1.

**Entities:**

Driver(**Employee number**, name, adress, phone number)

Bus(**Registration number**, number of passengers, decks)

Route(**Route number**, average passengers a day)

Town(name)

Garage()

Stage()

2.

**Relationships:**

Drivers allocated to a Stage many to one

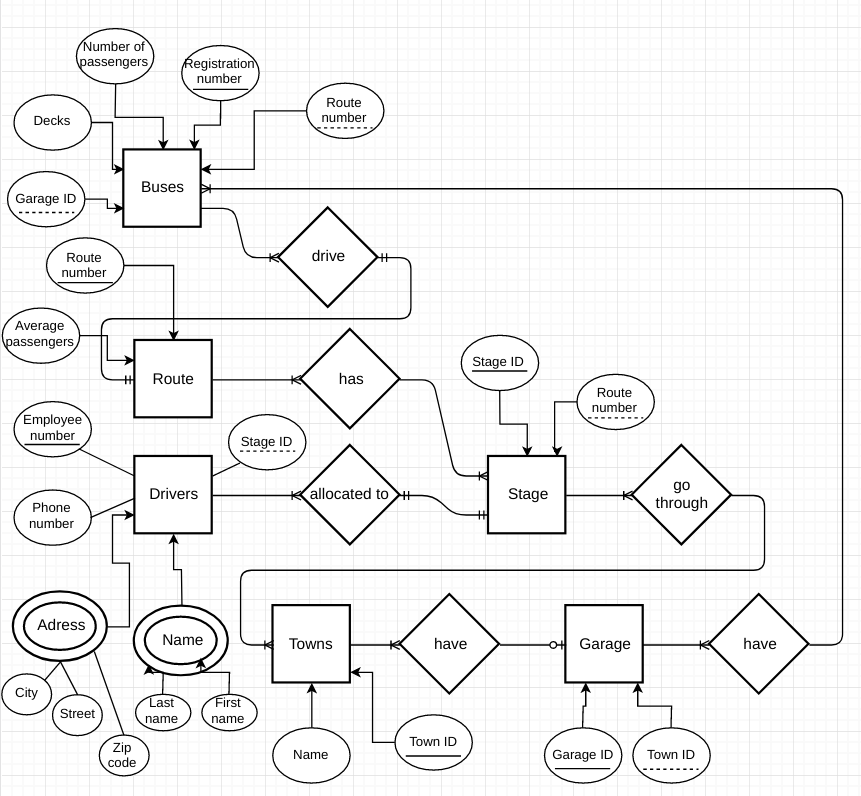
Buses drive a Route many to one

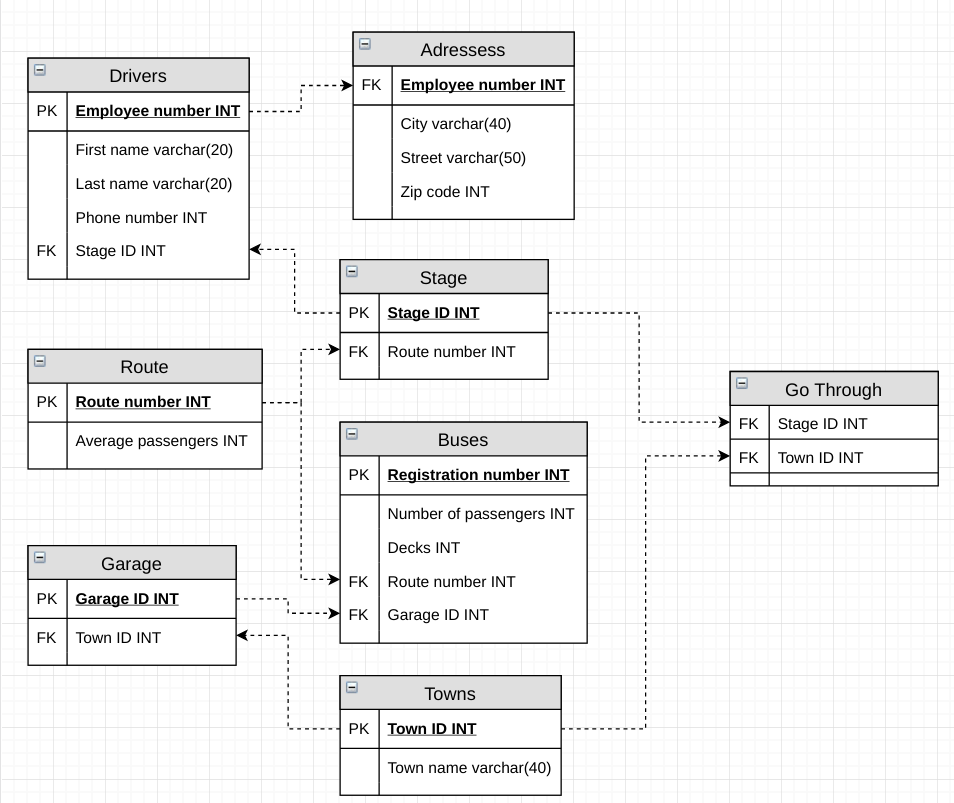
Route has Stages one to many

Town has a Garage one to one optional

Stages go through towns many to many

Garage has buses one to many

3/4.

5/6.

7.

DROP DATABASE IF EXISTS 2109013290\_bus\_db;

CREATE DATABASE 2109013290\_bus\_db;

USE 2109013290\_bus\_db;

#Route

CREATE TABLE route (

route\_number INT PRIMARY KEY NOT NULL,

average\_passengers INT

);

#Stage

CREATE TABLE stage(

stage\_ID INT PRIMARY KEY NOT NULL,

route\_number INT NOT NULL,

#Aðkomulyklar

CONSTRAINT route\_number\_FK FOREIGN KEY (route\_number) REFERENCES route(route\_number)

);

#Towns

CREATE TABLE towns(

town\_ID INT PRIMARY KEY NOT NULL,

town\_name VARCHAR(40) NOT NULL

);

#Go Through

CREATE TABLE go\_through (

stage\_ID INT NOT NULL,

town\_ID INT NOT NULL,

#Aðkomulyklar

CONSTRAINT stage\_ID\_FK FOREIGN KEY (stage\_ID) REFERENCES stage (stage\_ID),

CONSTRAINT town\_ID\_FK FOREIGN KEY (town\_ID) REFERENCES towns (town\_ID)

);

#Garage

CREATE TABLE garage(

garage\_ID INT PRIMARY KEY NOT NULL,

town\_ID INT NOT NULL,

#Aðkomulyklar

CONSTRAINT town\_ID\_FK2 FOREIGN KEY (town\_ID) REFERENCES towns(town\_ID)

);

#Buses

CREATE TABLE buses(

registration\_number INT PRIMARY KEY NOT NULL,

number\_of\_passengers INT,

decks INT(1),

route\_number INT NOT NULL,

garage\_ID INT NOT NULL,

#Aðkomulyklar

CONSTRAINT route\_number\_FK2 FOREIGN KEY (route\_number) REFERENCES route(route\_number),

CONSTRAINT garage\_ID\_FK FOREIGN KEY (garage\_ID) REFERENCES garage(garage\_ID)

);

#Drivers

CREATE TABLE drivers(

employee\_number INT PRIMARY KEY NOT NULL,

first\_name VARCHAR(20) NOT NULL,

last\_name VARCHAR(20) NOT NULL,

phone\_number INT,

stage\_ID INT NOT NULL,

#Aðkomulyklar

CONSTRAINT stage\_ID\_FK2 FOREIGN KEY (stage\_ID) REFERENCES stage(stage\_ID)

);

#Adressess

CREATE TABLE adressess(

employee\_number INT NOT NULL,

city VARCHAR(40) NOT NULL,

street VARCHAR(50) NOT NULL,

zipcode INT NOT NULL,

#Aðkomulyklar

CONSTRAINT employee\_number\_FK FOREIGN KEY (employee\_number) REFERENCES drivers(employee\_number)

);