CSC3170
Database System

Chenhao Ma

School of Data Science

The Chinese University of Hong Kong, Shenzhen

Basic Info

- *Instructor*
- Chenhao Ma (*machenhao@cuhk.edu.cn, 401c Zhixin Bldg*)
- Office hour: **5:00-6:00 pm Monday**

- *Teaching assistants*
- Office hour: **(will announce shortly)**

张悦	ZHANG Yue	223040247@link.cuhk.edu.cn
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- *USTFs*

胡瑞李蓁	HURUI Lizhen	122090168@link.cuhk.edu.cn
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Basic Info

- *Lecture*
- Mon/Wed 10:30-11:50am
- Teaching Complex C201 (**TxC201**)

- *Tutorial*
- Practices (programs and problems)
- TAs and USTFs lead the tutorials (starting from week 2)
- Teaching B Bldg 104 (**TB104**) **(need updates)**
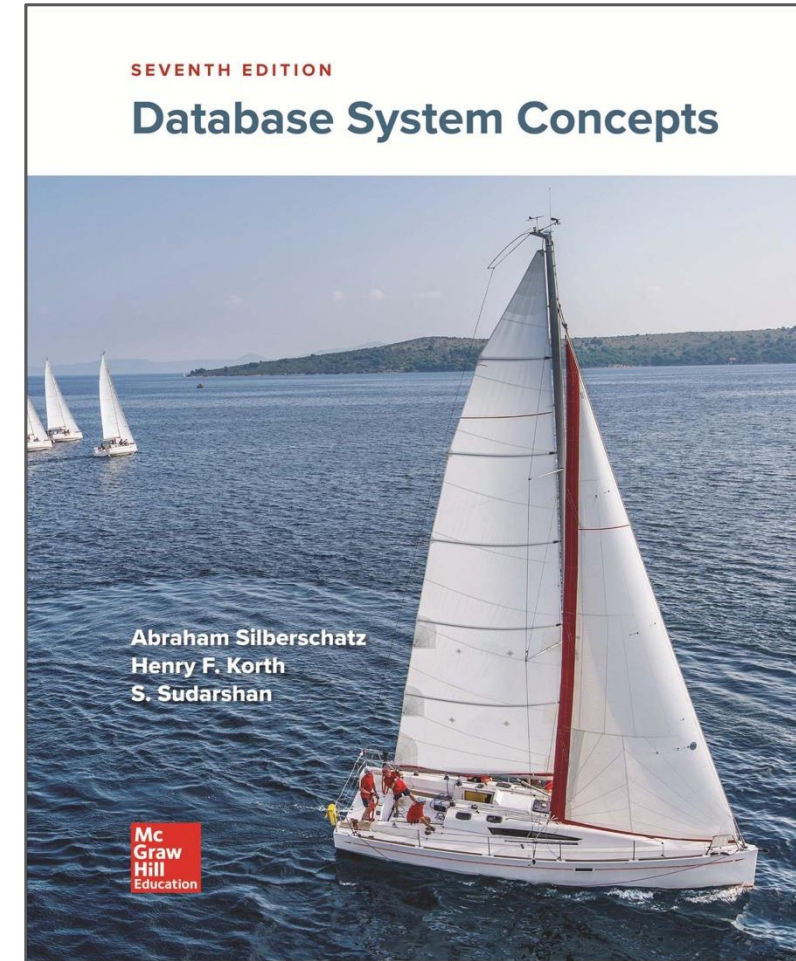- **Thu 6:00-6:50 pm** / Thu 7:00-7:50 pm

Assessment

- *3 assignments (30%)*
- 1st @ week #2, 2nd @ week #5, 3rd @ week #10
- A1 (SQL, pure programming)
- A2 and A3 (at least 50% programming)
- Late submission: **up to 2 days with 20% penalty**
- **Start early~**

- *1 individual project (30%)*
- Around 1 month to finish, due on week #10
- **High workload, generous grades**
  - **92.16 on average** for all valid submissions (24 fall)

- *Final exam (40%)*
- Closed test, no dictionary, 1-page cheatsheet paper

Basic Info

- ***Course materials and discussions:***
- [BlackBoard]

- ***Working language: English***
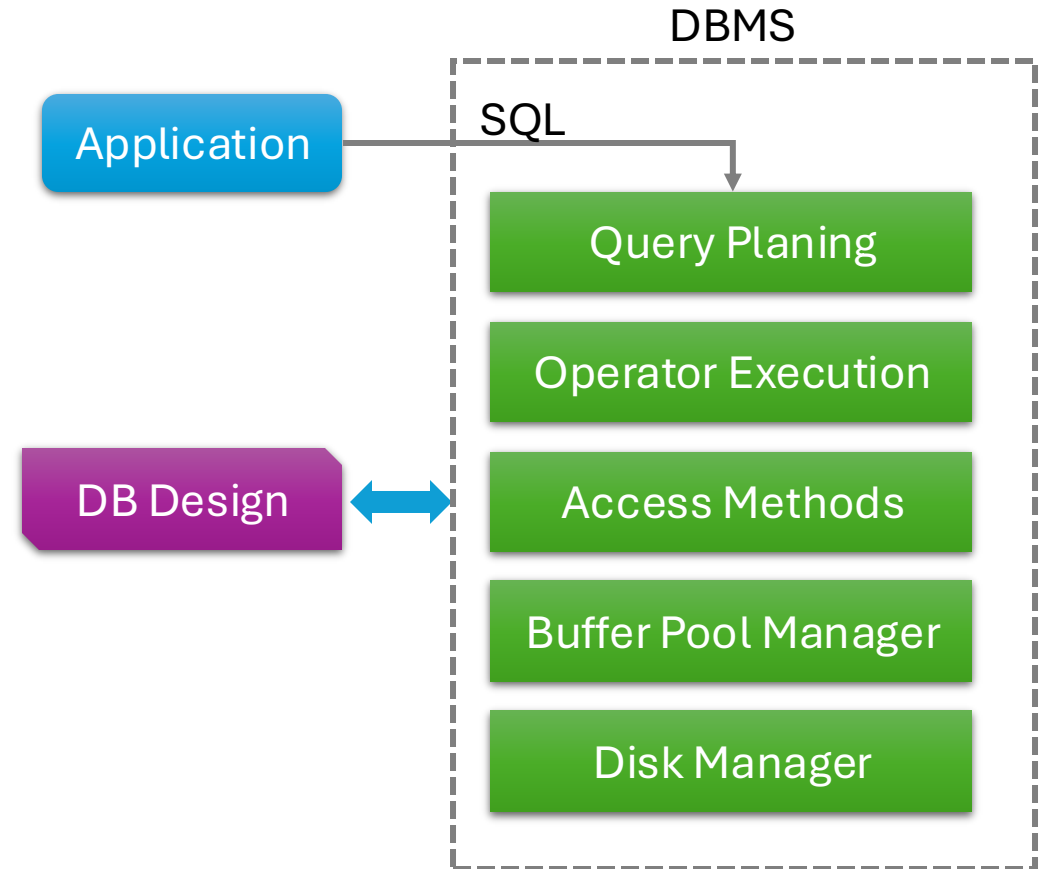- After-class discussion can be in English/Chinese

Reading materials

- **Database System Concepts**
  7th Edition
  Silberschatz, Korth, & Sudarshan
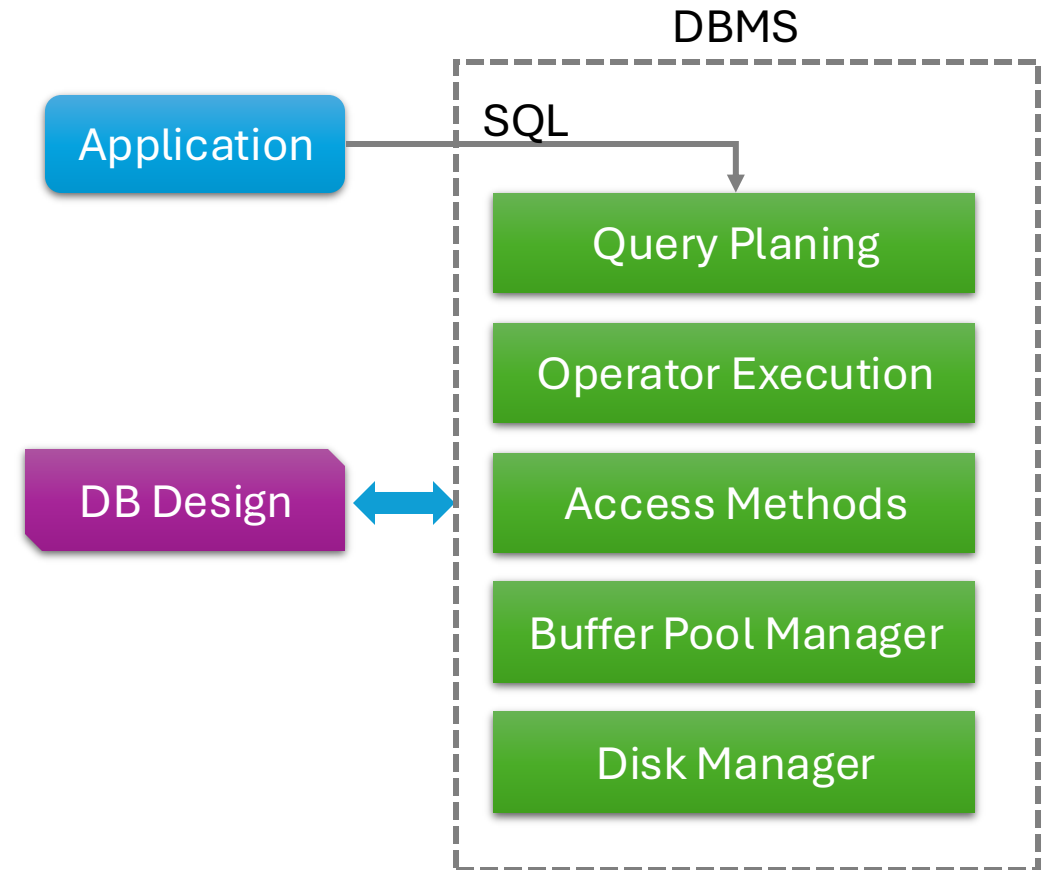
Tentative Teaching Plan

- 1   Introduction & Relational Model
- 2   SQL
- 3   Storage
- 4   Storage Models
- 5   Buffer Management
- 6   Hash Table
- 7   B+Tree
- 8   Sorting & aggregation
- 9   Joins
- 10   Query execution
- 11   Query optimization
- 12   DB Design: ER-Diagram
- 13   DB Design: FD & Normalization
- 14   Transactions & Concurrency control

DBMS

Application —— SQL ——

Query Planing

Operator Execution

DB Design ←→ Access Methods

Buffer Pool Manager

Disk Manager

Difference to Previous DB Sessions

- This session: more focus on what is inside the DBMS
  - Storage
  - Indexing
  - Query Execution
  - ...

- 25Spring: more focus on DB design?
  - ER-diagram
  - Functional Dependencies
  - Normalization
  - ...

DBMS

Application —— SQL

Query Planing

Operator Execution

DB Design ⟷ Access Methods

Buffer Pool Manager

Disk Manager

Feedback

- ***Feedback is important and highly appreciated!***
- Talk to the course instructor and TAs
- Send us emails
- …

Thank you!