# In-class exercise

1) Create a new VI
2) From the Signal Processing -> Waveform Generation palette menu place the “Basic Function Generator.vi” on the block diagram.
3) Create a control for all of the input terminals on the function generator except for “Reset”
4) Create a case structure to the right of the function generator and wire up the error output to the case selector.
5) In the “No Error” case, wire the Waveform output of the function generator and unbundle the Y data with the wave form unbundle found on the Waveform palette menu.
6) To the left, create a for-loop.
7) On the front panel, create a Waveform Chart from the Graph palette.
8) On the block diagram, place the waveform chart terminal inside the for-loop.
9) Use an indexing tunnel to wire the Y-data through the tunnel.
10) Wire the indexed Y-data into the chart terminal.
11) From the Timing palette menu place the “Wait until next ms multiple” node inside the for
12) Create a control in the while loop from the “Wait” input. Rename the control “Delay”
13) Right click on the edge of the for-loop and select “Conditional Terminal.” This will create a conditional terminal like a while loop, giving you “For N or until” behavior.
14) Create a stop button by right-clicking on the conditional terminal and selecting create control.
15) In the “Error” case, place the “General Error Handler” from the “Dialog and User Interface palette” Place it and wire it to the error wire from the case selector.
16) Save the VI as Exercise1.vi
17) Run the VI
18) Play with the inputs to the VI and note the changes.
19) At least once, make Frequency greater than sampling info->Fs and note the behavior.
20) Save the VI as Exercise2.vi
21) Inside the “No Error Case” select and delete the for-loop and the waveform unbundle.
22) On the Front Panel, create a “Waveform Graph” from the Graph palette
23) Place the graph terminal inside the No Error case and wire it to the waveform data.

24) Save the VI

25) Run the VI and play around with the settings.

26) Note the difference in the time axes between Exercise1.vi and Exercise2.vi. Why is this?