

Advanced Computer Architecture

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黃文吉

◆ Office Hour:

Tuesday 09:00 to 11:00

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Textbook

◆ Computer Architecture

A Quantitative Approach, 6th Ed.

John L. Hennessy and David A. Patterson

(請用正版教科書)



References

- ◆ Computer Organization and Design
The Hardware/Software Interface
David A. Patterson and John L. Hennessy
- ◆ Advanced Computer Architecture
Parallelism, Scalability and Programmability
Kai Huang

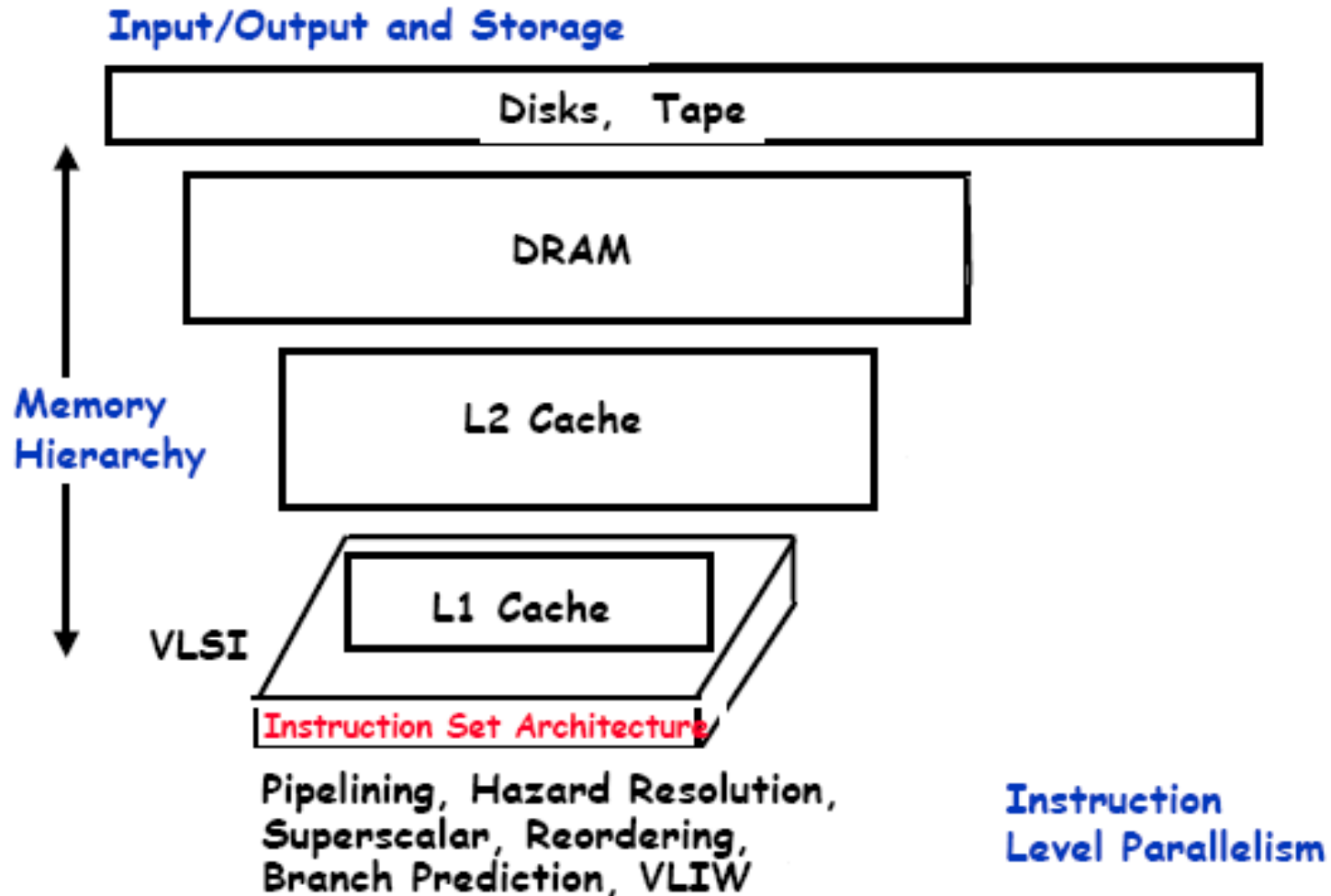
Outline(1)

- ◆ Fundamentals of Quantitative Design and Analysis (Chap. 1)
- ◆ Instruction Set Principles and Examples (Appendix A)
- ◆ Pipelining: Basic and Intermediate Concepts (Appendix C)
- ◆ Instruction-Level Parallelism and Its Exploitation (Chap.3)

Outline(2)

- ◆ Data-Level Parallelism in Vector, SIMD and GPU Architectures (Chap.4)
- ◆ Memory Hierarchy Design (Appendix B and Chap. 2)
- ◆ Thread-Level Parallelism (Chap. 5)
- ◆ Other Advanced Topics

Outline(3)



Grading Policy

- ◆ Homeworks 20%
- ◆ Midterm 40%
- ◆ Final 40%