Race-condition problem

The system behaviours depends on the sequence or timing of events that is non-deterministic

- Not desirable in most cases (hard to catch bug)

Mutual Exclusion

We want to use **mutual exclusion** to synchronize access to to shared resources

Code that uses mutual exclusion to synchronize its execution is called a **critical section**

- Only one thread at a time can execute in the critical section

- All other threads are forced to wait on entry

- When a thread leaves a critical section, another can enter