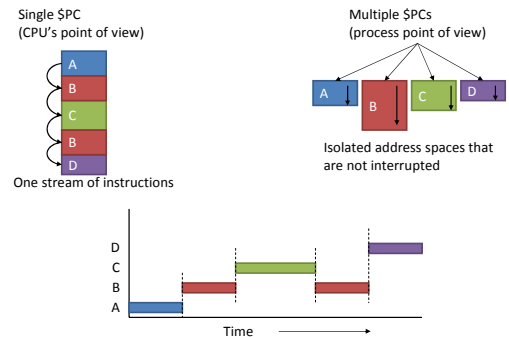


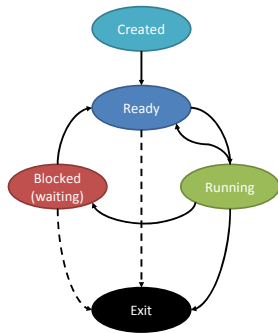
CS 449 - Threads

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Multiprogramming



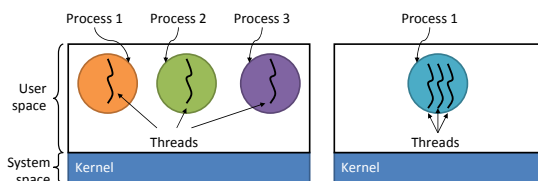
Life Cycle of a Process



Thread

A stream of instructions and their associated state

Processes and Threads

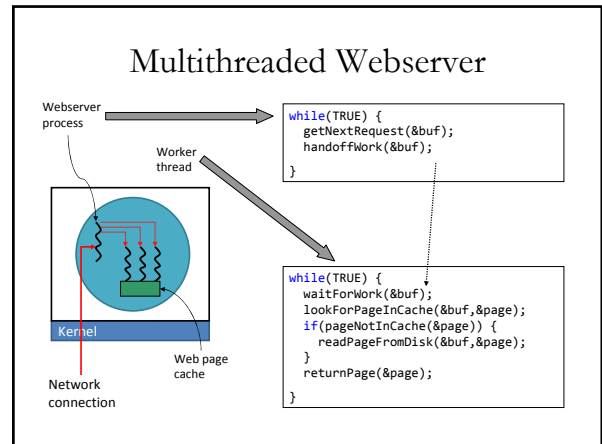
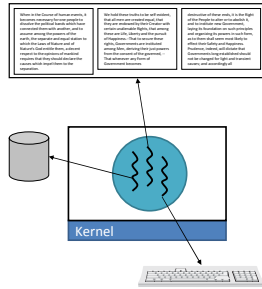


Thread State

Per process items
 Address space
 Open files
 Child processes
 Signals & handlers
 Accounting info
Global variables

Per thread items	Per thread items	Per thread items
Program counter	Program counter	Program counter
Registers	Registers	Registers
Stack & stack pointer	Stack & stack pointer	Stack & stack pointer
State	State	State

Multithreading in Action



User Threads vs. Kernel Threads

