Mutex locks in C++11 - overview

- **Mutex** – basic lockable object
  - Non-recursive (cannot be locked twice without an intervening unlock)
- Wrapper classes that manage mutex objects:
  - **lock_guard** – keeps the mutex always locked for the duration (lifetime) of the lock_guard variable (i.e., until it goes out of scope)
  - **unique_lock** – unique ownership of the mutex object in both locked and unlocked states
- **condition_variable** – utilizes a unique lock
  - `cv.wait(ul):`
    - Unlocks the unique lock `ul`
    - Puts the calling thread to sleep
    - Condition variable `cv` is notified by another thread
    - Re-locks the unique lock `ul`
    - Wakes the calling thread