

Playing Cricket

You need at least one bowler and one batsman to play cricket.

There are two threads, one for bowlers and one for batsmen. There is room for only one practice session. A practice session is possible if there is a bowler and a batsman available. If a batsman arrives, and a bowler is already available, he will engage a bowler for a practice session and vice versa. If however, a new batsman arrives and a bowler is not available, the batsman will hold the court and wait for the bowler to arrive and vice versa. No two bowlers can coexist the same time the same way as no two batsmen.

Use the following to start off:

```
int bowler = 0; int batsman = 0; //shared variables between both threads
```

```
Semaphore batsmanSem = 0; bowlerSem = 0, mutex = 1;
```

```
int bowlers = 0; int batsmen = 0  bowlerSem = 0; batterSem = 0;
```

mutex = 1 Batsmen ...

```
1: wait(mutex)
2: if bowlers > 0:
3: bowlers - -
4: signal(bowlerSem)
5: else:
6: batsmen + +
7: signal(mutex)
8: wait(batterSem)
9: Play()
10:signal(mutex)
```

Bowlers ...

```
1: wait(mutex)
2: if batsmen > 0: 3: batsmen - -
4: signal(batterSem) 5: else:
6: bowler + + 7: signal(mutex) 8:
wait(bowlerSem) 9: Play()
```