CLD Exercise 5: Reading and Writing Data from a Configuration File

Objective

Develop a VI that reads and writes configuration file data to and from a UI data structure. Use the provided cluster and the application front panel (Figure 1).
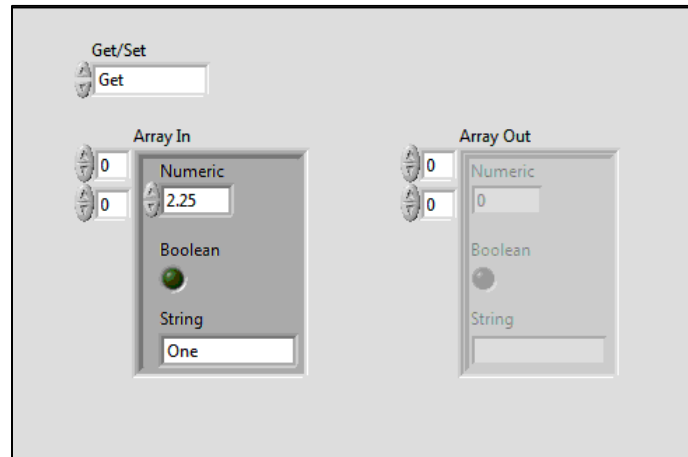

Figure 1. Application Front Panel

General Operation

The application will open a configuration file and either read the contents and put the values into a cluster array, or take values from a cluster array and save it in the file.

Application Terminology

Get/Set

The action for the VI.

Data Formats

VI Data Structure

The VI data is limited to eight records in a two row by four column array. The location of the array element determines the data elements Index1 and Index2. Each array element contains the Numeric, Boolean, and String data.

VI File

The path to the configuration file must be relative and must not be hard coded. See the configuration file `CLD 5 Configuration Data File.ini` for the data format.

The two index numbers are the row and column of the location for the cluster in the array. Index1 is the row, Index2 is the column.

Initialization

There are no specific initialization requirements. The **Array In** control is defaulted to contain eight records; it is a two row by four column array.

Operation

VI Run

- **Get:** The application will read the file data and populate the data structure provided on the front panel. The location for the data in the array is specified by the index numbers.
- **Set:** The application will read the **Array In** and write the position indices of the array element and the corresponding three data values to the configuration file.

Questions

What are the complications from using zero based indexing?

How important is the data type to the Configuration File VIs?

Do the data types have to be hard coded?