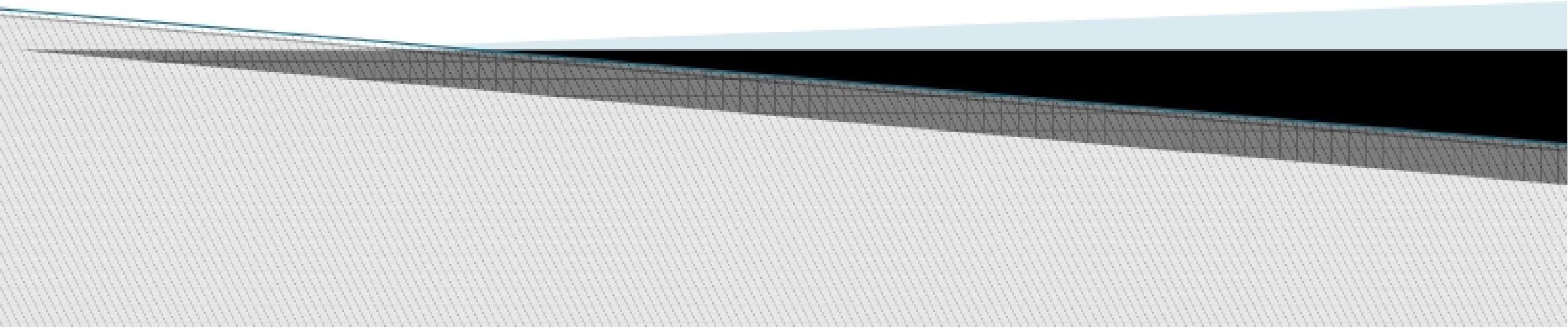


# CMSC424: Normalization

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# Databases

- ▶ Data Models
  - Conceptual representation of the data
- ▶ Data Retrieval
  - How to ask questions of the database
  - How to answer those questions
- ▶ Data Storage
  - How/where to store data, how to access it
- ▶ Data Integrity
  - Manage crashes, concurrency
  - Manage semantic inconsistencies

# Relational Database Design

- ▶ Where did we come up with the schema that we used ?
  - E.g. why not store the actor names with movies ?
- ▶ If from an E-R diagram, then:
  - Did we make the right decisions with the E-R diagram ?
- ▶ Goals:
  - Formal definition of what it means to be a “good” schema.
  - How to achieve it.