

# Multiple Reader Single Writer Exercises

# Multiple Reader, Single Writer

- What is meant by "Multiple Reader, Single Writer"?
- Give some examples of applications which use this pattern
- What issues are there with "Multiple Reader, Single Writer"?

# std::mutex Example

- Write a program which has two task functions
  - A "writer" task which modifies shared data
  - A "reader" task which accesses shared data but does not modify it
- Use an std::mutex to synchronize these tasks
  - The reader task should sleep for 100ms before unlocking the mutex
  - This is to simulate activity
- The program creates twenty reader threads, then two writer threads, then another twenty reader threads
- How long do you expect it will take the program to run?
- Explain the results