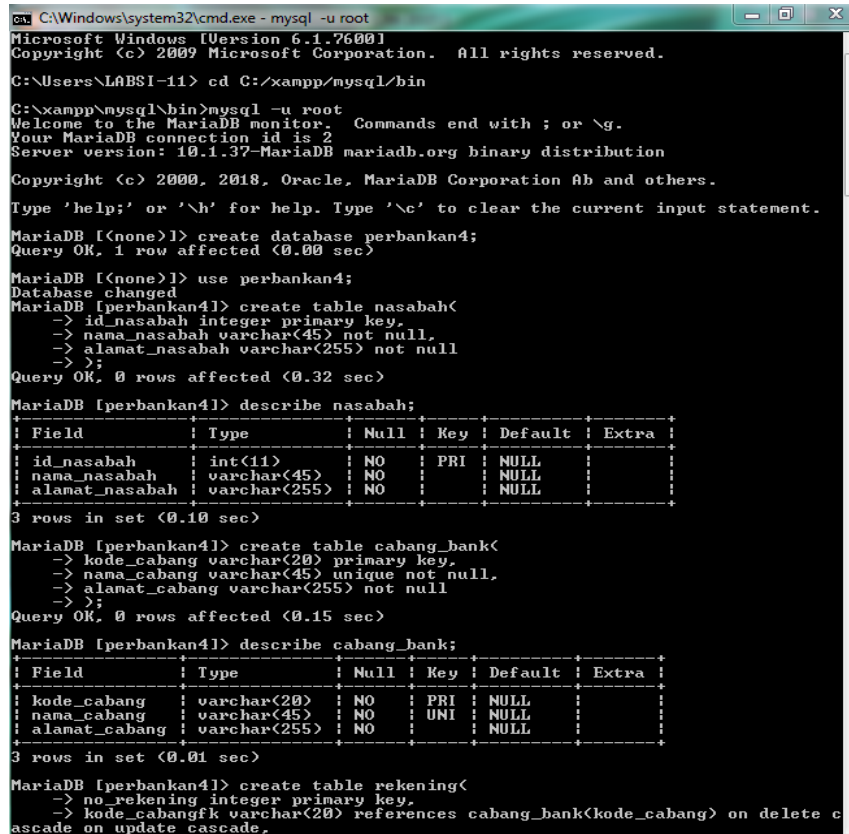Nama   : Xenyx S

Kelas   : D

Nim   : L200170089

MODUL 4

DATA DEFINITION LANGUAGE (DDL)

A. Langkah-langkah Praktikum
1. Jalankan XAMPP Control Panel.
2. Jalankan server Apache dan MySQL.
3. Buka Command Prompt dan login sebagai root ke MySQL seperti di langkah pada Modul 1.
4. Buat database baru dengan perintah berikut.
   Create database perbankan;
5. Hubungkan ke dalam database yang telah dibuat dengan perintah berikut. Sehingga akan muncul pemberitahuan "database changed".
   Use perbankan;
6. Membuat database perbankan

```
C:\Windows\system32\cmd.exe - mysql  -u root

MariaDB [perbankan4]> create table rekening(
    -> no_rekening integer primary key,
    -> kode_cabangfk varchar(20) references cabang_bank(kode_cabang) on delete c
ascade on update cascade,
    -> pin varchar(20) default '1234' not null,
    -> saldo integer default 0 not null
    -> );
Query OK, 0 rows affected (0.18 sec)

MariaDB [perbankan4]> describe rekening;
+---------------+-------------+------+-----+---------+-------+
| Field         | Type        | Null | Key | Default | Extra |
+---------------+-------------+------+-----+---------+-------+
| no_rekening   | int(11)     | NO   | PRI | NULL    |       |
| kode_cabangfk | varchar(20) | YES  |     | NULL    |       |
| pin           | varchar(20) | NO   |     | 1234    |       |
| saldo         | int(11)     | NO   |     | 0       |       |
+---------------+-------------+------+-----+---------+-------+
4 rows in set (0.01 sec)

MariaDB [perbankan4]> 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 (0.15 sec)

MariaDB [perbankan4]> describe transaksi;
+-----------------+---------------------+------+-----+-------------------+-------
---------+
| Field           | Type                | Null | Key | Default           | Extra
          |
+-----------------+---------------------+------+-----+-------------------+-------
---------+
| no_transaksi    | bigint(20) unsigned | NO   | PRI | NULL              | auto_
increment |
| id_nasabahfk    | int(11)             | YES  |     | NULL              |
          |
| no_rekeningfk   | int(11)             | YES  |     | NULL              |
          |
| jenis_transaksi | varchar(20)         | NO   |     | debit             |
          |
| tanggal         | datetime            | NO   |     | CURRENT_TIMESTAMP |
          |
| jumlah          | int(11)             | NO   |     | NULL              |
          |
+-----------------+---------------------+------+-----+-------------------+-------
---------+
6 rows in set (0.01 sec)

MariaDB [perbankan4]> create table nasabah_has_rekening(
```

```
C:\Windows\system32\cmd.exe - mysql  -u root

---------+
6 rows in set (0.01 sec)

MariaDB [perbankan4]> 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 (0.16 sec)

MariaDB [perbankan4]> describe nasabah_has_rekening;
+---------------+---------+------+-----+---------+-------+
| Field         | Type    | Null | Key | Default | Extra |
+---------------+---------+------+-----+---------+-------+
| id_nasabahfk  | int(11) | NO   | PRI | NULL    |       |
| no_rekeningfk | int(11) | NO   | PRI | NULL    |       |
+---------------+---------+------+-----+---------+-------+
2 rows in set (0.01 sec)

MariaDB [perbankan4]>
```

7. Membuat database Mahasiswa

```
Microsoft Windows [Version 10.0.17134.648]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Astrin Indah>cd C:/xampp/mysql/bin

C:\xampp\mysql\bin>mysql -u root
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 2
Server version: 10.1.38-MariaDB mariadb.org binary distribution

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> create database mahasiswa;
Query OK, 1 row affected (0.07 sec)

MariaDB [(none)]> use mahasiswa;
Database changed
MariaDB [mahasiswa]> create table ruangkelas(
    -> kode_kelas varchar(10) primary key,
    -> jumlah_kursi integer
    -> );
Query OK, 0 rows affected (0.23 sec)

MariaDB [mahasiswa]> describe ruangkelas;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| kode_kelas   | varchar(10) | NO   | PRI | NULL    |       |
| jumlah_kursi | int(11)     | YES  |     | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
2 rows in set (0.03 sec)
```

```
MariaDB [mahasiswa]> create table matakuliah(
    -> kode_makul varchar(10),
    -> nama_makul varchar(50),
    -> sks_makul integer primary key,
    -> semester_makul varchar(10),
    -> kode_kelasfk varchar(10) references ruangkelas(kode_kelas) on delete cascade on update cascade
    -> );
Query OK, 0 rows affected (0.52 sec)

MariaDB [mahasiswa]> describe matakuliah;
+----------------+-------------+------+-----+---------+-------+
| Field          | Type        | Null | Key | Default | Extra |
+----------------+-------------+------+-----+---------+-------+
| kode_makul     | varchar(10) | YES  |     | NULL    |       |
| nama_makul     | varchar(50) | YES  |     | NULL    |       |
| sks_makul      | int(11)     | NO   | PRI | NULL    |       |
| semester_makul | varchar(10) | YES  |     | NULL    |       |
| kode_kelasfk   | varchar(10) | YES  |     | NULL    |       |
+----------------+-------------+------+-----+---------+-------+
5 rows in set (0.07 sec)

MariaDB [mahasiswa]> create table dosen(
    -> id_dosen integer primary key,
    -> nama_dosen varchar(50) unique not null,
    -> alamat_dosen varchar(255),
    -> kontak_dosen integer,
    -> kode_makulfk varchar(10) references matakuliah(kode_makul) on delete cascade on update cascade
    -> );
Query OK, 0 rows affected (0.24 sec)

MariaDB [mahasiswa]> describe dosen;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| id_dosen     | int(11)     | NO   | PRI | NULL    |       |
| nama_dosen   | varchar(50) | NO   | UNI | NULL    |       |
| alamat_dosen | varchar(255)| YES  |     | NULL    |       |
| kontak_dosen | int(11)     | YES  |     | NULL    |       |
| kode_makulfk | varchar(10) | YES  |     | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
5 rows in set (0.02 sec)

MariaDB [mahasiswa]> create table mhs(
    -> nim_mhs varchar(20) primary key,
```

```
MariaDB [mahasiswa]> create table mhs(
    -> nim_mhs varchar(20) primary key,
    -> nama_mhs varchar(50) unique not null,
    -> alamat_mhs varchar(255),
    -> tempat_lahir varchar(10),
    -> id_dosenfk integer references dosen(id_dosen) on delete set null on update cascade
    -> );
Query OK, 0 rows affected (0.26 sec)

MariaDB [mahasiswa]> describe mhs;
+--------------+--------------+------+-----+---------+-------+
| Field        | Type         | Null | Key | Default | Extra |
+--------------+--------------+------+-----+---------+-------+
| nim_mhs      | varchar(20)  | NO   | PRI | NULL    |       |
| nama_mhs     | varchar(50)  | NO   | UNI | NULL    |       |
| alamat_mhs   | varchar(255) | YES  |     | NULL    |       |
| tempat_lahir | varchar(10)  | YES  |     | NULL    |       |
| id_dosenfk   | int(11)      | YES  |     | NULL    |       |
+--------------+--------------+------+-----+---------+-------+
5 rows in set (0.07 sec)

MariaDB [mahasiswa]> show tables;
+----------------------+
| Tables_in_mahasiswa  |
+----------------------+
| dosen                |
| matakuliah           |
| mhs                  |
| ruangkelas           |
+----------------------+
4 rows in set (0.00 sec)

MariaDB [mahasiswa]>
```

8.   Membuat database Sewa kamera

```
Microsoft Windows [Version 10.0.17134.648]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Astrin Indah>cd C:/xampp/mysql/bin

C:\xampp\mysql\bin>mysql -u root
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 5
Server version: 10.1.38-MariaDB mariadb.org binary distribution

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> create database sewakamera;
Query OK, 1 row affected (0.00 sec)

MariaDB [(none)]> use sewakamera;
Database changed
MariaDB [sewakamera]> create table Kamera(
    -> kode_kamera integer primary key,
    -> jumlah_kamera integer,
    -> nama_kamera varchar(20) unique not null
    -> );
Query OK, 0 rows affected (0.25 sec)

MariaDB [sewakamera]> describe Kamera;
+---------------+-------------+------+-----+---------+-------+
| Field         | Type        | Null | Key | Default | Extra |
+---------------+-------------+------+-----+---------+-------+
| kode_kamera   | int(11)     | NO   | PRI | NULL    |       |
| jumlah_kamera | int(11)     | YES  |     | NULL    |       |
| nama_kamera   | varchar(20) | NO   | UNI | NULL    |       |
+---------------+-------------+------+-----+---------+-------+
3 rows in set (0.02 sec)

MariaDB [sewakamera]> create table transaksi(
    -> no_transaksi integer primary key,
    -> tanggal_transaksi varchar(10),
    -> jumlah_transaksi integer,
    -> tanggal_kembali varchar(10)
    -> );
Query OK, 0 rows affected (0.28 sec)
```

```
MariaDB [sewakamera]> describe transaksi;
+-------------------+-------------+------+-----+---------+-------+
| Field             | Type        | Null | Key | Default | Extra |
+-------------------+-------------+------+-----+---------+-------+
| no_transaksi      | int(11)     | NO   | PRI | NULL    |       |
| tanggal_transaksi | varchar(10) | YES  |     | NULL    |       |
| jumlah_transaksi  | int(11)     | YES  |     | NULL    |       |
| tanggal_kembali   | varchar(10) | YES  |     | NULL    |       |
+-------------------+-------------+------+-----+---------+-------+
4 rows in set (0.02 sec)
```

```
MariaDB [sewakamera]> create table pelanggan(
    -> nama_pelanggan varchar(50) unique not null,
    -> id_pelanggan integer primary key,
    -> alamat_pelanggan varchar(255),
    -> kode_kamerafk integer references kamera(kode_kamera) on delete cascade on update cascade,
    -> no_transaksifk integer references transaksi(no_transaksi) on delete cascade on update cascade
    -> );
Query OK, 0 rows affected (0.23 sec)

MariaDB [sewakamera]> describe pelanggan;
+------------------+--------------+------+-----+---------+-------+
| Field            | Type         | Null | Key | Default | Extra |
+------------------+--------------+------+-----+---------+-------+
| nama_pelanggan   | varchar(50)  | NO   | UNI | NULL    |       |
| id_pelanggan     | int(11)      | NO   | PRI | NULL    |       |
| alamat_pelanggan | varchar(255) | YES  |     | NULL    |       |
| kode_kamerafk    | int(11)      | YES  |     | NULL    |       |
| no_transaksifk   | int(11)      | YES  |     | NULL    |       |
+------------------+--------------+------+-----+---------+-------+
5 rows in set (0.02 sec)

MariaDB [sewakamera]> drop table pegawai;
Query OK, 0 rows affected (0.54 sec)

MariaDB [sewakamera]> create table pegawai(
    -> nama_pegawai varchar(50) unique not null,
    -> id_pegawai integer primary key,
    -> alamat_pegawai varchar(255),
    -> no_transaksifk integer references transaksi(no_transaksi) on delete cascade on update cascade,
    -> id_pelangganfk integer references pelanggan(id_pelanggan) on delete cascade on update cascade
    -> );
Query OK, 0 rows affected (0.24 sec)

MariaDB [sewakamera]> describe pegawai;
+----------------+--------------+------+-----+---------+-------+
| Field          | Type         | Null | Key | Default | Extra |
+----------------+--------------+------+-----+---------+-------+
| nama_pegawai   | varchar(50)  | NO   | UNI | NULL    |       |
| id_pegawai     | int(11)      | NO   | PRI | NULL    |       |
| alamat_pegawai | varchar(255) | YES  |     | NULL    |       |
| no_transaksifk | int(11)      | YES  |     | NULL    |       |
| id_pelangganfk | int(11)      | YES  |     | NULL    |       |
+----------------+--------------+------+-----+---------+-------+
5 rows in set (0.02 sec)
```

```
MariaDB [sewakamera]> show tables;
+---------------------+
| Tables_in_sewakamera |
+---------------------+
| kamera              |
| pegawai             |
| pelanggan           |
| transaksi           |
+---------------------+
4 rows in set (0.00 sec)

MariaDB [sewakamera]>
```