
SEMAPHORE SHARED RESOURCE

CADT Semaphore

OPERATIONS

ACTION Init: $\mathbb{N}[i]$

ACTION V:

ACTION P:

SEMANTICS

DOMAIN:

STATE: *Semaphore* = \mathbb{N}

INVARIANT: $== 0 \vee == 1$

INITIAL: 0

PRE: $v == 0 \vee v == 1$

CPRE: true

Init(v)

POST: $= v$

PRE: true

CPRE: $== 0$

V()

POST: $=^{\text{in}} + 1$

PRE: true

CPRE: $== 1$

P()

POST: $=^{\text{in}} - 1$