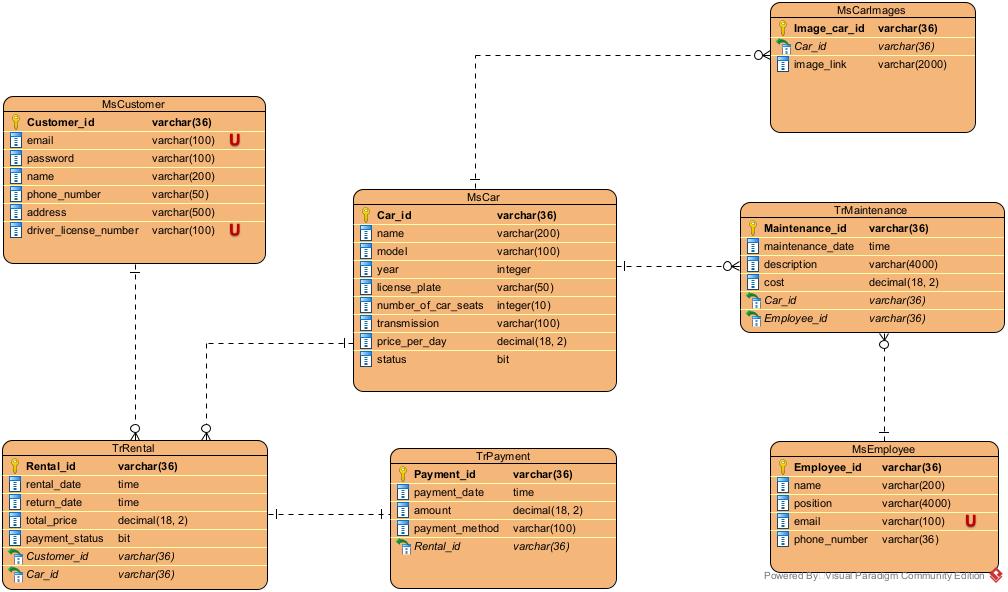
1. Perbaiki diagram ERD diatas, berdasarkan pelatihan yang sudah anda ikuti, menurut anda apa yang kurang tepat? Jika ada, silahkan buat diagram ERD versi anda untuk memperbaiki



//Create MsCustomer table

CREATE TABLE MsCustomer (

Customer\_id VARCHAR(36) PRIMARY KEY,

email VARCHAR(100) UNIQUE NOT NULL,

password VARCHAR(100) NOT NULL,

name VARCHAR(200) NOT NULL,

phone\_number VARCHAR(50),

address VARCHAR(500),

driver\_license\_number VARCHAR(100) UNIQUE NOT NULL

);

//Create MsCar table

CREATE TABLE MsCar (

Car\_id VARCHAR(36) PRIMARY KEY,

name VARCHAR(200) NOT NULL,

model VARCHAR(100) NOT NULL,

year INT NOT NULL,

license\_plate VARCHAR(50) NOT NULL,

number\_of\_car\_seats INT NOT NULL,

transmission VARCHAR(100) NOT NULL,

price\_per\_day DECIMAL(18,2) NOT NULL,

status BIT NOT NULL,

TrRentalRental\_id VARCHAR(36)

);

//Create MsCarImages table

CREATE TABLE MsCarImages (

Image\_car\_id VARCHAR(36) PRIMARY KEY,

Car\_id VARCHAR(36) NOT NULL,

image\_link VARCHAR(2000) NOT NULL,

FOREIGN KEY (Car\_id) REFERENCES MsCar(Car\_id)

);

//Create MsEmployee table

CREATE TABLE MsEmployee (

Employee\_id VARCHAR(36) PRIMARY KEY,

name VARCHAR(200) NOT NULL,

position VARCHAR(4000) NOT NULL,

email VARCHAR(100) UNIQUE NOT NULL,

phone\_number VARCHAR(36)

);

//Create TrRental table

CREATE TABLE TrRental (

Rental\_id VARCHAR(36) PRIMARY KEY,

rental\_date DATETIME2 NOT NULL,

return\_date DATETIME2,

total\_price DECIMAL(18,2) NOT NULL,

payment\_status BIT NOT NULL,

Customer\_id VARCHAR(36) NOT NULL,

FOREIGN KEY (Customer\_id) REFERENCES MsCustomer(Customer\_id)

);

//Create TrPayment table

CREATE TABLE TrPayment (

Payment\_id VARCHAR(36) PRIMARY KEY,

payment\_date DATETIME2 NOT NULL,

amount DECIMAL(18,2) NOT NULL,

payment\_method VARCHAR(100) NOT NULL,

Rental\_id VARCHAR(36) NOT NULL,

FOREIGN KEY (Rental\_id) REFERENCES TrRental(Rental\_id)

);

//Create TrMaintenance table

CREATE TABLE TrMaintenance (

Maintenance\_id VARCHAR(36) PRIMARY KEY,

maintenance\_date DATETIME2 NOT NULL,

description VARCHAR(4000),

cost DECIMAL(18,2) NOT NULL,

Car\_id VARCHAR(36) NOT NULL,

Employee\_id VARCHAR(36) NOT NULL,

FOREIGN KEY (Car\_id) REFERENCES MsCar(Car\_id),

FOREIGN KEY (Employee\_id) REFERENCES MsEmployee(Employee\_id)

);

// Add Foreign Key Constraint for TrRentalRental\_id in MsCar

ALTER TABLE MsCar

ADD CONSTRAINT FK\_Car\_Rental

FOREIGN KEY (TrRentalRental\_id) REFERENCES TrRental(Rental\_id);

1. Laporkan dalam bentuk document, masukkan ss sebelum dan sesudah melakukan improvement serta jelaskan Langkah Langkah yang ada anda lakukan untuk meningkatkan performa dari query yang telah dilakukan

Sebelum

A screenshot of a computer code

Description automatically generated

Sesudah

A screenshot of a computer code

Description automatically generated

(1) Mengganti SELECT \* menjadi pemilihan kolom spesifik (cost, name, description, maintenance\_date) untuk mengurangi beban transfer data

(2) Memperbaiki kondisi JOIN dari tm.car\_id menjadi mc.Car\_id untuk memastikan akurasi data

(3) Memberikan alias yang jelas untuk setiap kolom agar lebih mudah dibaca, sambil tetap mempertahankan penggunaan NOLOCK untuk mengurangi blocking pada operasi read-only.