

Threads

methods

t.join : waits for t to finish
before continuing

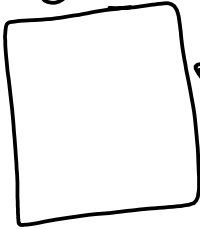
Thread.yield : running → ready

Thread.sleep(msec) : wait until
msec timer

OutOfSync

main

Data
collector



workers:

myTotal
+1

sharedSum
+1

myTotal
+1

myTotal
+1

long
static sharedSum

+1

+1

+1

+1

+1

+1

+1

+1

+1

+1

+1

+1

+1

+1

+1

+1

+1

+1

+1

+1

race
condition

sharedSum = ~~104~~
~~104~~
= 103

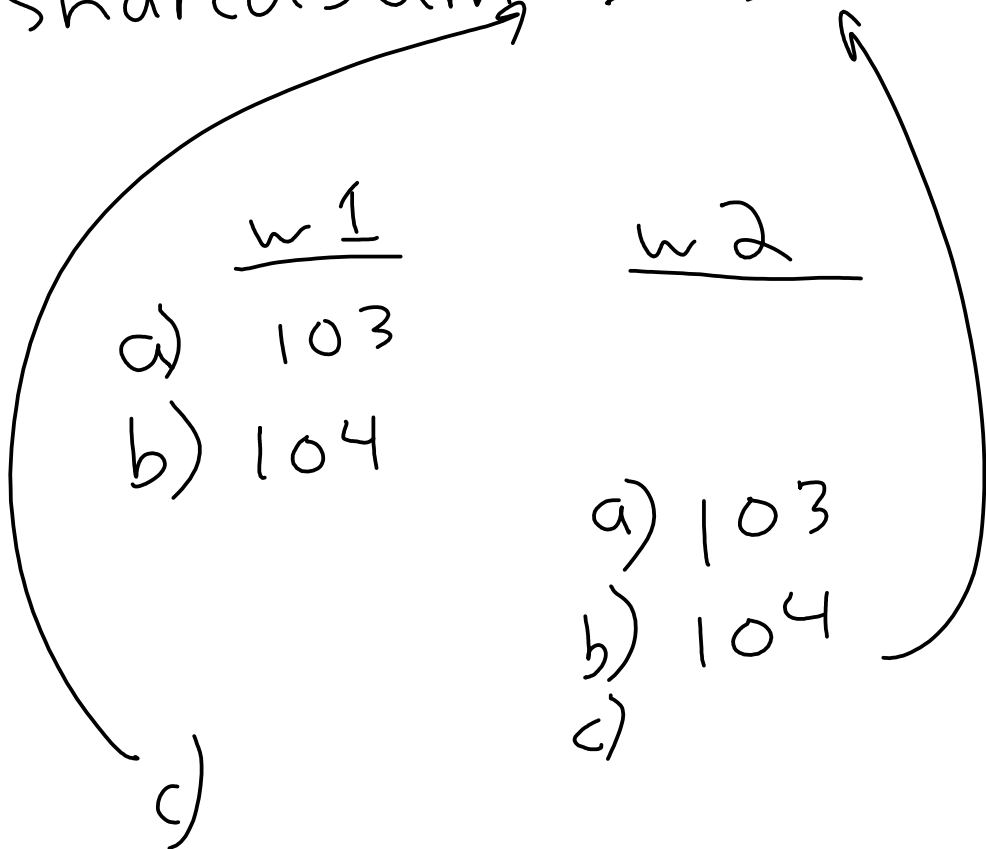
sharedSum++

sSum = sSum + 1

a) load sSum
b) add 1
c) store sSum

w 1
a) 103
b) 104
c)

w 2
a) 103
b) 104
c)



Synchronization

2 threads/processes accessing
a shared resource

critical region / critical section
code which access shared
resource.