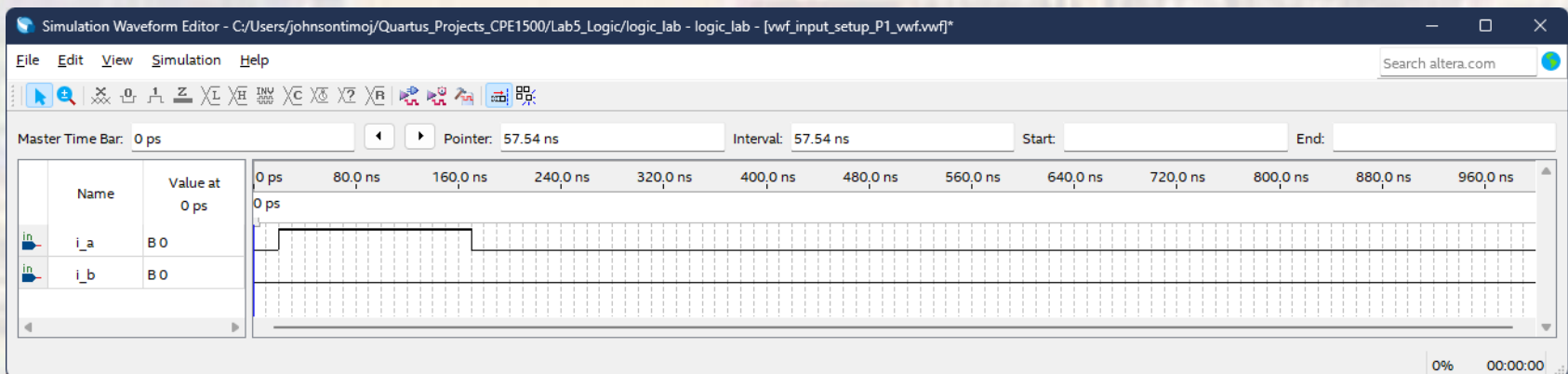
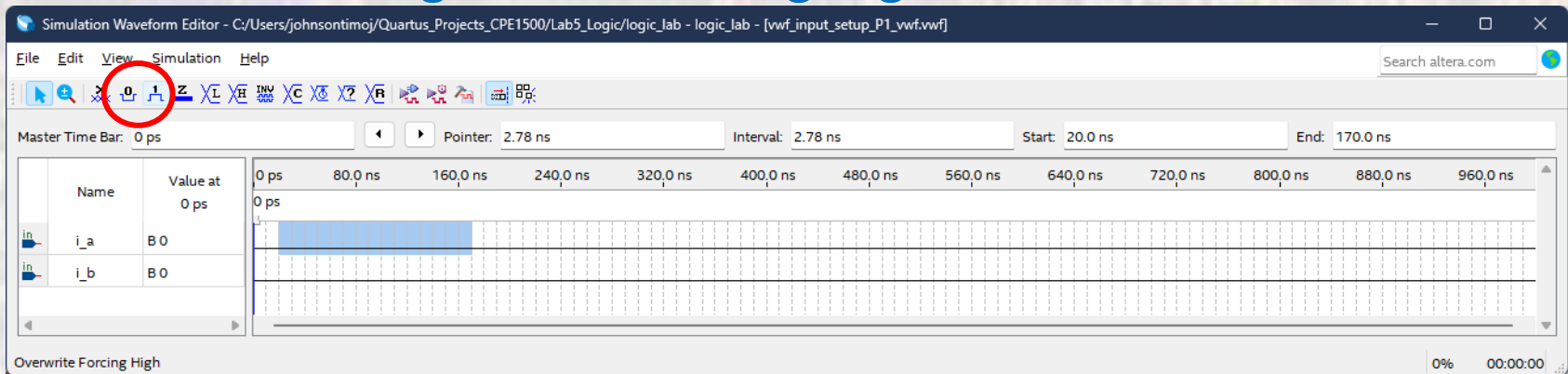


# University Waveform Viewer Input Setup

Last updated 1/14/25

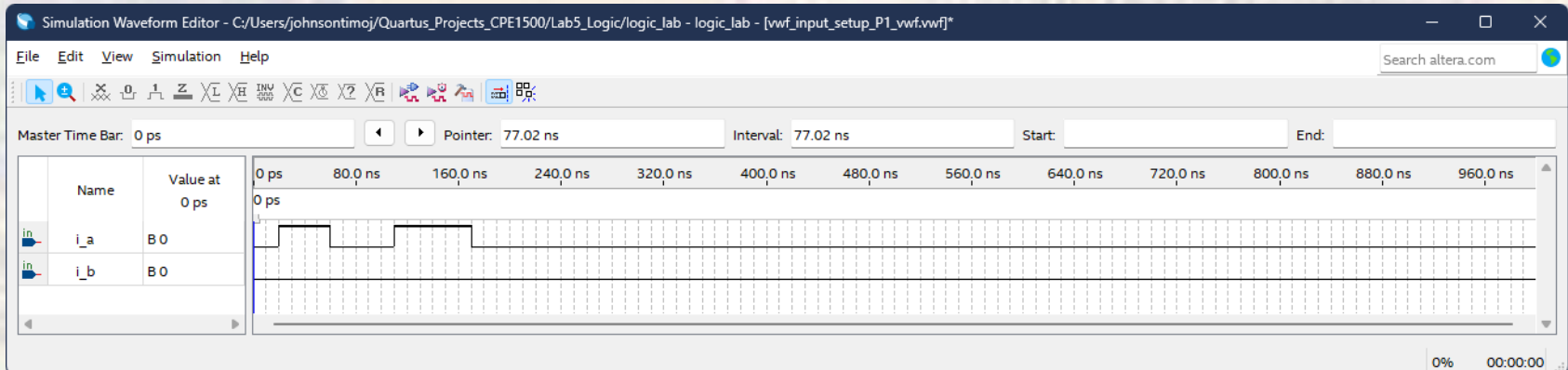
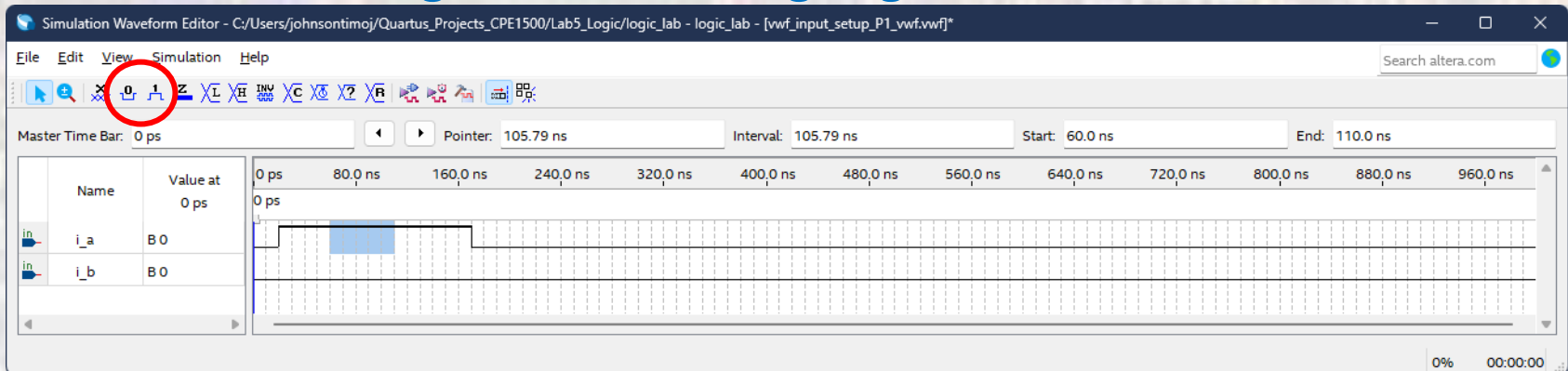
# University Waveform Viewer – Input Setup

- Forcing 0 or 1
  - sweep the cursor along the signal trace to indicate the value(s) you want to change
  - Select **Forcing Low** or **Forcing High**



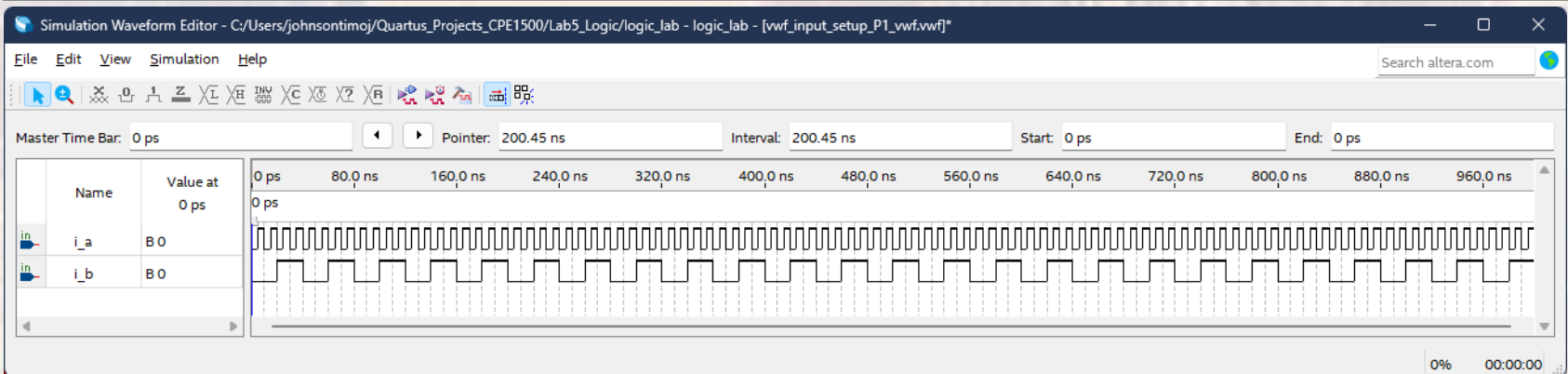
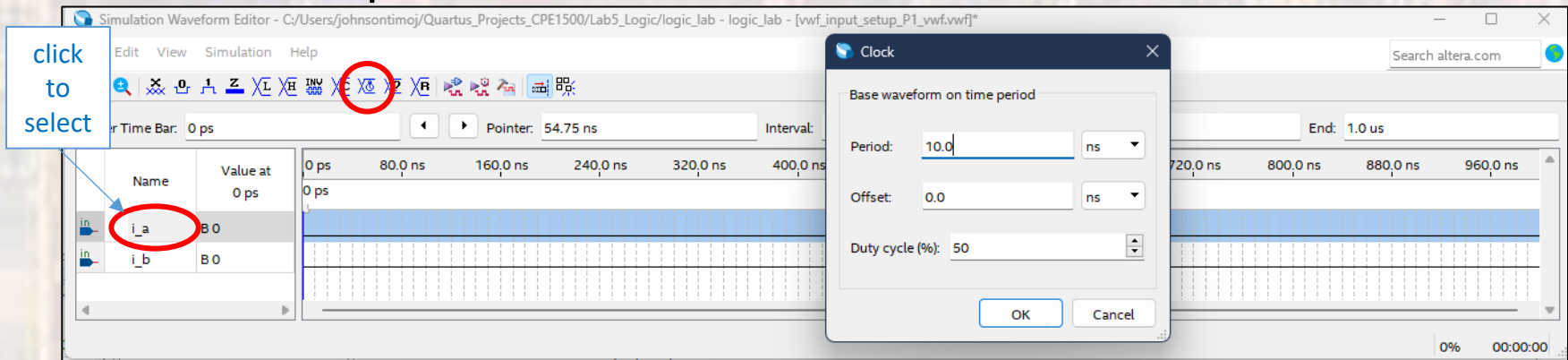
# University Waveform Viewer – Input Setup

- Forcing 0 or 1
  - sweep the cursor along the signal trace to indicate the value(s) you want to change
  - Select **Forcing Low** or **Forcing High**



# University Waveform Viewer – Input Setup

- Create a periodic signal
  - Select the signal
  - Select **Overwrite Clock**
  - Set the parameters



# University Waveform Viewer – Input Setup

- Create a random signal
  - Select the signal
  - Select **Random Values**
  - Set the parameters

click to select

Simulation Waveform Editor - C:/Users/johnsontimoi/Quartus\_Projects\_CPE1500/Lab5\_Logic/logic\_lab - logic\_lab - [vwf\_input\_setup\_P1\_vwf.vwf]\*

Random Values

Generate random values

- Every grid interval
- Every half grid interval
- At random intervals
- At fixed intervals

Interval period:  ns

OK Cancel

Name	Value at 0 ps
i_a	B 0
i_b	B 0

Time Bar: 0 ps Pointer: 2.78 ns Interval: 2.78 ns

Simulation Waveform Editor - C:/Users/johnsontimoi/Quartus\_Projects\_CPE1500/Lab5\_Logic/logic\_lab - logic\_lab - [vwf\_input\_setup\_P1\_vwf.vwf]\*

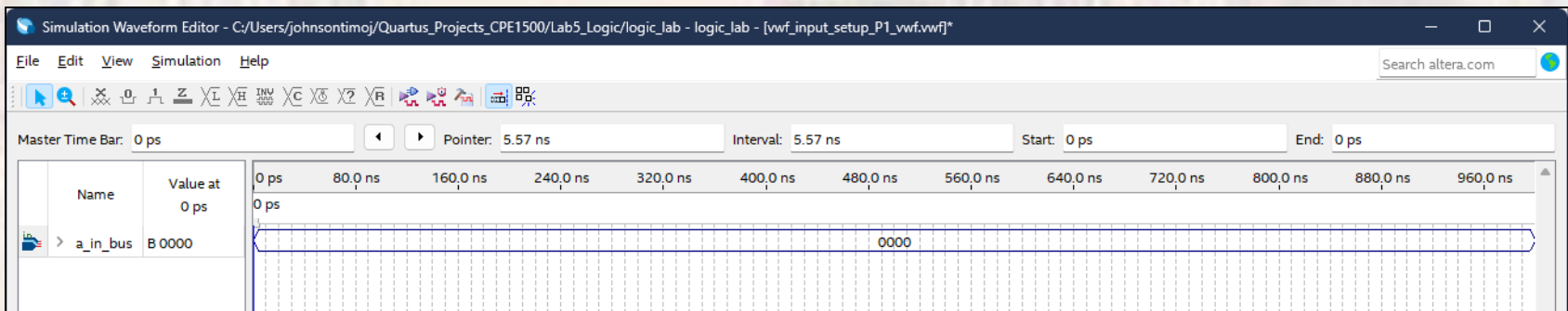
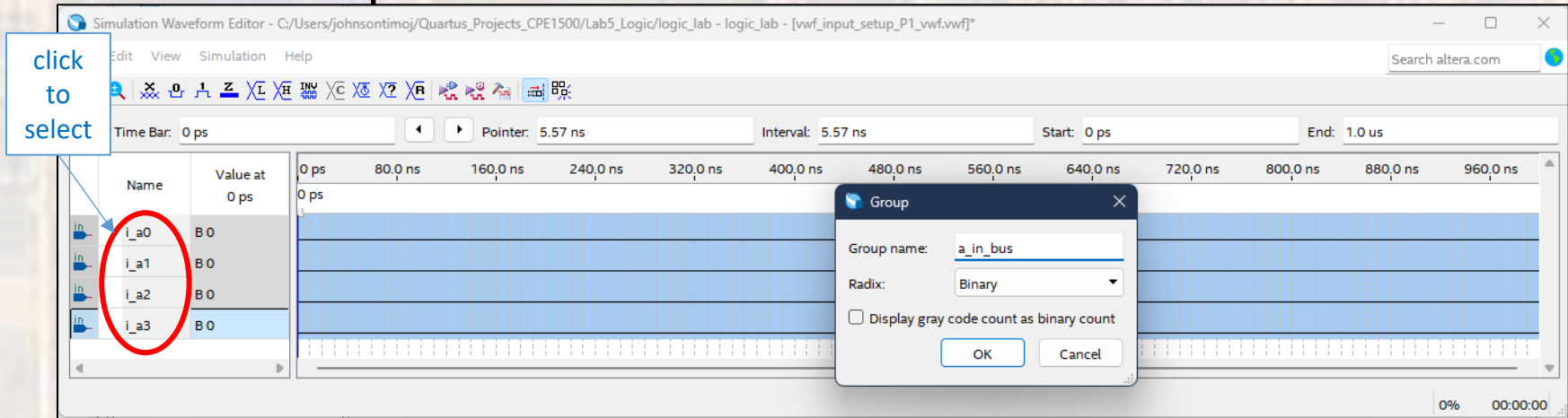
Master Time Bar: 0 ps Pointer: 4.64 ns Interval: 4.64 ns Start: 0 ps End: 0 ps

Name	Value at 0 ps
i_a	B 0
i_b	B 1

0 ps 80.0 ns 160.0 ns 240.0 ns 320.0 ns 400.0 ns 480.0 ns 560.0 ns 640.0 ns 720.0 ns 800.0 ns 880.0 ns 960.0 ns

# University Waveform Viewer – Input Setup

- Collect multiple signals into a bus
  - Select the signals
  - rt-click → select **grouping** → **group**
  - Set the parameters



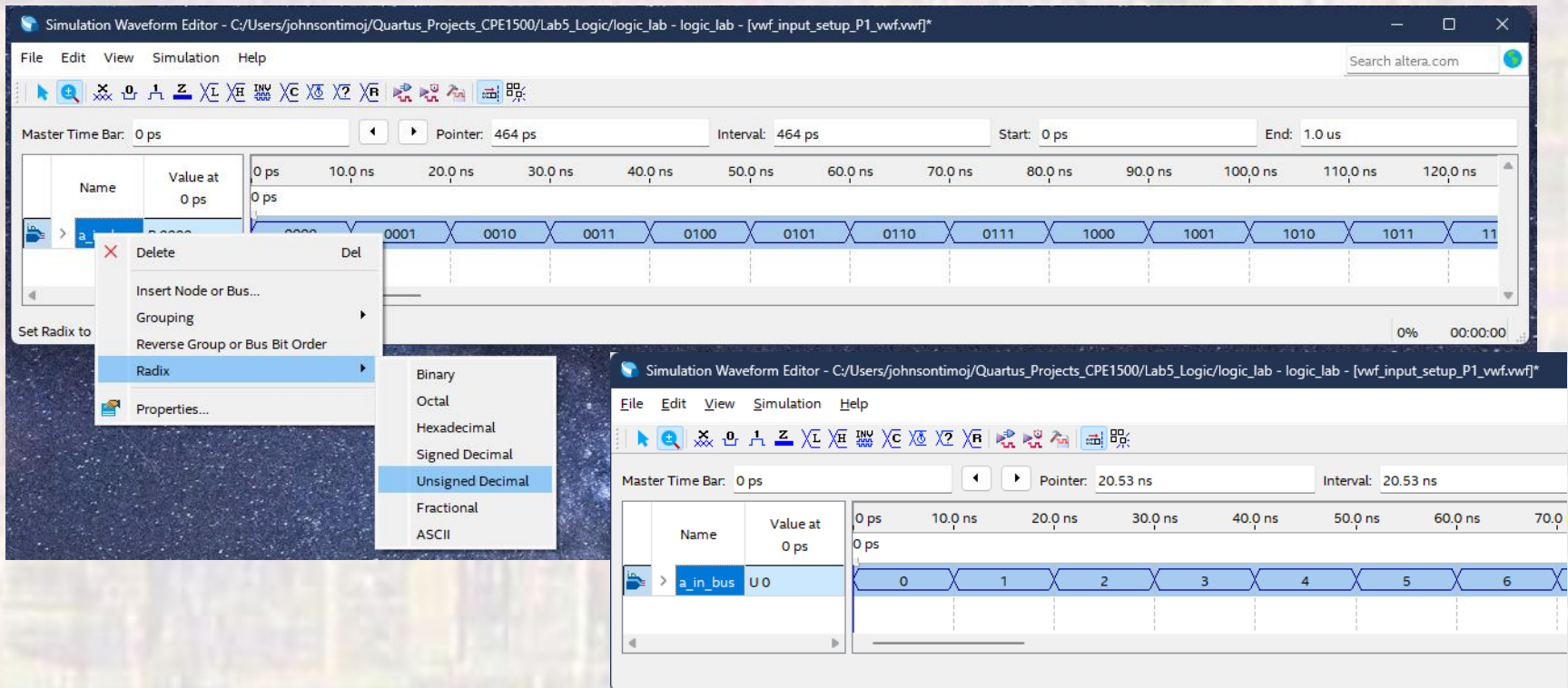
# University Waveform Viewer – Input Setup

- Create a counting signal
  - Select the bus
  - Select **Count Value**
  - Set the parameters

The image shows two screenshots from the Simulation Waveform Editor. The top screenshot shows the 'Count Value' dialog box with the following settings: Radix: Binary, Start value: 0000, Increment by: 1, Count type: Binary (selected), and Transitions occur: Count every: 10.0 ns. A callout box with the text 'click to select' points to the 'a\_in\_bus' signal in the signal list, which is circled in red. The waveform shows a constant signal at 0000. The bottom screenshot shows the same signal list with 'a\_in\_bus' selected, and the waveform showing a periodic square wave signal. The time bar indicates a pointer at 337.79 ns and an interval of 337.79 ns.

# University Waveform Viewer – Input Setup

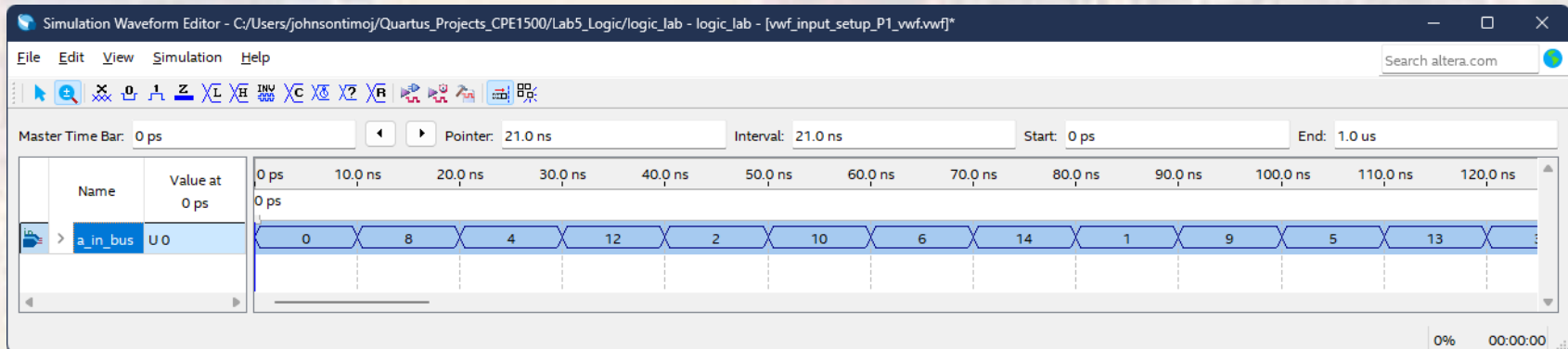
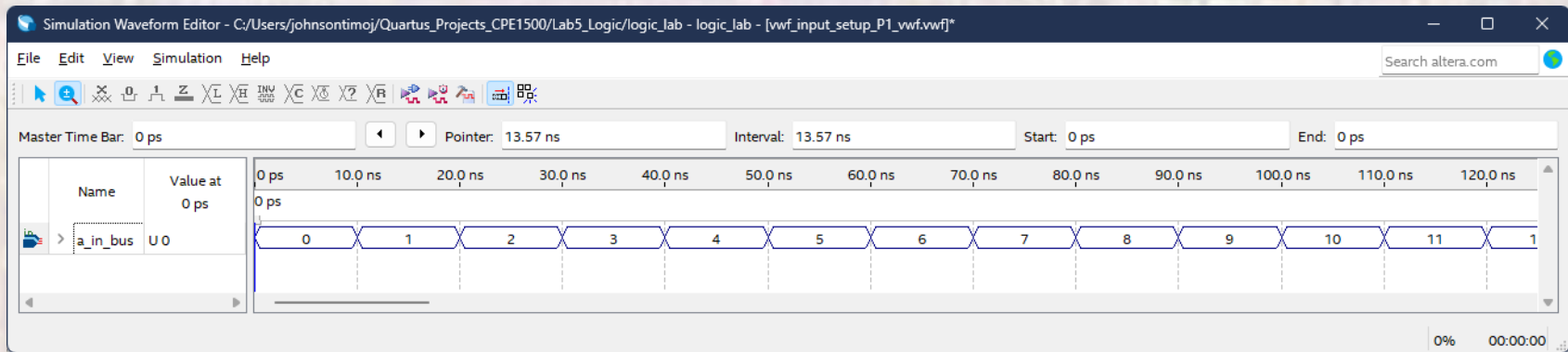
- Modifying a bus signal representation - radix
  - Select the bus
  - rt-click → select **Radix**
  - Choose a representation





# University Waveform Viewer – Input Setup

- Modifying a bus signal representation - order
  - Select the bus
  - rt-click → select **Reverse Group or BUS Bit Order**



# University Waveform Viewer – Input Setup

- Create an arbitrary bus value
  - sweep the cursor along the bus trace to indicate the value(s) you want to change
  - Select **Arbitrary Value**
  - Set the value

