Nama : TIO SEPTIADI MURBIATORO

NIM : L200170099

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 Hotel.

```
MariaDB [(none)]> create database hotel
    -> ;
Query OK, 1 row affected (0.01 sec)

MariaDB [(none)]>
```

2. Menghubungkan ke dalam database yang telah dibuat.

```
MariaDB [(none)]> use hotel
Database changed
MariaDB [hotel]>
```

3. Membuat tabel Pelanggan.

```
MariaDB [hotel]> create table pelanggan(
    -> id_pelanggan integer primary key,
    -> nama_pelanggan varchar(255)not null,
    -> alamat_pelanggan varchar(255)not null
    -> );
Query OK, 0 rows affected (0.24 sec)
```

4. Membuat tabel resepsionis.

```
MariaDB [hotel]> create table resepsionis(
    -> id_resepsionis integer primary key,
    -> nama_rsepsionis varchar(255)not null,
    -> alamat_resepsionis varchar(255)not null
    -> );
Query OK, 0 rows affected (0.27 sec)
```

5. Membuat tabel penyedia_layanan.

```
MariaDB [hotel]> create table penyedia_layanan(
    -> kode_layanan integer primary key,
    -> nama_layanan varchar(45)
    -> );
Query OK, 0 rows affected (0.68 sec)
```

6. Membuat tabel hotel1.

```
MariaDB [hotel]> create table hotel1(
    -> kode_hotel integer primary key,
    -> nama_hotel varchar(45),
    -> alamat_hotel varchar(255),
    -> stok_kamar integer
    -> );
Query OK, 0 rows affected (0.55 sec)
```

7. Membuat tabel pelanggan_has_resepsionis

```
MariaDB [hotel]> create table pelanggan_has_resepsionis(
    -> id_pelangganFK integer references pelanggan(id_pelanggan)on delete cascade on update cascade,
    -> id_resepsionisFK integer references resepsionis(id_resepsionis)on delete cascade on update cascade,
    -> primary key(id_pelangganFK, id_resepsionisFK)
    -> );
Query OK, 0 rows affected (0.28 sec)
```

.

8. Membuat tabel pelanggan_penyedia_layanan.

```
MariaDB [hotel]> create table pelanggan_has_penyedia_layanan(
    -> id_pelangganFK integer references pelanggan(id_pelanggan)on delete cascade on update cascade,
    -> kode_layananFK integer references layanan(kode_layanan)on delete cascade on update cascade,
    -> primary key(id_pelangganFK, kode_layananFK)
    -> );
Query OK, 0 rows affected (0.24 sec)
```

9. Membuat tabel resepsionis_has_penyedia_layanan.

```
MariaDB [hotel]> create table ressepsionis_has_penyedia_layanan(
    -> id_resepsionisFK integer references resepsionis(id_resepsionis)on delete cascade on update cascade,
    -> kode_layananFK integer references layanan(kode_layanan)on delete cascade on update cascade,
    -> primary key(id_resepsionisFK, kode_layananFK)
    -> );
Query OK, 0 rows affected (0.27 sec)
```

10. Membuat tabel penyedia_layanan_has_hotel1.

```
MariaDB [hotel]> create table penyedia_layanan_has_hotel1(
    -> kode_layananFK integer references layanan(kode_layanan)on delete cascade on update cascade,
    -> kode_hotelFK integer references hotel(kode_hotel)on delete cascade on update cascade,
    -> primary key(kode_layananFK, kode_hotelFK)
    -> );
Query OK, 0 rows affected (0.27 sec)
```

11. Mengecek hasil Pembuatan Database.

```
MariaDB [hotel]> show tables
    -> ;
+-----------------------------------+
| Tables_in_hotel                   |
+-----------------------------------+
| hotel1                            |
| pelanggan                         |
| pelanggan_has_penyedia_layanan    |
| pelanggan_has_resepsionis         |
| penyedia_layanan                  |
| penyedia_layanan_has_hotel1       |
| resepsionis                       |
| ressepsionis_has_penyedia_layanan |
+-----------------------------------+
8 rows in set (0.00 sec)
```

12. Melihat Struktur tabel Pelanggan.

```
MariaDB [hotel]> describe pelanggan;
+------------------+--------------+------+-----+---------+-------+
| Field            | Type         | Null | Key | Default | Extra |
+------------------+--------------+------+-----+---------+-------+
| id_pelanggan     | int(11)      | NO   | PRI | NULL    |       |
| nama_pelanggan   | varchar(255) | NO   |     | NULL    |       |
| alamat_pelanggan | varchar(255) | NO   |     | NULL    |       |
+------------------+--------------+------+-----+---------+-------+
3 rows in set (0.04 sec)
```

13. Melihat Struktur tabel resepsionis.

```
MariaDB [hotel]> describe resepsionis;
+--------------------+-------------+------+-----+---------+-------+
| Field              | Type        | Null | Key | Default | Extra |
+--------------------+-------------+------+-----+---------+-------+
| id_resepsionis     | int(11)     | NO   | PRI | NULL    |       |
| nama_rsepsionis    | varchar(255) | NO   |     | NULL    |       |
| alamat_resepsionis | varchar(255) | NO   |     | NULL    |       |
+--------------------+-------------+------+-----+---------+-------+
3 rows in set (0.03 sec)
```

14. Melihat Struktur tabel penyedia_layanan.

```
MariaDB [hotel]> describe penyedia_layanan;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| kode_layanan | int(11)     | NO   | PRI | NULL    |       |
| nama_layanan | varchar(45) | YES  |     | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
2 rows in set (0.02 sec)
```

15. Melihat Struktur hotel1.

```
MariaDB [hotel]> describe hotel1;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| kode_hotel   | int(11)     | NO   | PRI | NULL    |       |
| nama_hotel   | varchar(45) | YES  |     | NULL    |       |
| alamat_hotel | varchar(255) | YES  |     | NULL    |       |
| stok_kamar   | int(11)     | YES  |     | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
4 rows in set (0.02 sec)
```

16. Melihat Struktur data pelanggan_has_penyedia_layanan.

```
MariaDB [hotel]> describe pelanggan_has_penyedia_layanan;
+----------------+---------+------+-----+---------+-------+
| Field          | Type    | Null | Key | Default | Extra |
+----------------+---------+------+-----+---------+-------+
| id_pelangganFK | int(11) | NO   | PRI | NULL    |       |
| kode_layananFK | int(11) | NO   | PRI | NULL    |       |
+----------------+---------+------+-----+---------+-------+
2 rows in set (0.02 sec)
```

17. Melihat Struktur data pelanggan_has_resepsionis .

```
MariaDB [hotel]> describe pelanggan_has_resepsionis;
+-----------------+---------+------+-----+---------+-------+
| Field           | Type    | Null | Key | Default | Extra |
+-----------------+---------+------+-----+---------+-------+
| id_pelangganFK  | int(11) | NO   | PRI | NULL    |       |
| id_resepsionisFK | int(11) | NO   | PRI | NULL    |       |
+-----------------+---------+------+-----+---------+-------+
2 rows in set (0.02 sec)
```

18. Melihat Struktur data penyedia_layanan_has_hotel1.

```
MariaDB [hotel]> describe penyedia_layanan_has_hotel1;
+----------------+---------+------+-----+---------+-------+
| Field          | Type    | Null | Key | Default | Extra |
+----------------+---------+------+-----+---------+-------+
| kode_layananFK | int(11) | NO   | PRI | NULL    |       |
| kode_hotelFK   | int(11) | NO   | PRI | NULL    |       |
+----------------+---------+------+-----+---------+-------+
2 rows in set (0.02 sec)
```

19. Melihat Struktur data resepsionis_has_penyedia_layanan.

```
MariaDB [hotel]> describe ressepsionis_has_penyedia_layanan;
+------------------+---------+------+-----+---------+-------+
| Field            | Type    | Null | Key | Default | Extra |
+------------------+---------+------+-----+---------+-------+
| id_resepsionisFK | int(11) | NO   | PRI | NULL    |       |
| kode_layananFK   | int(11) | NO   | PRI | NULL    |       |
+------------------+---------+------+-----+---------+-------+
2 rows in set (0.02 sec)
```

20. Tampilan database di xampp.

	Table	Action	Rows	Type	Collation	Size	Overhead
☐	hotel1	Browse Structure Search Insert Empty Drop	0	InnoDB	latin1_swedish_ci	16 KiB	-
☐	pelanggan	Browse Structure Search Insert Empty Drop	0	InnoDB	latin1_swedish_ci	16 KiB	-
☐	pelanggan_has_penyedia_layanan	Browse Structure Search Insert Empty Drop	0	InnoDB	latin1_swedish_ci	16 KiB	-
☐	pelanggan_has_resepsionis	Browse Structure Search Insert Empty Drop	0	InnoDB	latin1_swedish_ci	16 KiB	-
☐	penyedia_layanan	Browse Structure Search Insert Empty Drop	0	InnoDB	latin1_swedish_ci	16 KiB	-
☐	penyedia_layanan_has_hotel1	Browse Structure Search Insert Empty Drop	0	InnoDB	latin1_swedish_ci	16 KiB	-
☐	resepsionis	Browse Structure Search Insert Empty Drop	0	InnoDB	latin1_swedish_ci	16 KiB	-
☐	ressepsionis_has_penyedia_layanan	Browse Structure Search Insert Empty Drop	0	InnoDB	latin1_swedish_ci	16 KiB	-
	8 tables	Sum	0	InnoDB	latin1_swedish_ci	128 KiB	0 B