Exercise 6-1: Preparing Files for Distribution

Goal

Review the Building Applications Checklist and prepare VIs to build a stand-alone application.

Scenario

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

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

A VI that runs as a stand-alone application remains in memory when the application finishes running. Therefore, it is necessary to call the Quit LabVIEW function 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 executing.

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 stand-alone application.

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» Developing and Distributing an Application**.
3. Review the **Preparing to Build the Application** section.

Guided Instructions

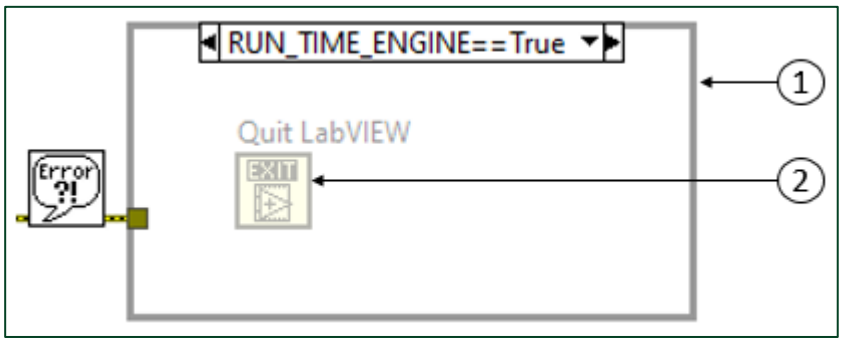
Set the Top-Level Application Window

1. Open C:\Exercises\LabVIEW Core 2\Deployment\Event-Driven State Machine.lvproj.
2. From the **Project Explorer** window, open the Event-Driven State Machine - Main VI.
3. Select **File» VI Properties** to display the **VI Properties** dialog box.
4. Select **Window Appearance** from the **Category** pull-down menu.
5. Uncheck the **Same as VI name** checkbox, and enter a name, such as Event-Driven State Machine, in the **Window title** text box.
6. Select **Top-level application window** to give the front panel a professional appearance when the VI opens as a stand-alone application.
7. Click the **Customize** button to view the various window settings that LabVIEW provides for configuring the top-level application windows.

8. Click **OK** to close the **Customize Window Appearance** dialog box and click **OK** to close the **VI Properties** dialog box.
9. 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. The Quit LabVIEW function exits LabVIEW and closes the application after it has executed.



   1. **Conditional Disable Structure-** Place a **Conditional Disable Structure** after the Simple Error Handler VI from the **Quick Drop** window. Wire the error out of the Simple Error Handler VI to the border of the structure. Right-click the **border** of the structure and select **Add Sub-diagram After**. In the **Configure Condition** dialog, set the value of **Symbol(s)** to Run_Time_Engine. Set **Value(s)** to True.
   2. **Quit LabVIEW Function-** Place this function in the "RUN_TIME_ENGINE==True" sub-diagram. You can leave the Default sub-diagram empty.

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

Specify a File Path Relative to the Application

The Event-Driven State Machine - Main VI already contains code to specify a relative path to the application.

Open the Generate Timestamped VI in the Log case of the loop. The Application Directory VI creates a path relative to the stand-alone application when you call the VI from a stand-alone application. Otherwise, the Application Directory VI returns the path to the folder containing the project file.

Test

1. Run the Event-Driven State Machine - Main VI to ensure that it is working.
2. Save the VI and the project.

End of Exercise 6-1