# Lab 1: Java Revision — Sticky Notes

Aim

This lab class will provide you with an opportunity to refresh your Java programming skills and in particular:

- see how *DrJava**** can be used with multiple source files;
- work on a 'project' containing a harness class (`Lab1.java`), an organiser class (`Lab1Frame.java`), and a library class (`StickyNotePad.java`);
- implement a class that contains an interactive graphical user interface; and
- write software that manipulates an array of `Strings`.

Context

The context for the exercise is a computerised pad of sticky notes. A pad of sticky notes can contain 0 or more notes. Each note can have something written on it and only one of the notes is visible at any time. A new note may be created, the current note may be deleted, or the user may move backwards to the previous note or forwards to the next note.

When completed, the lab class will provide a computerised sticky note pad that should look like the following:
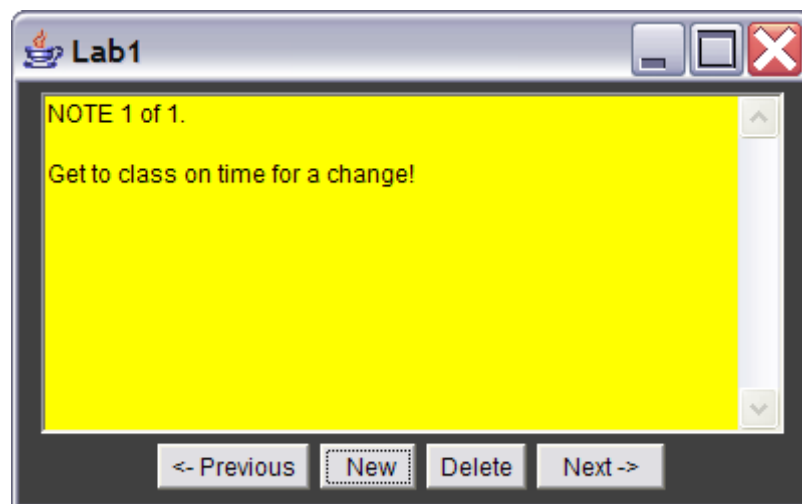
Tasks

1. Copy the three program files from *MyLO* to your computer and open them all in *DrJava*. If you are unsure how to do this, look at the bottom half of the following page.

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* *DrJava* is free and downloadable from http://www.drjava.org/download.shtml. But you don't have to use *DrJava*. You can use any Java IDE you want for your work, but the face-to-face tutorials will use *DrJava*. For on-line tutorials, if you don't want to use *DrJava* you could do it in a web browser: https://repl.it/ If you want to use that, please try to register (it's free) before your on-line tutorial starts.

2. Examine the files to investigate what they do. This project contains a default harness (`Lab1.java`) and partially complete organiser class (`Lab1Frame.java`) and library class (`StickyNotePad.java`). The harness requires no modification for this exercise but the organiser and library classes need to be completed as indicated below.

3. Examine the contents of `Lab1Frame.java`. Make the following changes:
   a) Replace the comment `//***1` with code to instantiate a `StickyNotePad` object capable of storing 10 notes and have the variable `snp` refer to that newly created object.
   b) Replace the comment `//***2` with code to advance the pad to the next note.

4. Examine the contents of `StickyNotePad.java`. Most methods contain comments which explain the algorithm and indicate what the code should do — but there is no code. Using these comments as a guide, implement all the methods in the `StickyNotePad` class.

5. Compile and run the project (removing any errors you may find) and experiment with the sticky note pad application. Remember, in *DrJava* you can only click "**Run**" when `Lab1.java` (the harness class) is selected.

Opening a Java program in *DrJava*
1. You may be able to open the file by simply double-clicking on it.
2. If not, then the easiest option is to open *DrJava* first and then drag the file(s) you want to open into its window. To open *DrJava*, click the start menu at the bottom-left of the screen and then, as shown below, type *DrJava*. When the application name appears, press the <Enter> key to open it.