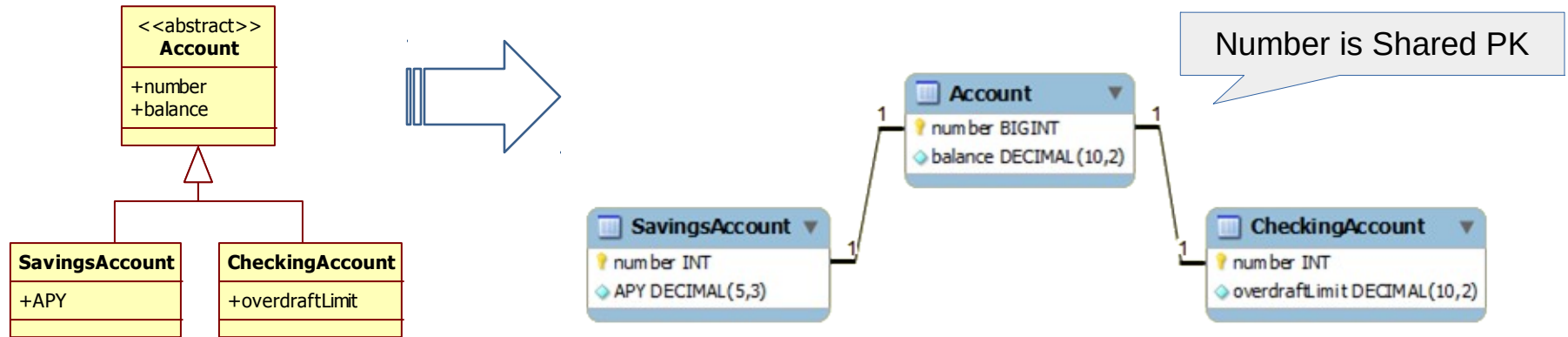CS544 EA
Hibernate

Inheritance: Joined Tables

Joined Tables

- Uses FK '**has-a**' to emulate '**is-a**'
  - Uses **Shared Primary Key** as Foreign Key
  - Queries use joins to include needed tables

Joined Tables in Action

Account Table

NUMBER	BALANCE
1	500
2	100
3	23.5

SavingsAccount

NUMBER	APY
2	2.3

CheckingAccount

NUMBER	OVERDRAFTLIMIT
1	200
3	0

✔ Normalized Schema

✔ Database view similar to domain

✗ Inserting or updating takes multiple statements

✗ Joins make queries slower

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SQL for Joined Query

```
select
        account0_.number as number0_,
        account0_.balance as balance0_,
        account0_.owner_id as owner3_0_,
        account0_1_.overdraftLimit as overdraf1_1_,
        account0_2_.APY as APY2_,
        case
            when account0_1_.number is not null then 1
            when account0_2_.number is not null then 2
            when account0_.number is not null then 0
        end as clazz_
    from
        Account account0_
    left outer join
        CheckingAccount account0_1_
            on account0_.number=account0_1_.number
    left outer join
        SavingsAccount account0_2_
            on account0_.number=account0_2_.number
```

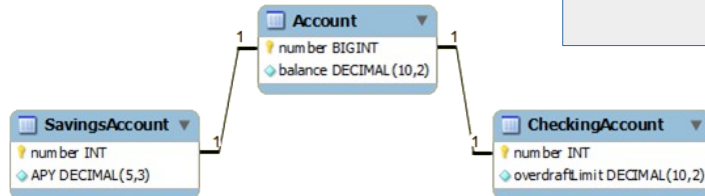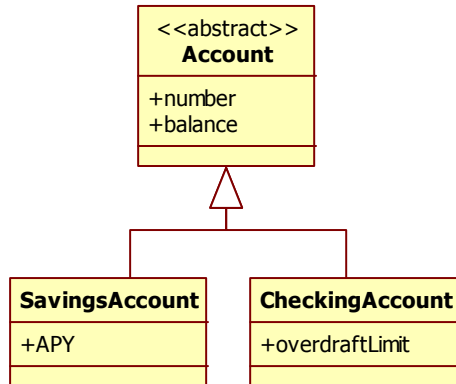Discriminator generated based on what is joined

Joined Mapping

- Simply set the **strategy to JOINED**

```
@Entity
@Inheritance(strategy=InheritanceType.JOINED)
public abstract class Account {
        @Id
        @GeneratedValue
        private Long number;
        private double balance;
```

```
@Entity
public class SavingsAccount extends Account {
        private double APY;
```

```
@Entity
public class CheckingAccount extends Account {
        private double overdraftLimit;
```

Remember: subclasses do not have an **@Id**

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