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Matakuliah : Data Warehouse dan Business Intelligent

TUGAS 1

1. Write a CREATE TABLE statement for the Customer table. Choose data types appropriate for the DBMS used in your course. All columns are required (not null).
   Answer:

```
MariaDB [dwbi]> CREATE TABLE Customer(
    -> custno char(10) not null,
    -> custname text not null,
    -> address text not null,
    -> Internal enum('Y','N') not null,
    -> contact varchar(30) not null,
    -> phone int(11) not null,
    -> city varchar(30) not null,
    -> state char(10) not null,
    -> zip int(11) not null);
Query OK, 0 rows affected (0.03 sec)

MariaDB [dwbi]>
```

2. Write a CREATE TABLE statement for the Facility table. Choose data types appropriate for the DBMS used in your course. All columns are required (not null).
   Answer:

```
MariaDB [dwbi]> CREATE TABLE Facility(
    -> facno char(10) not null,
    -> facname varchar(255) not null);
Query OK, 0 rows affected (0.03 sec)

MariaDB [dwbi]>
```

3. Write a CREATE TABLE statement for the Location table. Choose data types appropriate for the DBMS used in your course. LocName column is required (not null).
   Answer:

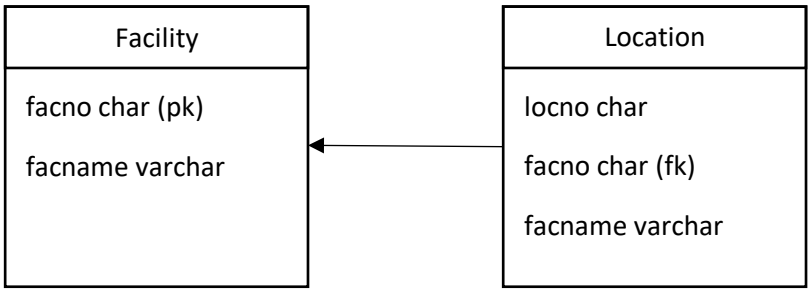
```
MariaDB [dwbi]> CREATE TABLE Location(
    -> locno char(10) null,
    -> facno char(10) null,
    -> locname varchar(255) not null);
Query OK, 0 rows affected (0.03 sec)
```

4. Identify the foreign key(s) and 1-M relationship(s) among the Customer, Facility, and Location tables. For each relationship, identify the parent table and the child table.

   Answer:

   From the three tables, which has a foreign key only the Location table. The foreign key in the location table is the facno attribute which refers to the facno attribute in the Facility table.

   1-M relationship is described as below:



   Location as child table and Facility as parent table. The relationship meaning is 1 facno in Facility can accommodate more than 1 Location.

5. Extend your CREATE TABLE statement from problem (3) with referential integrity constraints.

   Answer:

```
MariaDB [dwbi]> alter table `Location` add CONSTRAINT `LocationFK` foreign key(`facno`)
references `Facility`(`facno`) on delete cascade on update cascade;
Query OK, 0 rows affected (0.09 sec)
Records: 0  Duplicates: 0  Warnings: 0

MariaDB [dwbi]>
```

6. From examination of the sample data and your common understanding of scheduling and operation of events, are null values allowed for the foreign key in the Location table? Why or why not? Extend the CREATE TABLE statement in problem (5) to enforce the null value restrictions if any.

   Answer:

   As far as my understanding null are not only allowed but must be. Because the foreign key refererences to the parent table, the value must also follow what is in the parent table, so the default value must be null.

7. Extend your CREATE TABLE statement for the Facility table (problem 2) with a unique constraint for FacName. Use an external named constraint clause for the unique constraint.

   Answer: