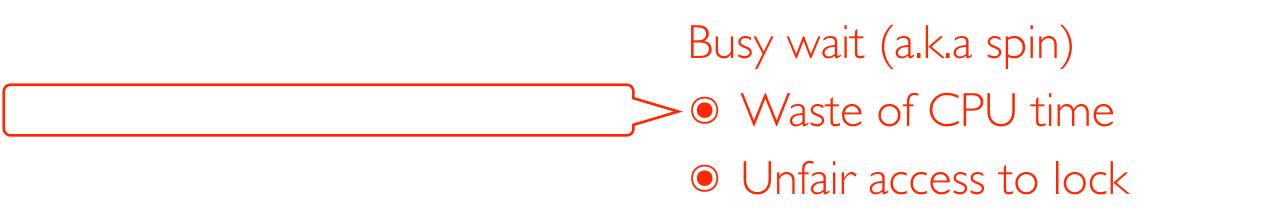


(good) implementation of a spin lock

```
struct lock {
    int held = 0;
void acquire (lock) {
   while test-and-set(&lock->held);
void release (lock) {
    lock->held = 0;
```



(good) implementation of a spin lock

```
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```

Busy wait (a.k.a spin)

- Waste of CPU time
- Unfair access to lock

(bad) implementation of a sleeping lock

```
struct lock {
}

void acquire (lock) {
    disable_interrupts();
}

void release (lock) {
    enable_interrupts();
}
```

- → Disabling interrupts blocks notification of external events that could trigger a context switch
- Can miss or delay important events
- The thread is no longer preemptive