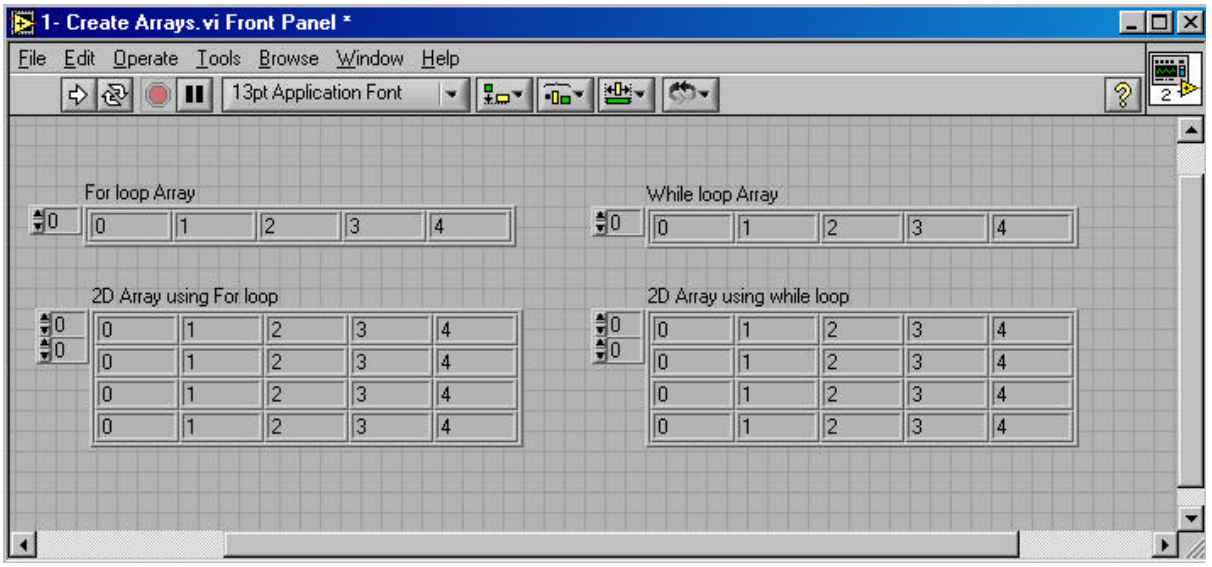
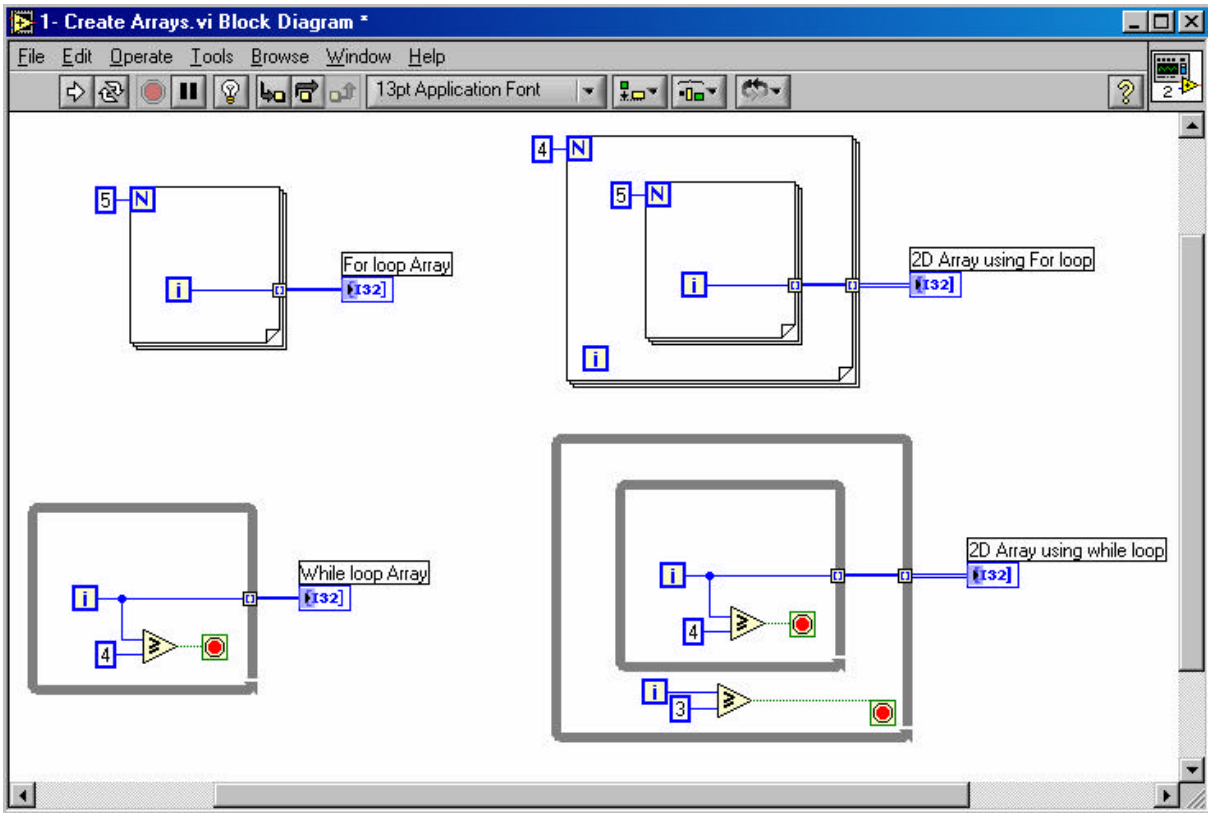
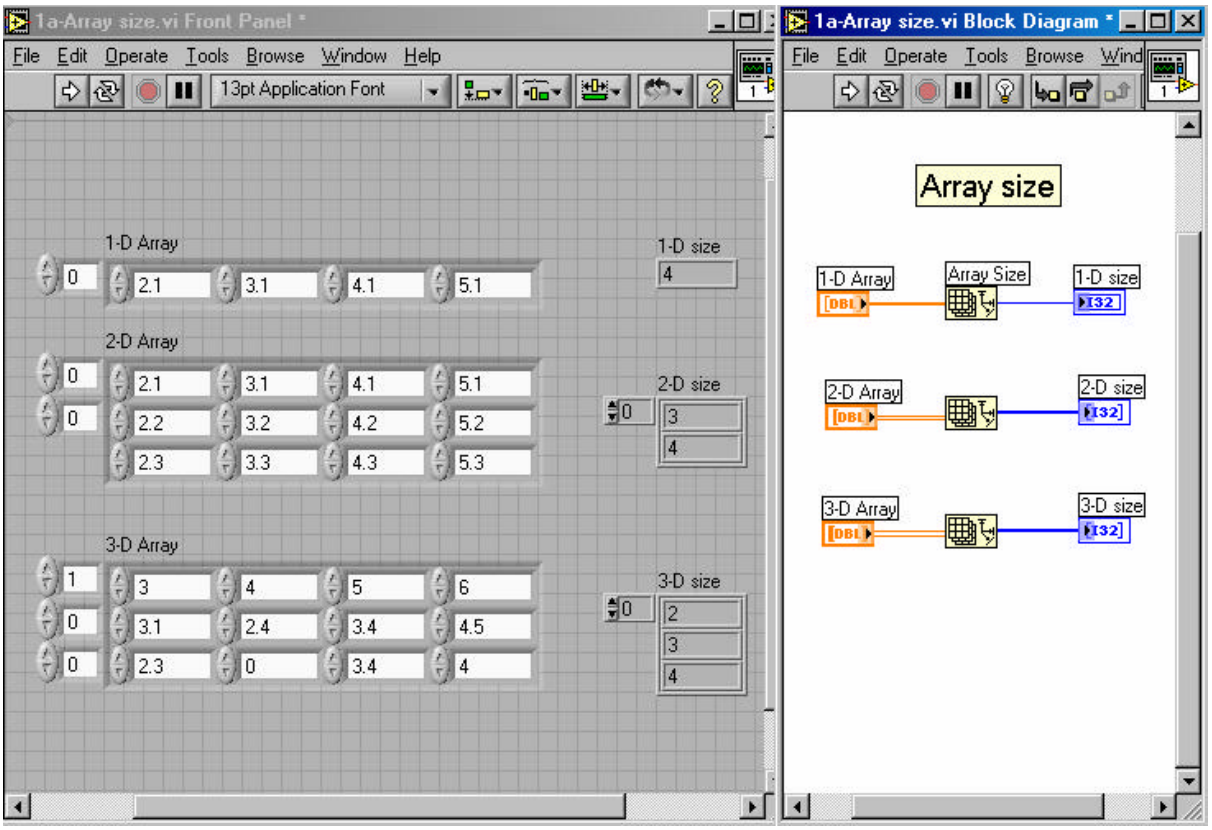
Array Examples

Example 1: How to create arrays with For and While loops

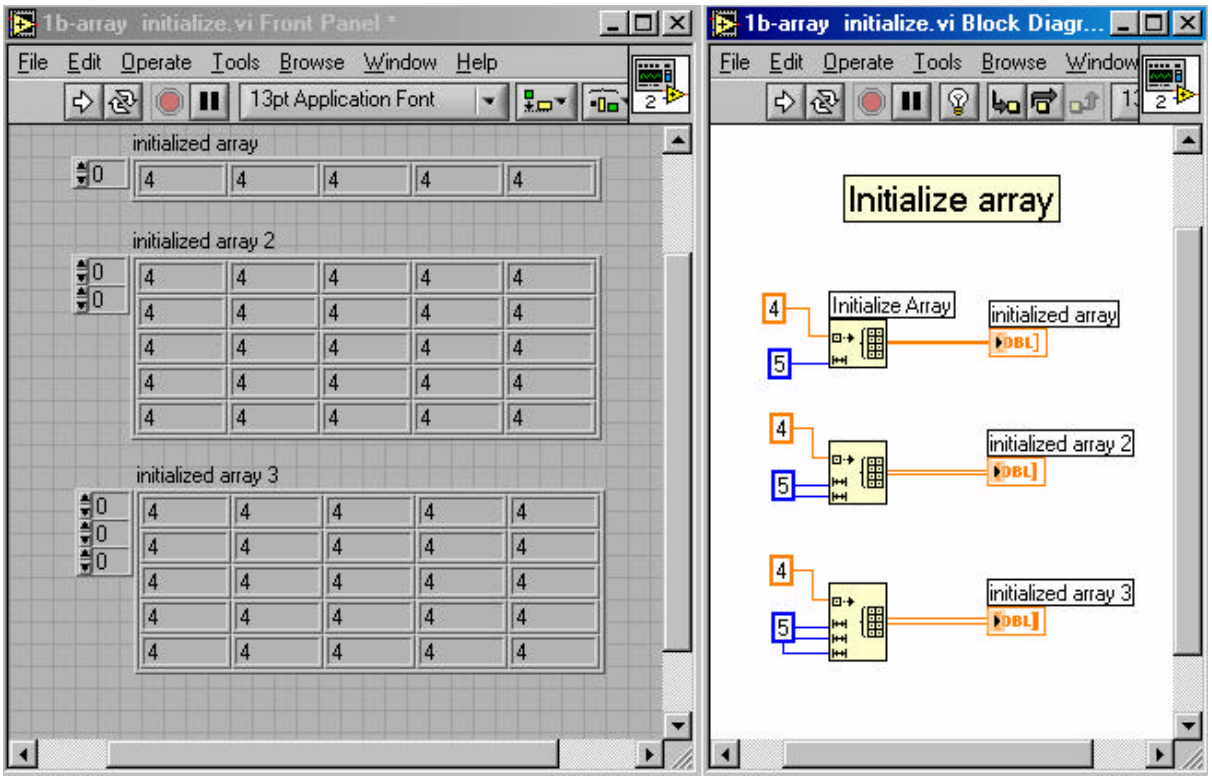




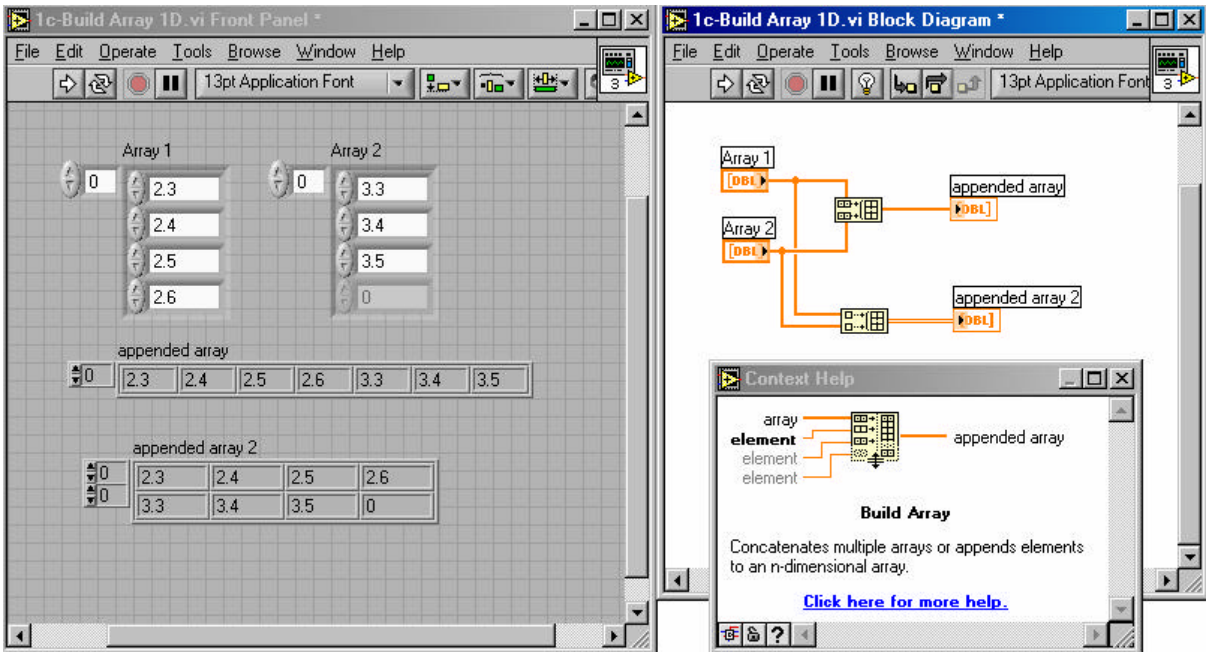
Example 2: Array size function

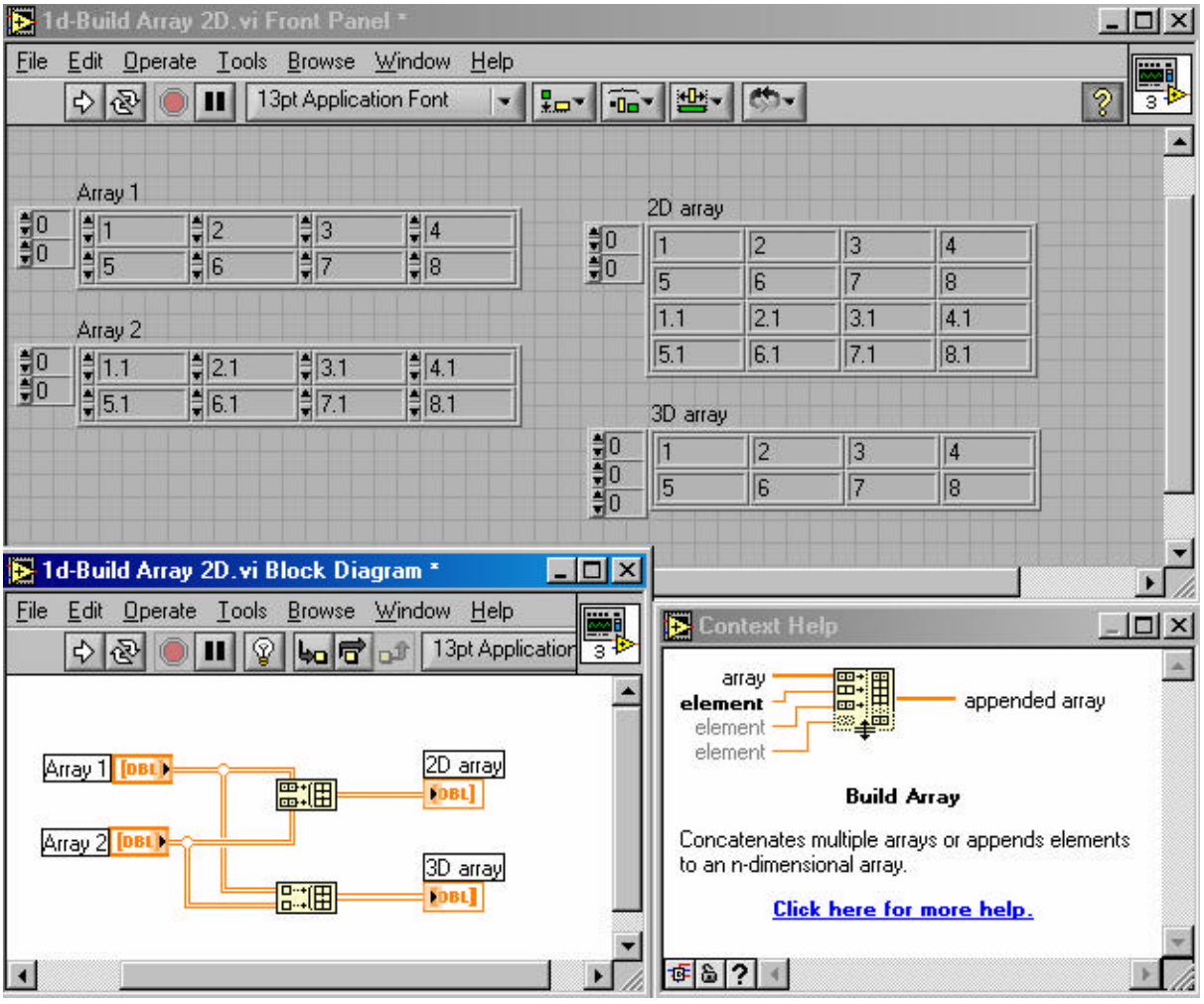


Example 3: Initialize array function

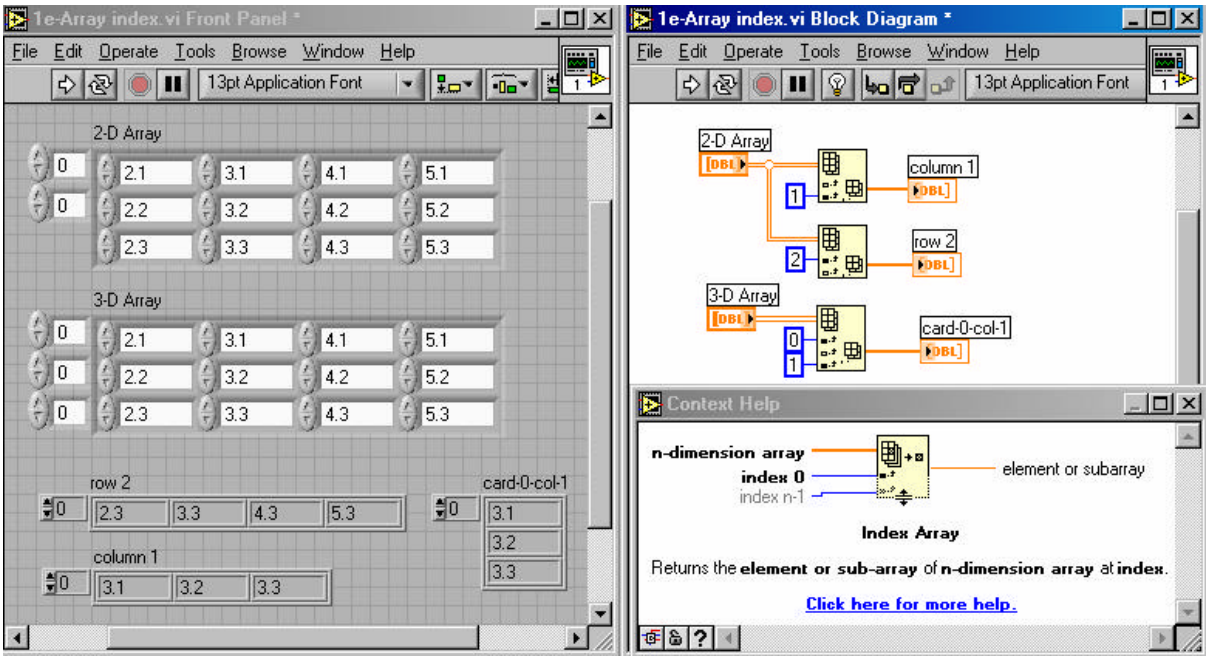


Example 3: Build array function

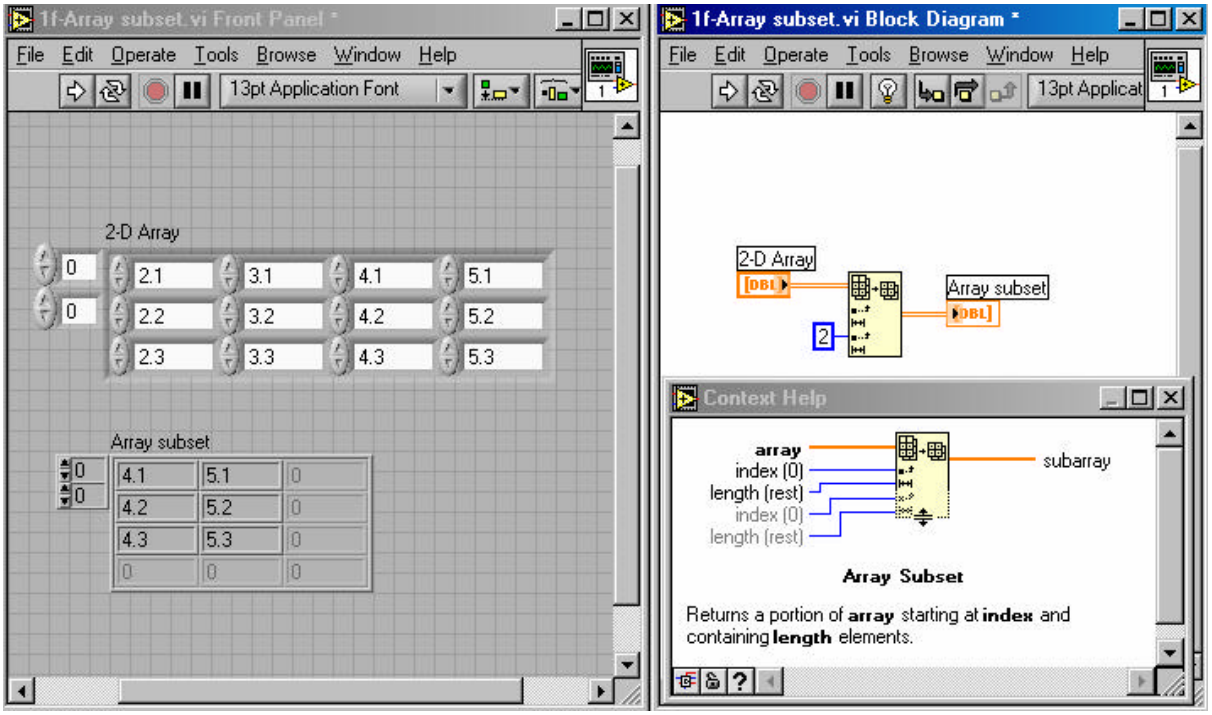




Example 4: Index array function

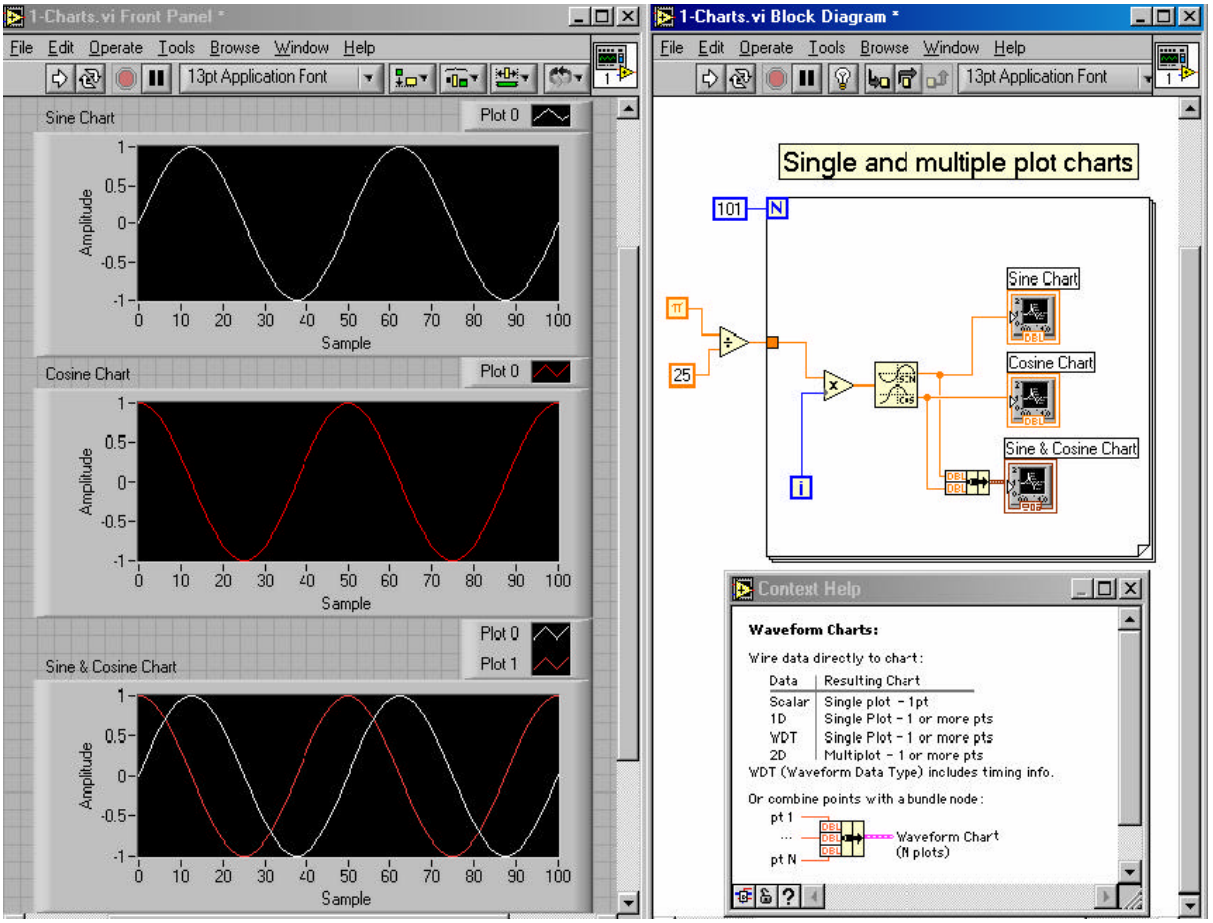


Example 5: Array subset function

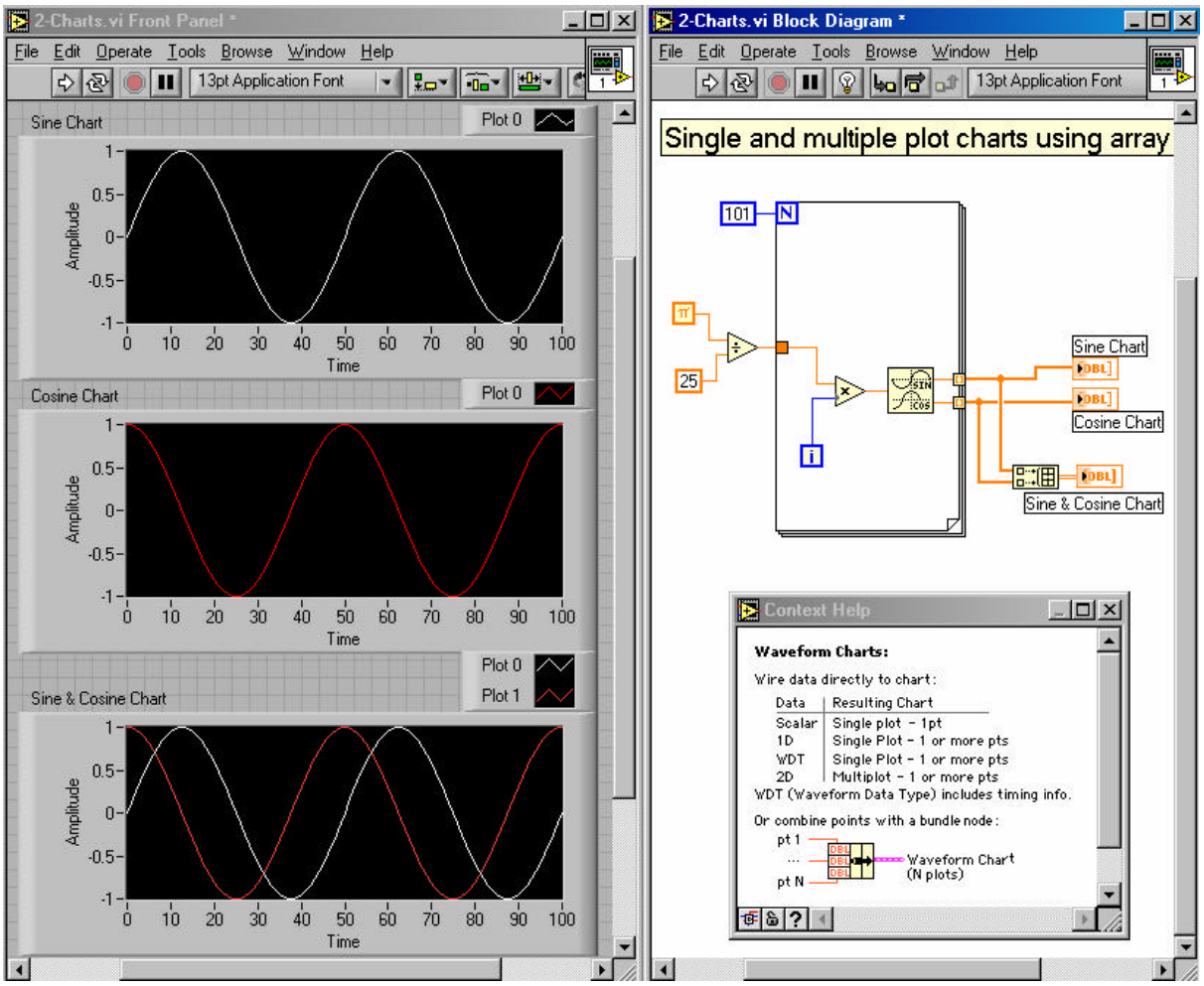


Waveform charts and graphs

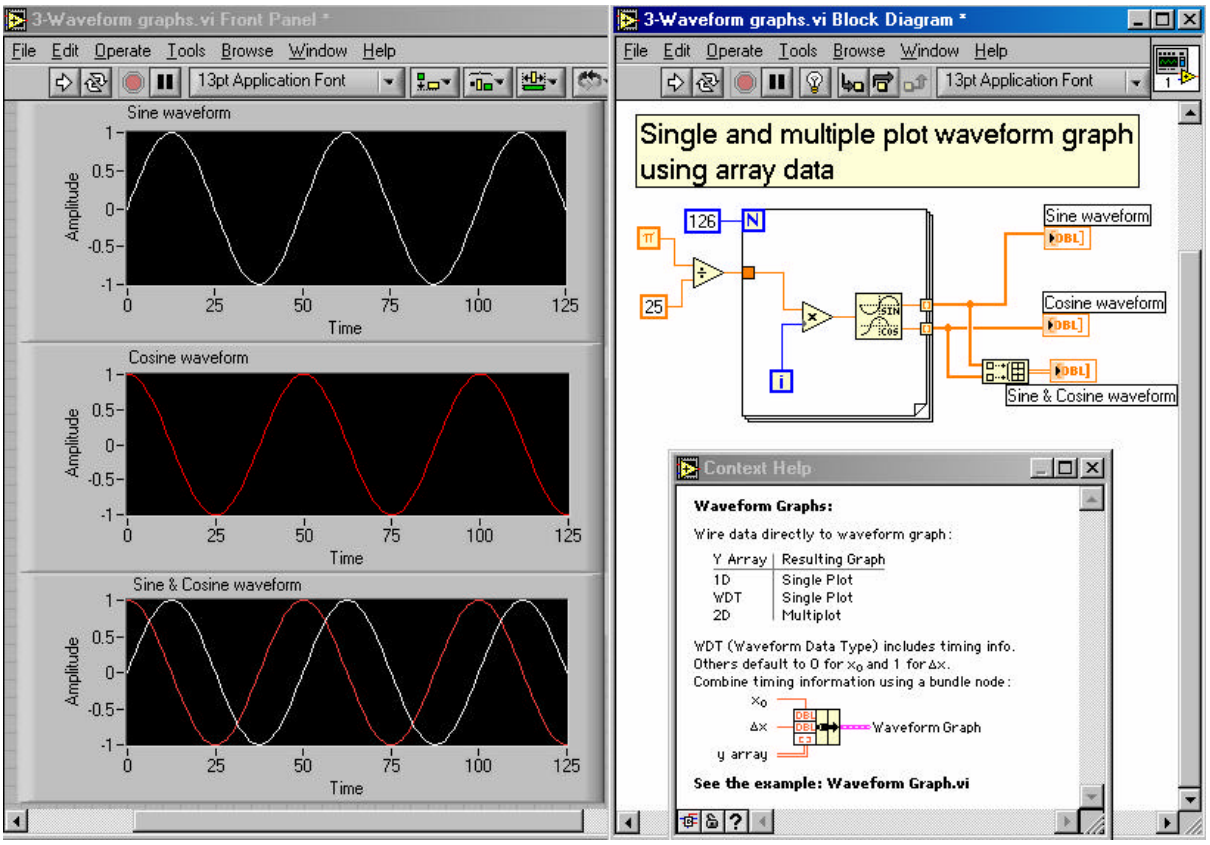
Example 1: Single & multiple plot waveform chart using scalar data



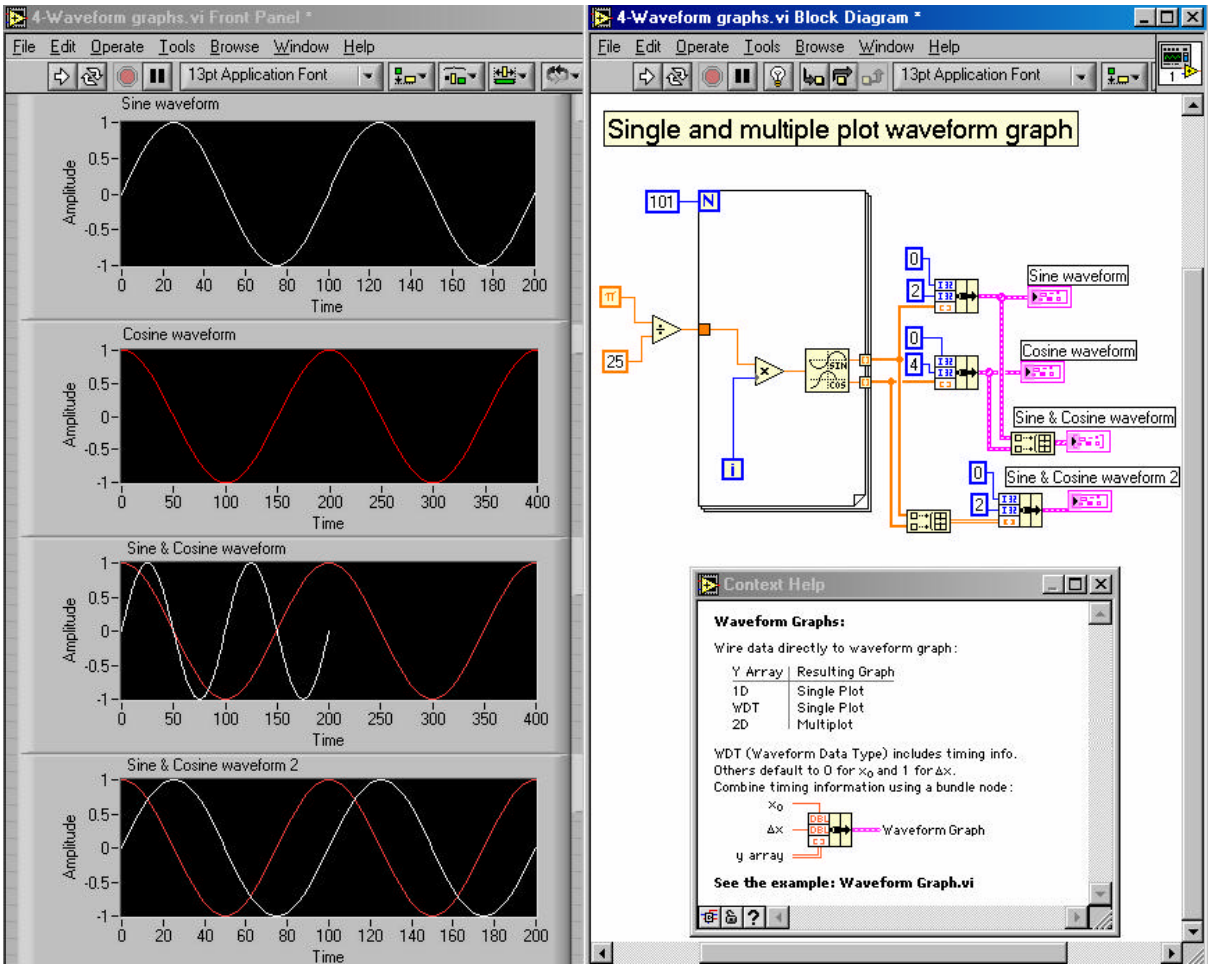
Example 2: Single & multiple plot waveform chart using array data



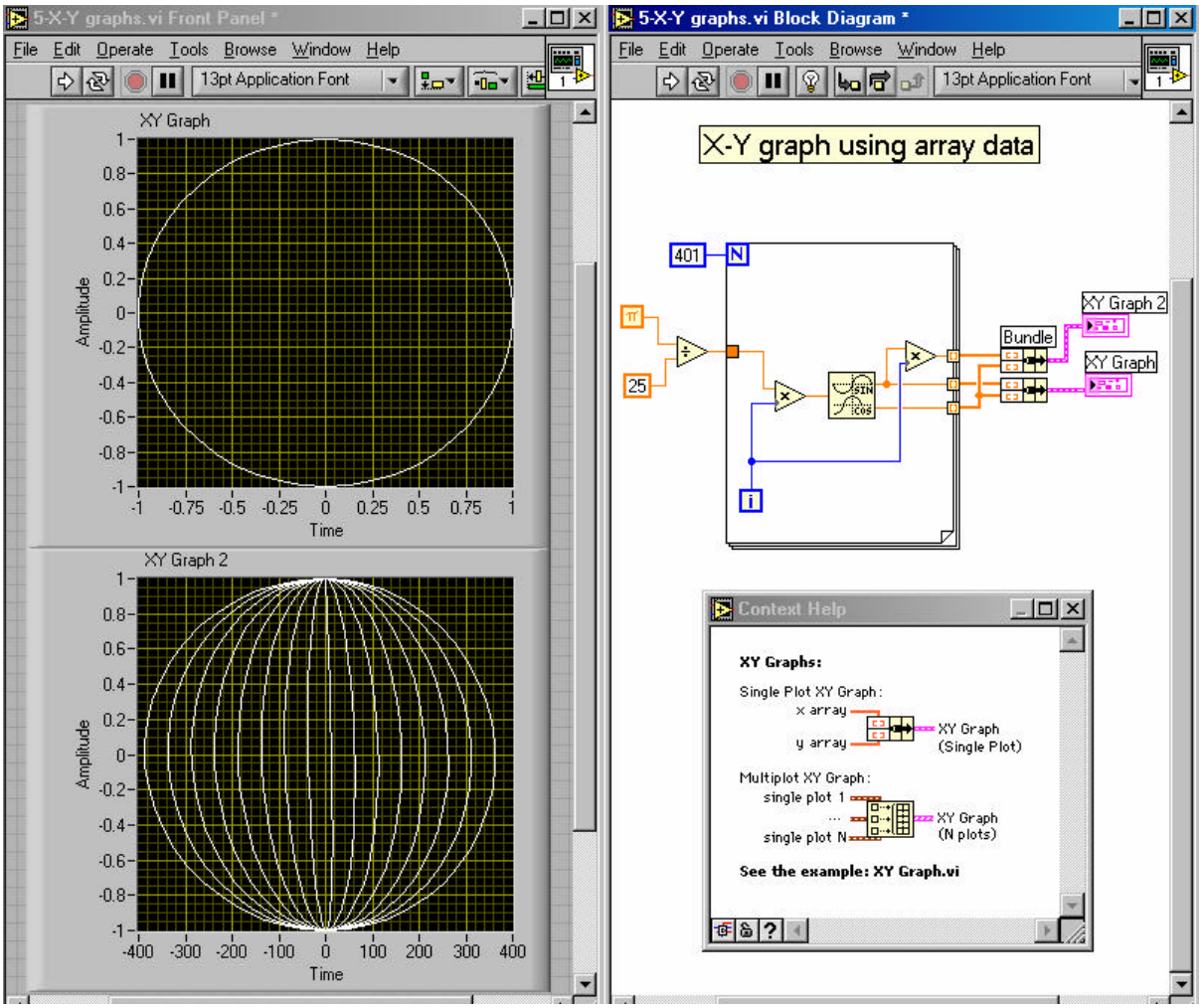
Example 3: Single & multiple plot waveform graph



Example 4: Single & multiple plot waveform graph with scaled x-axis



Example 5: X-Y graph example



Array & Graph Summary

- An *array* is a collection of data elements of the same type. The data elements can be of any type, so you can create numeric, Boolean, string, or cluster arrays.
- Remember that the *index* value is zero-based so the index representing the first element of an array has a value of zero.
- If a data object is not assigned, the array terminal will appear black with an empty bracket.
- You create an array in the Panel window using a two-step process. First, you place an array shell (Array & Cluster subpalette) in the window, and then you add the desired control or indicator to the shell.
- There are many functions to manipulate arrays, such as Build Array and Index Array, in the Array subpalette.
- Both the For Loop and While Loop can process and accumulate arrays at their borders. This is done by having auto-indexing enabled at the loop tunnels. By default, LabVIEW enables auto-indexing in For Loops and disables auto-indexing in While Loops.
- Polymorphism is the ability of a function to adjust to input data of different data structures.
- Waveform graphs and XY graphs display data from arrays.
- Graphs have many unique features that you can use to customize your plot display. Pop up on the graph or its components to access its different plotting options.
- You can display more than one plot on a graph using the Build Array function (Array subpalette). The graph automatically becomes a multiplot graph when you wire the array of outputs to the terminal.