

# Design theory and BCNF

Wednesday, May 22, 2019

2:08 PM

- Relational Schema Design: Sometimes consider use multiple tables.
- Anomalies
  - Redundancy = repeated data (don't want to store same data multiple times)
  - Update anomalies = might update wrong data.
  - Deletion anomalies
- Steps to reduce anomalies:
  - relational schema  $\xrightarrow{\text{find}}$  functional dependencies (FD)  $\rightarrow$  use FD to normalize relational schema
- Functional dependencies (FDs)
  - def: If two tuples agree on the attributes  $A_1, \dots, A_n$ , then they must also agree on the attributes  $B_1, \dots, B_m$ .
  - $A_1, \dots, A_n \rightarrow B_1, \dots, B_m$   
determines