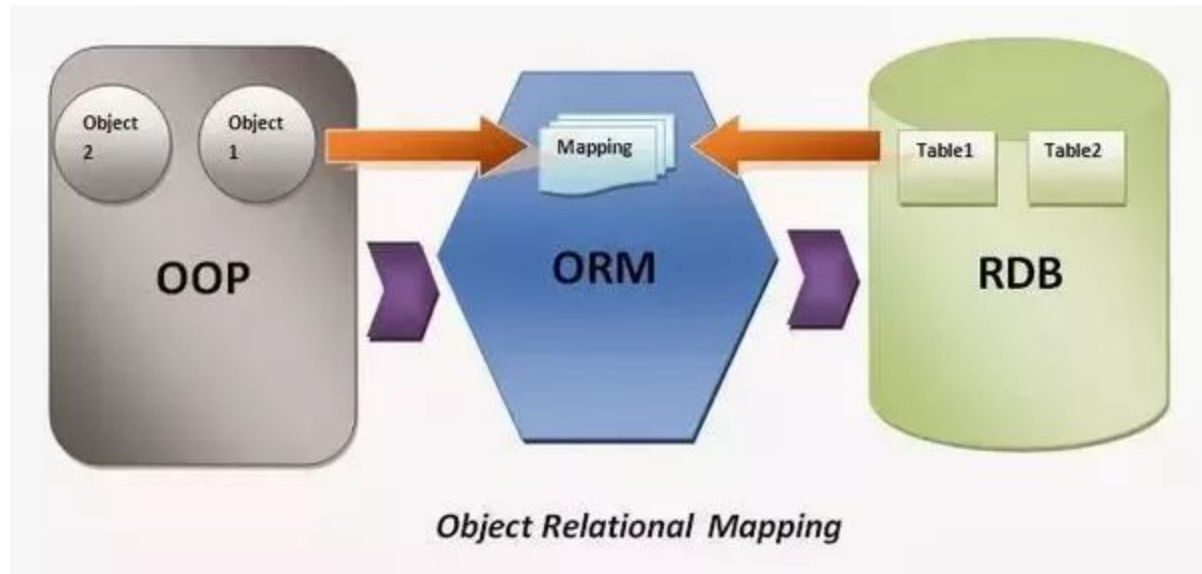
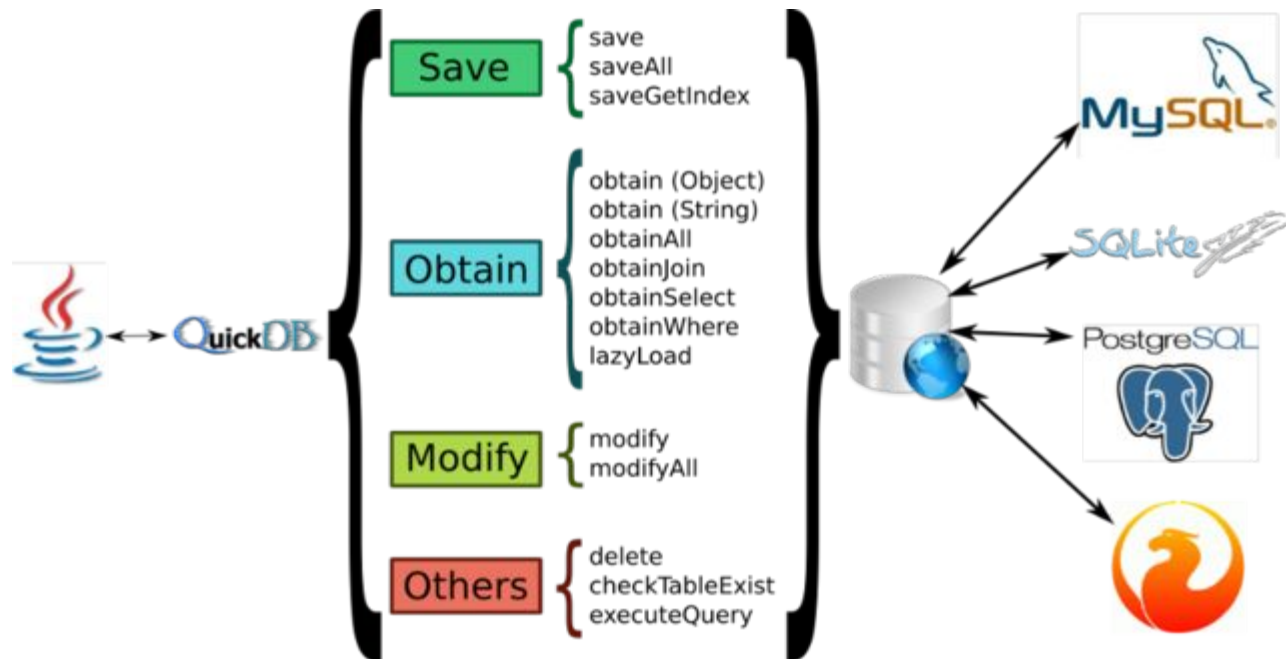


# Bài 14: ORM Basic

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ORM?



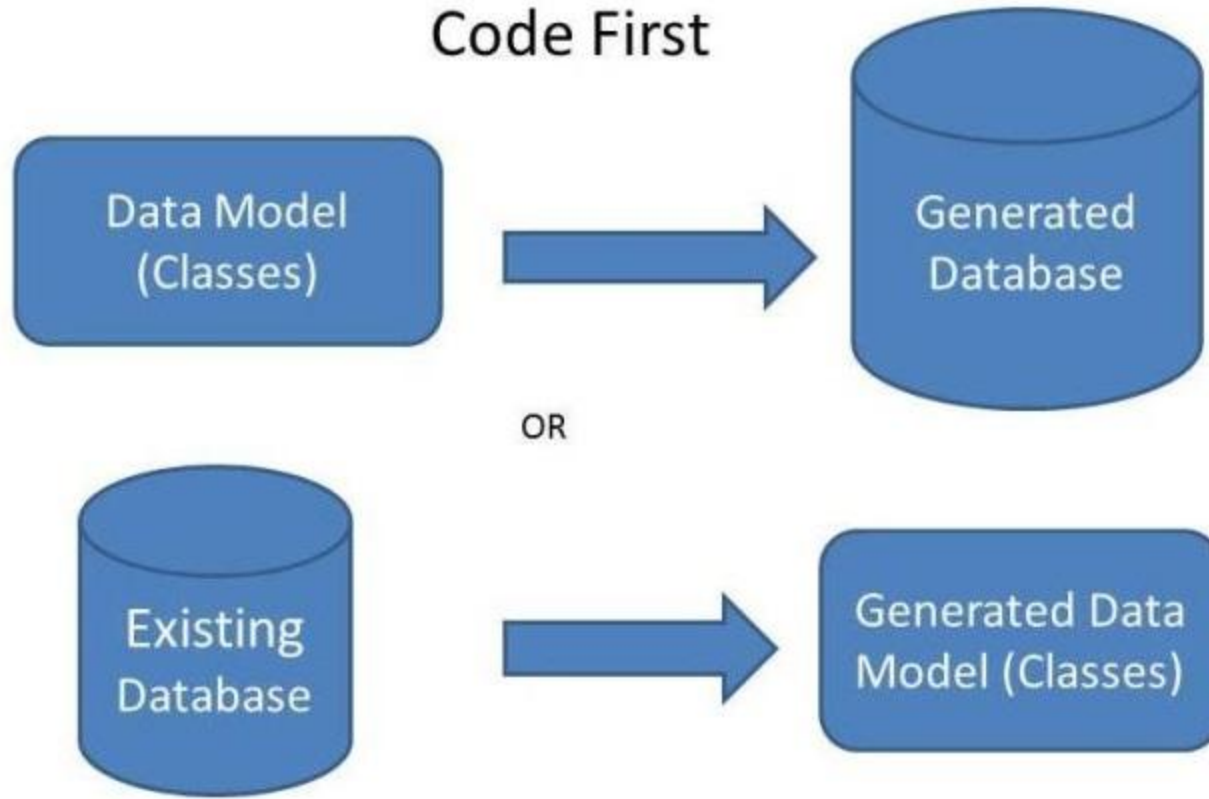


# ORM framework

- ❑ Java
  - Hibernate
  - Spring Data JPA
- ❑ .NET
  - LLBLGen
  - Entity framework
- ❑ PHP
  - Doctrine
  - Propel
  - Eloquent

Code first vs Database first?

## Code First

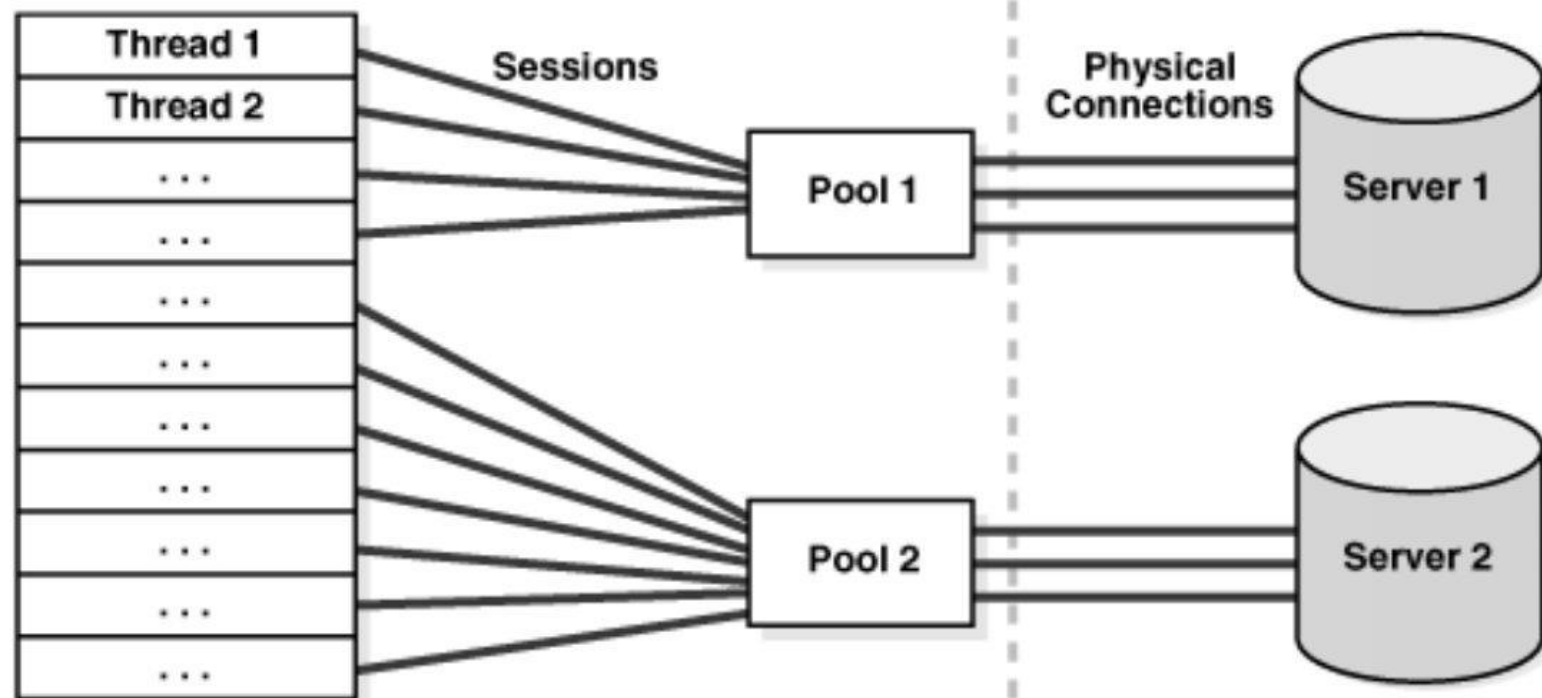


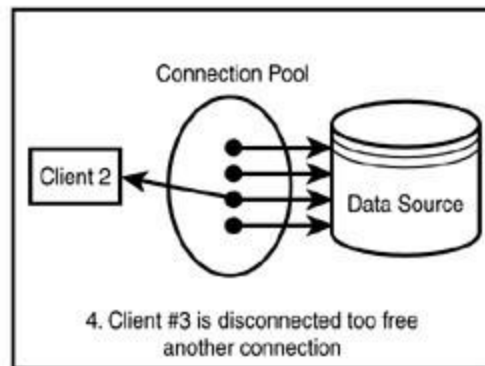
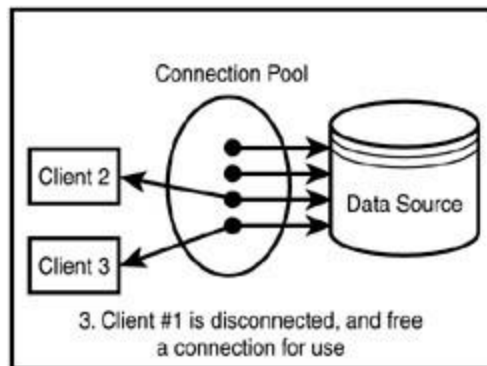
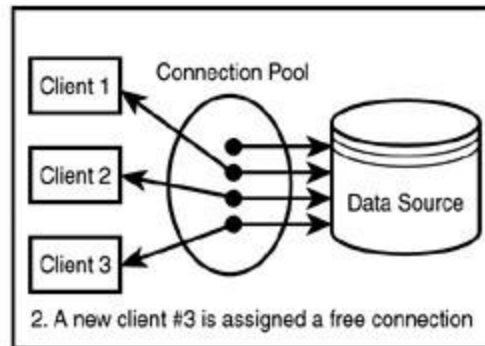
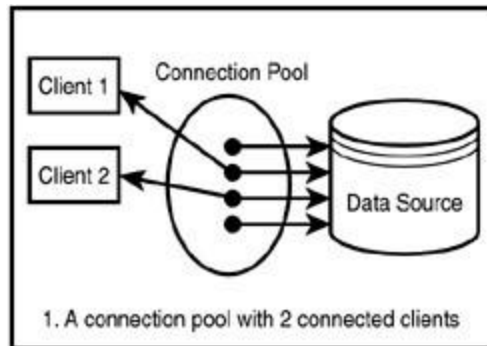




# Connection pooling

## Application







# Task

- ❑ Build an application use Spring Framework 5.x (Spring boot 2.x)
  - Business requirements:
    - Manage: Type (id, name), Category (id, name, typeId), Item (id, name), ItemCategory(itemId, categoryId)
    - Allow
      - `List<Category> findByType(String type, int pageIndex, int pageSize)` - find categories by type name
      - `List<Item> findByCategory(String category, int pageIndex, int pageSize)` - find items by category's name
      - `void updateCategory(Long id, String name)`
  - Technical requirement
    - Use Spring Data Jpa