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Kelas : D

Modul : 4

DATABASE UNIVERSITAS

1. Membuat database baru dengan nama Universitas.

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

2. Menghubungkan ke dalam database yang telah dibuat.

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

3. Membuat tabel Mahasiswa.

```
MariaDB [universitas]> CREATE TABLE Mahasiswa(
    -> NIM_Mahasiswa INTEGER PRIMARY KEY,
    -> Nama_Mahasiswa VARCHAR(45)NOT NULL,
    -> Alamat_Mahasiswa VARCHAR(255)NOT NULL
    -> );
Query OK, 0 rows affected (0.47 sec)
```

4. Membuat tabel Dosen.

```
MariaDB [universitas]> CREATE TABLE Dosen(
    -> NIK_Dosen INTEGER PRIMARY KEY,
    -> Nama_Dosen VARCHAR(45)NOT NULL,
    -> Alamat_Dosen VARCHAR(255)NOT NULL
    -> );
Query OK, 0 rows affected (0.45 sec)
```

5. Membuat tabel Mata_Kuliah.

```
MariaDB [universitas]> CREATE TABLE Mata_Kuliah(
    -> Kode_MK VARCHAR(10) PRIMARY KEY,
    -> Nama_MK VARCHAR(20) NOT NULL
    -> );
Query OK, 0 rows affected (0.21 sec)
```

6. Membuat tabel Ruang_Kelas.

```
MariaDB [universitas]> CREATE TABLE Ruang_Kelas(
    -> Kode_RK VARCHAR(10) PRIMARY KEY,
    -> Nama_RK VARCHAR(10) NOT NULL
    -> );
Query OK, 0 rows affected (0.85 sec)
```

7. Membuat tabel Mahasiswa_has_Dosen.

```
MariaDB [universitas]> CREATE TABLE Mahasiswa_has_Dosen(
    -> NIM_MahasiswaFK INTEGER REFERENCES Mahasiswa(NIM_Mahasiswa)
    -> ON DELETE CASCADE ON UPDATE CASCADE,
    -> NIK_DosenFK INTEGER REFERENCES Dosen(NIK_Dosen)
    -> ON DELETE CASCADE ON UPDATE CASCADE,
    -> PRIMARY KEY(NIM_MahasiswaFK, NIK_DosenFK)
    -> );
Query OK, 0 rows affected (0.29 sec)
```

8. Membuat tabel Dosen_has_MK.

```
MariaDB [universitas]> CREATE TABLE Dosen_has_MK(
    -> NIK_DosenFK INTEGER REFERENCES Dosen(NIK_Dosen)
    -> ON DELETE CASCADE ON UPDATE CASCADE,
    -> Kode_MKFK INTEGER REFERENCES MK(Kode_MK)
    -> ON DELETE CASCADE ON UPDATE CASCADE,
    -> PRIMARY KEY(NIK_DosenFK, Kode_MKFK)
    -> );
Query OK, 0 rows affected (0.23 sec)
```

9. Membuat tabel Mahasiswa_has_RK.

```
MariaDB [universitas]> CREATE TABLE Mahasiswa_has_RK(
    ->  NIM_MahasiswaFK INTEGER REFERENCES Mahasiswa(NIM_Mahasiswa)
    -> ON DELETE CASCADE ON UPDATE CASCADE,
    -> Kode_RKFK INTEGER REFERENCES RK(Kode_RK)
    -> ON DELETE CASCADE ON UPDATE CASCADE,
    -> PRIMARY KEY(NIM_MahasiswaFK, Kode_RKFK)
    -> );
Query OK, 0 rows affected (0.19 sec)
```

10. Membuat tabel RK_has_MK.

```
MariaDB [universitas]> CREATE TABLE RK_has_MK(
    -> Kode_RKFK INTEGER REFERENCES RK(Kode_RK)
    -> ON DELETE CASCADE ON UPDATE CASCADE,
    -> Kode_MKFK INTEGER REFERENCES MK(Kode_MK)
    -> ON DELETE CASCADE ON UPDATE CASCADE,
    -> PRIMARY KEY(Kode_RKFK, Kode_MKFK)
    -> );
Query OK, 0 rows affected (0.19 sec)
```

11. Mengecek hasil Pembuatan Database.

```
MariaDB [universitas]> show tables;
+----------------------+
| Tables_in_universitas |
+----------------------+
| dosen                |
| dosen_has_mk         |
| mahasiswa            |
| mahasiswa_has_dosen  |
| mahasiswa_has_rk     |
| mata_kuliah          |
| rk_has_mk            |
| ruang_kelas          |
+----------------------+
8 rows in set (0.00 sec)
```

12. Melihat Struktur tabel Mahasiswa.

```
MariaDB [universitas]> describe Mahasiswa;
+------------------+--------------+------+-----+---------+-------+
| Field            | Type         | Null | Key | Default | Extra |
+------------------+--------------+------+-----+---------+-------+
| NIM_Mahasiswa    | int(11)      | NO   | PRI | NULL    |       |
| Nama_Mahasiswa   | varchar(45)  | NO   |     | NULL    |       |
| Alamat_Mahasiswa | varchar(255) | NO   |     | NULL    |       |
+------------------+--------------+------+-----+---------+-------+
3 rows in set (0.00 sec)
```

13. Melihat Struktur tabel Dosen.

```
MariaDB [universitas]> describe Dosen;
+--------------+--------------+------+-----+---------+-------+
| Field        | Type         | Null | Key | Default | Extra |
+--------------+--------------+------+-----+---------+-------+
| NIK_Dosen    | int(11)      | NO   | PRI | NULL    |       |
| Nama_Dosen   | varchar(45)  | NO   |     | NULL    |       |
| Alamat_Dosen | varchar(255) | NO   |     | NULL    |       |
+--------------+--------------+------+-----+---------+-------+
3 rows in set (0.00 sec)
```

14. Melihat Struktur data Mata_Kuliah.

```
MariaDB [universitas]> describe Mata_Kuliah;
+---------+-------------+------+-----+---------+-------+
| Field   | Type        | Null | Key | Default | Extra |
+---------+-------------+------+-----+---------+-------+
| Kode_MK | varchar(10) | NO   | PRI | NULL    |       |
| Nama_MK | varchar(20) | NO   |     | NULL    |       |
+---------+-------------+------+-----+---------+-------+
2 rows in set (0.00 sec)
```

15. Melihat Struktur data Ruang_Kelas.

```
MariaDB [universitas]> describe Ruang_Kelas;
+---------+-------------+------+-----+---------+-------+
| Field   | Type        | Null | Key | Default | Extra |
+---------+-------------+------+-----+---------+-------+
| Kode_RK | varchar(10) | NO   | PRI | NULL    |       |
| Nama_RK | varchar(10) | NO   |     | NULL    |       |
+---------+-------------+------+-----+---------+-------+
2 rows in set (0.00 sec)
```

16. Melihat Struktur data Mahasiswa_has_Dosen.

```
MariaDB [universitas]> describe Mahasiswa_has_Dosen;
+-----------------+---------+------+-----+---------+-------+
| Field           | Type    | Null | Key | Default | Extra |
+-----------------+---------+------+-----+---------+-------+
| NIM_MahasiswaFK | int(11) | NO   | PRI | NULL    |       |
| NIK_DosenFK     | int(11) | NO   | PRI | NULL    |       |
+-----------------+---------+------+-----+---------+-------+
2 rows in set (0.00 sec)
```

17. Melihat Struktur data Dosen_has_MK.

```
MariaDB [universitas]> describe Dosen_has_MK;
+-------------+---------+------+-----+---------+-------+
| Field       | Type    | Null | Key | Default | Extra |
+-------------+---------+------+-----+---------+-------+
| NIK_DosenFK | int(11) | NO   | PRI | NULL    |       |
| Kode_MKFK   | int(11) | NO   | PRI | NULL    |       |
+-------------+---------+------+-----+---------+-------+
2 rows in set (0.00 sec)
```

18. Melihat Struktur data Mahasiswa_has_RK.

```
MariaDB [universitas]> describe Mahasiswa_has_RK;
+-----------------+---------+------+-----+---------+-------+
| Field           | Type    | Null | Key | Default | Extra |
+-----------------+---------+------+-----+---------+-------+
| NIM_MahasiswaFK | int(11) | NO   | PRI | NULL    |       |
| Kode_RKFK       | int(11) | NO   | PRI | NULL    |       |
+-----------------+---------+------+-----+---------+-------+
2 rows in set (0.00 sec)
```

19. Melihat Struktur data RK_has_MK.

```
MariaDB [universitas]> describe RK_has_MK;
+-----------+---------+------+-----+---------+-------+
| Field     | Type    | Null | Key | Default | Extra |
+-----------+---------+------+-----+---------+-------+
| Kode_RKFK | int(11) | NO   | PRI | NULL    |       |
| Kode_MKFK | int(11) | NO   | PRI | NULL    |       |
+-----------+---------+------+-----+---------+-------+
2 rows in set (0.00 sec)
```

DATABASE BANDARA

1. Membuat database baru dengan nama Bandara.

```
MariaDB [(none)]> create database Bandara;
Query OK, 1 row affected (0.05 sec)
```

2. Menghubungkan ke dalam database yang telah dibuat.

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

3. Membuat tabel Penumpang.

```
MariaDB [Bandara]> CREATE TABLE Penumpang(
    -> id_penumpang INTEGER PRIMARY KEY,
    -> nama_penumpang VARCHAR(45) NOT NULL,
    -> alamat_penumpang VARCHAR(255) NOT NULL
    -> );
Query OK, 0 rows affected (0.27 sec)
```

4. Membuat tabel Kasir.

```
MariaDB [Bandara]> CREATE TABLE Kasir(
    -> id_kasir INTEGER PRIMARY KEY,
    -> nama_kasir VARCHAR(45) NOT NULL,
    -> alamat_kasir VARCHAR(255) NOT NULL
    -> );
Query OK, 0 rows affected (0.23 sec)
```

5. Membuat tabel Pesawat.

```
MariaDB [Bandara]> CREATE TABLE Pesawat(
    -> kode_pesawat INTEGER PRIMARY KEY,
    -> nama_pesawat VARCHAR(45) NOT NULL
    -> );
Query OK, 0 rows affected (0.22 sec)
```

6. Membuat tabel Tiket_Pesawat.

```
MariaDB [Bandara]> CREATE TABLE Tiket_Pesawat(
    -> kode_tiket VARCHAR(20) PRIMARY KEY,
    -> jumlah_tiket VARCHAR(20) NOT NULL,
    -> nomor_duduk VARCHAR(20) NOT NULL
    -> );
Query OK, 0 rows affected (0.24 sec)
```

7. Membuat tabel Kasir_has_Penumpang.

```
MariaDB [Bandara]> CREATE TABLE Kasir_has_Penumpang(
    -> id_kasirFK INTEGER REFERENCES kasir(id_kasir)
    -> ON DELETE CASCADE ON UPDATE CASCADE,
    -> id_penumpangFK INTEGER REFERENCES penumpang(id_penumpang)
    -> ON DELETE CASCADE ON UPDATE CASCADE,
    -> PRIMARY KEY(id_kasirFK, id_penumpangFK)
    -> );
Query OK, 0 rows affected (0.22 sec)
```

8. Membuat tabel Penumpang_has_Pesawat

```
MariaDB [Bandara]> CREATE TABLE Penumpang_has_Pesawat(
    -> id_penumpangFK INTEGER REFERENCES penumpang(id_penumpang)
    -> ON DELETE CASCADE ON UPDATE CASCADE,
    -> kode_pesawatFK INTEGER REFERENCES pesawat(kode_pesawat)
    -> ON DELETE CASCADE ON UPDATE CASCADE,
    -> PRIMARY KEY(id_penumpangFK, kode_pesawatFK)
    -> );
Query OK, 0 rows affected (0.22 sec)
```

9. Membuat tabel Tiket_Pesawat_has_Penumpang.

```
MariaDB [Bandara]> CREATE TABLE Tiket_Pesawat_has_Penumpang(
    -> kode_tiketFK INTEGER REFERENCES tiket_pesawat(kode_tiket)
    -> ON DELETE CASCADE ON UPDATE CASCADE,
    -> id_penumpangFK INTEGER REFERENCES penumpang(id_penumpang)
    -> ON DELETE CASCADE ON UPDATE CASCADE,
    -> PRIMARY KEY(kode_tiketFK, id_penumpangFK)
    -> );
Query OK, 0 rows affected (0.23 sec)
```

10. Membuat tabel Pesawat_has_Tiket_Pesawat.

```
MariaDB [Bandara]> CREATE TABLE Pesawat_has_Tiket_Pesawat(
    -> kode_pesawatFK INTEGER REFERENCES pesawat(kode_pesawat)
    -> ON DELETE CASCADE ON UPDATE CASCADE,
    -> kode_tiketFK INTEGER REFERENCES tiket_pesawat(kode_tiket)
    -> ON DELETE CASCADE ON UPDATE CASCADE,
    -> PRIMARY KEY(kode_pesawatFK, kode_tiketFK)
    -> );
Query OK, 0 rows affected (0.28 sec)
```

11. Mengecek hasil Pembuatan Database.

```
MariaDB [Bandara]> show tables;
+-----------------------------+
| Tables_in_bandara           |
+-----------------------------+
| kasir                       |
| kasir_has_penumpang         |
| penumpang                   |
| penumpang_has_pesawat       |
| pesawat                     |
| pesawat_has_tiket_pesawat   |
| tiket_pesawat               |
| tiket_pesawat_has_penumpang |
+-----------------------------+
8 rows in set (0.07 sec)
```

12. Melihat Struktur tabel Penumpang & Melihat Struktur tabel Kasir.

```
MariaDB [Bandara]> describe Kasir;
+--------------+--------------+------+-----+---------+-------+
| Field        | Type         | Null | Key | Default | Extra |
+--------------+--------------+------+-----+---------+-------+
| id_kasir     | int(11)      | NO   | PRI | NULL    |       |
| nama_kasir   | varchar(45)  | NO   |     | NULL    |       |
| alamat_kasir | varchar(255) | NO   |     | NULL    |       |
+--------------+--------------+------+-----+---------+-------+
3 rows in set (0.01 sec)

MariaDB [Bandara]> describe Penumpang;
+------------------+--------------+------+-----+---------+-------+
| Field            | Type         | Null | Key | Default | Extra |
+------------------+--------------+------+-----+---------+-------+
| id_penumpang     | int(11)      | NO   | PRI | NULL    |       |
| nama_penumpang   | varchar(45)  | NO   |     | NULL    |       |
| alamat_penumpang | varchar(255) | NO   |     | NULL    |       |
+------------------+--------------+------+-----+---------+-------+
3 rows in set (0.18 sec)
```

13. Melihat Struktur data Pesawat & Melihat Struktur data Tiket_Pesawat.

```
MariaDB [Bandara]> describe Pesawat;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| kode_pesawat | int(11)     | NO   | PRI | NULL    |       |
| nama_pesawat | varchar(45) | NO   |     | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
2 rows in set (0.01 sec)

MariaDB [Bandara]> describe Tiket_Pesawat;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| kode_tiket   | varchar(20) | NO   | PRI | NULL    |       |
| jumlah_tiket | varchar(20) | NO   |     | NULL    |       |
| nomor_duduk  | varchar(20) | NO   |     | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
3 rows in set (0.00 sec)
```

14. Melihat Struktur data Kasir_has_Penumpang & Melihat Struktur data Penumpang_has_Pesawat .

```
MariaDB [Bandara]> describe Kasir_has_Penumpang;
+----------------+---------+------+-----+---------+-------+
| Field          | Type    | Null | Key | Default | Extra |
+----------------+---------+------+-----+---------+-------+
| id_kasirFK     | int(11) | NO   | PRI | NULL    |       |
| id_penumpangFK | int(11) | NO   | PRI | NULL    |       |
+----------------+---------+------+-----+---------+-------+
2 rows in set (0.01 sec)
```

```
MariaDB [Bandara]> describe Penumpang_has_Pesawat;
+----------------+---------+------+-----+---------+-------+
| Field          | Type    | Null | Key | Default | Extra |
+----------------+---------+------+-----+---------+-------+
| id_penumpangFK | int(11) | NO   | PRI | NULL    |       |
| kode_pesawatFK | int(11) | NO   | PRI | NULL    |       |
+----------------+---------+------+-----+---------+-------+
2 rows in set (0.00 sec)
```

15. Melihat Struktur data Tiket_Pesawat_has_Penumpang & Melihat Struktur data Pesawat_has_Tiket_Pesawat.

```
MariaDB [Bandara]> describe Tiket_Pesawat_has_Penumpang;
+----------------+---------+------+-----+---------+-------+
| Field          | Type    | Null | Key | Default | Extra |
+----------------+---------+------+-----+---------+-------+
| kode_tiketFK   | int(11) | NO   | PRI | NULL    |       |
| id_penumpangFK | int(11) | NO   | PRI | NULL    |       |
+----------------+---------+------+-----+---------+-------+
2 rows in set (0.01 sec)
```

```
MariaDB [Bandara]> describe Pesawat_has_Tiket_Pesawat;
+----------------+---------+------+-----+---------+-------+
| Field          | Type    | Null | Key | Default | Extra |
+----------------+---------+------+-----+---------+-------+
| kode_pesawatFK | int(11) | NO   | PRI | NULL    |       |
| kode_tiketFK   | int(11) | NO   | PRI | NULL    |       |
+----------------+---------+------+-----+---------+-------+
2 rows in set (0.01 sec)
```