Key Points For Today

Key Things You should Know from Today for the Final, since we went pretty fast
• These are key things you should know from today's lecture. If you have questions about them, please come prepared to ask on Thursday.

• You should know
  • Virtual cache
  • Physical cache
  • Virtually-indexed, physically tagged

• Why V-index/phys-tagged caches are desirable

• The dangers of virtual caches

• What “widening the pipeline means,” and simple examples of how structural and data dependences can arise

• What OOO execution means

• Be able to identify RAW, WAW, and WAR dependences

• What register renaming accomplishes.

• What a CMP is

• What cache coherence ensures (i.e., why we need it).

• What SMT is.

• What instruction level parallelism (ILP) is.