Nama : Nabilah Luthfiyah Nasution

NIM : 181402039

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).**

```
MariaDB [(none)]> use dwbi;
Database changed
MariaDB [dwbi]> tee Tugas1_DWBI.txt
Logging to file 'Tugas1_DWBI.txt'
MariaDB [dwbi]> create table Customer (
    -> custNo char(11) not null,
    -> custname varchar(100) not null,
    -> address varchar(100) not null,
    -> Internal varchar(2) not null,
    -> contact varchar(100) not null,
    -> phone varchar(14) not null,
    -> city varchar(10) not null,
    -> state varchar(10) not null,
    -> zip varchar(10) not null,
    -> CONSTRAINT CustomerPK PRIMARY KEY (custNo));
Query OK, 0 rows affected (0.289 sec)
```

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).**

```
MariaDB [dwbi]> create table Facility (
    -> facno char(11) not null,
    -> facname varchar(100) not null,
    -> CONSTRAINT FacilityPK PRIMARY KEY (facno));
Query OK, 0 rows affected (0.307 sec)
```

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 (nots null).**

```
MariaDB [dwbi]> create table Location (
    -> locno char(11) not null,
    -> facno char(11) not null,
    -> locname varchar(100) not null,
    -> CONSTRAINT LocationPK PRIMARY KEY (locno));
Query OK, 0 rows affected (3.523 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.**

   Pada ketiga tabel tersebut terdapat parent table dan child table. Menurut saya, parent table pada ketiga tabel di atas adalah table Location sementara table Customer dan table Facility merupakan child table. Foreign key terdapat pada table Location dengan nama facno. Sementara 1-M relationship(s) terdapat pada tabel Facility dan tabel Location, dimana one nya adalah table facility dan many nya adalah table location.

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

```
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 (1.352 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

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.

Foreign key pada tabel Location boleh saja tidak diisi (null), dikarenakan foreign key tidak memiliki fungsi untuk mengidentifikasi record yang terdapat dalam tabel.

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.**

```
MariaDB [dwbi]> alter table Facility add UNIQUE (facno);
Query OK, 0 rows affected (0.687 sec)
Records: 0  Duplicates: 0  Warnings: 0
```