**Project #15 – Audible Thread Traces**

**Purpose:**

This project provides a facility to emit sounds based on thread execution and blocking.

**Requirements:**

For the Audible Thread Traces Project you will:

1. Write an alarm class that starts a tone, using the computer’s sound card, after a settable interval of time. It also provides a function that resets so as to re-enable the time wait.
2. The alarm class provides a means for a thread to register a callback that resets the alarm time wait. If the thread isn’t blocked it will continually reset the alarm lease so no tone is issued. If the thread is blocked, then the callback blocks and the alarm will sound after the timeout. In this way, we get an audible indication that a thread is blocked.
3. Now, you design a way to allow multiple threads to use this facility, each with its own tone frequency, so we can get an audible indication of blocking for all the threads in a program.