2023/2024 AY Odd Semester		**MODULE 3 PRACTICUM EXAMINATION** **Departemen Teknik Informatika** Fakultas Teknologi Elektro dan Informatika Cerdas Institut Teknologi Sepuluh Nopember			
Course	:	Database System (EF4104)	Time	:	4 Days
Day, Date	:	22 - 25 November 2024	Location	:	Informatics
Module Material	:	Query	Exam type	:	Closed Book
Lecturer	:	Database System Lecturer Team			

"NeoNest Gaming Shop"

1. Case Study

NeoNest, a new gaming store, is in need of a comprehensive database system to streamline its operations and effectively manage transactions. The database should capture information about **employees**, **customers**, **items**, **purchase transactions, and membership**.

NeoNest is staffed with several employees, each assigned to different sections based on the store's requirements. To facilitate **employee** management, the store owner will input employee data into the database, including details such as name, telephone number, address, and job section (e.g., sales associate, cashier, cleaning service, etc.).

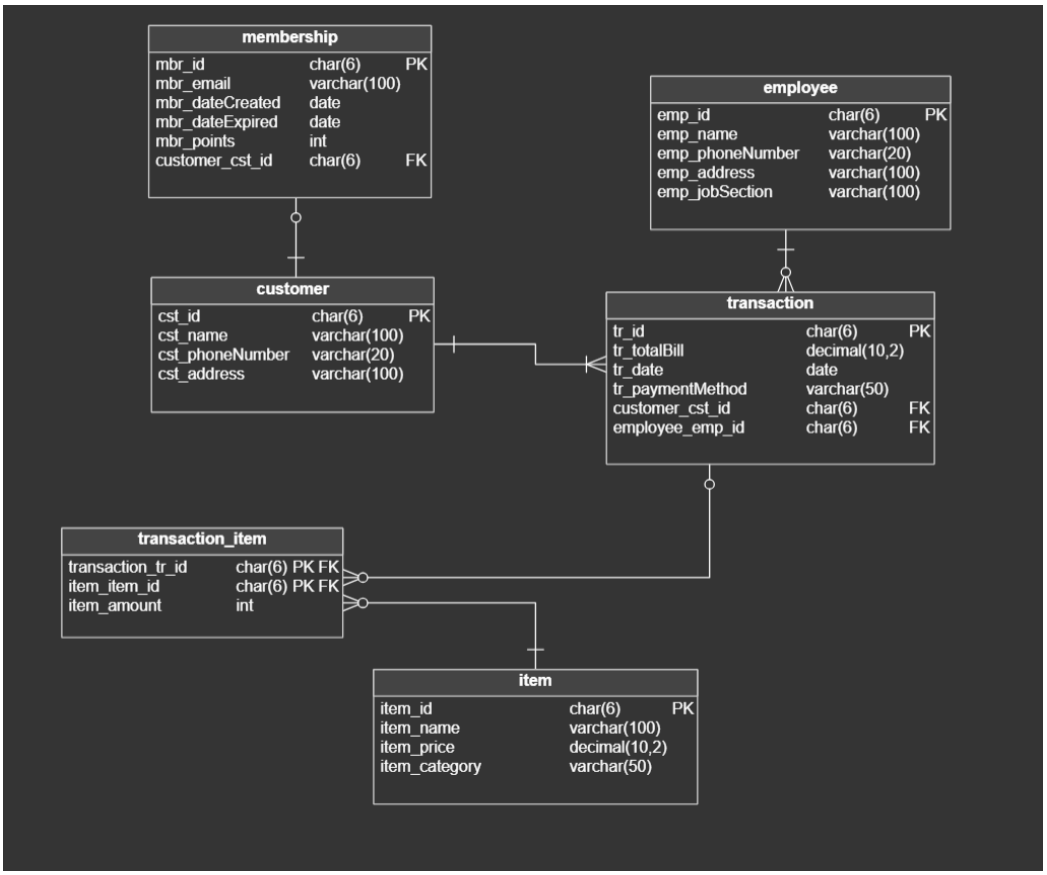
In the purchase **transactions**, the system will record the transaction date, employee id, customer id, total price, and payment method. Employees will also input NeoNest **customer** data such as name, telephone number, and address into the database.

Every gaming **item** sold will be updated by the employee in the database, encompassing details like item name, item price, and category. The Store also has a **membership** system that gives some advantage to the customer. The data that will be recorded to the database are email, date created, date expired, and membership points.

2. Assumption :

- Each customer can have a membership, but it is not mandatory that customers should have membership. And also each membership should be owned by one customer.
- Each employee has only one job section and one phone number.
- Every transaction in the Gaming House will be stored in a different entity called transaction.
- NeoNest Gaming Store uses a 6-digit ID for each table. Example for transaction entities TR0001, TR0002, TR0003
- Not all employee have to handle transaction because maybe they have the different job section

3. Physical Data Model (PDM)



4. DDL & DML

- Link: https://its.id/m/InsertNeoNest

5. Queries

a. Basic Query

1. Show the names of members whose total points are more than 100 and less than 115.
2. Show all transactions that the payment method is cash.

b. Aggregate Query

3. Show the customer id and the average of his total bills that is more than 5 million.
4. Show the total transaction that uses cash.
5. Display customer name, customer phone, member email, totalTransaction of the top 3 customers that join membership with the highest number of transactions.

c. Nested Query

6. Display the customer average total bill and the customer id whose average total bill is more than the average of all transactions at the store. Then sort the data from the largest average value.
7. Show employees that handle most of the transaction.
8. Show the customer's id, name, and the total transaction bill with the total bill greater than the average bill of all customers.
9. Display the customer that have more than one transaction
10. Show Items not yet purchased by customers.