## 1) All tasks same priority (run-to-completion)

```
(86985) lab2: T1: took LED mutex (wait=0 ms) (86986) lab2: T1: LED ON (busy-wait 500 ms) (87495) lab2: T1: LED ON (busy-wait 500 ms) (87496) lab2: T1: LED ON (busy-wait 500 ms) (87496) lab2: T1: LED ON (busy-wait 500 ms) (87755) lab2: T2: took LED mutex (wait=0 ms) (87756) lab2: T2: took LED mutex (wait=0 ms) (87756) lab2: T2: LED OFF (delay 1000 ms) (87775) lab2: T3: tick=8756 (88005) lab2: T1: LED ON (busy-wait 500 ms) (88006) lab2: T1: LED ON (busy-wait 500 ms) (88515) lab2: T1: took LED mutex (wait=0 ms) (88516) lab2: T1: LED ON (busy-wait 500 ms) (88755) lab2: T2: took LED mutex (wait=0 ms) (88756) lab2: T2: LED OFF (delay 1000 ms) (88755) lab2: T3: tick=8856 (89025) lab2: T1: took LED mutex (wait=0 ms) (89026) lab2: T1: took LED mutex (wait=0 ms) (89536) lab2: T1: took LED mutex (wait=0 ms) (89536) lab2: T1: LED ON (busy-wait 500 ms) (89755) lab2: T2: took LED mutex (wait=0 ms) (89756) lab2: T2: LED OFF (delay 1000 ms) (89755) lab2: T2: LED OFF (delay 1000 ms) (89755) lab2: T1: took LED mutex (wait=0 ms) (90045) lab2: T1: LED ON (busy-wait 500 ms) (90756) lab2: T1: took LED mutex (wait=0 ms) (90045) lab2: T1: LED ON (busy-wait 500 ms) (90556) lab2: T1: LED ON (busy-wait 500 ms) (90756) lab2: T2: LED OFF (delay 1000 ms) (90757) lab2: T2: LED OFF (delay 1000 ms) (90756) lab2: T1: LED ON (busy-wait 500 ms) (90757) lab2: T2: LED OFF (delay 1000 ms) (90756) lab2: T1: LED ON (busy-wait 500 ms) (91576) lab2: T1: LED ON (busy-wait 500 ms) (91576) lab2: T1: LED ON (busy-wait 500 ms) (91576) lab2: T1: LED ON (busy-wait 500 ms) (91577) lab2: T2: LED OFF (delay 1000 ms)
      (91577) lab2: T1: LED ON (busy-wait 500 ms)
(91756) lab2: T2: took LED mutex (wait=0 ms)
(91757) lab2: T2: LED OFF (delay 1000 ms)
(91776) lab2: T3: tick=9156
(92086) lab2: T1: took LED mutex (wait=0 ms)
(92087) lab2: T1: LED ON (busy-wait 500 ms)
(92596) lab2: T1: took LED mutex (wait=0 ms)
(92597) lab2: T1: LED ON (busy-wait 500 ms)
(92756) lab2: T2: took LED mutex (wait=0 ms)
(92757) lab2: T2: LED OFF (delay 1000 ms)
(92776) lab2: T3: tick=9256
(93106) lab2: T1: LED ON (busy-wait 500 ms)
          (93107) lab2: T1: LED ON (busy-wait 500 ms)
(93616) lab2: T1: took LED mutex (wait=0 ms)
                                                                                                                                     lab2:
                                                                                                                                                                                                                         T1: LED ON (busy-wait 500 ms)
```

## 3) (a) **T1 > T2 > T3** (run-to-completion)

```
I (132) esp_image: segment 1: paddr=0x00025df8 vaddr=0x40223df0 size=0x003e0 ( 922) load  
I (146) esp_image: segment 2: paddr=0x0002be0 vaddr=0x3ffe8000 size=0x003e0 ( 992) load  
I (186) esp_image: segment 3: paddr=0x0002be0 vaddr=0x3ffe8000 size=0x003e0 ( 128) load  
I (186) boot: loaded app from paddr=0x0002be0 vaddr=0x00100000 size=0x0036dc ( 17844) load  
I (186) boot: loaded app from paddr=0x0002be0 vaddr=0x0100000 size=0x0036dc ( 17844) load  
I (186) boot: loaded app from paddr=0x0002be0 vaddr=0x0100000 size=0x0036dc ( 17844) load  
I (182) app_main: in: in: partition at offset 0x10000  
I (218) lab2: 11: book LED mutex (vait=0 ms)  
I (222) lab2: 11: book LED mutex (vait=0 ms)  
I (222) lab2: 11: book LED mutex (vait=0 ms)  
I (222) lab2: 12: book LED mutex (vait=0 ms)  
I (223) lab2: 12: book LED mutex (vait=0 ms)  
I (231) lab2: 13: book LED mutex (vait=0 ms)  
I (231) lab2: 13: book LED mutex (vait=0 ms)  
I (231) lab2: 11: book LED mutex (vait=0 ms)  
I (1740) lab2: 11: LED ON (busy-wait 500 ms)  
I (1740) lab2: 12: book LED mutex (vait=0 ms)  
I (1740) lab2: 13: book LED mutex (vait=0 ms)  
I (1740) lab2: 13: book LED mutex (vait=0 ms)  
I (1740) lab2: 13: book LED mutex (vait=0 ms)  
I (1740) lab2: 13: book LED mutex (vait=0 ms)  
I (1740) lab2: 13: book LED mutex (vait=0 ms)  
I (1740) lab2: 13: book LED mutex (vait=0 ms)  
I (1740) lab2: 13: book LED mutex (vait=0 ms)  
I (2279) lab2: 11: LED ON (busy-wait 500 ms)  
I (2279) lab2: 11: LED ON (busy-wait 500 ms)  
I (2270) lab2: 11: LED ON (busy-wait 500 ms)  
I (2300) lab2: 11: LED ON (busy-wait 500 ms)  
I (3300) lab2: 11: book LED mutex (vait=0 ms)  
I (3300) lab2: 11: book LED mutex (vait=0 ms)  
I (3300) lab2: 11: book LED mutex (vait=0 ms)  
I (3300) lab2: 11: book LED mutex (vait=0 ms)  
I (3300) lab2: 11: book LED mutex (vait=0 ms)  
I (3300) lab2: 11: book LED mutex (vait=0 ms)  
I (3300) lab2: 11: book LED mutex (vait=0 ms)  
I (3300) lab2: 11: book LED mutex (vait=0 ms)  
I (3300) lab2: 11: book LED mutex (vait=0 ms)  
I (3300) lab2:
```

## 2) (b) No priority inheritance

```
(19181) lab2: T2: took LED sem (wait=0 ms)
(19182) lab2: T2: LED OFF (delay 1000 ms)
(19183) lab2: T3: tick=1898
(19191) lab2: T1: took LED sem (wait=0 ms)
(19193) lab2: T1: LED ON (busy-wait 500 ms)
(19711) lab2: T1: took LED sem (wait=0 ms)
(19712) lab2: T1: LED ON (busy-wait 500 ms)
(20211) lab2: T2: took LED sem (wait=0 ms)
(20212) lab2: T2: LED OFF (delay 1000 ms)
(20213) lab2: T3: tick=2001
(20221) lab2: T1: took LED sem (wait=0 ms)
(20223) lab2: T1: LED ON (busy-wait 500 ms)
(20742) lab2: T1: took LED sem (wait=0 ms)
(20743) lab2: T1: LED ON (busy-wait 500 ms)
(21242) lab2: T2: took LED sem (wait=0 ms)
        lab2: T2: LED OFF (delay 1000 ms)
(21243)
(21244) lab2: T3: tick=2104
(21252) lab2: T1: took LED sem (wait=0 ms)
(21254) lab2: T1: LED ON (busy-wait 500 ms)
(21772) lab2: T1: took LED sem (wait=0 ms)
(21773) lab2: T1: LED ON (busy-wait 500 ms)
(22272) lab2: T2: took LED sem (wait=0 ms)
(22273)
        lab2: T2: LED OFF (delay 1000 ms)
(22274) lab2: T3: tick=2207
(22282) lab2: T1: took LED sem (wait=0 ms)
(22284) lab2: T1: LED ON (busy-wait 500 ms)
(22802) lab2: T1: took LED sem (wait=0 ms)
(22803) lab2: T1: LED ON (busy-wait 500 ms)
(23302) lab2: T2: took LED sem (wait=0 ms)
(23303) lab2: T2: LED OFF (delay 1000 ms)
(23304)
        lab2: T3: tick=2310
(23312) lab2: T1: took LED sem (wait=0 ms)
(23314) lab2: T1: LED ON (busy-wait 500 ms)
(23832) lab2: T1: took LED sem (wait=0 ms)
(23833) lab2: T1: LED ON (busy-wait 500 ms)
(24332) lab2: T2: took LED sem (wait=0 ms)
(24333) lab2: T2: LED OFF (delay 1000 ms)
(24334)
        lab2: T3: tick=2413
(24342) lab2: T1: took LED sem (wait=0 ms)
(24344) lab2: T1: LED ON (busy-wait 500 ms)
(24862) lab2: T1: took LED sem (wait=0 ms)
(24863) lab2: T1: LED ON (busy-wait 500 ms)
(25362) lab2: T2: took LED sem (wait=0 ms)
        lab2: T2: LED OFF (delay 1000 ms)
(25363)
        lab2: T3: tick=2516
(25364)
(25372) lab2: T1: took LED sem (wait=0 ms)
(25374) lab2: T1: LED ON (busy-wait 500 ms)
(25893) lab2: T1: took LED sem (wait=0 ms)
(25894) lab2: T1: LED ON (busy-wait 500 ms)
(26393) lab2: T2: took LED sem (wait=0 ms)
(26394) lab2: T2: LED OFF (delay 1000 ms)
(26395) lab2: T3: tick=2619
(26403) lab2: T1: took LED sem (wait=0 ms)
(26405) lab2: T1: LED ON (busy-wait 500 ms)
```

## (c) Priority inheritance enabled

```
(9999) Tab2: T1: took LED mutex (wait=0
  (10001) lab2: T1: LED ON (busy-wait 500 ms)
I (10520) lab2: T1: took LED mutex (wait=0 ms)
I (10521) lab2: T1: LED ON (busy-wait 500 ms)
I (11020) lab2: T2: took LED mutex (wait=0 ms)
  (11021) lab2: T2: LED OFF (delay 1000 ms)
  (11022) lab2: T3: tick=1082
  (11030) lab2: T1: took LED mutex (wait=0 ms)
  (11033) lab2: T1: LED ON (busy-wait 500 ms)
I (11550) lab2: T1: took LED mutex (wait=0 ms)
I (11551) lab2: T1: LED ON (busy-wait 500 ms)
I (12050) lab2: T2: took LED mutex (wait=0 ms)
  (12051) lab2: T2: LED OFF (delay 1000 ms)
  (12052) lab2: T3: tick=1185
  (12060) lab2: T1: took LED mutex (wait=0 ms)
  (12063) lab2: T1: LED ON (busy-wait 500 ms)
  (12580) lab2: T1: took LED mutex (wait=0 ms)
I (12581) lab2: T1: LED ON (busy-wait 500 ms)
I (13080) lab2: T2: took LED mutex (wait=0 ms)
I (13081) lab2: T2: LED OFF (delay 1000 ms)
  (13082) lab2: T3: tick=1288
  (13090) lab2: T1: took LED mutex (wait=0 ms)
  (13093) lab2: T1: LED ON (busy-wait 500 ms)
I (13610) lab2: T1: took LED mutex (wait=0 ms)
I (13611) lab2: T1: LED ON (busy-wait 500 ms)
I (14110) lab2: T2: took LED mutex (wait=0 ms)
I (14111) lab2: T2: LED OFF (delay 1000 ms)
  (14112) lab2: T3: tick=1391
  (14120) lab2: T1: took LED mutex (wait=0 ms)
  (14123) lab2: T1: LED ON (busy-wait 500 ms)
  (14640) lab2: T1: took LED mutex (wait=0 ms)
I (14641) lab2: T1: LED ON (busy-wait 500 ms)
I (15140) lab2: T2: took LED mutex (wait=0 ms)
I (15141) lab2: T2: LED OFF (delay 1000 ms)
  (15142) lab2: T3: tick=1494
  (15150) lab2: T1: took LED mutex (wait=0 ms)
  (15153) lab2: T1: LED ON (busy-wait 500 ms)
  (15671) lab2: T1: took LED mutex (wait=0 ms)
  (15672) lab2: T1: LED ON (busy-wait 500 ms)
 (16171) lab2: T2: took LED mutex (wait=0 ms)
(16172) lab2: T2: LED OFF (delay 1000 ms)
  (16173) lab2: T3: tick=1597
  (16181) lab2: T1: took LED mutex (wait=0 ms)
  (16184) lab2: T1: LED ON (busy-wait 500 ms)
  (16701) lab2: T1: took LED mutex (wait=0 ms)
  (16702) lab2: T1: LED ON (busy-wait 500 ms)
I (17201) lab2: T2: took LED mutex (wait=0 ms)
I (17202) lab2: T2: LED OFF (delay 1000 ms)
 (17203) lab2: T3: tick=1700
  (17211) lab2: T1: took LED mutex (wait=0 ms)
  (17214) lab2: T1: LED ON (busy-wait 500 ms)
  (17731) lab2: T1: took LED mutex (wait=0 ms)
  (17732) lab2: T1: LED ON (busy-wait 500 ms)
```