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thread_local int local_counter = 0;
std::atomic<int> global_counter(0);
std::mutex m;

void increment(int howmany) {
    for (int i = 0; i < howmany; ++i) {
        local_counter++;
        global_counter++;
    }
    std::lock_guard<std::mutex> g(m);
    std::cout << "Thread exiting with local = " << local_counter
              << " and global = " << global_counter << std::endl;
}

int run_threads(int thread_count, int increments_per_thread) {
    std::vector<std::thread> threads;
    for (int i = 0; i < thread_count; ++i)
        threads.push_back(std::thread(increment, increments_per_thread));
    for (int i = 0; i < thread_count; ++i)
        threads[i].join();
}

```

FIGURE A.9 A C++ program that uses thread-local variables.