COMP 306: Database Management Systems

Spring 2022 - Homework #1

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**Question 1.**

*part a.*

CREATE TABLE Vehicle(

vin: INT

model: CHAR(30)

price: INT

PRIMARY KEY (vin) )

CREATE TABLE Salesperson(

sid: INT

name: CHAR(30)

PRIMARY KEY (sid) )

CREATE TABLE Customer(

ssn: INT

name: CHAR(30)

state: CHAR(30)

street: CHAR(30)

city: CHAR(30)

PRIMARY KEY (ssn) )

CREATE TABLE Car(

vin: INT

engine\_size: INT

PRIMARY KEY (vin),

FOREIGN KEY vin REFERENCES Vehicle)

CREATE TABLE Truck(

vin: INT

tonnage: INT

PRIMARY KEY (vin),

FOREIGN KEY vin REFERENCES Vehicle)

CREATE TABLE SUV(

vin: INT

no\_seats: INT

PRIMARY KEY (vin),

FOREIGN KEY vin REFERENCES Vehicle)

CREATE TABLE Sale(

vin: INT

sid: INT

ssn: INT

date: CHAR(10)

PRIMARY KEY (vin, sid, ssn),

FOREIGN KEY vin REFERENCES Vehicle,

FOREIGN KEY sid REFERENCES Salesperson,

FOREIGN KEY ssn REFERENCES Customer)

*part b.*

CREATE TABLE Book(

ISBN: INT

title: CHAR(30)

price: INT

front\_cover\_type: CHAR(30)

no\_pages: INT

customer\_id: INT

referenced\_id: INT

payment\_method: CHAR(30)

purchase\_date: CHAR(30)

borrow\_date: CHAR(30)

return\_date: CHAR(30)

PRIMARY KEY (ISBN)

FOREIGN KEY customer\_id REFERENCES CUSTOMER(id)

FOREIGN KEY referenced\_id REFERENCES RegisteredCustomer(id)

)

CREATE TABLE Author(

id: INT

name: CHAR(30)

PRIMARY KEY (id))

CREATE TABLE Customer(

id: INT

name: CHAR(30)

PRIMARY KEY (id))

CREATE TABLE RegisteredCustomer(

id: INT

reg\_date: CHAR(30)

PRIMARY KEY (id),

FOREIGN KEY id REFERENCES Customer)

CREATE TABLE VisitingCustomer(

id: INT

address: CHAR(30)

phone: INT

PRIMARY KEY (id)

FOREIGN KEY id REFERENCES Customer)

CREATE TABLE WrittenBy(

id: INT

ISBN: INT

PRIMARY KEY (id, ISBN),

FOREIGN KEY id REFERENCES Author,

FOREIGN KEY ISBN REFERENCES Book)

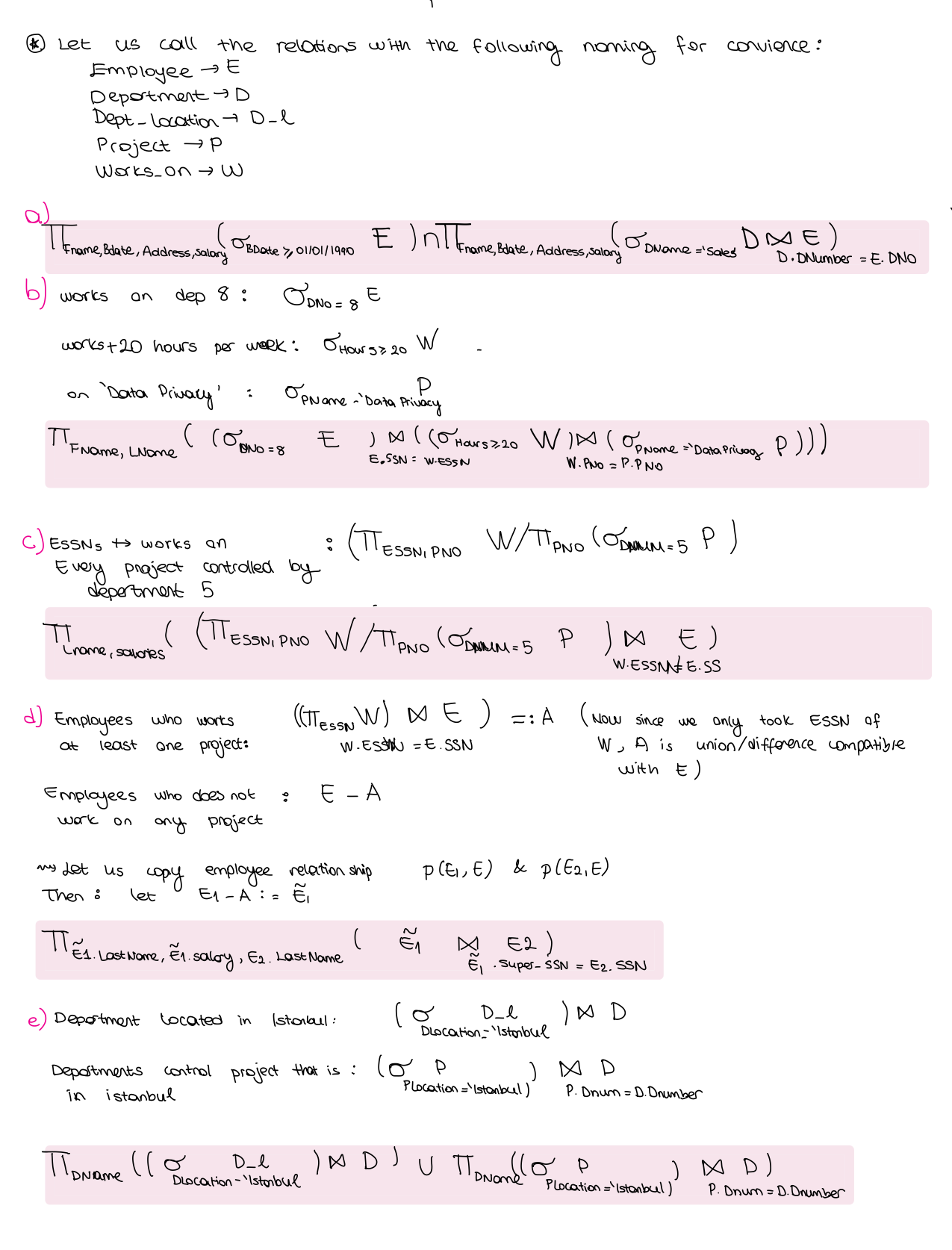
CREATE TABLE CustomerMail(

id: INT

mail\_address: CHAR (30)

PRIMARY KEY (id),

FOREIGN KEY id REFERENCES Customer)

**Question 2.**

