Inspector Java is an advanced, multi-threaded project scanner which aims to scan a project's Java source files and return useful information to give project leaders a feel for the overall status of the project codebase. Such information as the total number of files, the total number of lines of code in the project, and the information such as the number of source files per directory (package) and the minimum and maximum, as well as the mode of the number of source files per package helps to give the project leader a better understanding of the current project hierarchy, such as the distribution of classes in packages (to prevent large unwieldy packages from developing by successfully splitting those packages into smaller packages to maintain the maintainability of the codebase.)

Challenges in this application include (but are not limited to, curiously enough) :

- User Interface Design. It's a primary goal to create a GUI that is both simple and easy to use without sacrificing the functionality in terms of important data it can display to the user.
- Multithreading in Java's Swing GUI library. Swing is not thread-safe, so making a special SwingWorker thread which behaves correctly with Swing to create a true, multithreaded GUI with full worker thread interruptibility is a significant challenge, partly due to the poor design of the SwingWorker threading framework, and the inherently painful nature of multithreaded application programming itself.
- Data Storage. It's a difficult task to most efficiently manage the memory for an application which seeks to scan and display highly detailed information about every source file in a project which could have hundreds or hundreds of thousands of files in it. To best create the data storage methods to ensure fast response to user input is a primary goal and a key point to the entire project.
- Useful Information. It's also quite difficult to determine which bits of information will be most useful, and which bits can be left out of the program entirely. Things such as number of imports are irrelevant to a project leader, whereas a way to view the size of a file in relation to the rest of the project would be extremely useful to a project leader in order to determine if some files are becoming too monolithic and need to be divided into smaller, more efficient, more manageable bits.