Tips and Tricks to Speed LabVIEW Development

Useful Nuggets to Save You Time

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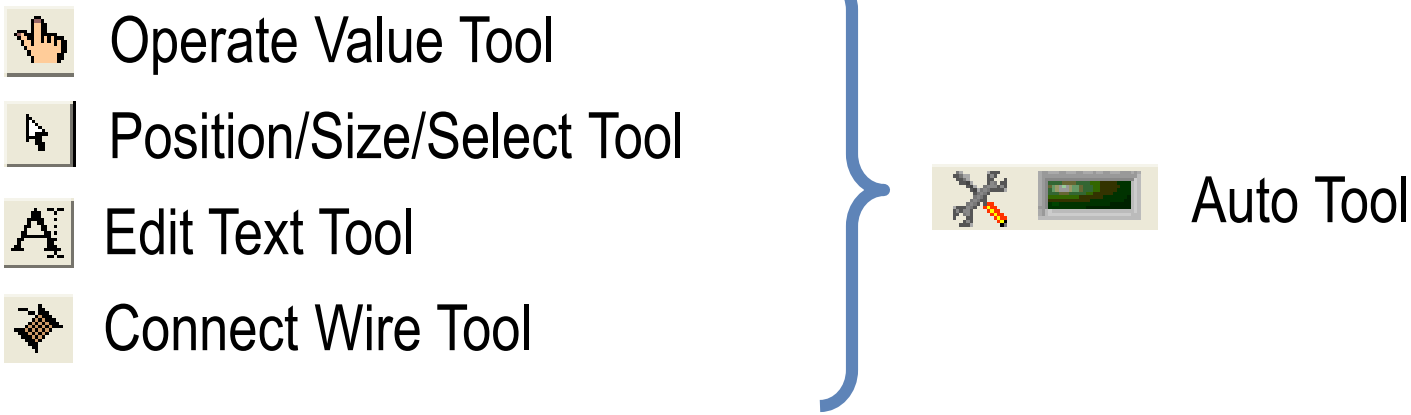
Agenda

- 15 Tips and Tricks for NI LabVIEW Development
  - Beginner: Simple tricks to save time
  - Intermediate: LabVIEW tips you probably didn't know about
  - Advanced: Useful nuggets to put you ahead of the game
- New features in LabVIEW 8.5

Automatically Select the Right Tool

- Avoid manually switching among many tools



Darren says: “Come on, just try it!”

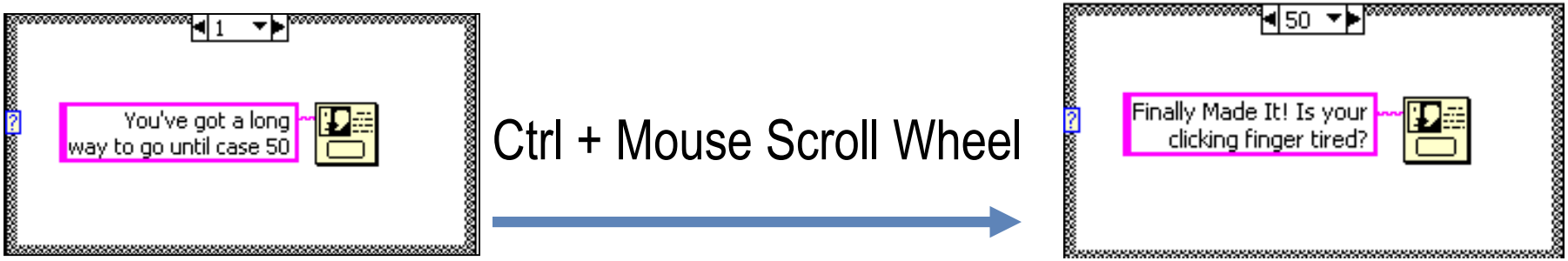
Switch Terminal Wires Easily

Hold Down Ctrl
and Left-Click on Input Terminal

Note: This works only for functions with two inputs when both inputs have already been wired.

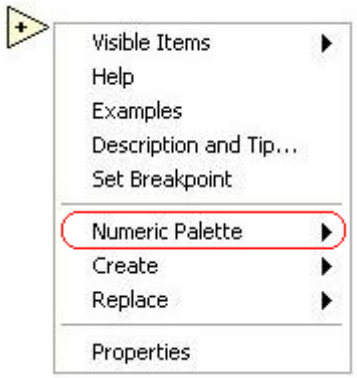
Easily Scroll Through Structures

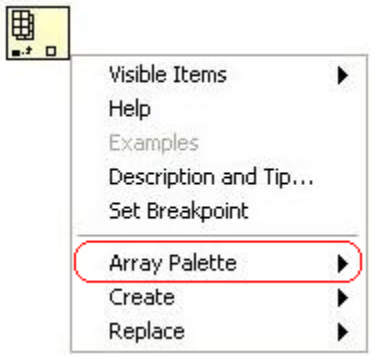
- You can use Ctrl + Mouse Scroll to scroll through:
  - Case Structures
  - Event Structures
  - Stacked Sequence Structures
  - Diagram Disable Structures

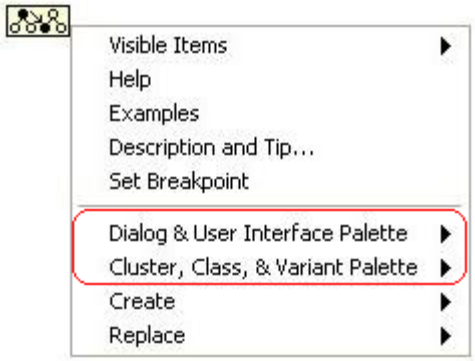


Quickly Find the Right Palette

- Right-click on a block diagram object for a palette shortcut

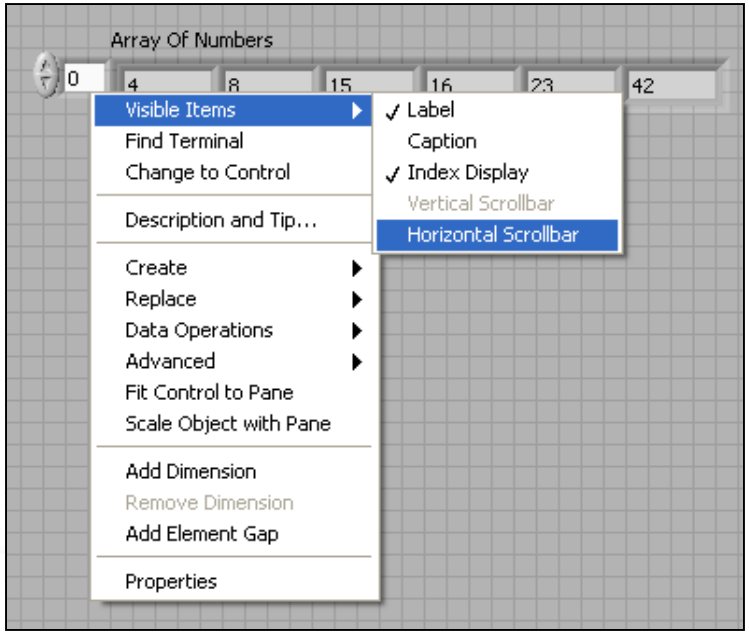


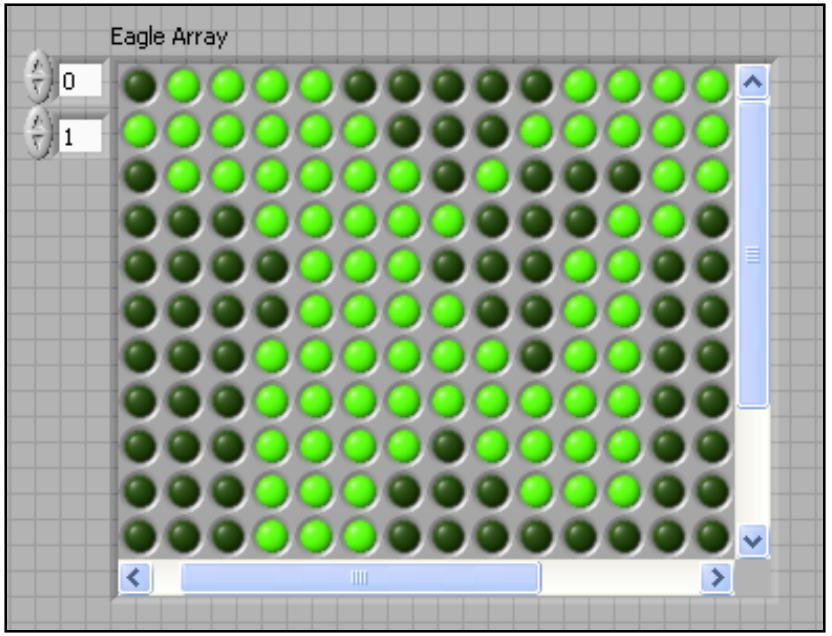




Easily Navigate Arrays

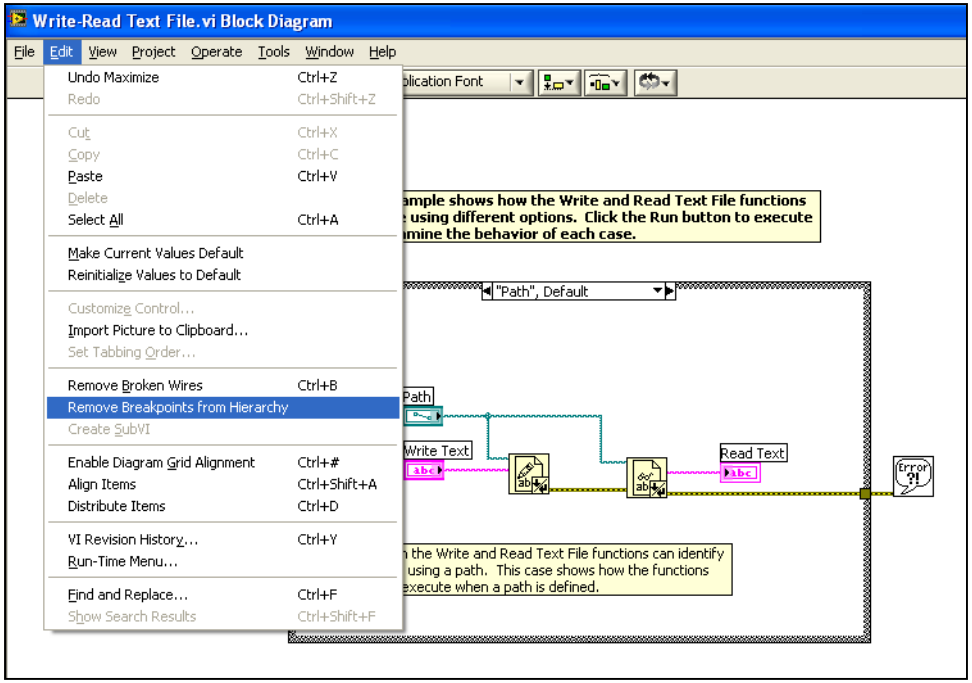
- Right-click on an array and select **Visible Items >> Horizontal Scrollbar (or Visible Items >> Vertical Scrollbar)**
- To view last element, select **Advanced >> Show Last Element**
- Both horizontal and vertical scrollbars available (depending on array dimensions)

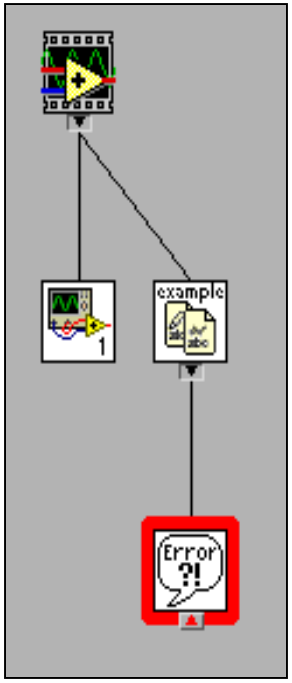




Removing Many Breakpoints

- Select **Edit >> Remove Breakpoints from Hierarchy**

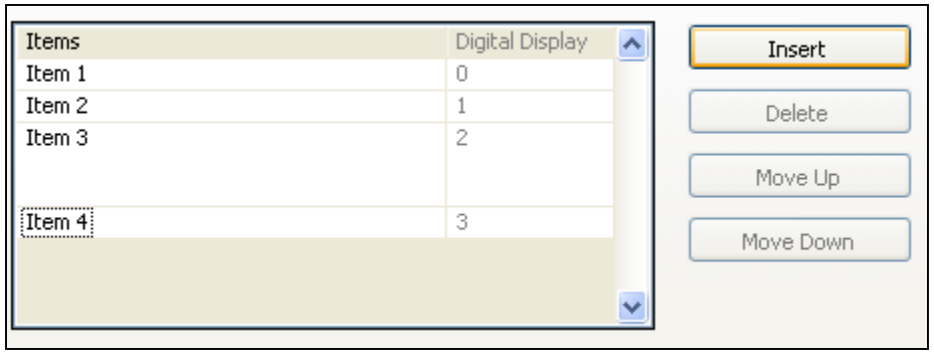


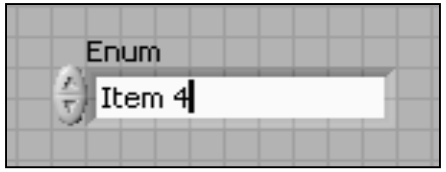


Note: Only available in LabVIEW 8.20 and later.

Easily Add Enumeration Items

- Press Ctrl while over an Enum to use the Text Tool
- Use Shift + Enter to repeatedly add items

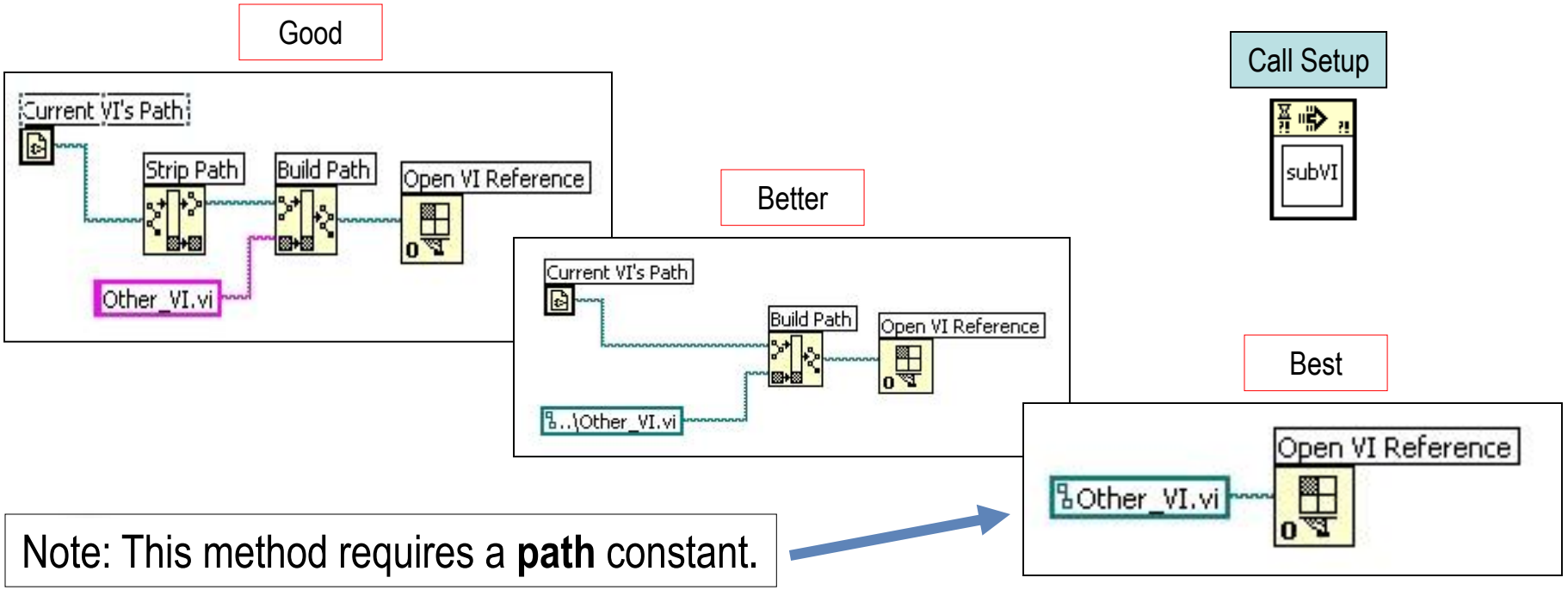




Shift + Enter

Quickly Open a VI Reference
(next to current VI on disk)

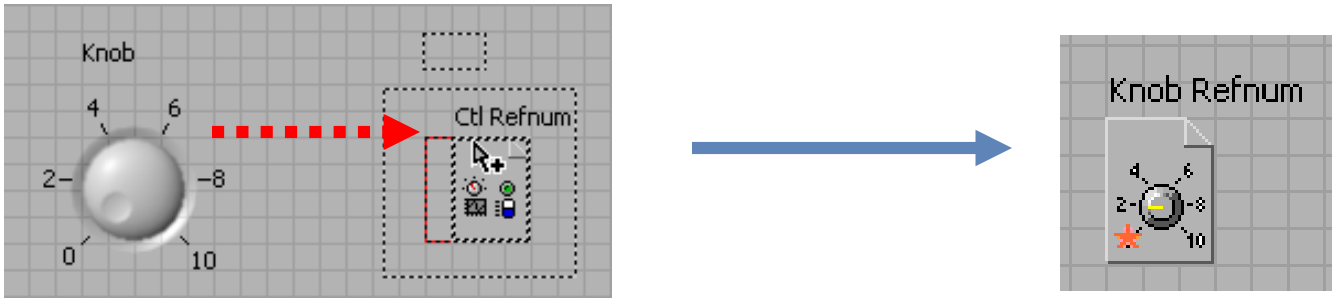
- LabVIEW automatically looks in the current directory
- Right-click on VI and select Call Setup to call it dynamically



Note: This method requires a **path** constant.

Automatically Create Control References

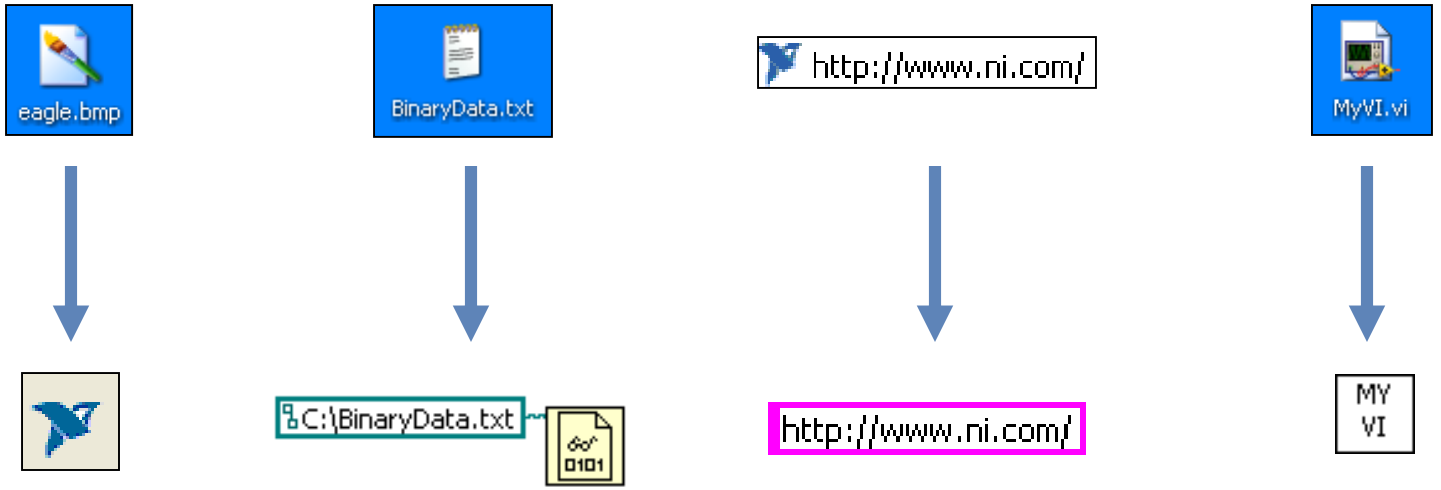
- Simply drag a control into a Control Refnum
- Automatically creates a class-specific, type-specific reference



Note: To keep the original control, use **Ctrl-Drag** instead.

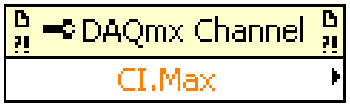
Drag and Drop to Save Time

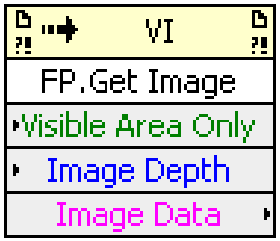
- Drag an image into your VI icon
- Select a file and drag into a path constant
- Take a URL from Internet Explorer and drag into a string constant
- Drag items from disk or Project Explorer into a LabVIEW block diagram

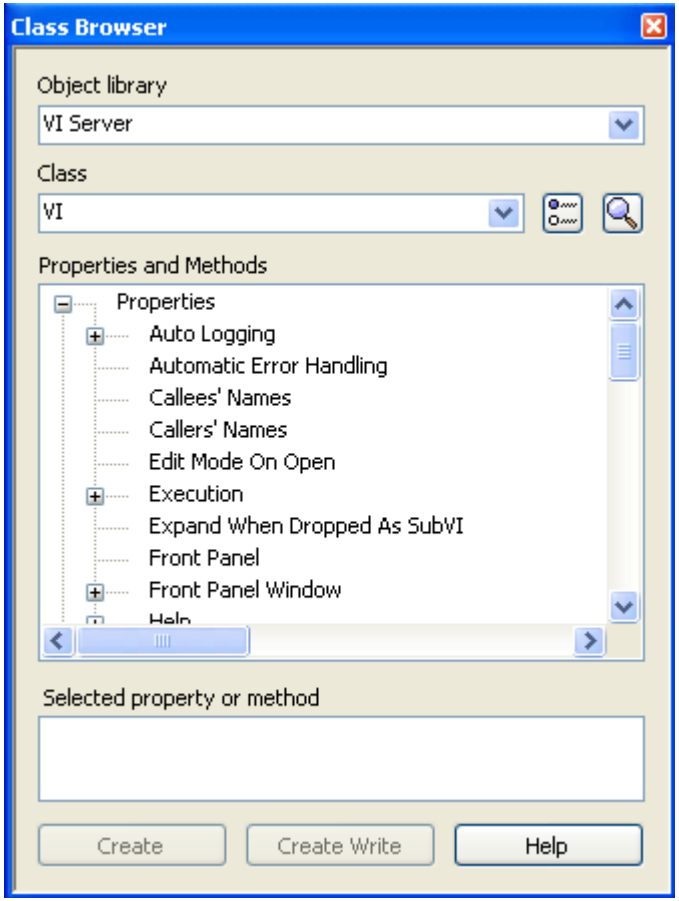


Quickly Browse Properties and Methods

- **View >> Class Browser**
- Shortcut: Ctrl + Shift + B
- Drag a property or method directly into your VI







NATIONAL INSTRUMENTS

Perform Advanced File I/O Tasks

- New File I/O VIs in LabVIEW 8.20
  - Recursive File List
  - Check If File or Folder Exists
  -

Get File Extension
  - Compare Two Paths
  - Generate Temporary File Path
  -

MD5 Checksum File

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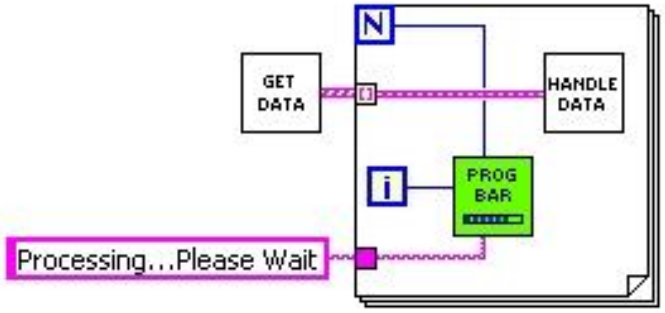
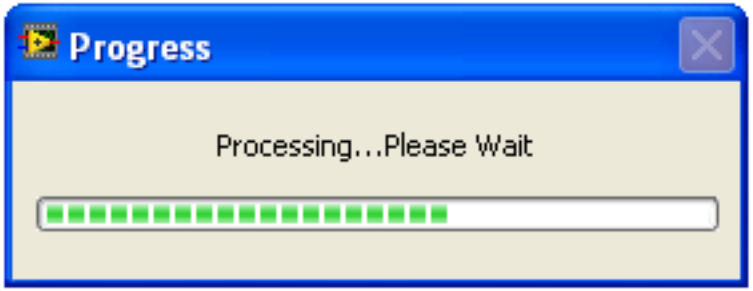
Implement a For Loop Progress Bar

- Place Progress Bar VI inside a For Loop
- Opens automatically after a specified amount of time
- Download sample code from ni.com/forums (search for “For Loop Progress Bar”)

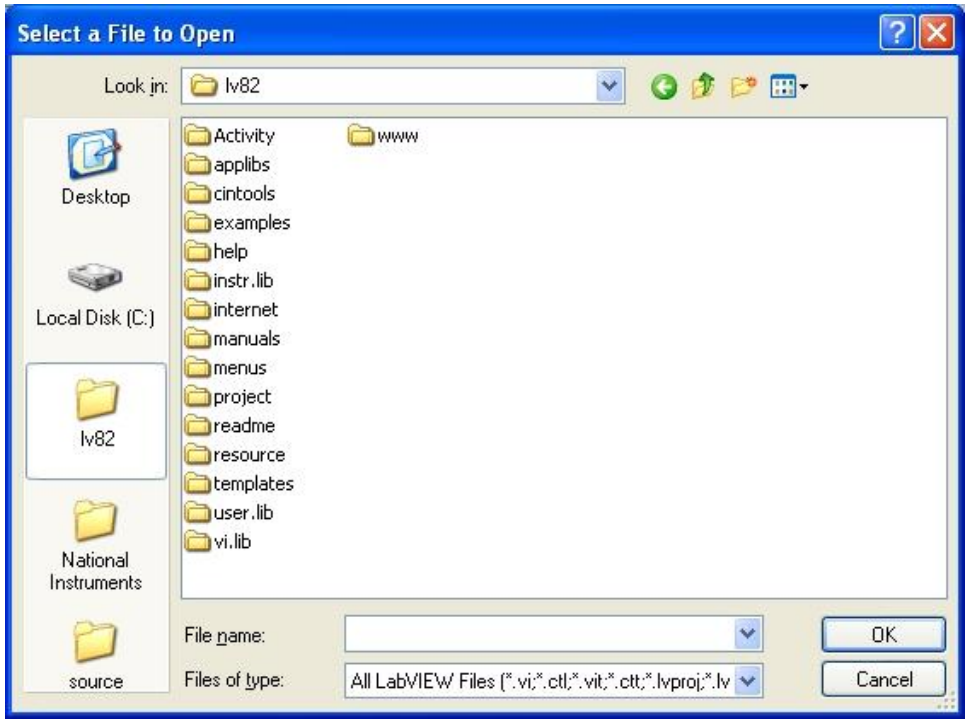




Change the Windows File Dialog

(to contain recently used folders in LabVIEW)

- Add LabVIEW.ini token "MRUFolders = TRUE"
- Maintain easy access to the last 5 directories used in LabVIEW



Note 1: Only available in LabVIEW 8.20 and later.
Note 2: Overrides TweakUI settings.

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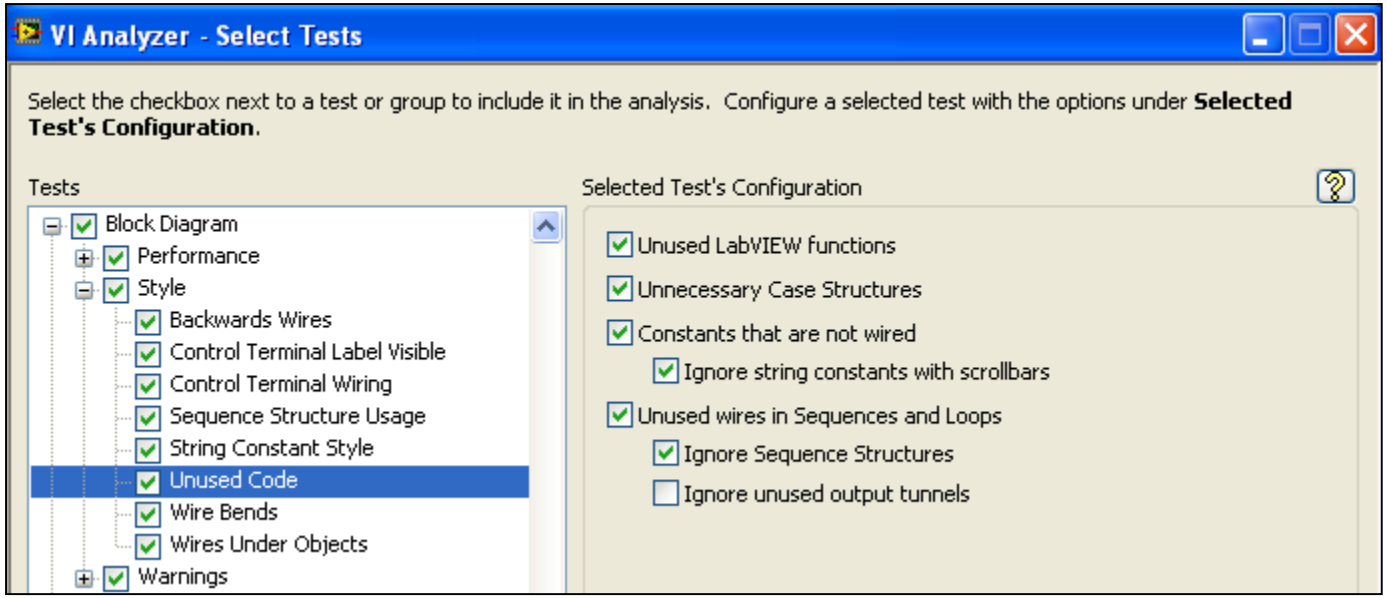
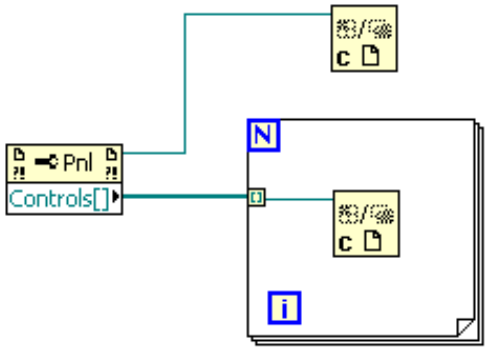
Automatically Analyze Your VIs

- **Tools >> VI Analyzer >> Analyze VIs**
  - Check performance, style, UI, documentation, and more
  - Save VI Analyzer settings for later use



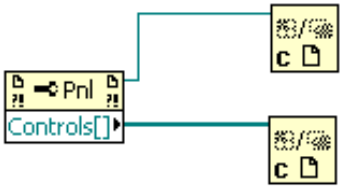
LabVIEW 8.5 - Close Arrays of References

- In LabVIEW 8.20, you must close multiple references in a For Loop



LabVIEW 8.20

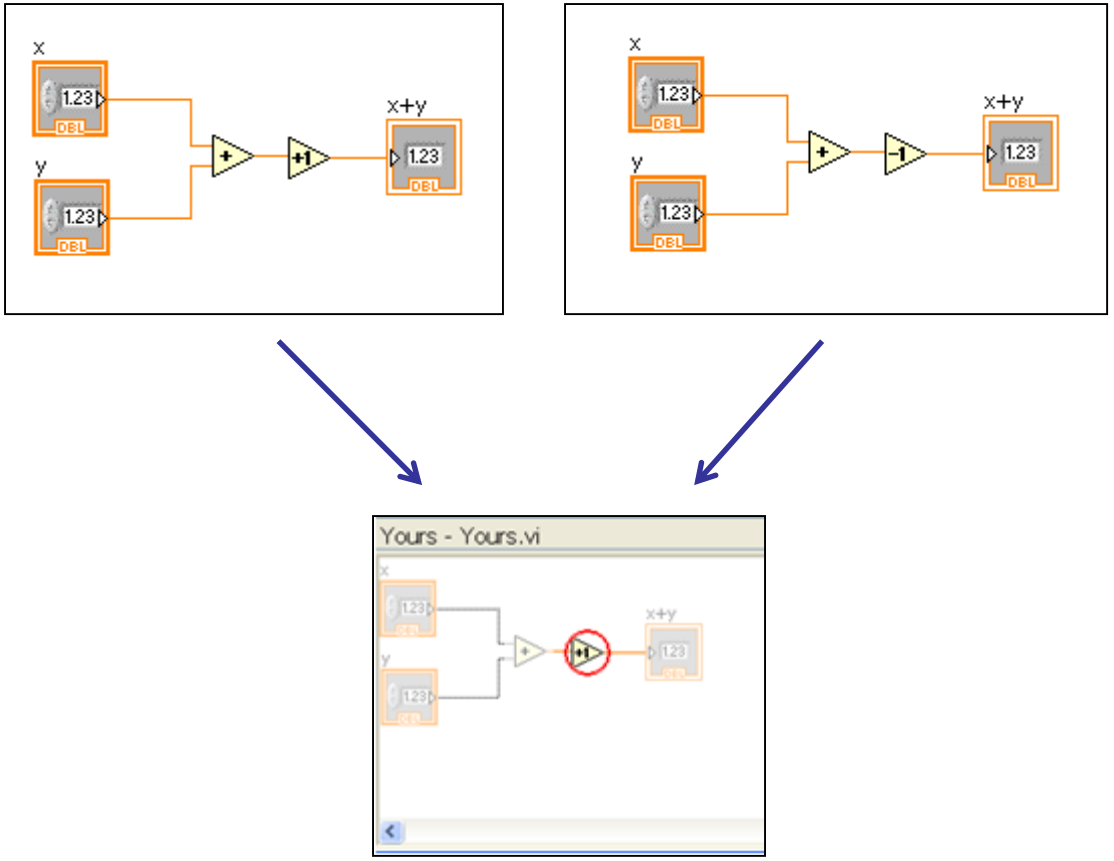
- In LabVIEW 8.5, Close Reference now accepts a 1D array of references



LabVIEW 8.5

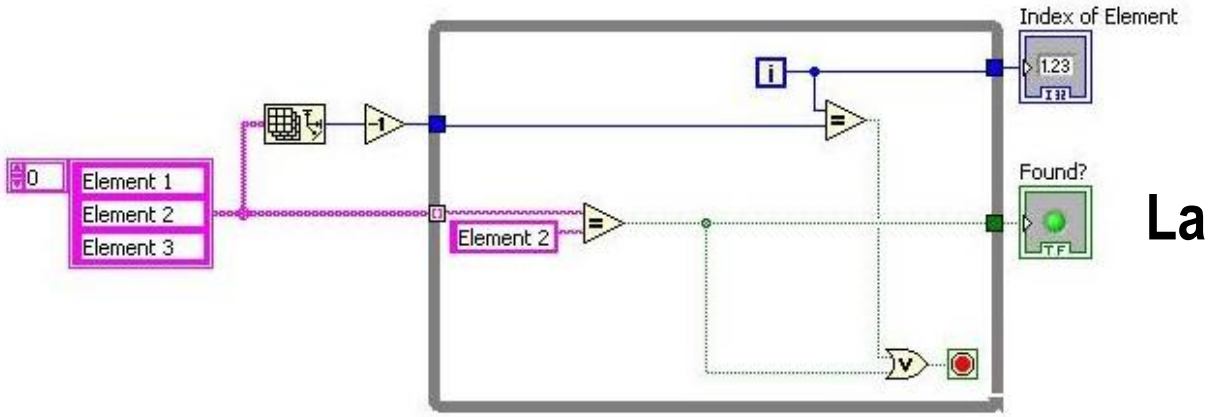
LabVIEW 8.5 - Merge Two VIs

- Track changes made to a base VI (**Tools >> Merge VIs**)



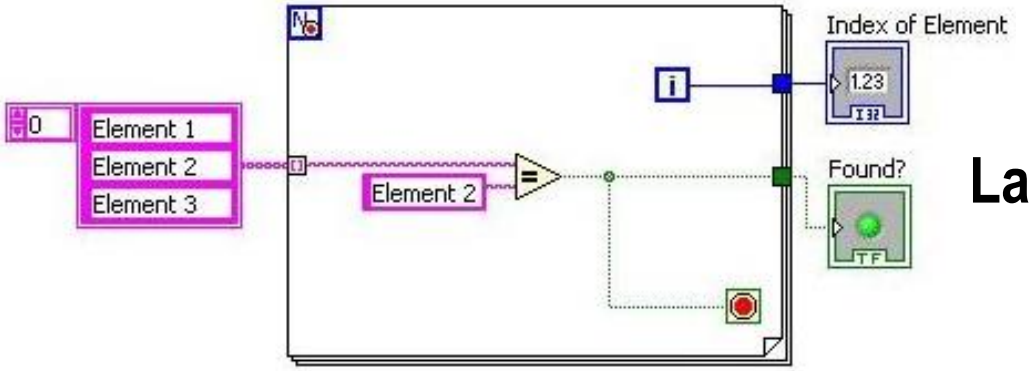
- Interactively decide which changes to incorporate

LabVIEW 8.5 - For Loop with Break



LabVIEW 8.20

- Run a fixed number of times **or** until a condition is met



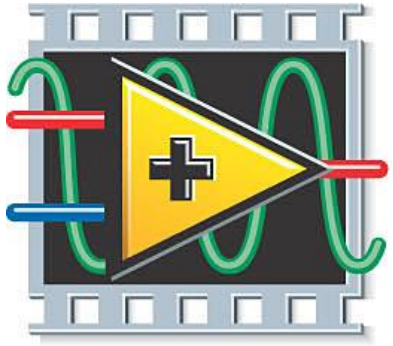
LabVIEW 8.5

NATIONAL INSTRUMENTS

Other Resources

- ni.com/info
  (Use info code “nugget” to download presentation)
- Weekly LabVIEW Nuggets
  (ni.com/forums and search for “nuggets”)
- LAVA: Favorite Tips and Shortcuts
  (forums.lavag.org)

Thank you for attending!



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LabVIEW™