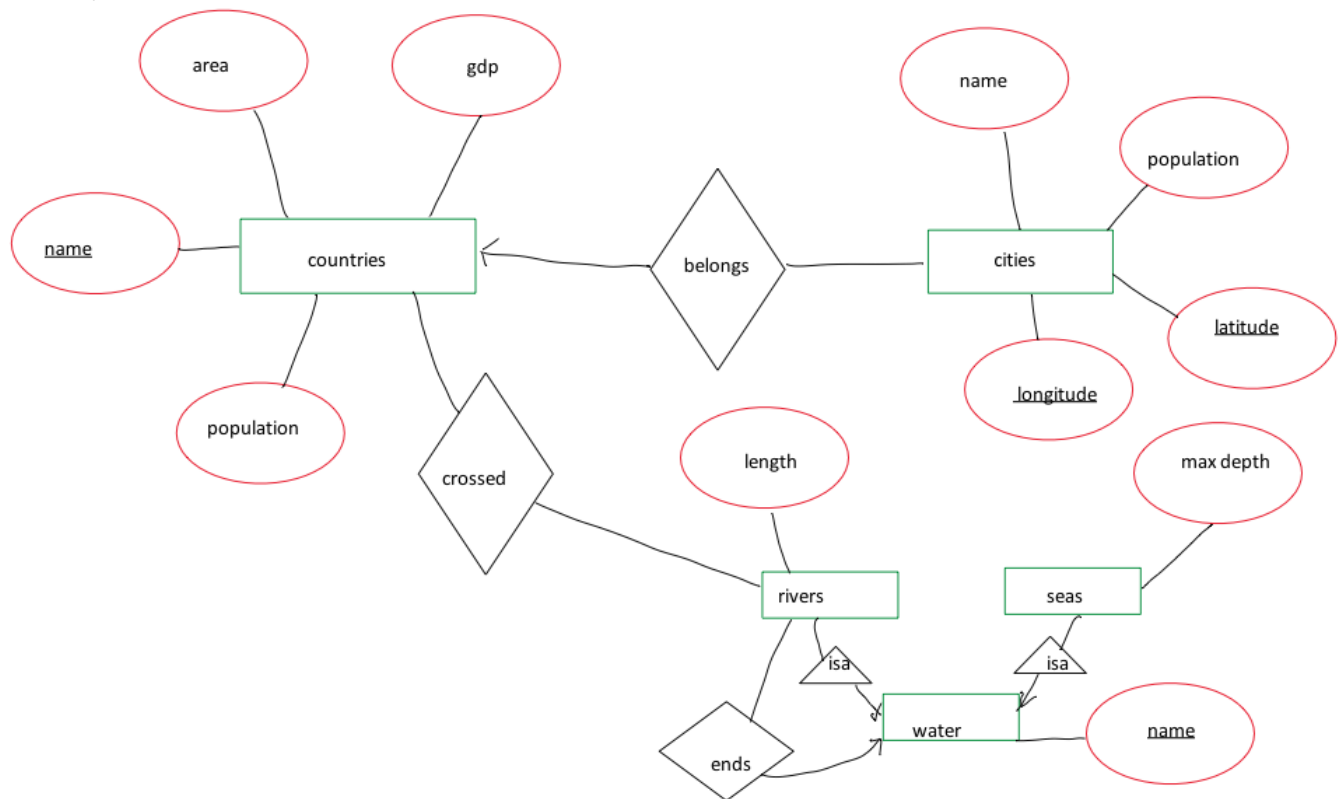


Part 1 q1



q2

```

create table InsuranceCo(name varchar(30) primary key, phone int);
create table Vehicle(licencePlate varchar(30) primary key,
                    year int,
                    maxLiability int,
                    ssn int,
                    name varchar(30),
                    FOREIGN KEY (name) references InsuranceCo(name),
                    FOREIGN KEY (ssn) references Person(ssn));
create table Car(licencePlate varchar(30) primary key,
                make varchar(30),
                FOREIGN KEY (licencePlate) references Vehicle(licencePlate));
create table Truck(licencePlate varchar(30) primary key,
                  capacity int,
                  driverID int,
                  FOREIGN KEY (licencePlate) references Vehicle(licencePlate),
                  FOREIGN KEY (driverID) references Driver(driverID));
create table Person(ssn int primary key, name varchar(30));
create table Driver(driverID int primary key,
                  ssn int,
  
```

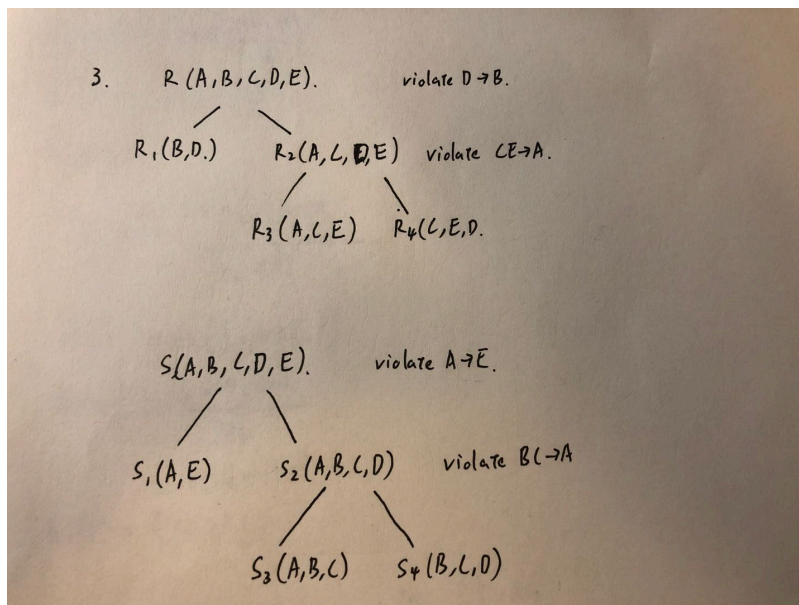
```

FOREIGN KEY (ssn) references Person(ssn));
create table nonProfessionalDriver(ssn int primary key,
FOREIGN KEY(ssn) references Driver(driverID));
create table ProfessionalDriver(ssn int primary key,
medicalHistory varchar(30)
FOREIGN KEY (ssn) references Driver(driverID));
create table Drives(licencePlate varchar(30)
ssn int,
FOREIGN KEY (licencePlate) references Vehicle(licencePlate),
FOREIGN KEY (ssn) references Person(ssn));

```

-- To represent the relationship "insures" in the E/R diagram. I put the primary
-- key of InsuranceCo "name" into the Vehicle table.

-- Drives are many to many relations while operates are many to one relations.
-- The drives need extra table while operates do not.



4. a) $A \rightarrow A$ b) $A \rightarrow B$ c) $A \rightarrow B$
 $B \rightarrow B$ $B \rightarrow C$ $B \rightarrow A$
 $C \rightarrow C$ $C \rightarrow D$ $C \rightarrow ABD$
 $D \rightarrow D$ $D \rightarrow A$ $D \rightarrow ABC$