

컴퓨터구조02

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Hardware Multithreading

• hardware multithreading

: Increasing utilization of a processor by switching to another thread when one thread is stalled.

• thread

: Includes ① program counter ② register state.
③ stack.

Lightweight, share single address space.

• process

: thread + address space + OS state.

process switch : Involves OS ○

thread switch : Involves OS X

• Fine-grained multithreading

: hardware multithreading, switching between threads after every instruction.

• Coarse-grained multithreading

: //, switching between threads only after significant events. Such as a last level cache miss.

• Simultaneous multithreading (SMT)

//, lowers the cost of multithreading by

// , lowers the cost of multi-threading by utilizing the resources needed for multiple issues dynamically scheduled m/c architecture.

