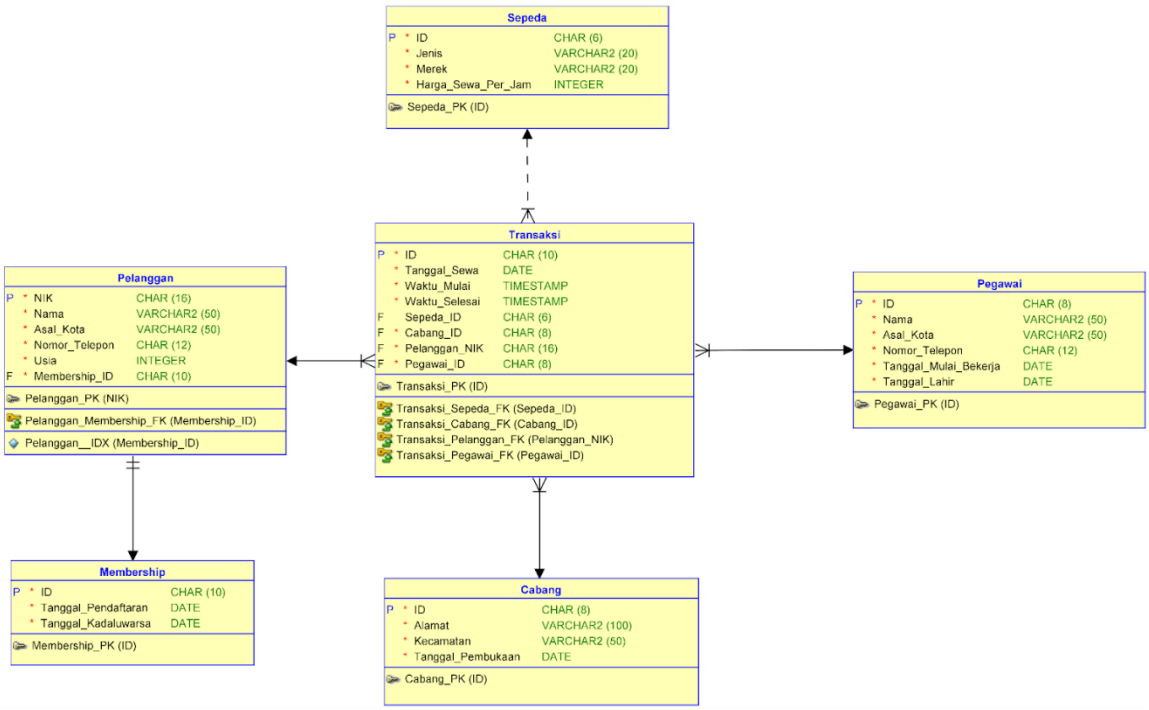
TA 2023/2024 Semester Gasal	**SOAL PRAKTIKUM MODUL 3** **Departemen Teknik Informatika** Fakultas Teknologi Elektro dan Informatika Cerdas Institut Teknologi Sepuluh Nopember	

Mata Kuliah	:	Sistem Basis Data (EF4104)	Waktu	:	10.10 – 11.50 (100 menit)
Hari, Tanggal	:	Kamis, 30 November 2023	Lokasi	:	Teknik Informatika
Materi Modul	:	Kueri	Sifat Ujian	:	Open Catatan
Dosen	:	Tim Dosen Sistem Basis Data			

PDM



Note:

- PDM is created using Oracle Data Modeler

Use this file in working on the problem!

- MYSQL: https://drive.google.com/file/d/1d7_W6VgEPPWVOyAajZEiaz1BGCgsKIdv/view?usp=drive_link

Use the following format to answer the questions!
https://its.id/m/FormatJawabanPraktikum3SBD

Create a query to get the information requested by each question!

1. Display the NIK (Customer ID), Customer Name, and Customer City of customers who already have a Membership and have transactions with a start time after January 1, 2023, at 8:00 AM (2023-01-01 08:00:00).

2. Show all data from the Branch (Cabang) table and the transaction count at each branch.

3. Display customer data who are above the average age of employees. In MySQL, use TIMESTAMPDIFF(YEAR, birth_date_column, CURDATE()) to get the current age.

4. Obtain the bike ID where it has the brand with the highest number of rentals in each branch, display the bike ID in one cell for all bikes using the GROUP_CONCAT() function. (columns: branch ID, brand transaction count, and bike ID)

5. Are there customers who registered on the date they rented a bike? If yes, display the customer name, membership ID, and the total number of transactions they have done (assuming there are several customers, even though the query result shows only one), sort the data based on customers with the highest number of transactions.

6. Display Employee Name, Start Date, and the number of transactions they handled for employees who started working from the year 2023. Display the transaction count as the 'Number of Transactions' column.

7. Display the bike types along with the number of bikes rented for this month. Hint: use the CURRENT_DATE() function to get the current date.

8. Display the Name, Phone Number, and Membership ID of customers who rented the 'Gunung' bike more than once.

9. Display the Transaction ID, rental date, rental duration, bike type, and total rental cost where the duration exceeds the overall average duration of rentals.

   In this case, you can use the built-in TIMESTAMPDIFF function to calculate the difference between Waktu_Mulai and Waktu_Selesai in the specified unit (for the above case, in HOUR), and the result is stored in the Duration column in the query result. An example of using the TIMESTAMPDIFF function in other cases is: TIMESTAMPDIFF(DAY, First_Date, Second_Date)

10. Display the Branch ID and the number of rental transactions performed for the branch with the fewest transactions.

    Do not use LIMIT 1 because there may be more than 1 branch with the fewest transactions.