Introduction to Database Systems
《数据库系统引论》
(Fall 2008)
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Contacting the Instructor

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Contacting the TAs

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Goals of the Course

- Foundation of Relational database management systems
- Major Issues in building database systems
- Techniques and skills for implementing database applications
- Some advanced topics in databases
Textbooks and References

- **Textbook**

- **Other References**
  - C.J. Date, *An Introduction to Database Systems* (Seventh Edition)
Textbooks in Chinese

- 《数据库系统教程》
  施伯乐、丁宝康、周傲英等编著
  高等教育出版社
- 《数据库系统概论》（第三版）
  萨师煊和王珊编著，高等教育出版社
- 《数据库系统原理》（第二版）
  李建中和王珊编著，电子工业出版社，2004
Other Materials

- Conferences Proceedings
  - PODS, SIGMOD, VLDB, ICDE, ICDT, EDBT, ER, DEXA, DASFAA, etc.

- Journals
  - ACM Transactions on Database Systems (TODS)
  - IEEE Transactions on Knowledge and Data Engineering (TKDE)
  - VLDB Journal
  - Data and Knowledge Engineering

- The Internet resources
  - Yahoo, Google, Citeseer, DBLP, etc.
Outline of the Course (1)

- **Lecture 1**: Introduction to the course and database systems *(Sept. 3)*

- **Part I  Relational databases**
  - **Lecture 2**: Relational Data Model and Relational Algebra *(Sept. 10)*
  - **Lecture 3**: Structured Query Language: Part A *(Sept. 17)*
  - **Lecture 4**: Structured Query Language: Part B *(Sept. 24)*
  - **Lecture 5**: Advanced SQL *(Oct. 8)*

- **Part II  Relational database design**
  - **Lecture 6**: E-R model *(Oct. 15)*
  - **Lecture 7**: Relational Database Design *(Oct. 22)*
Outline of the Course (2)

- Lecture 8: XML Data Management (Oct. 29)
- Part III  Data Storage & Querying
  - Lecture 9: File Structures (Nov. 5)
  - Lecture 10: Index Structures (Nov. 12)
  - Lecture 11: Query Processing (Nov. 19)
  - Lecture 12: Query Optimization (Nov. 26)
- Part IV  Transaction Management
  - Lecture 13: Transaction Processing (Dec. 3)
  - Lecture 14: Concurrency Control (Dec. 10)
  - Lecture 15: Concurrency Control (Dec. 17)
  - Lecture 16: Database Recovery (Dec. 24)
Grading Policy

- Attendance & Assignments (10%)
- Course Projects (30%)
- Midterm examination (20)
- Final examination (40%)
Punishment Policy

- Once plagiarism or cheating is founded in your assignments, examinations and course projects, your grade will definitely be set to zero!