CS544 EA
Hibernate

EntityManager

Hibernate Framework

- **Framework** Just like Spring
  - Also creates your objects (**IOC** fancy factory)
  - Connects them together (**DI**)
  - Adds additional functionality (**AOP**/interceptor proxies)

- Unlike Spring these framework details are not always obvious – but definitely still there!
  - What Spring calls ApplicationContext
  - JPA calls: EntityManager (Hibernate used to call: Session)
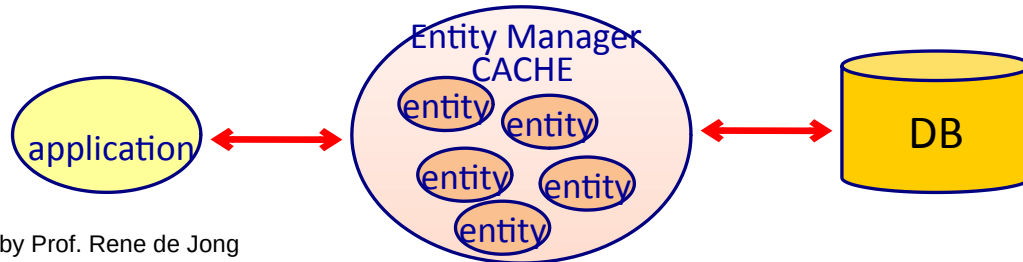
Entities

- **Domain objects** are called Entities
  - Hibernate manages (creates, injects, proxies) them
  - That's why it's called the EntityManager

```
@Entity
public class Customer {
  @Id
  @GeneratedValue
  private Long id;
  private String firstname;
  private String lastname;

  ...
```

LifeTime

- An EntityManager usually exists for the short time span of a (web) **request**

- During this time it keeps a cache of all the Objects it has retrieved from the DB

  – Ask for same object many times → one DB access

  – Objects usually don't go stale (EM exists briefly)

Entity Manager
CACHE

application

entity entity
entity entity
entity

DB

Model by Prof. Rene de Jong

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EntityManagerFactory

- To create a new EntityManager for every request Hibernate provides a factory
  - **Created once** on startup (singleton)
  - Reads all the mappings
  - Thread safe methods