Little Book of Semaphores, Chapter 2

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- Only **increment** and **decrement** available.
- When a thread decrements, if the value is zero the thread blocks.
- When a thread increments, if there are threads waiting, one gets unblocked.

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- No getter. Why?

Notation for Semaphors

Decrement	Increment
P	V
Wait	Signal
Wait	Post
Acquire	Release
Get	Release

Semaphore notation in cleaned up Python and Racket

```
fred = Semaphore(1)
fred.signal()
fred.wait()
```

```
(define fred (make-semaphore 1))
(semaphore-post fred)
(semaphore-wait fred)
```

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- Semaphores can be implemented easily in hardware, so solutions are portable.
- However, they can get complex quickly.