timestamp (tick)	BLOCKED	READY (in order)	current thread (and any transition)	comments / others
0	-	-	-	-
10	-	t1	main	t1 created and forking (adding to READY)
20	-	t1, t2	main	t1 forked t2 created and forking (adding to READY)
30	-	t1, t2, t3	main	t2 forked t3 created and forking (adding to READY)
40	-	t1, t2, t3, t4	main	t3 forked t4 created and forking (adding to READY)
50	-	t1, t2, t3, t4	main	t4 forked Executing Join(t1) // waiting for t1 before continuing main thread main releases semaphore Join
60	main	t2, t3, t4	main -> t1	main thread sleep (added to BLOCKED) switch to t1
70	main	t2, t3, t4	t1	t1 acquires lock Lock1 t1 acquires semaphore locksem t1 acquired lock Lock1 (success)
80	main	t3, t4, t1	t1 -> t2	t1 yielded (added to READY) Context Switch to t2
90	main, t2	t4, t1	t2 -> t3	t2 acquires lock Lock1 Context Switch to t3
100	main, t2, t3	t1	t3 -> t4	t3 acquires lock Lock1 Context Switch to t4
110	main, t2, t3, t4	-	t4 -> t1	t4 acquires lock Lock1 Context Switch to t1
120	main, t3, t4	t2	t1	t1.value++ and print (value = 1) Add t2 to READY t1 releases semaphore locksem
130	main, t3, t4	t2	t1	Cotinuing from Join(t1) in Tick 50 t1 acquires semaphore Join
140	t3, t4	t2, main	t1	Add main to READY t1 releases semaphore in_join
150	t3, t4	main	t1 -> t2	Context Switch to t2 Delete t1 (Finish()) t2 acquires semaphore locksem t1 acquired lock Lock1 (success)
160	t3, t4	t2	t2 -> main	t2 yielded (added to READY) Context Switch to main main acqures semaphore in_join
170	t3, t4	t2	main	Executing Join(t2) // waiting for t2 before continuing main thread main releases semaphore Join
180	main, t3, t4	-	main -> t2	main thread sleep (added to BLOCKED) switch to t2
190	main, t4	t3	t2	t2.value++ and print (value = 2) Add t3 to READY t2 releases semaphore locksem
200	main, t4	t3	t2	Cotinuing from Join(t2) in Tick 170 t2 acquires semaphore Join
210	t4	t3, main	t2	Add main to READY t2 releases semaphore in_join
220	t4	main	t2 -> t3	Context Switch to t3 Delete t2 (Finish()) t3 acquires semaphore locksem t3 acquired lock Lock1 (success)
230	t4	t3	t3 -> main	t3 yielded (added to READY) Context Switch to main main acqures semaphore in_join
240	t4	t3	main	Executing Join(t3) // waiting for t3 before continuing main thread main releases semaphore Join
250	main, t4	-	main -> t3	main thread sleep (added to BLOCKED) switch to t3
260	main	t4	t3	t3.value-- and print (value = 1) Add t3 to READY t3 releases semaphore locksem
270	main	t4	t3	Cotinuing from Join(t3) in Tick 240 t3 acquires semaphore Join
280	-	t4, main	t3	Add main to READY t3 releases semaphore in_join
290	-	main	t3 -> t4	Context Switch to t4 Delete t3 (Finish()) t4 acquires semaphore locksem t4 acquired lock Lock1 (success)

timestamp (tick)	BLOCKED	READY (in order)	current thread (and any transition)	comments / others
300	-	t4	t4 -> main	t4 yielded (added to READY) Context Switch to main main acqures semaphore in_join
310	-	t4	main	Executing Join(t4) // waiting for t4 before continuing main thread main releases semaphore Join
320	main	-	main -> t4	main thread sleep (added to BLOCKED) switch to t4
330	main	-	t4	t4.value-- and print (value = 0) Add t4 to READY t4 releases semaphore locksem
340	main	-	t4	Cotinuing from Join(t4) in Tick 310 t4 acquires semaphore Join
350	-	main	t4	Add main to READY t4 releases semaphore in_join
360	-	-	t4 -> main	Context Switch to main Delete t4 (Finish()) main acquires semaphore in_join
370	-	-	main -> NULL	Check value End main (Finish()) End program as no more threads