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CSE 414 HW7

1.

A close up of a map

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2.a)

CREATE TABLE Vehicle (

licensePlate VARCHAR(30) PRIMARY KEY,

year int,

insuranceCoName VARCHAR(30),

maxLiability int,

ssn int

)

CREATE TABLE InsuranceCo (

name VARCHAR(30) PRIMARY KEY,

phone int

)

CREATE TABLE Person (

ssn int PRIMARY KEY,

name VARCHAR(30)

)

CREATE TABLE Driver (

ssn int PRIMARY KEY REFERENCES Person (ssn),

driverID int

)

CREATE TABLE NonProfessionalDriver (

ssn int PRIMARY KEY REFERENCES Driver (ssn)

)

CREATE TABLE ProfessionalDriver (

ssn int PRIMARY KEY REFERENCES Driver (ssn),

medicalHistory VARCHAR(30)

)

CREATE TABLE Car (

licensePlate VARCHAR(30) PRIMARY KEY REFERENCES Vehicle(licensePlate),

make VARCHAR(30)

)

CREATE TABLE Truck (

licensePlate VARCHAR(30) PRIMARY KEY REFERENCES Vehicle(licensePlate),

capacity int,

ssn int FOREIGN KEY REFERENCES ProfessionalDriver (ssn)

)

CREATE TABLE Drives (

ssn int FOREIGN KEY REFERENCES NonProfessionalDriver(ssn),

licensePlate VARCHAR(30) FOREIGN KEY REFERENCES Vehicle(licensePlate)

)

b) The Insures has a N-1 relationship with “Vehicle” and “InsuranceCo”. So, instead of creating a new table, I took the primary key of “InsuranceCo” and the attributes in “Insures” and input them into Vehicle table. This would prevent creation of unnecessary tables.

c) Because “Drives” represents the N-N relationship between “NonProfessionalDriver” and “Car”, I needed to create a new table to represent the cross product of the two entities. “Operates” represents a N-1 relationship which means it is not necessary to create another table, similar to the “Insures” in previous answer.

3) A close up of text on a white background

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4) a) ABCD -> ABCD

b) A -> B, B -> C, C -> D, D -> A

c) A -> B, B -> A, C -> ABD, D -> ABC