DATABASE SYSTEMS

PRACTICUM 4

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1. **Activity 1**


```
Command Prompt - mysql  -u root

C:\xampp\mysql\bin>mysql -u root -p
Enter password: ******
ERROR 1045 (28000): Access denied for user 'root'@'localhost' (using password: YES)

C:\xampp\mysql\bin>mysql -u root
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 23
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)]> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mysql              |
| performance_schema |
| phpmyadmin         |
| test               |
+--------------------+
5 rows in set (0.002 sec)

MariaDB [(none)]> create database perbankan;
Query OK, 1 row affected (0.036 sec)

MariaDB [(none)]> use perbankan
Database changed
MariaDB [perbankan]> 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 (0.333 sec)

MariaDB [perbankan]> CREATE TABLE cabang_bank (
    -> kode_cabang VARCHAR(45) UNIQUE NOT NULL,
    -> nama_cabang VARCHAR(45) UNIQUE NOT NULL,
    -> alamat_cabang VARCHAR(255) NOT NULL);
Query OK, 0 rows affected (0.246 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 (0.373 sec)
```

Picture 1.1. Creating new database and create the table

Picture 1.2. Creating the table and show the result of all table

Picture 1.3. Show data inside of a table

2. **Assignment 1**

```
Select Command Prompt - mysql -u root

MariaDB [perbankan]> CREATE TABLE dosen (
    -> nip VARCHAR(20) PRIMARY KEY,
    -> nama_dosen VARCHAR(45) NOT NULL,
    -> alamat_dosen VARCHAR(45) NOT NULL);
Query OK, 0 rows affected (0.195 sec)

MariaDB [perbankan]> CREATE TABLE mahasiswa (
    -> nim VARCHAR(20) PRIMARY KEY,
    -> dosen_nipFK VARCHAR(20) REFERENCES dosen(dosen_nip) ON DELETE CASCADE ON UPDATE CASCADE,
    -> nama_mhs VARCHAR(45) NOT NULL,
    -> alamat_mhs VARCHAR(45) NOT NULL);
Query OK, 0 rows affected (0.270 sec)

MariaDB [perbankan]> CREATE TABLE mata_kuliah (
    -> kode_mk VARCHAR(20) PRIMARY KEY,
    -> nama_mk VARCHAR(45) NOT NULL,
    -> deskripsi_mk VARCHAR(255) NOT NULL);
Query OK, 0 rows affected (0.259 sec)

MariaDB [perbankan]> CREATE TABLE ruang (
    -> kode_ruang VARCHAR(20) PRIMARY KEY);
Query OK, 0 rows affected (0.223 sec)

MariaDB [perbankan]> CREATE TABLE mata_kuliah_has_ruang (
    -> kode_mkFK VARCHAR(20) REFERENCES mata_kuliah(kode_mk) ON DELETE CASCADE ON UPDATE CASCADE,
    -> kode_ruangFK VARCHAR(20) REFERENCES ruang(kode_ruang) ON DELETE CASCADE ON UPDATE CASCADE);
Query OK, 0 rows affected (0.281 sec)

MariaDB [perbankan]> CREATE TABLE mahasiswa_has_mata_kuliah (
    -> nimFK VARCHAR(20) REFERENCES mahasiswa(nim) ON DELETE CASCADE ON UPDATE CASCADE,
    -> kode_mkFK VARCHAR(20) REFERENCES mata_kuliah(kode_mk) ON DELETE CASCADE ON UPDATE CASCADE);
Query OK, 0 rows affected (0.216 sec)

MariaDB [perbankan]> CREATE TABLE dosen_has_mata_kuliah (
    -> nipFK VARCHAR(20) REFERENCES dosen(nip) ON DELETE CASCADE ON UPDATE CASCADE,
    -> kode_mkFK VARCHAR(20) REFERENCES mata_kuliah(kode_mk) ON DELETE CASCADE ON UPDATE CASCADE);
Query OK, 0 rows affected (0.239 sec)
```

Picture 2.1. Creating the Table

```
Command Prompt - mysql -u root

MariaDB [perbankan]> show tables;
+------------------------+
| Tables_in_perbankan    |
+------------------------+
| cabang_bank            |
| dosen                  |
| dosen_has_mata_kuliah  |
| mahasiswa              |
| mahasiswa_has_mata_kuliah |
| mata_kuliah            |
| mata_kuliah_has_ruang  |
| nasabah                |
| nasabah_has_rekening   |
| rekening               |
| ruang                  |
| transaksi              |
+------------------------+
12 rows in set (0.001 sec)

MariaDB [perbankan]> describe cabang_bank;
+--------------+--------------+------+-----+---------+-------+
| Field        | Type         | Null | Key | Default | Extra |
+--------------+--------------+------+-----+---------+-------+
| kode_cabang  | varchar(20)  | NO   | PRI | NULL    |       |
| nama_cabang  | varchar(45)  | NO   | UNI | NULL    |       |
| alamat_cabang| varchar(255) | NO   |     | NULL    |       |
+--------------+--------------+------+-----+---------+-------+
3 rows in set (0.016 sec)

MariaDB [perbankan]> describe dosen;
+--------------+--------------+------+-----+---------+-------+
| Field        | Type         | Null | Key | Default | Extra |
+--------------+--------------+------+-----+---------+-------+
| nip          | varchar(20)  | NO   | PRI | NULL    |       |
| nama_dosen   | varchar(45)  | NO   |     | NULL    |       |
| alamat_dosen | varchar(45)  | NO   |     | NULL    |       |
+--------------+--------------+------+-----+---------+-------+
3 rows in set (0.017 sec)

MariaDB [perbankan]> describe dosen_has_mata_kuliah;
+-----------+--------------+------+-----+---------+-------+
| Field     | Type         | Null | Key | Default | Extra |
+-----------+--------------+------+-----+---------+-------+
| nipFK     | varchar(20)  | YES  |     | NULL    |       |
| kode_mkFK | varchar(20)  | YES  |     | NULL    |       |
+-----------+--------------+------+-----+---------+-------+
2 rows in set (0.017 sec)
```

Picture 2.2. Showing the Tables and data inside of a Table