CSGE602055 Operating Systems
CSF2600505 Sistem Operasi
Minggu 06: Processes & Threads

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Agenda

Week 06: Processes & Threads

- Reference: (OSCE2e ch3/4) (UCB 02 03) (UDA P2L1/2/3) (OLD 03)
- Process Concept
    - Program (passive) $\leftrightarrow$ Process (active)
    - Process in Memory: | *Stack* $\cdots$ *Head* | *Data* | *Text* |
    - Process State: | *running* | *waiting* | *ready* |
    - fork() and execlp()
- The Multi-process Synchronization Problem
    - Producer-Consumer (Bounded Buffer)
    - Readers-Writers
    - Dining Philosopher
- Communication
    - Pipes
    - Sockets
    - RPC

Thread

- Multicore Programming
- Multithreading Models
- Threading Issues
- Benefits
    - Responsiveness
    - Resource Sharing
    - Economy
    - Scalability
- Concurrency vs. Parallelism
- Multithreading Models
    - Many to One
    - One to One
    - Many to Many
    - Multilevel Models
- Pthreads
- Lab
    - fork()

- This is the end of the presentation.