

5. Exercises

See the book for exercises using [x86.py](#)

```
$ cat flag.s
.var flag
.var count

.main
.top

.acquire
mov  flag, %ax      # get flag
test $0, %ax       # if we get 0 back: lock is free!
jne  .acquire       # if not, try again
mov  $1, flag       # store 1 into flag

# critical section
mov  count, %ax     # get the value at the address
add  $1, %ax        # increment it
mov  %ax, count     # store it back

# release lock
mov  $0, flag       # clear the flag now

# see if we're still looping
sub  $1, %bx
test $0, %bx
jgt  .top

halt
```