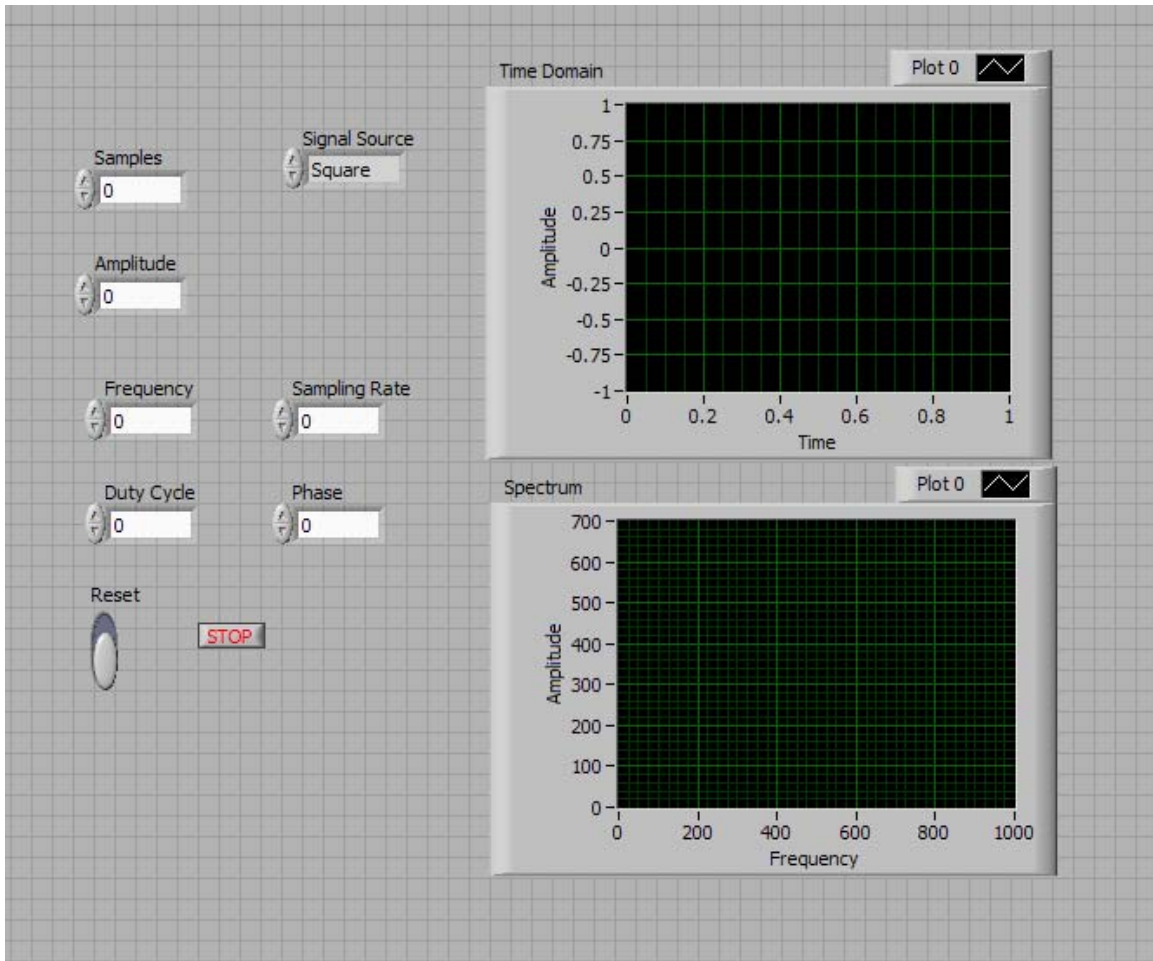


Displaying the Spectrum

1. Starting from last week's lab, develop a VI which has the following front panel.



2. Design the upper display to show the spectrum of the signal while the lower graph displays the signal in the time domain.
3. Use the FFT.vi to obtain the spectrum and be sure to plot the spectrum magnitude.
4. For the upper display, make sure its X-axis displays time in seconds and for the lower display, make sure its X-axis displays frequency in Hz.
5. Display each signal and its spectrum and show that your program works properly.
6. Also show examples of Oversampling and Undersampling by chosen several sampling frequencies and signal frequencies. For example, start with a 10 times sampling scenario and reduce the sampling frequency in steps to a 1 times sampling scenario and in your notebook, describe what is displayed for each of these cases.