

Mutex

- ▶ A second common use for semaphores is to enforce mutual exclusion
- ▶ It guarantees that only one thread accesses the shared variable at a time
- ▶ A `mutex` is like a token that passes from one thread to another, allowing one thread at a time to proceed

Q: Add semaphores to the following example to enforce mutual exclusion to the shared variable `i`.

Thread A: `i++`

Thread B: `i++`

Why? Because `i++` is not atomic.