Lab: Hibernate Code First

This document defines the lab assignments for the ["Spring Data" course at Software University](#).

1. Vehicle Hierarchy

Your task is to **create a Vehicle hierarchy**.

Vehicle - Abstract Class

- Has an **Id – Long**
- Has a **Type - String**
- Has a **Model - String**
- Has a **Price - BigDecimal**
- Has a **fuelType - String**

Car

Extends from the **Vehicle** class

- Has **Seats - Integer**

Truck

Extends from the **Vehicle** class

- Has **loadCapacity - Double**

Bike

Extends from the **Vehicle** class

Plane

Extends from the **Vehicle** class

- Has **passengerCapacity** - **Integer**

Use the appropriate **inheritance types** to reach **the diagrams** in the examples.

planes

🔑 id	bigint(20)
fuel_type	varchar(255)
model	varchar(255)
price	decimal(19,2)
type	varchar(255)
airline	varchar(255)
passenger_capacity	int(11)

cars

🔑 id	bigint(20)
fuel_type	varchar(255)
model	varchar(255)
price	decimal(19,2)
type	varchar(255)
seats	int(11)

trucks

🔑 id	bigint(20)
fuel_type	varchar(255)
model	varchar(255)
price	decimal(19,2)
type	varchar(255)
load_capacity	double

bikes

🔑 id	bigint(20)
fuel_type	varchar(255)
model	varchar(255)
price	decimal(19,2)
type	varchar(255)

vehicle

🔑 id	bigint(20)
fuel_type	varchar(255)
model	varchar(255)
price	decimal(19,2)
type	varchar(255)

id:id   id:id   id:id   id:id

bikes

🔑 id	bigint(20)

planes

🔑 id	bigint(20)
airline	varchar(255)
passenger_capacity	int(11)

cars

🔑 id	bigint(20)
seats	int(11)

trucks

🔑 id	bigint(20)
load_capacity	double
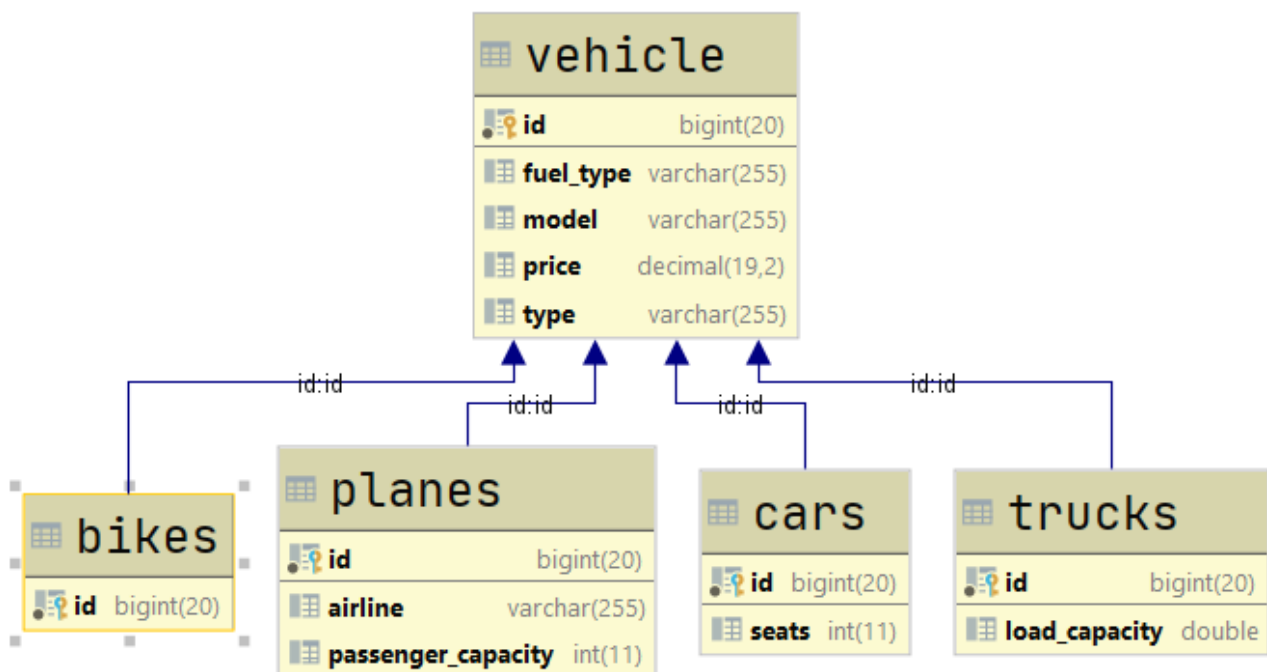
vehicle

id	bigint(20)
DTYPE	varchar(31)
fuel_type	varchar(255)
model	varchar(255)
price	decimal(19,2)
type	varchar(255)
airline	varchar(255)
passenger_capacity	int(11)
seats	int(11)
load_capacity	double

2. Relations

Plate_number

- Has an **id** - **BigInteger**
- Has a **number - String**
- Has a **one to one** relations with **Cars**

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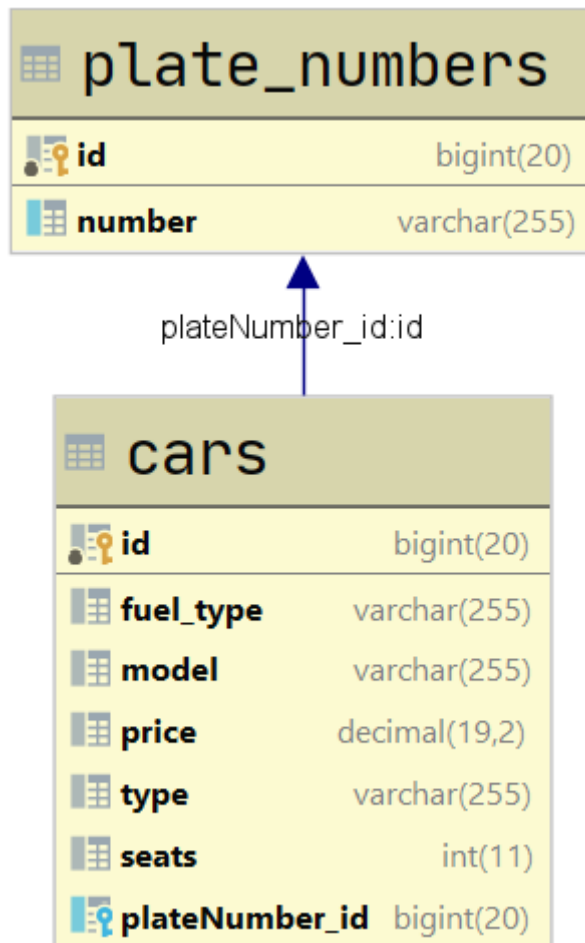
Companies

- Has an **id** - **BigInteger**
- Has a **name - String**
- Has a **one to many** relations with **Planes**

companies	
🔑 **id**	bigint(20)
name	varchar(255)

company_id:id

planes	
🔑 **id**	bigint(20)
fuel_type	varchar(255)
model	varchar(255)
price	decimal(19,2)
type	varchar(255)
airline	varchar(255)
passenger_capacity	int(11)
company_id	bigint(20)
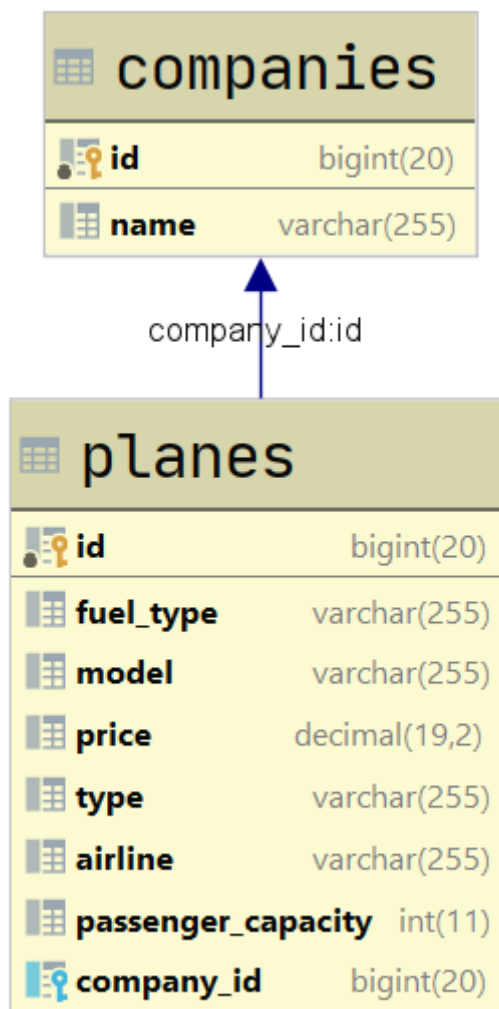
Drivers

- Has an **id** - **BigInteger**
- Has a **full_name - String**
- Has a **many to many** relations with **Cars**

drivers

🔑 **id**	bigint(20)
full_name	varchar(255)

trucks

🔑 **id**	bigint(20)
fuel_type	varchar(255)
model	varchar(255)
price	decimal(19,2)
type	varchar(255)
load_capacity	double

driver_id:id

truck_id:id

drivers_trucks

🔑 **driver_id**	bigint(20)
🔑 **truck_id**	bigint(20)