

Threading Lab Due Fri

Semaphores - 1965

Dijkstra: first as a lock
condition var

So far

- locks - mutual exclusion
- condition variables - waiting & signalling

Inside a semaphore
if counter ≤ 0 then wait

- counter

wait 'P' prolang "try decrease" down

post 'V' verhoog "increase" up

→ if counter < 0
= # waiting threads

Using semaphores as locks (mutual exclusion)

init counter as 1

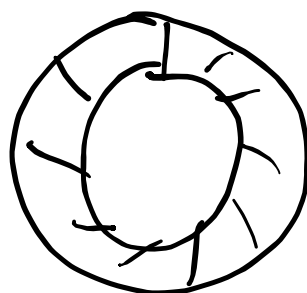
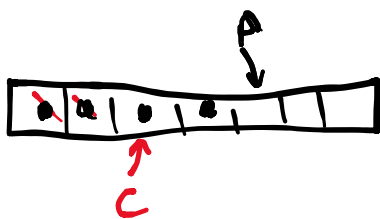
value changes between 1 + 0

Binary semaphore

Join problem

init counter as 0

Producer/Consumer (Bounded Buffer)



$(i+1) \% \text{max}$