Summary

As a means to becoming more proficient when editing Java programs, you will customize your
\texttt{gvim} text editor, observe and document the changes that are evident after customization, and then
explore additional commands that you can use in \texttt{gvim} to quickly and effectively manipulate Java
code. Then, using the \texttt{"git add"}, \texttt{"git commit"}, and \texttt{"git push"} commands you should upload
a written reflection on your experiences to your Git repository hosted by Bitbucket.

Review Additional Resources

Since your textbook does not include a detailed discussion about \texttt{gvim}, you will need to review
some additional print and online resources that explain how to become more adept at editing the
text of a Java program. First, please take turns scanning the chapters in the “Practical Vim”
book that the course instructor brings to the practical session. If you want to further improve your
“essential Vim skills” so that you can “edit text at the speed of thought”, then you should also visit
the \url{http://vimcasts.org/} Web site to watch the screencasts and read the articles about Vim.

Learning About spf13-vim

Known as the “ultimate Vim distribution”, spf13-vim is a configuration of the \texttt{gvim} text editor
designed to allow you to make it both highly-customized and easy-to-use. The creator of spf13-
vim, Steve Francia, explains that this Vim distribution is “designed for programming”, which is
exactly how we normally use \texttt{gvim} in this class. You can learn more about spf13-vim by visiting
the Web sites in the below list. As you are reading this material, please ask the course instructor
or a teaching assistant if you encounter something that is hard to understand.

- The main spf13-vim Web site: \url{http://vim.spf13.com/}
- The GitHub page for spf13-vim: \url{https://github.com/spf13/spf13-vim}

Installing and Using spf13-vim

After you have finished learning more about spf13-vim and the features that it provides, you are
ready to install it into your home account by typing the following command in your terminal.

\texttt{curl https://j.mp/spf13-vim3 -L > spf13-vim.sh && sh spf13-vim.sh}

Please make sure that you type the command exactly as it is written; if you do not input this
command correctly then you will not be able to improve your configuration of \texttt{gvim}. Once you have
typed this command you will see that many plugins will be downloaded and installed by a package...
manager. Try to observe what is happening and take notes about what you see. Do you recognize
the names of any of the *gvim* plugins as they are being installed? What do they do?

Now you are ready to try out your improved version of *gvim*. Using your terminal window,
please go into the `practicals/practical01/` directory to find the `Kinetic.java` program that
you studied during the first practical assignment. You can edit this file by typing the command
`gvim Kinetic.java` in your terminal. Please carefully study the new design of *gvim*—what
are five ways in which it is now different from the “default” configuration that you were using
previously? To best answer this question, you should add some new lines of code to `Kinetic.java`.

There are many steps that you can take to further configure the *gvim* text editor. For instance,
by using the “Edit/Color Scheme” menu item you can change the way in which *gvim* uses color to
highlight the syntactic elements of a Java program. Additionally, spf13-vim installs many plugins
that you can use to write Java programs more efficiently. If you study the main spf13-vim Web
site, you will notice that some of the plugins are activated by pressing the “<Leader>” key when
you are in command mode; your current configuration of *gvim* uses the comma key (i.e., “,”) as
the leader key. After adjusting the color scheme to suite your taste, you should learn how to use
at least one of the plugins that spf13-vim has installed. How does your chosen plugin work? What
features does it provide? Do you plan to use this plugin on a regular basis? Why or why not?

Learning how to write Java programs in *gvim* is similar to learning a new human language.
That is, the *gvim* text editor has its own “language” that you can learn. For instance, pressing
the “=” key twice in *gvim*’s command mode will format a line of text with proper indentation. In
addition, the “gg” and “G” commands respectfully move the *gvim* cursor to the top and bottom of
your Java program. Knowing these facts, what do you think that the “gg=G” command does? Of
course, *gvim*’s language includes a wide variety of additional commands like “u”, “d”, “dd”, and
“dip”. How do these commands allow you to manipulate your Java program’s source code?

**Completing the Practical Assignment**

To finish this assignment and earn a “checkmark”, you should create a `practicals/practical06/`
directory in your Bitbucket repository. Then, you should use your newly configured version of
*gvim* to create a file called “responses”. Inside of this file, you should provide an answer to all of
the questions that were posed in this assignment sheet. That is, you can retype the question that
you see in the assignment sheet and then furnish your answer below it. For example, one of the
questions that the assignment poses is “how does your chosen plugin work?” Finally, you should
turn in a screenshot that shows your re-configured *gvim* editing the `Kinetic.java` program.

If you have finished installing and learning how to use spf13 and then decide that you would
prefer to continue with the “standard” configuration of *gvim* that you have used since the start of
the semester, then you may uninstall it. Please see the instructor if you need help with this task.

**General Guidelines for Practical Sessions**

- **Submit Something.** Your grade for this assignment is a “checkmark” indicating whether
  you did or did not complete the work and submit something to the Bitbucket repository.

- **Review the Honor Code Policy on the Syllabus.** Remember that while you may discuss
  your writing with other students in the course, text that is nearly identical to, or merely
  variations on, the work of others will be taken as evidence of violating the Honor Code.