

# The Birth of NoSQL

## Not Only SQL

- The latest attempt to overthrow the relational model's dominance
- Driving forces
  - A need for greater scalability
  - A widespread preference for free and open source software
  - Specialized query operations
  - A desire for a more dynamic and expressive data model

# Some challenges by relational mode

## why NoSQL?

- Impedance mismatch
  - the Object-Relational mismatch between
    - the objects in the application code and
    - the database model of tables, rows, and columns
  - ORM (Object-Relational Mapping) frameworks as a translation layer
    - e.g., ActiveRecord, Hibernate
    - helpful, but the difference cannot be hidden completely
- Many-to-One & Many-to-Many relationships
  - Normalization removes duplication, but introduces many-to-one mapping