LabWindows/CVI meets the changing needs of test engineers with an interactive development environment designed for virtual instrumentation. With easy-to-use development tools, you can quickly create, configure, and display measurements during program design, verification, and testing. LabWindows/CVI automates much of the manual coding and compiling.

1. **Designing User Interfaces**
   Design graphical user interfaces (GUIs) in the intuitive User Interface Editor. Select from controls designed specifically for instrumentation.

2. **Customizing Controls**
   Customize each GUI control with easy-to-use dialog boxes.

3. **Generating Code**
   Automatically generate an ANSI C program based on the GUI with LabWindows/CVI CodeBuilder. CodeBuilder creates code that responds automatically to user events such as mouse clicks, key presses, and menu selections.

4. **Using Function Panels**
   Use interactive function panels to generate library calls, test the calls, and insert them into the program. A function panel is a graphical representation of a LabWindows/CVI function and its parameters.

5. **Editing Source Code**
   Complete your program using the built-in source editor. Use the source code completion options to view functions, variables, prototypes, and function help within the Source window. You also can access input selection dialog boxes for parameters and declare parameter variables from within the Source window.

6. **Debugging**
   Use LabWindows/CVI debugging tools to catch common programming mistakes. The patented User Protection feature automatically checks for invalid program behavior. Set breakpoints and use tooltips to pause program execution and view or modify variable values.

7. **Distributing Applications**
   Create a distribution to package your LabWindows/CVI application and all of its dependencies so that you can distribute your application to another computer.
Use built-in instrumentation libraries to interface test applications to the outside world. LabWindows/CVI includes a large set of run-time libraries for instrument control, data acquisition, analysis, and user interface creation. This chart illustrates the classes in each library. To find specific functions, press <Ctrl-Shift-P> in the Source window. You can also use the Library Tree to browse to and search for functions.

### User Interface Library
The User Interface Library contains functions that programmatically control the user interface.

### Advanced Analysis Library
The Advanced Analysis Library contains functions that simulate and analyze large sets of numerical data quickly and efficiently.

### Utility Library
The Utility Library contains functions that perform various operations, including using the system times, managing disk files, launching another executable, and using multiple threads.

### NI-DAQmx Library
The NI-DAQmx Library contains functions that communicate with and control data acquisition devices.

### ActiVeX Library
The ActiVeX Library contains functions that create and control ActiveX objects. These functions interact with ActiveX objects that are generated with the ActiveX Controller Wizard. Also use the ActiVeX Library functions with ActiveX server code, which you can generate using the Create ActiveX Server Wizard.

### TCP Support Library
The TCP Support Library contains functions that provide support for a platform-independent interface to the reliable, byte-stream oriented, connection capabilities of TCP.

### Internet Library
The Internet Library contains functions that communicate with and receive data from remote servers.

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**Note:** The LabWindows/CVI Base Package does not include the Internet Library.