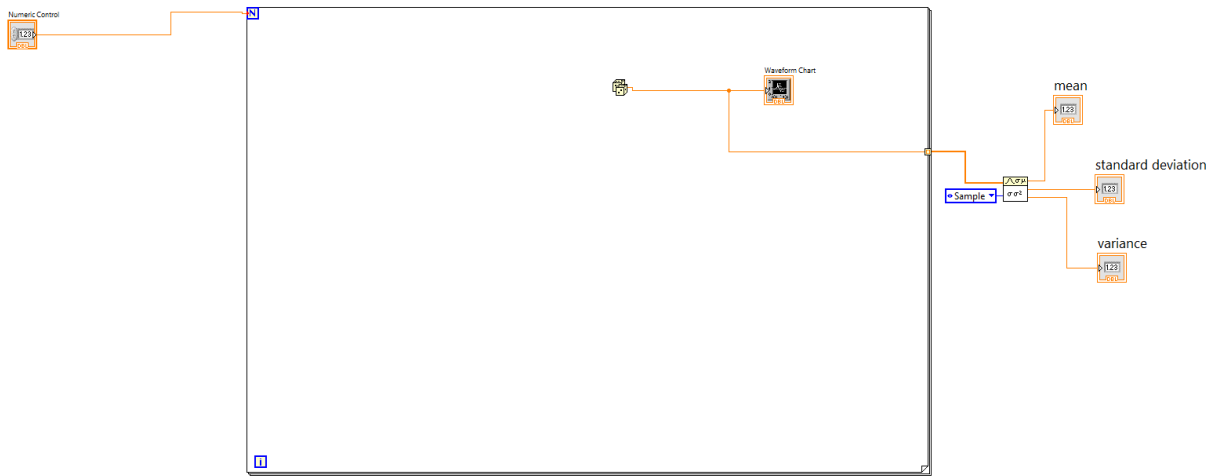
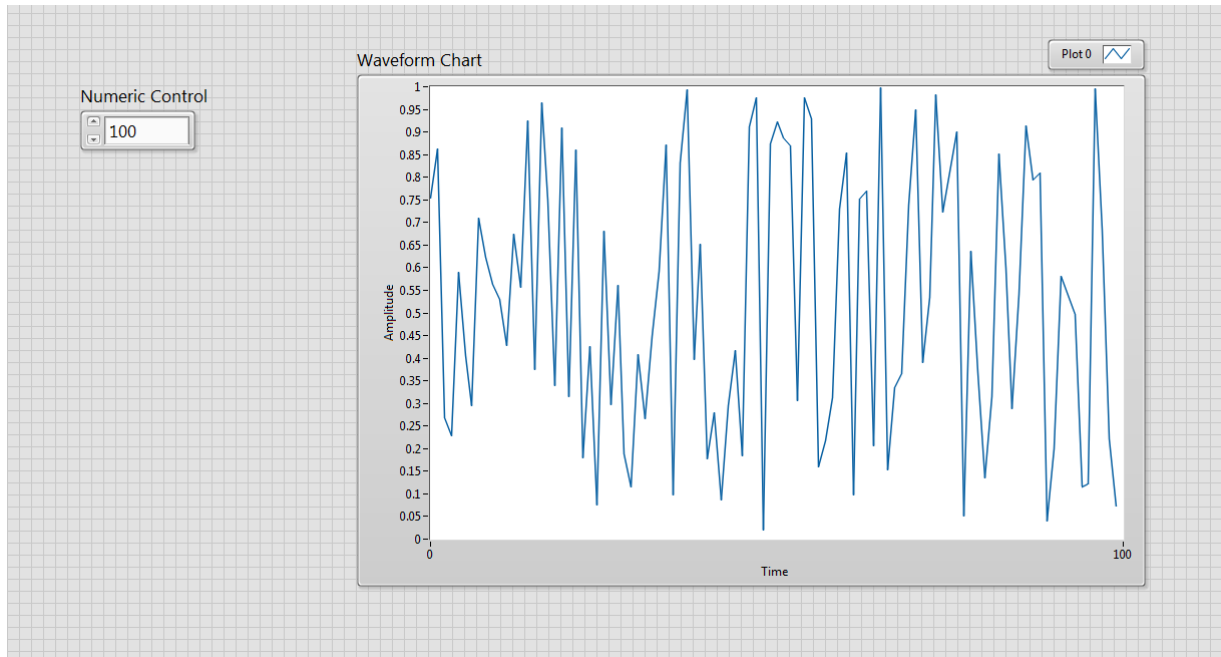
Connect the local number ' to the waveform Chart



Run the program and watch the curve change the numeric control and run the program again.



Remove the wire and place a random number generator and run the program again/



Collect the generated random numbers and calculate mean, standard deviation and variance of the sample

Part2: Data acquisition:

- Write a labview code that communicate with a voltmeter and measure the voltage.
- Create a for-loop and measure the voltage for 1000 times.
- Create a waveform chart and plot the measured data.
- Calculate mean and standard deviation of the data.
- Measure voltage fluctuation across different resistors and plot the variation of the standard deviation of the voltage with the resistance contact to the voltmeter. You will see that as you increase the resistance, the standard deviation will increase. This is called Johnson noise.