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CS333 – Fall 2014

Proj 2 – Synch.h

######################################################################

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