

Endspurt!!!

- Exceptions
- Thread, Runnable
- Synchronized
- Wait, notify, notifyAll
- Thread States
- Semaphoren
- JCSP
- Swing
- JOMP
- Linearizability
- History
- Amdahal's Law
- Atomic

AtomicTest

- Unprotected min: 3840 mms
- Synchronized min: 136900 mms
- Atomic min: 23993 mms

- Construct a scenario in which the loop in thread 0 executes exactly once.
- Construct a scenario in which the loop in thread 0 executes exactly three times.
- Construct a scenario in which the loop in thread 0 executes exactly infinitely often.

Mulö

```
T1: read t1 <- flag (== 1)
  enter loop
  read t1 <- flag (== 1)
  t1-- (== 0)
  store t1 -> flag (== 0)
  read t1 <- flag (== 0)
  enter loop
T0:   read t0 <- flag (== 0)
      enter loop
      read t0 <- flag (== 0)
T1: read t1 <- flag (== 0)
T0:   t0++ (== 1)
      store t0 -> flag (== 1)
      read t0 <- flag (== 1)
      exit loop
T1: t1-- (== -1)
      store t1 -> flag (== -1)
      read t1 <- flag (== -1)
      exit loop
```

```
T1: read t1 <- flag (== 1)
  enter loop
  read t1 <- flag (== 1)
  t1-- (== 0)
  store t1 -> flag (== 0)
T0:   read t0 <- flag (== 0)
      enter loop
      read t0 <- flag (== 0)
      t0++ (== 1)
      store t0 -> flag (== 1)
T1: read t1 <- flag (== 1)
  enter loop
  t1-- (== 0)
  store t1 -> flag (== 0)
T0:   read t0 <- flag (== 0)
      enter loop
      read t0 <- flag (== 0)
      t0++ (== 1)
      store t0 -> flag (== 1)
T1: read t1 <- flag (== 1)
  enter loop
  t1-- (== 0)
  store t1 -> flag (== 0)
T0:   read t0 <- flag (== 0)
      enter loop
      read t0 <- flag (== 0)
      t0++ (== 1)
T1: read t1 <- flag (== 0)
T0:   store t0 -> flag (== 1)
      read t0 <- flag (== 1)
      exit loop
T1: t1-- (== -1)
      store t1 -> flag (== -1)
      read t1 <- flag (== -1)
      exit loop
```