



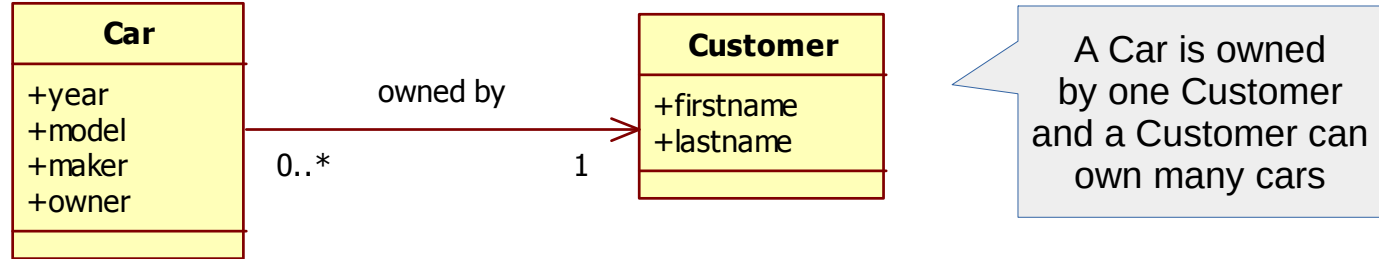
CS544 EA

Hibernate

Association: ManyToOne

ManyToOne uni-directional

- OO:



- Relational:

CAR table

ID	MAKER	MODEL	YEAR	CUSTOMER_ID
1	Honda	Acord	1996	1
2	Volvo	S80	1999	1

FK is always on the many side

Car table has a Customer FK

CUSTOMER table

ID	FIRSTNAME	LASTNAME
1	Frank	Brown

Code

@ManyToOne

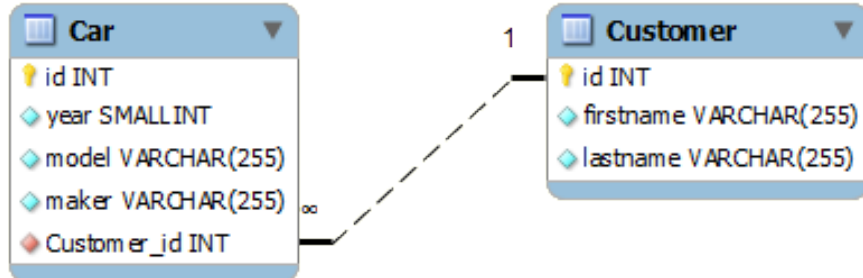
```
@Entity
public class Car {
    @Id
    @GeneratedValue
    private Long id;
    private short year;
    private String model;
    private String maker;
    @ManyToOne
    @JoinColumn(name="customer_id")
    private Customer owner;
    ...
}
```

Optional
@JoinColumn
to name the
column in DB

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

Normally mapped
Customer Entity

Default name:
owner_id



CAR table

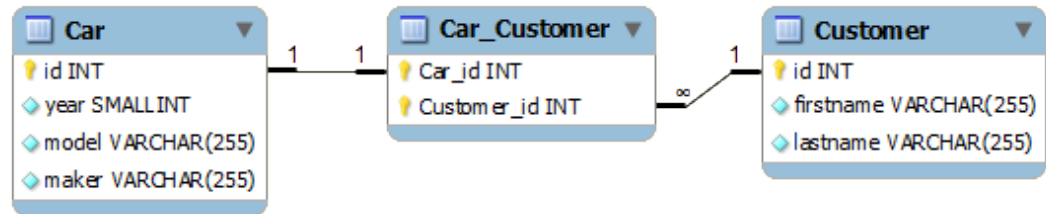
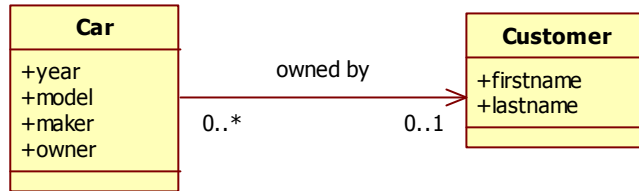
ID	MAKER	MODEL	YEAR	CUSTOMER_ID
1	Honda	Acord	1996	1
2	Volvo	S80	1999	1

CUSTOMER table

ID	FIRSTNAME	LASTNAME
1	Frank	Brown

Join Table

- ManyToOne can be mapped with a JoinTable
 - Useful for optional (0..1) associations
 - Optional would require the FK to be nullable
 - Normalization does not like nullable columns



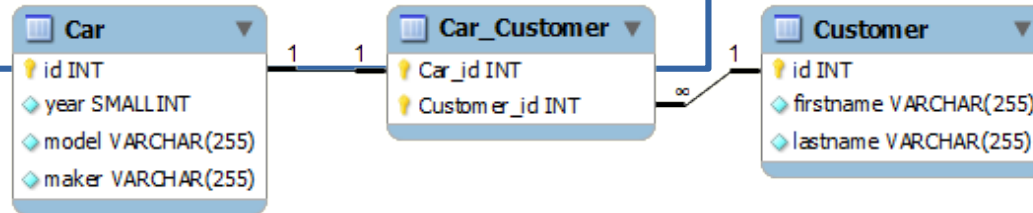
Code

```
@Entity
public class Car {
    @Id
    @GeneratedValue
    private Long id;
    private short year;
    private String model;
    private String maker;
    @ManyToOne
    @JoinTable(name="car_customer"
        joinColumns = { @JoinColumn(name = "customer_id") },
        inverseJoinColumns = { @JoinColumn(name = "cars_id") }
    )
    private Customer owner;
    ...
}
```

@JoinTable
and its name
are required

Column names
are optional

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



CAR table

ID	MAKER	MODEL	YEAR
1	Honda	Acord	1996
2	Volvo	S80	1999

CAR_CUSTOMER table

CUSTOMER_ID	ID
1	1

CUSTOMER table

ID	FIRSTNAME	LASTNAME
1	Frank	Brown