Evaluating Expressions

IntelliJ IDEA enables you to evaluate an arbitrary expression in the context of a stack frame currently selected in the **Frame** pane of the **Debug** window. So doing, the following modes are available:

- *Expression Mode* for evaluating single-line expressions.

- *Code Fragment Mode* for evaluating short code portions introducing them in the **Statements to evaluate** text field. Supported constructs are declarations, assignments, loops and `if/else`.
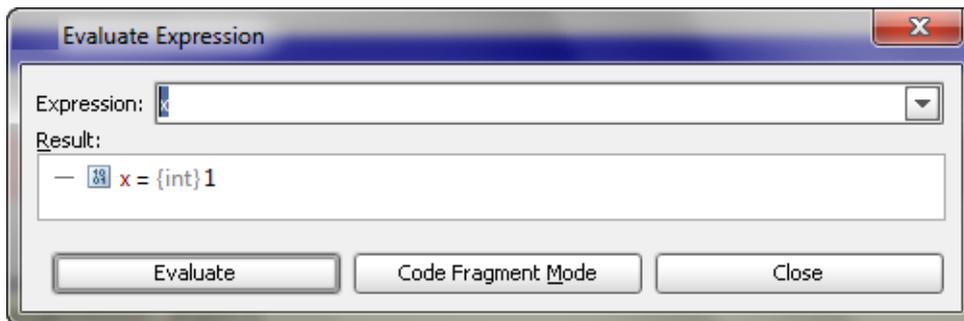
Besides that, IntelliJ IDEA provides a way to quickly evaluate in the editor an expression at caret or a selection.

While using the *Expression Evaluation* feature, be aware of the following:

- A method can be invoked within the **Expression Evaluation** dialog only if the debugger has stopped at a breakpoint, but has not been paused.

- Expression Evaluation can be only "single-level". In other words, if IntelliJ IDEA stops at a breakpoint within a method called from the Expression Evaluation, you cannot use the Expression Evaluation feature again.

- If a method invoked within the **Expression Evaluation** has a breakpoint inside its body, this breakpoint will be ignored.
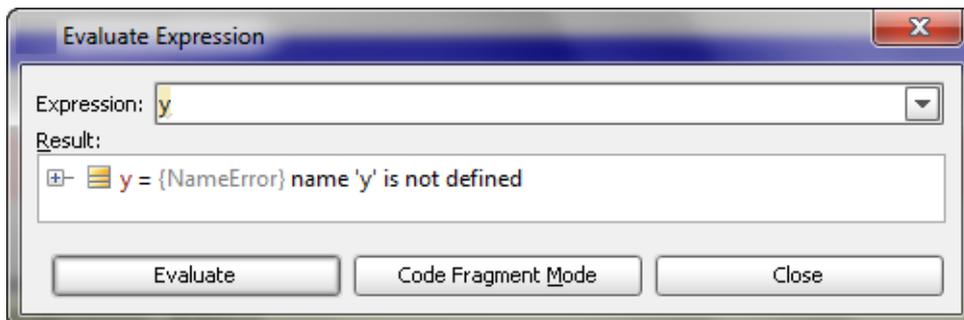
To evaluate an arbitrary expression

1. In the Frames pane, select the thread where you want an expression to be evaluated.

2. Invoke the Evaluate Expression in one of the following ways:

   ▪ On the main menu, choose **Run | Evaluate Expression**

   ▪ On the context menu of the editor, choose **Evaluate Expression**

   ▪ Press `Alt+F8`

   ▪ Click 🖩 on the stepping toolbar of the Debug tool window.

3. Select the desired mode of evaluation. If you want to evaluate a code fragment, click the **Code Fragment Mode** button.

4. Depending on the mode selected, type the expression or statements to evaluate in the text field.

> If you have assigned a label to a variable, object, or watch, you can reference it by this label as if it were a local variable `<label-name>_DebugLabel` defined in the same context where the expression is evaluated. IntelliJ IDEA also displays this label in the completion suggestion list.

5. Click **Evaluate**. If the specified expression cannot be evaluated, the possible reason will be briefly described in the **Result** pane of the dialog box.
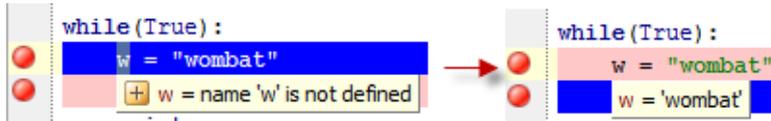

> During the debugger session, the value of any expression at caret is shown at the tooltip every time you hover your mouse pointer over it. If an expression contains children, clicking ➕ expands the node and displays all children.
>
> However, *Quick evaluate expression* helps you view the expression value using the keyboard only.

To quickly evaluate an expression in the editor

1. Place the caret at the desired location, or select an expression to be evaluated.

2. Press `Ctrl+Alt+F8` or `Alt+Button1 Click`. The tooltip with the expression value appears under the selected expression.

See Also

Procedures:

- Setting Labels to Variables, Objects and Watches
- Debugging
- Pausing and Resuming the Debugger Session

Reference:

- Debug Tool Window
- Evaluate Expression
- Debug Tool Window. Variables
- Debug Tool Window. Watches

Web Resources:

- Developer Community