

#####

header Synch

uses Thread

```
class Semaphore
  superclass Object
  fields
    count: int
    waitingThreads: List [Thread]
  methods
    Init (initialCount: int)
    Down ()
    Up ()
endClass
```

```
class Mutex
  superclass Object
  fields
    waitingThreads: List [Thread]
    heldBy: ptr to Thread
    waitCount: int
    lockState: int
  methods
    Init ()
    Lock ()
    Unlock ()
    IsHeldByCurrentThread () returns bool
endClass
```

```
class Condition
  superclass Object
  fields
    waitingThreads: List [Thread]
  methods
    Init ()
    Wait (mutex: ptr to Mutex)
    Signal (mutex: ptr to Mutex)
    Broadcast (mutex: ptr to Mutex)
endClass
```

endHeader