SOFTWARE GUILD

Java Basics Unit

Lesson 6 - Debugging

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Objectives

- Execute a program in debug mode

- Set breakpoints

- Step through a program statement by statement

- Observe values of program variables while debugging

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Setup

- ## Open WindowMaster
  - If you don't have the original version, copy and paste from the Lesson Notes

- ## Make sure program compiles and runs

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Setting Breakpoints

- Set by clicking at the leftmost grey margin of the line at which you want to set the breakpoint

- Click in the margin again to remove

- Can only be set on lines with *executable statements*

- Can set multiple breakpoints in a program

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Executing in Debug Mode

- Programs must be executed in **debug mode** in order for breakpoints to take effect

- To execute your program in debug mode, click the **Debug Project** button:

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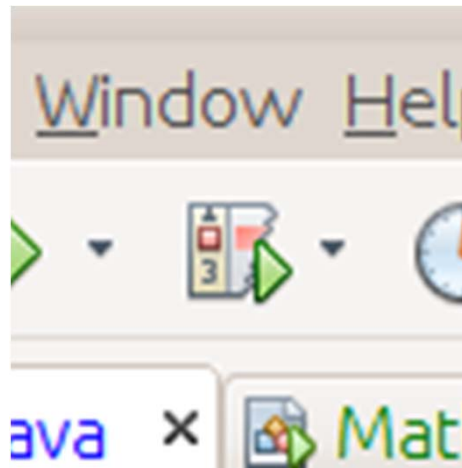
Stepping Through Code

- The main commands for stepping through code are:

  o Step Over (F8)

    - Runs the current statement, moves to next statement, and stops. Use if you just want to run the next statement.

  o Step Into (F7)

    - Steps into the code of the current statement, runs the first statement of that code, moves the next statement of that code, and stops. Use if you want to step through the underlying code.

  o Continue (F5)

    - Continues execution of the program until the next breakpoint or the end of the program.

Looking at Variables

- Values of variables will appear in the Variables window

- Variables only appear in the window as they come into scope

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