

# Preparing Files for Distribution

## Goal

Review the Building Applications Checklist and prepare VIs to build a standalone application.

## Scenario

Review the Building Applications Checklist to assist you in the build process before creating a standalone application or installer.

Stand-alone applications in LabVIEW have the Window Appearance set to Top-level application to enable the front panel to open when the VI runs.

A VI that is running as a stand-alone executable remains in memory when the application finishes running. Therefore, it is necessary to call the Quit LabVIEW function in order to close the application when the application finishes executing. Placing the Quit LabVIEW function on the block diagram can make editing the application more difficult in the future because LabVIEW exits each time the application finishes. With the use of the App.Kind property, you can specify that LabVIEW exits only when executed within the run-time system.

## Design

- Modify the VI Properties to prepare to build a stand-alone application.
- Modify the application to call the Quit LabVIEW function when the code is executed in the run-time system.
- Modify the application to specify a log path relative to the standalone executable.

## Implementation

The files that you need to complete this exercise are here: <NI eLearning>\LV Core 2\Prep Files Distr\Exercise.

Before you build an application, you first prepare the code so that it executes reliably when compiled into an application.

### Review the Building Applications Checklist

1. Select **Help»LabVIEW Help** to open the LabVIEW Help.
2. Select **Fundamentals»Building and Distributing Applications»Building Applications Checklist**.
3. Review the Preparing Files checklist items.

### Set Top-Level Application Window

1. Open the Weather Station UI VI.
  - ☐ Open `Weather Station.lvproj` in the <Exercise> directory.
  - ☐ In the Project Explorer window, double-click **Weather Station UI.vi**.

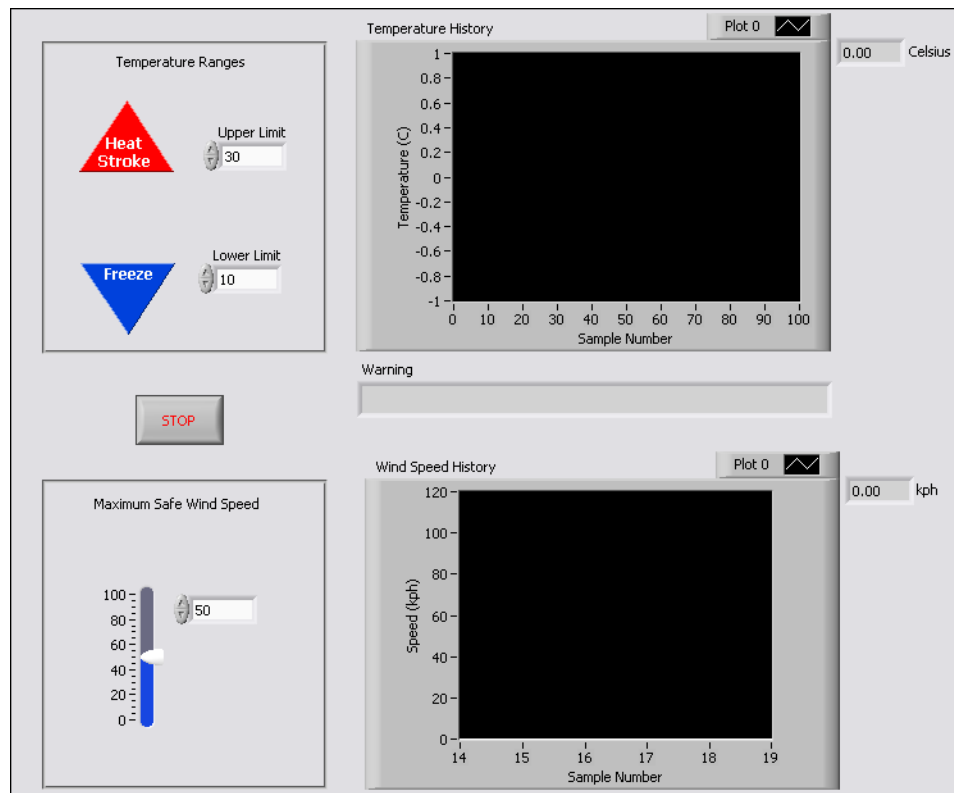
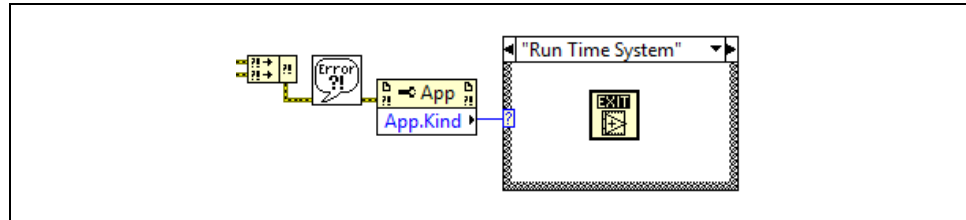


Figure 1. Front Panel

2. Select **File»VI Properties** to display the VI Properties dialog box.
3. Select **Window Appearance** from the top pull-down menu.
4. Give the window a name, such as `Weather Station`.
5. Select **Top-level application** window. This gives the front panel a professional appearance when it opens as an executable.
6. Click **OK**.
7. Save the VI.

## Call the Quit LabVIEW Function

1. Open and modify the block diagram to call the Quit LabVIEW function when the application finishes.



**Figure 2.** Adding the Quit LabVIEW Function to the Block Diagram



- ☐ Add the **Quit LabVIEW** function to the block diagram so that it is the last function that executes. This function quits LabVIEW and quits the application after it has executed.
- ☐ Enclose the Quit LabVIEW function in a Case structure.
- ☐ Using the settings below in the Class Browser window create the Application: Kind property.
  - Object library: **VI Server**
  - Class: **Application**
  - Properties and Methods: **Properties»Application»Kind**
- ☐ Wire the Property Node as shown in Figure 2.
- ☐ Use the labeling tool to replace the text in the case label with `Run Time System`.

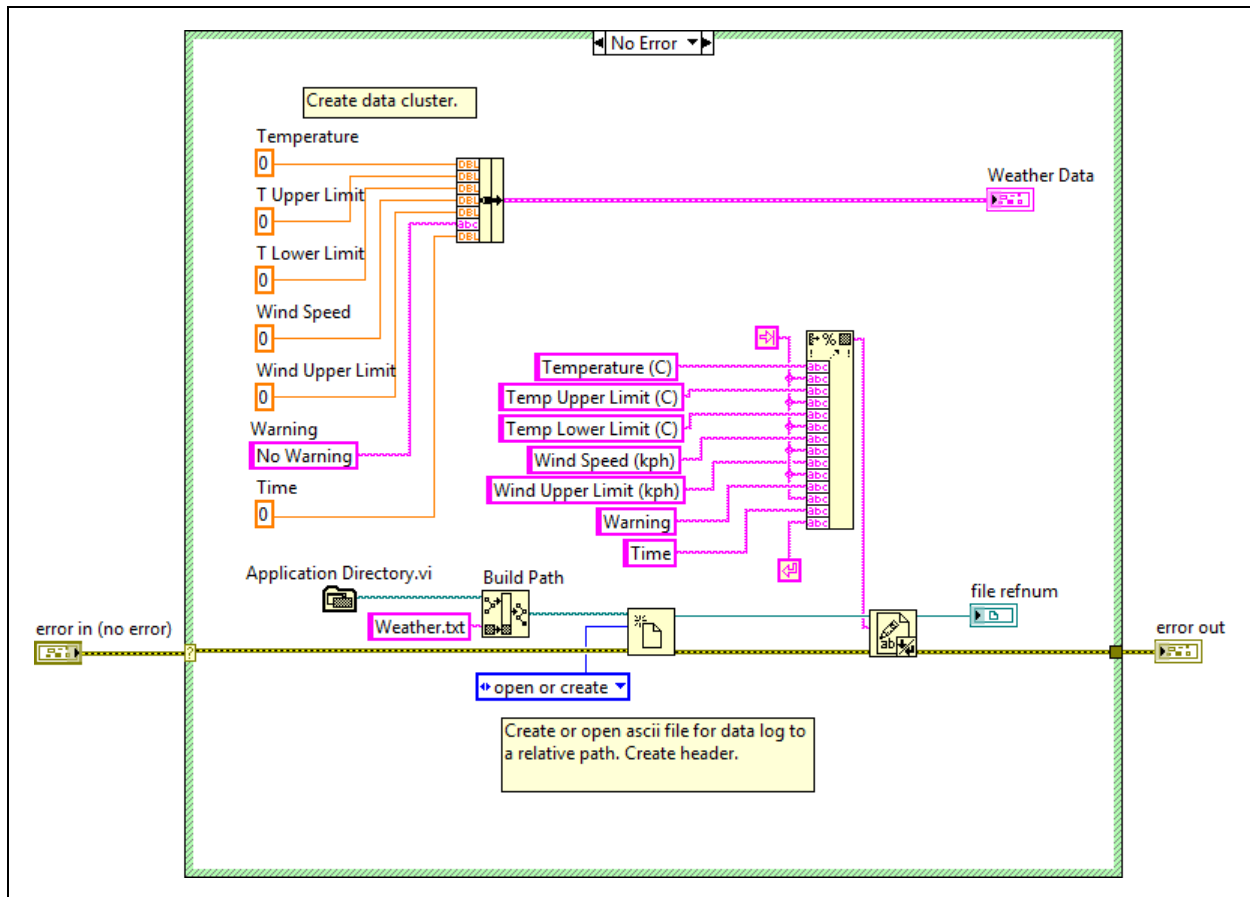


**Note** Enum values that you wire to a case selector terminal are case sensitive.

2. In the Project Explorer window, select **File»Save All** to save all the VIs.

## Specify a File Path Relative to the Executable

1. Instead of prompting the user to specify a log file, modify your code to specify a file path relative to the application executable.



**Figure 3.** Additional Build Path Function

- ☐ Open the **Initialize Weather Station.vi** from the Project Explorer window.
- ☐ Switch to the block diagram.
- ☐ Add a **Build Path** function to the block diagram.
- ☐ Right-click the **name or relative path input** and select **Create» Constant** from the shortcut menu.
- ☐ Type `weather.txt` in the string constant.
- ☐ Add an **Application Directory VI** to the block diagram.
- ☐ Wire the block diagram as shown in Figure 3.

- ☐ Save and close the VI.
- ☐ From the Project Explorer window, open and run the **Weather Station UI.vi**. When you click the **Stop** button, the VI stops but does not quit LabVIEW.
- ☐ Open the <Exercise> directory in the Windows Explorer. Verify that the `weather.txt` file exists and contains the log information.

## End of Exercise

## **Notes**

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