Mastering Debugging with Visual Studio

Reference

Read other tips and tricks at this article: ' Mastering Debugging In Visual Studio'

Presentation

Debug Menu

- Speak to the Menu - Debug
- Speak to the Menu - Windows
- Speak to the Debug Toolbar
- Speak to the Attach to Process
    - Tree View
    - Command Line column
    - Select Window button

Breakpoints

NOTE: * new for 2022

- Debugging with Breakpoints
    - Step Over
    - Step Into
    - Step Out
    - Continue
    - Set Next Statement
    - Show Next Statement
    - "Run to Cursor" *
    - "Force Run to Cursor" *
- Grey Glyph *
- Labeling in Breakpoint
- Conditional Breakpoint
- Import / Export Breakpoint
- Breakpoint Hit Count
- Breakpoint When Hit
- Breakpoint Filter
- Breakpoint - Temporary *
- Breakpoint - Dependent *

Data Tip

- Pin Inspect Value During Debugging
- Drag-Drop Pin Data Tip
- Adding Comments
- Last Session Debugging Value

- Import Export Data Tips
- Change Value Using Data Tips
- Clear Data Tips

Watch Windows

- Locals
- Autos
- Watch
  - Creating Object ID

Immediate Window

Call Stack

Debugging Multi-threaded Program (optional)

- Exploring Threads Window
- Flag Just My Code
- Breakpoint Filter - Multi-thread Debugging
- Debugging Parallel Program
- Parallel Task and Parallel Stacks

Debugging with IntelliTrace (optional - speak to)

- Overview
- Mapping with IntelliTrace
- Filter IntelliTrace Data

Useful Shortcut Keys for VS Debugging

Shortcut Keys	Descriptions
Ctrl-Alt-V, A	Displays the Auto window
Ctrl-Alt-B	Displays the Breakpoints dialog
Ctrl-Alt-C	Displays the Call Stack
Ctrl-Shift-F9	Clears all of the breakpoints in the project
Ctrl-F9	Enables or disables the breakpoint on the current line of code
Ctrl-Alt-E	Displays the Exceptions dialog
Ctrl-Alt-I	Displays the Immediate window
Ctrl-Alt-V, L	Displays the Locals window

Shortcut Keys	Descriptions
Ctrl-Alt-Q	Displays the Quick Watch dialog
Ctrl-Shift-F5	Terminates the current debugging session, rebuilds if necessary, and starts a new debugging session.
Ctrl-F10	Starts or resumes execution of your code and then halts execution when it reaches the selected statement.
Ctrl-Shift-F10	Sets the execution point to the line of code you choose
Alt-NUM *	Highlights the next statement
F5	If not currently debugging, this runs the startup project or projects and attaches the debugger.
Ctrl-F5	Runs the code without invoking the debugger
F11	Step Into
Shift-F11	Executes the remaining lines out from procedure
F10	Executes the next line of code but does not step into any function calls
Shift-F5	Available in break and run modes, this terminates the debugging session
Ctrl-Alt-H	Displays the Threads window to view all of the threads for the current process
F9	Sets or removes a breakpoint at the current line
Ctrl-Alt-W, 1	Displays the Watch 1 window to view the values of variables or watch expressions
Ctrl-Alt-P	Displays the Processes dialog, which allows you to attach or detach the debugger to one or more running processes
Ctrl-D,V	IntelliTrace Event