Nama   : Ilham Anwar Yazied

NIM   : L200180049

Kelas   : B (Praktikum Sistem Basis Data Modul 4)

1. Langkah – Langkah Kegiatan Praktikum
   a) Membuat database perbankan

   b) Membuat tabel nasabah dan tabel cabank_bank
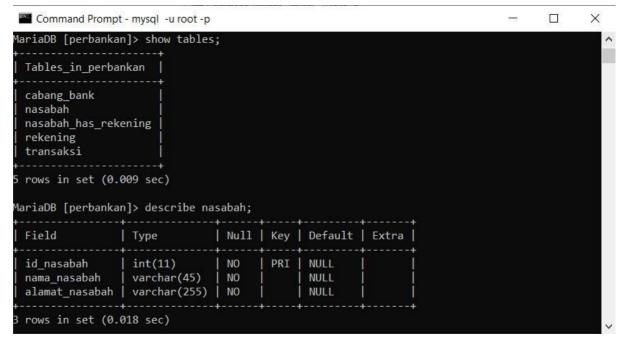
c) Membuat tabel rekening dan tabel transaksi

```
Command Prompt - mysql -u root -p                                    —    □    ×

MariaDB [perbankan]> CREATE TABLE rekening (
    -> no_rekening INTEGER PRIMARY KEY,
    -> kode_cabangFK VARCHAR(20) REFERENCES cabang_bank(kode_cabang)
    -> ON DELETE CASCADE ON UPDATE CASCADE,
    -> pin VARCHAR(20) DEFAULT '1234' NOT NULL,
    -> saldo INTEGER DEFAULT 0 NOT NULL
    -> );
Query OK, 0 rows affected (0.031 sec)

MariaDB [perbankan]> CREATE TABLE transaksi (
    -> no_transaksi SERIAL PRIMARY KEY,
    -> id_nasabahFK INTEGER REFERENCES nasabah(id_nasabah)
    -> ON DELETE SET NULL ON UPDATE CASCADE,
    -> no_rekeningFK INTEGER REFERENCES rekening(no_rekening)
    -> ON DELETE SET NULL ON UPDATE CASCADE,
    -> jenis_transaksi VARCHAR(20) DEFAULT 'debit' NOT NULL,
    -> tanggal DATETIME NOT NULL DEFAULT CURRENT_TIMESTAMP,
    -> jumlah INTEGER NOT NULL CHECK (jumlah>=20000)
    -> );
Query OK, 0 rows affected (0.035 sec)
```

d) Membuat tabel nasabah_has_rekening

```
Command Prompt - mysql -u root -p                                    —    □    ×

    -> ON DELETE SET NULL ON UPDATE CASCADE,
    -> jenis_transaksi VARCHAR(20) DEFAULT 'debit' NOT NULL,
    -> tanggal DATETIME NOT NULL DEFAULT CURRENT_TIMESTAMP,
    -> jumlah INTEGER NOT NULL CHECK (jumlah>=20000)
    -> );
Query OK, 0 rows affected (0.035 sec)

MariaDB [perbankan]> CREATE TABLE nasabah_has_rekening (
    -> id_nasabahFK INTEGER REFERENCES nasabah(id_nasabah)
    -> ON DELETE CASCADE ON UPDATE CASCADE,
    -> no_rekeningFK INTEGER REFERENCES rekening(no_rekening)
    -> ON DELETE CASCADE ON UPDATE CASCADE,
    -> PRIMARY KEY(id_nasabahFK, no_rekeningFK)
    -> );
Query OK, 0 rows affected (0.031 sec)

MariaDB [perbankan]> show tables;
+----------------------+
| Tables_in_perbankan  |
+----------------------+
| cabang_bank          |
```

e) Show tables dan describe nasabah

```
MariaDB [perbankan]> show tables;
+----------------------+
| Tables_in_perbankan  |
+----------------------+
| cabang_bank          |
| nasabah              |
| nasabah_has_rekening |
| rekening             |
| transaksi            |
+----------------------+
5 rows in set (0.009 sec)

MariaDB [perbankan]> describe nasabah;
+----------------+--------------+------+-----+---------+-------+
| Field          | Type         | Null | Key | Default | Extra |
+----------------+--------------+------+-----+---------+-------+
| id_nasabah     | int(11)      | NO   | PRI | NULL    |       |
| nama_nasabah   | varchar(45)  | NO   |     | NULL    |       |
| alamat_nasabah | varchar(255) | NO   |     | NULL    |       |
+----------------+--------------+------+-----+---------+-------+
3 rows in set (0.018 sec)
```

2. Tugas Praktikum

   Implementasikan hasil rancangan database yang menangani database pada
   tugas modul 2 ke dalam program mysql

   a) Membuat database kuliah

```
MariaDB [(none)]> create database kuliah;
ERROR 1007 (HY000): Can't create database 'kuliah'; database exists
MariaDB [(none)]> use kuliah;
Database changed
MariaDB [kuliah]> create table mahasiswa (
    -> nim INTEGER PRIMARY KEY,
    -> nama VARCHAR(45) NOT NULL,
    -> alamat VARCHAR(255) NOT NULL
    -> );
Query OK, 0 rows affected (0.029 sec)

MariaDB [kuliah]> drop database kuliah
    -> ;
Query OK, 1 row affected (0.074 sec)

MariaDB [(none)]> create database kuliah;
Query OK, 1 row affected (0.001 sec)

MariaDB [(none)]> use kuliah;
Database changed
```

b) Membuat table mahasiswa,dosen,mata_kuliah,ruang_kelas


```
Database changed
MariaDB [kuliah]> create table mahasiswa (
    -> nim_mhs INTEGER PRIMARY KEY,
    -> nama_mhs VARCHAR(45) NOT NULL,
    -> alamat_mhs VARCHAR(255) NOT NULL
    -> );
Query OK, 0 rows affected (0.033 sec)

MariaDB [kuliah]> create table dosen (
    -> nip_dosen INTEGER PRIMARY KEY,
    -> nama_dosen VARCHAR(45) NOT NULL,
    -> alamat_dosen VARCHAR(255) NOT NULL
    -> );
Query OK, 0 rows affected (0.028 sec)

MariaDB [kuliah]> create table mata_kuliah (
    -> id_mk INTEGER PRIMARY KEY,
    -> nama_mk varchar(25) NOT NULL
    -> );
Query OK, 0 rows affected (0.027 sec)
```



```
MariaDB [kuliah]> drop table mahasiswa_has_dosen;
Query OK, 0 rows affected (0.020 sec)

MariaDB [kuliah]> create table mahasiswa_has_dosen (
    -> nim_mhsFK INTEGER REFERENCES mahasiswa(nim_mhs)
    -> ON DELETE CASCADE ON UPDATE CASCADE,
    -> nip_dosenFK INTEGER REFERENCES dosen(nip_dosen)
    -> ON DELETE CASCADE ON UPDATE CASCADE,
    -> PRIMARY KEY(nim_mhsFK,nip_dosenFK)
    -> );
Query OK, 0 rows affected (0.028 sec)

MariaDB [kuliah]> create table dosen_has_mata_kuliah (
    -> nip_dosenFK INTEGER REFERENCES dosen(nip_dosen)
    -> ON DELETE CASCADE ON UPDATE CASCADE,
    -> id_mkFK INTEGER REFERENCES mata_kuliah(id_mk)
    -> ON DELETE CASCADE ON UPDATE CASCADE,
    -> PRIMARY KEY(nip_dosenFK,id_mkFK)
    -> );
Query OK, 0 rows affected (0.028 sec)
```

c) Show semua table yang ada pada database kulia

```
MariaDB [kuliah]> show tables;
+-------------------------+
| Tables_in_kuliah        |
+-------------------------+
| dosen                   |
| dosen_has_mata_kuliah   |
| mahasiswa               |
| mahasiswa_has_dosen     |
| mahasiswa_has_mata_kuliah |
| mata_kuliah             |
| ruang_kelas             |
+-------------------------+
7 rows in set (0.001 sec)

MariaDB [kuliah]> describe mahasiswa;
+-------------+--------------+------+-----+---------+-------+
| Field       | Type         | Null | Key | Default | Extra |
+-------------+--------------+------+-----+---------+-------+
| nim_mhs     | int(11)      | NO   | PRI | NULL    |       |
| nama_mhs    | varchar(45)  | NO   |     | NULL    |       |
| alamat_mhs  | varchar(255) | NO   |     | NULL    |       |
```

```
3 rows in set (0.026 sec)

MariaDB [kuliah]> describe dosen;
+---------------+--------------+------+-----+---------+-------+
| Field         | Type         | Null | Key | Default | Extra |
+---------------+--------------+------+-----+---------+-------+
| nip_dosen     | int(11)      | NO   | PRI | NULL    |       |
| nama_dosen    | varchar(45)  | NO   |     | NULL    |       |
| alamat_dosen  | varchar(255) | NO   |     | NULL    |       |
+---------------+--------------+------+-----+---------+-------+
3 rows in set (0.018 sec)

MariaDB [kuliah]> describe mata_kuliah;
+---------+-------------+------+-----+---------+-------+
| Field   | Type        | Null | Key | Default | Extra |
+---------+-------------+------+-----+---------+-------+
| id_mk   | int(11)     | NO   | PRI | NULL    |       |
| nama_mk | varchar(25) | NO   |     | NULL    |       |
+---------+-------------+------+-----+---------+-------+
2 rows in set (0.018 sec)
```

```
ERROR 1146 (42S02): Table 'kuliah.ruang_kuliah' doesn't exist
MariaDB [kuliah]> describe ruang_kelas;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| id_ruangan   | int(11)     | NO   | PRI | NULL    |       |
| nama_ruangan | varchar(25) | NO   |     | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
2 rows in set (0.017 sec)

MariaDB [kuliah]> describe dosen_has_mata_kuliah;
+------------+---------+------+-----+---------+-------+
| Field      | Type    | Null | Key | Default | Extra |
+------------+---------+------+-----+---------+-------+
| nip_dosenFK | int(11) | NO   | PRI | NULL    |       |
| id_mkFK     | int(11) | NO   | PRI | NULL    |       |
+------------+---------+------+-----+---------+-------+
2 rows in set (0.015 sec)

MariaDB [kuliah]> describe mahasiswa_has_dosen;
+-------------+---------+------+-----+---------+-------+
```

Command Prompt - mysql -u root -p

```
MariaDB [kuliah]> describe mahasiswa_has_dosen;
+-------------+---------+------+-----+---------+-------+
| Field       | Type    | Null | Key | Default | Extra |
+-------------+---------+------+-----+---------+-------+
| nim_mhsFK   | int(11) | NO   | PRI | NULL    |       |
| nip_dosenFK | int(11) | NO   | PRI | NULL    |       |
+-------------+---------+------+-----+---------+-------+
2 rows in set (0.012 sec)

MariaDB [kuliah]> describe mahasiswa_has_mata_kuliah;
+-----------+---------+------+-----+---------+-------+
| Field     | Type    | Null | Key | Default | Extra |
+-----------+---------+------+-----+---------+-------+
| nim_mhsFK | int(11) | NO   | PRI | NULL    |       |
| id_mkFK   | int(11) | NO   | PRI | NULL    |       |
+-----------+---------+------+-----+---------+-------+
2 rows in set (0.016 sec)

MariaDB [kuliah]>
```