

Nama : Diah Fitri Ramadhani

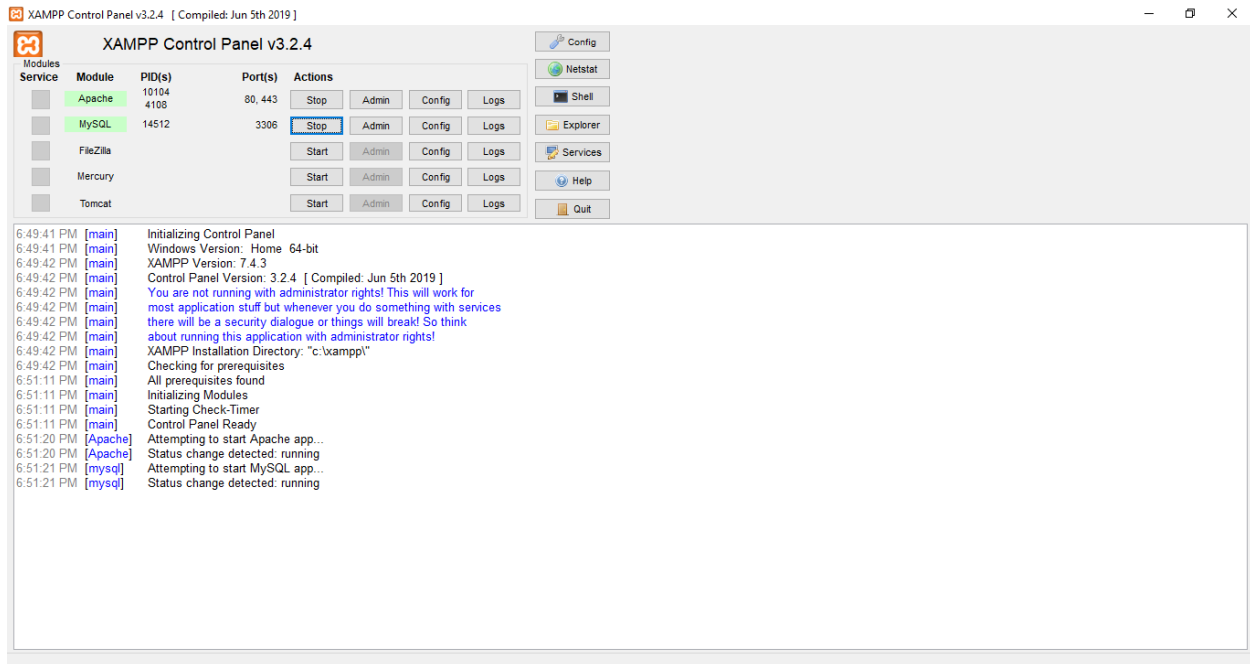
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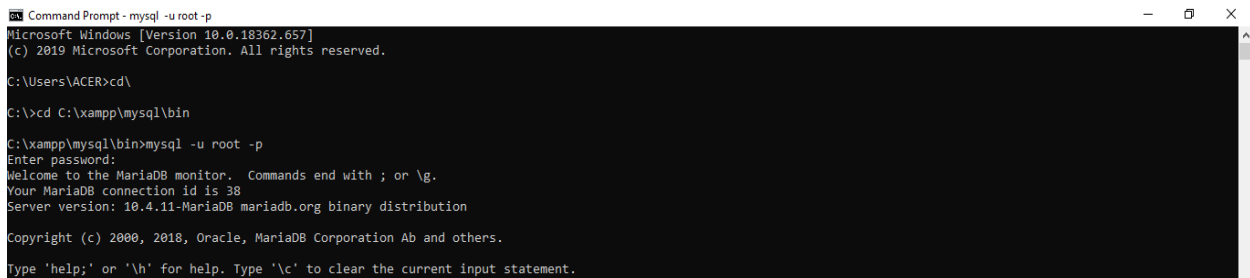
Modul 4 Sistem Basis Data

Kegiatan Praktikum

1. Jalankan XAMPP Control Panel, lalu jalankan server Apache dan MySQL.



2. Buka Comand Prompt dan login sebagai root ke MySQL seperti langkah pada modul 1.



3. Buat database baru dengan perintah create database perbankann;
Hubungkan ke dalam database dengan perintah use perbankann;
Sehingga akan muncul “database changed”.

```
Command Prompt - mysql -u root -p
Microsoft Windows [Version 10.0.18362.657]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\ACER>cd\

C:\>cd C:\xampp\mysql\bin

C:\xampp\mysql\bin>mysql -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 83
Server version: 10.4.11-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 perbankann;
Query OK, 1 row affected (0.001 sec)

MariaDB [(none)]> use perbankann;
Database changed
MariaDB [perbankann]> CREATE TABLE nasabah (
    -> id_nasabah INTEGER PRIMARY KEY,
    -> nama_nasabah VARCHAR(45) NOT NULL,
    -> alamat_nasabah VARCHAR(255) NOT NULL);
Query OK, 0 rows affected (0.494 sec)

MariaDB [perbankann]> _
```

4. Membuat tabel nasabah, cabang_bank, rekening, transaksi, nasabah_has_rekening.

```
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Database changed
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    -> nama_nasabah VARCHAR(45) NOT NULL,
    -> alamat_nasabah VARCHAR(255) NOT NULL);
Query OK, 0 rows affected (0.494 sec)

MariaDB [perbankann]> _
```

```
MySQL Select Command Prompt - mysql -u root -p

MariaDB [perbankan]> CREATE TABLE cabang_bank(
  -> kode_cabang VARCHAR(20) PRIMARY KEY,
  -> nama_cabang VARCHAR(45) UNIQUE NOT NULL,
  -> alamat_cabang VARCHAR(255) NOT NULL);
Query OK, 0 rows affected (0.294 sec)

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 (0.244 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 (0.374 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 (0.278 sec)
```

5. Mengecek hasil pembuatan database gunakan perintah show tables;

Melihat struktur tiap table dilakukan dengan perintah describe.

```
MySQL Command Prompt - mysql -u root -p

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 (0.278 sec)

MariaDB [perbankan]> show tables;
+-----+
| Tables_in_perbankan |
+-----+
| cabang_bank          |
| nasabah              |
| nasabah_has_rekening |
| rekening             |
| transaksi            |
+-----+
5 rows in set (0.196 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 (0.118 sec)

MariaDB [perbankan]>
```

Tugas

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

```
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C:\>cd C:\xampp\mysql\bin

C:\xampp\mysql\bin>mysql -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 71
Server version: 10.4.11-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 dataa_kuliah;
Query OK, 1 row affected (0.046 sec)

MariaDB [(none)]> use dataa_kuliah;
Database changed
MariaDB [dataa_kuliah]> CREATE TABLE mahasiswa;
ERROR 1113 (42000): A table must have at least 1 column
MariaDB [dataa_kuliah]> CREATE TABLE mahasiswa (
  -> nim VARCHAR(20) PRIMARY KEY,
  -> nama_mhs VARCHAR(45) NOT NULL,
  -> jurusan VARCHAR(20) NOT NULL,
  -> alamat_mhs VARCHAR(225) NOT NULL
  -> );
Query OK, 0 rows affected (0.305 sec)

MariaDB [dataa_kuliah]> CREATE TABLE dosen (
  -> nidk INTEGER PRIMARY KEY,
  -> nama_dosen VARCHAR(45) NOT NULL,
  -> alamat_dosen VARCHAR(225) NOT NULL
  -> );
Query OK, 0 rows affected (0.282 sec)

MariaDB [dataa_kuliah]> CREATE TABLE mata_kuliah (
  -> kode_matkul VARCHAR(10) PRIMARY KEY,
  -> nama_matkul VARCHAR(45) UNIQUE NOT NULL,
  -> jumlah_sks INTEGER NOT NULL
  -> );
```

```
Command Prompt - mysql -u root -p

MariaDB [dataa_kuliah]> CREATE TABLE ruang_kelas (
  -> kode_kelas VARCHAR(10) PRIMARY KEY,
  -> kapasitas_kls INTEGER NOT NULL
  -> );
Query OK, 0 rows affected (0.320 sec)

MariaDB [dataa_kuliah]> CREATE TABLE mahasiswa_has_mata_kuliah (
  -> nimFK VARCHAR(20) REFERENCES mahasiswa(nim) ON DELETE CASCADE ON UPDATE CASCADE,
  -> kode_matkulFK VARCHAR(10) REFERENCES mata_kuliah(kode_matkul) ON DELETE CASCADE ON UPDATE CASCADE
  -> );
Query OK, 0 rows affected (0.238 sec)

MariaDB [dataa_kuliah]> CREATE TABLE dosen_has_mata_kuliah (
  -> nidkFK VARCHAR(20) REFERENCES dosen(nidk) ON DELETE CASCADE ON UPDATE CASCADE,
  -> kode_matkul VARCHAR(10) REFERENCES mata_kuliah(kode_matkul) ON DELETE CASCADE ON UPDATE CASCADE
  -> );
Query OK, 0 rows affected (0.288 sec)

MariaDB [dataa_kuliah]> show tables;
+-----+
| Tables_in_dataa_kuliahh |
+-----+
| dosen                    |
| dosen_has_mata_kuliah    |
| mahasiswa                |
| mahasiswa_has_mata_kuliah |
| mata_kuliah              |
| ruang_kelas              |
+-----+
6 rows in set (0.001 sec)

MariaDB [dataa_kuliah]> describe mahasiswa;
+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+
| nim        | varchar(20)   | NO   | PRI | NULL    |       |
| nama_mhs   | varchar(45)   | NO   |     | NULL    |       |
| jurusan    | varchar(20)   | NO   |     | NULL    |       |
| alamat_mhs | varchar(225)  | NO   |     | NULL    |       |
+-----+
4 rows in set (0.009 sec)

MariaDB [dataa_kuliah]> describe dosen;
```

—

```
MariaDB [dataa_kuliahh]> dosen_has_mata_kuliah;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'dosen_has_mata_kuliah' at line 1
MariaDB [dataa_kuliahh]> describe dosen_has_mata_kuliah;
+-----+-----+-----+-----+-----+-----+

```

```
MariaDB [dataa_kuliahh]> _
```