
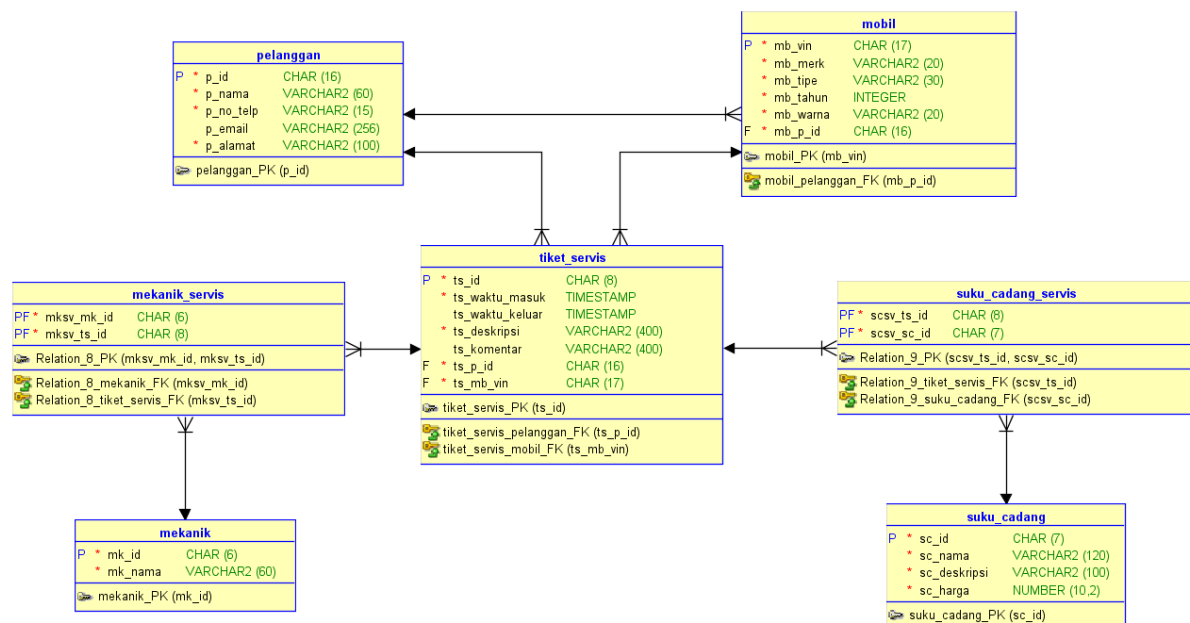


		<p><u>SOAL PRAKTIKUM MODUL 2</u></p> <p>Departemen Teknik Informatika</p> <p>Fakultas Teknologi Elektro dan Informatika Cerdas</p> <p>Institut Teknologi Sepuluh Nopember</p>					
TA 2023/2024 Semester Gasal							
Mata Kuliah	:	Sistem Basis Data (EF4104)	Waktu	:	12.40 – 14.20 (100 menit)		
Hari, Tanggal	:	Sabtu, 11 November 2023	Lokasi	:	Teknik Informatika		
Materi Modul	:	DDL dan DML	Sifat Ujian	:	Open Catatan		
Dosen	:	Tim Dosen Sistem Basis Data					

Antera Car Service



*** Note: PDM is prepared using Oracle SQL Developer Data Modeler.**

1. Mr. Popo owns a car service business called Antera. He is a very diligent person in running his business, which has made his business popular among customers. With an increasing number of customers, Mr. Popo needs more mechanics and spare parts to be able to serve customers to the maximum. Mr. Popo does not want to lose his customers, so he wants to record all the entities that occur in his car service business. You, as informatics students, want to help Mr. Popo organize his business database. Create a database according to the above PDM using the CREATE command.

Note: Use default values such as current_timestamp for ts_waktu_masuk and ts_waktu_keluar.

2. Mr. Popo is a forgetful person. He wants to add suppliers for each spare part in his business. Each supplier can supply many types of spare parts. However, each spare part only has one supplier. Mr. Popo wants to store supplier data and its types as follows:
 - sp_id CHAR (6) PK
 - sp_nama VARCHAR (60)
 - sp_no_telp VARCHAR (15)
 - sp_email VARCHAR (256)
 - sp_alamat VARCHAR (100)

3. The Antera Pak Popo car service business is growing with your help in creating a database for him. Mr. Popo only wants to see his business run without him directly involved in its operations. Mr. Popo needs employees for various positions. Change the name of the mechanic table to 'pegawai' (no need to change column names). Then, create a table named 'posisi' to store the job descriptions of employees. The 'posisi' table only contains:
 - ps_id CHAR(6) PK
 - ps_nama VARCHAR(15)

Make ps_id the PRIMARY KEY. Ensure that the columns ps_id and ps_nama cannot be NULL (without altering the table). Create a foreign key in the pegawai table that references ps_id.

4. You are students who are proficient in the Database System course. You know that the employee positions at Antera's car service business seem not to require many positions. Therefore, you suggest to Mr. Popo to delete the 'posisi' table and add the 'mk_posisi' column to the pegawai table. Your suggestion is gladly accepted by Mr. Popo :)
5. The database design is complete. Next, assist Mr. Popo in entering data into each table, namely:

pelanggan				
p_id	p_nama	p_no_telp	p_email	p_alamat
3225011201880002	Andy Williams	62123456789	andy@gmail.com	Jl. Apel no 1
3525010706950001	Marshall Paul	621451871011	paulan@gmail.com	Jl. Jeruk no 12
3525016005920002	Kazuya Tanaka	62190129190	tanaka@gmail.com	Jl. JKT no 48
3975311107780001	Budi Prutomo	621545458901	NULL	Jl. Nanas no 45
3098762307810002	Razai Ambudi	621898989102	NULL	Jl. Mangga no 2

mobil					
mb_vin	mb_merk	mb_tipe	mb_tahun	mb_warna	mb_p_id
JN8AZ1MW4BW678706	Nissan	Murano	2011	biru	3525010706950001
2LMTJ8JP0GSJ00175	Lincoln	MKX	2016	merah	3525016005920002
ZFF76ZHT3E0201920	Ferrari	Ferrari	2014	merah	3975311107780001
1HGCP26359A157554	Honda	Accord	2009	hitam	3225011201880002
5YJSA1DN5CFP01785	Tesla	Model S	2012	putih	3098762307810002

pegawai		
mk_id	mk_nama	mk_posisi
MK0001	Walter Jones	mekanik
MK0002	Kentaki Veraid	kasir
MK0003	Leo	mekanik
MK0004	Reyhand Janita	pencuci
MK0005	Elizabeth Alexandra	mekanik

supplier				
sp_id	sp_nama	sp_no_telp	sp_email	sp_alamat
SP0001	Indotrading	6282283741247	indotrading@rocketmail.com	Jl. Bambu no 5
SP0002	Jayasinda	628227428238	Jayasinda@yahoo.com	Jl. Padi no 12
SP0003	SAS Autoparts	6282212382311	sasparts@gmail.com	Jl. Sorghum no 24

suku_cadang

sc_id	sc_nama	sc_deskripsi	sc_harga
SC00001	Damper	Damper Per Belakang Original	800000.00
SC00002	Coil Ignition	Coil Ignition Denso Jepang	550000.00
SC00003	Selang Filter	Selang Filter Udara Original	560000.00
SC00004	Bushing	Bushing Upper Arm Original	345000.00
SC00005	Radiator Racing	Radiator Racing Kotorad Manual Diesel	6750000.00

tiket_servis						
ts_id	ts_waktu_masuk	ts_waktu_keluar	ts_deskripsi	ts_komentar	ts_p_id	ts_mb_vin
TS000001	2023-11-05 08:00:00	2023-11-05 16:30:00	Mobil mengalami getaran yang tidak normal saat berkendara. Untuk memperbaikinya, kami akan mengganti damper yang aus dan juga bushing yang telah rusak.	Saya sangat puas dengan perbaikan ini. Mobil saya sekarang berjalan lebih halus dan getarannya hilang. Terima kasih atas pelayanan yang baik!	3098762 3078100 02	5YJSA1D N5CFP017 85
TS000002	2023-11-05 09:15:00	2023-11-05 17:45:00	Mesin mobil sering mati secara tiba-tiba atau tidak berjalan dengan baik. Permasalahannya terletak pada coil ignition yang bermasalah. Kami akan menggantinya dan melakukan pengaturan ulang untuk memastikan kinerja mesin yang lebih baik.	Mesin mobil saya sekarang berjalan seperti baru lagi. Tidak ada lagi mati mendadak, dan kinerjanya sangat baik. Pelayanan yang cepat dan profesional.	3975311 1077800 01	ZFF76ZH T3E02019 20

TS00 0003	2023-11-06 10:30:00	2023-11-06 18:15:00	Untuk meningkatkan kinerja pendinginan mesin, kami akan membersihkan radiator dan memeriksa apakah ada kerusakan atau kebocoran. Jika diperlukan, kami akan mengganti komponen yang rusak.	Mobil saya sekarang tidak lagi mengalami masalah panas berlebihan. Radiator berfungsi dengan baik, dan saya merasa aman saat berkendara. Terima kasih atas perbaikan yang berkualitas	3525016 0059200 02	2LMTJ8JP 0GSJ0017 5
TS00 0004	2023-11-06 11:45:00	2023-11-06 19:30:00	Mobil mengalami masalah saat memasok bahan bakar ke mesin. Masalah ini terjadi karena selang filter bahan bakar yang tersumbat. Kami akan menggantinya sehingga aliran bahan bakar menjadi lancar kembali.	Setelah penggantian selang filter bahan bakar, mobil saya kembali berjalan dengan lancar. Tidak ada lagi masalah pengiriman bahan bakar. Pelayanan yang sangat membantu	3525010 7069500 01	JN8AZ1M W4BW678 706
TS00 0005	2023-11-06 12:30:00	2023-11-06 20:00:00	Mobil akan menjalani pemeliharaan komprehensif, termasuk pemeriksaan seluruh sistem. Ini termasuk penggantian damper yang aus, coil ignition yang bermasalah, serta pemeriksaan dan perawatan selang filter dan radiator racing. Semua suku cadang yang perlu diganti akan	Pemeliharaan komprehensif yang telah dilakukan membuat mobil saya seperti baru. Semua masalah telah diperbaiki, dan saya merasa yakin dengan kualitas perbaikan yang diberikan. Terima kasih atas kerja kerasnya	3225011 2018800 02	1HGCP26 359A1575 54

			diperbaiki agar mobil berfungsi seperti semula.			
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mekanik_servis	
mksv_ts_id	mksv_mk_id
TS000001	MK0005
TS000002	MK0003
TS000002	MK0004
TS000003	MK0005
TS000004	MK0003
TS000005	MK0001
TS000005	MK0005
TS000005	MK0004

suku_cadang_servis	
scsv_ts_id	scsv_sc_id
TS000001	SC00001
TS000001	SC00004
TS000002	SC00002
TS000003	SC00005
TS000004	SC00003
TS000005	SC00001
TS000005	SC00002
TS000005	SC00003
TS000005	SC00005

DML

6. Update the departure time on the service ticket using the current time.

Hint: NOW(), current_timestamp, localtime, localtimestamp

7. There is an error in customer data with id 3225011201880002, namely the name, email, and address should be Andi Williams, andi@bing.com, and Jl. Koreka no 15, respectively. Please make the data changes based on the provided revision.
8. Create a foreign key on the spare parts table that references the supplier ID. Then, establish a relationship between spare parts and suppliers with the following conditions:
 - Supplier SP0001 supplies spare part SC00004
 - Supplier SP0002 supplies spare parts SC00001 and SC00003
 - Supplier SP0003 supplies spare parts SC00002 and SC00005

Hint: First, add a new nullable foreign key. Ensure that all components have a supplier, then change the foreign key to not null to ensure that new components always have a supplier.

9. There has been an increase in the purchase price of spare parts from all suppliers. Mr. Popo wants to raise the selling price by 10% for spare parts that are priced over 500,000. Help Mr. Popo to adjust the prices of the specified spare parts.
10. On November 10, 2023, at 09:05, a customer named Kazuya Tanaka brought a car with VIN: 2LMTJ8JP0GSJ00175 to Antera Car Service. The respective mechanic (MK0001) described, " Mobil mengalami kerusakan damper belakang. Terdapat kebocoran cairan hidrolik dan kondisi damper sudah aus. Kami akan mengganti damper belakang " Add this ticket to the database. Note that this service requires rear damper spare parts. Add the data to the appropriate table.
11. From the previous question, add the service completion time using the current time. As Kazuya, you found a small scratch on the car. Add a less satisfactory comment on the service. Upon investigation, an employee named Walter Jones is frequently negligent in his work. After reading Kazuya's comment, Mr. Popo decides to terminate the employment of that employee. Delete the data of that employee from the database.
12. Mr. Popo wants to delete all data in the mechanic_service table. Help Mr. Popo to do this.