Justin Shuck

CS333 – Fall 2014

Proj 5 – Kernel.h

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

header Kernel

uses System, List, BitMap

const

SYSTEM\_STACK\_SIZE = 1000 -- in words

STACK\_SENTINEL = 0x24242424 -- in ASCII, this is "$$$$"

-- The kernel code will load into the first megabyte of physical memory. This

-- should be more than enough. We will use the second megabyte for page frames.

-- Thus, the frame region is 128 page frames of 8K each.

PAGE\_SIZE = 8192 -- in hex: 0x0000 2000

PHYSICAL\_ADDRESS\_OF\_FIRST\_PAGE\_FRAME = 1048576 -- in hex: 0x0010 0000

--NUMBER\_OF\_PHYSICAL\_PAGE\_FRAMES = 512 -- in hex: 0x0000 0200

-- ############ NEW code ############

NUMBER\_OF\_PHYSICAL\_PAGE\_FRAMES = 100 -- for testing only

-- ############ NEW code ############ endClass

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX SKIPPED CODE XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

var

readyList: List [Thread]

currentThread: ptr to Thread

mainThread: Thread

idleThread: Thread

threadsToBeDestroyed: List [Thread]

currentInterruptStatus: int

processManager: ProcessManager

threadManager: ThreadManager

frameManager: FrameManager

-- ############ NEW code ############

diskDriver: DiskDriver

--serialDriver: SerialDriver

fileManager: FileManager

-- ############ NEW code ############

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX SKIPPED CODE XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

InitializeScheduler ()

Run (nextThread: ptr to Thread)

PrintReadyList ()

ThreadStartMain ()

ThreadFinish ()

FatalError\_ThreadVersion (errorMessage: ptr to array of char)

SetInterruptsTo (newStatus: int) returns int

ProcessFinish (exitStatus: int)

-- ############ NEW code ############

InitFirstProcess ()

-- ############ NEW code ############

-- Routines from Switch.s:

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX SKIPPED CODE XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

endHeader