Nominal Case:

```
Scheduler periods completed: 160

Thread1 - Times ran: 160
Thread2 - Times ran: 80
Thread3 - Times ran: 40
Thread4 - Times ran: 10

Thread1 - Times overran: 0
Thread2 - Times overran: 0
Thread3 - Times overran: 0
Thread4 - Times overran: 0
```

Case T2 has overrun:
None of the other threads were affected, they were all still scheduled

```
Scheduler periods completed: 160

Thread1 - Times ran: 160
Thread2 - Times ran: 80
Thread3 - Times ran: 40
Thread4 - Times ran: 10

Thread1 - Times overran: 0
Thread2 - Times overran: 14
Thread3 - Times overran: 0
Thread4 - Times overran: 0
```

Case T3 has overrun:
Other threads not affected

```
Scheduler periods completed: 160

Thread1 - Times ran: 160
Thread2 - Times ran: 80
Thread3 - Times ran: 40
Thread4 - Times ran: 10

Thread1 - Times overran: 0
Thread2 - Times overran: 0
Thread3 - Times overran: 6
Thread4 - Times overran: 0
```

Description:

The program uses a timer to schedule a timer every 10 milliseconds and each thread has a counter that counts down until it runs. For example, T1 has a counter of 1 so it runs every time, while T2 has counter of 2 so it runs every other time. The threads were synchronized using 4 separate semaphores, one for each thread. The semaphore is release when it is that thread's turn to execute. Processor affinity was achieved by running a bash command on linux as soon as the program starts.