Process vs Thread

Concurrency &
Parallel Operation

Process — Your program
 — Managed by the OS
 — Personal address space
 — Can run on its own
 — Can have multiple threads

Thread —
 — share parts of the memory
 — has its own stack, registers, program counter

Thread

Concurrency:
A reads a file

Working on → File is now available

multiple tasks

Core O: | A | B | A | B | A |

time spent
on execution

Parallel Operation:
Working on multiple tasks... simultaneously

Core 0: | A . . . . - - |
Core 1: | B . . . . - |

Cache Structure

N = 2

Main → Cache Controller → Set, Set, Set, Set → Block, Block

isValid
isDirty
tag