

# 1<sup>st</sup> Level Cache

# 1st Level Cache

- Activated by default
- Linked to the Hibernate session
- Stores all entities that were used within a session
- Transparent usage

# 1st Level Cache

- When does Hibernate use the 1<sup>st</sup> Level Cache?
  - For *EntityManager.find()*
  - To traverse relationships

```
// get an entity by id
Author a = this.em.find(Author.class, 1L);

// use a getter method to access related entities
a.getBooks()
```

- But not for any Query!

# Demo

- Programmatic cache management via *EntityManager*
  - Entities can be removed from cache

```
// Evict a specific Entity  
this.em.detach(myEntity);  
  
// Evict all  
this.em.clear();
```

- Can be useful to reduce required memory

- Entities are in detached state after removal from cache
  - Changes are not written to database
  - Call *flush()* before removing changed entities from Cache

```
// call flush() to write all changes to database  
this.em.flush();  
  
// remove from cache  
this.em.detach(a);
```

# Demo

# Summary

- Stores all entities that were used within a specific session
- Activated by default
- Transparent usage
- Entities can be removed from the cache to reduce memory consumption



# Exercises