

Alex Hortin  
Hw3

The point of this exercise is to examine a source file of code that is part of a larger project and look for issues we have talked about in class like Proper Construction, Visibility, and Safe Publication of objects.

For the purpose of finding these issues within the included source file I will concentrate on finding issues within constructors leaking data that can be used to violate concurrent rules, synchronized methods as well as problems with visibility and escaping of private variables and methods.

Noted Possible Issues:

Line 239 has a visibility issue since it is modifying the threads priority without any synchronization of the other threads

Line 307 seems to exploit a hack that was noted in the comments talking about the program counter backstepping as a little hack to fix an issue with some unexpected branching...a problem that seems similar to the issue that the google conference was talking about.

Line 355 - 362 appears to try to address some of the issues that are introduced by this branching problem.

Line 348 exploits the getInstance to publish a new instance of the class and retrieve information about it.

Lines 453 - 500 Update the GUI using non threadsafe classes, meaning that the status of the GUI might never truly represent the status of the program. This is because methods are not properly synchronized.