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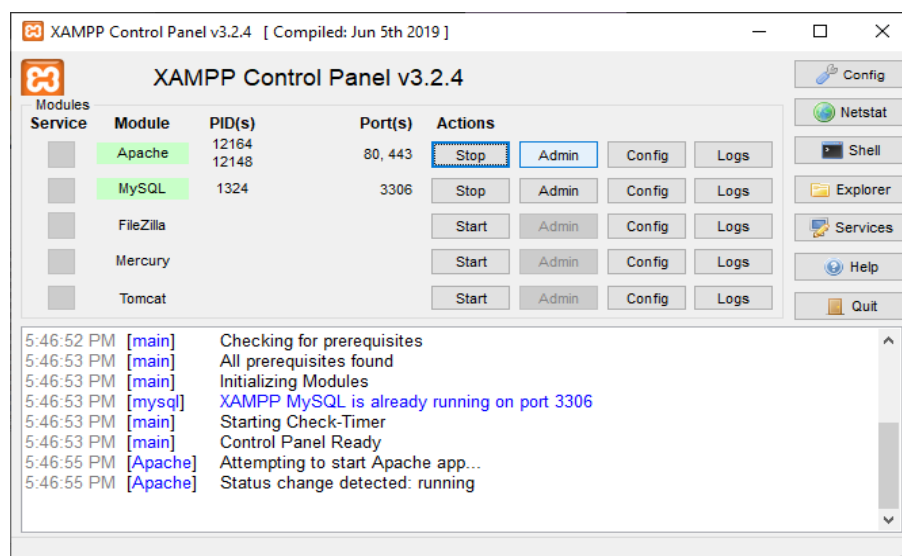
PRAKTIKUM SISTEM BASIS DATA

MODUL 5

DATA MANIPULATION LANGUAGE (DML)

Langkah – Langkah Praktikum:

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



2. Melakukan root ke MySQL kemudian pilih database perbankan

```
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 3
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)]> show databases;
+-----+
| Database |
+-----+
| information_schema |
| kuliah |
| mysql |
| perbankan |
| performance_schema |
| phpmyadmin |
| test |
+-----+
7 rows in set (0.17 sec)

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

3. Memasukkan data – data ke dalam database perbankan

- Tabel nasabah

```

MariaDB [(none)]> use perbankan
Database changed
MariaDB [perbankan]> INSERT INTO nasabah(id_nasabah, nama_nasabah, alamat_nasabah) VALUES(1,'Sutopo','Jl.Jendral Sudirman 12');
Query OK, 1 row affected (0.23 sec)

MariaDB [perbankan]> INSERT INTO nasabah(id_nasabah, nama_nasabah, alamat_nasabah) VALUES(2,'Maryati','Jl. MT. Haryono 31');
Query OK, 1 row affected (0.05 sec)

MariaDB [perbankan]> INSERT INTO nasabah(id_nasabah, nama_nasabah, alamat_nasabah) VALUES(3,'Suparman','Jl. Hasanudin 81');
Query OK, 1 row affected (0.06 sec)

MariaDB [perbankan]> INSERT INTO nasabah(id_nasabah, nama_nasabah, alamat_nasabah) VALUES(4,'Kartika Padmasari','Jl. Manggis 15');
Query OK, 1 row affected (0.08 sec)

MariaDB [perbankan]> INSERT INTO nasabah(id_nasabah, nama_nasabah, alamat_nasabah) VALUES(5,'Budi Eko Prayogo','Jl. Kantil 30');
Query OK, 1 row affected (0.10 sec)

MariaDB [perbankan]> INSERT INTO nasabah(id_nasabah, nama_nasabah, alamat_nasabah) VALUES(6,'Satria Eka Jaya','Jl. Slamet Riyadi 45');
Query OK, 1 row affected (0.10 sec)

MariaDB [perbankan]> INSERT INTO nasabah(id_nasabah, nama_nasabah, alamat_nasabah) VALUES(7,'Indri Hapsari','Jl. Sutoyo 5');
Query OK, 1 row affected (0.10 sec)

MariaDB [perbankan]> INSERT INTO nasabah(id_nasabah, nama_nasabah, alamat_nasabah) VALUES(8,'Sari Murti','Jl. Pangandaran 11');
Query OK, 1 row affected (0.11 sec)

MariaDB [perbankan]> INSERT INTO nasabah(id_nasabah, nama_nasabah, alamat_nasabah) VALUES(9,'Canka Lokananta','Jl. Tidar 86');
Query OK, 1 row affected (0.10 sec)

MariaDB [perbankan]> INSERT INTO nasabah(id_nasabah, nama_nasabah, alamat_nasabah) VALUES(10,'Budi Murtono','Jl. Merak 22');
Query OK, 1 row affected (0.10 sec)

MariaDB [perbankan]> _

```

- Tabel cabang_bank

```

MariaDB [perbankan]> INSERT INTO cabang_bank(kode_cabang, nama_cabang, alamat_cabang) VALUES('BRUS','Bank Rut Unit Surakarta','Jl. Slamet Riyadi 18');
Query OK, 1 row affected (0.12 sec)

MariaDB [perbankan]> INSERT INTO cabang_bank(kode_cabang, nama_cabang, alamat_cabang) VALUES('BRUM','Bank Rut Unit Magelang','Jl. P. Tendean 63');
Query OK, 1 row affected (0.10 sec)

MariaDB [perbankan]> INSERT INTO cabang_bank(kode_cabang, nama_cabang, alamat_cabang) VALUES('BRUB','Bank Rut Unit Boyolali','Jl. Ahmad Yani 45');
Query OK, 1 row affected (0.04 sec)

MariaDB [perbankan]> INSERT INTO cabang_bank(kode_cabang, nama_cabang, alamat_cabang) VALUES('BRUK','Bank Rut Unit Klaten','Jl. Suparman 23');
Query OK, 1 row affected (0.09 sec)

MariaDB [perbankan]> INSERT INTO cabang_bank(kode_cabang, nama_cabang, alamat_cabang) VALUES('BRUY','Bank Rut Unit Yogyakarta','Jl. Anggrek 21');
Query OK, 1 row affected (0.08 sec)

MariaDB [perbankan]> INSERT INTO cabang_bank(kode_cabang, nama_cabang, alamat_cabang) VALUES('BRUW','Bank Rut Unit Wonogiri','Jl. Untung Suropati 12');
Query OK, 1 row affected (0.09 sec)

```

- Tabel rekening

```
4 rows in set (0.13 sec)

MariaDB [perbankan]> INSERT INTO rekening(no_rekening, kode_cabangFK, pin, saldo
> VALUES(101,'BRUS',1111,500000);
Query OK, 1 row affected (0.11 sec)

MariaDB [perbankan]> INSERT INTO rekening(no_rekening, kode_cabangFK, pin, saldo
> VALUES(102,'BRUS',2222,350000);
Query OK, 1 row affected (0.07 sec)

MariaDB [perbankan]> INSERT INTO rekening(no_rekening, kode_cabangFK, pin, saldo
> VALUES(103,'BRUS',3333,750000);
Query OK, 1 row affected (0.08 sec)

MariaDB [perbankan]> INSERT INTO rekening(no_rekening, kode_cabangFK, pin, saldo
> VALUES(104,'BRUM',4444,900000);
Query OK, 1 row affected (0.08 sec)

MariaDB [perbankan]> INSERT INTO rekening(no_rekening, kode_cabangFK, pin, saldo
> VALUES(105,'BRUM',5555,2000000);
Query OK, 1 row affected (0.08 sec)

MariaDB [perbankan]> INSERT INTO rekening(no_rekening, kode_cabangFK, pin, saldo
> VALUES(106,'BRUS',6666,3000000);
Query OK, 1 row affected (0.09 sec)

MariaDB [perbankan]> INSERT INTO rekening(no_rekening, kode_cabangFK, pin, saldo
> VALUES(107,'BRUS',7777,1000000);
Query OK, 1 row affected (0.10 sec)

MariaDB [perbankan]> INSERT INTO rekening(no_rekening, kode_cabangFK, pin, saldo
> VALUES(108,'BRUB',0000,5000000);
Query OK, 1 row affected (0.09 sec)

MariaDB [perbankan]> INSERT INTO rekening(no_rekening, kode_cabangFK, pin, saldo
> VALUES(109,'BRUB',9999,0);
Query OK, 1 row affected (0.08 sec)

MariaDB [perbankan]> INSERT INTO rekening(no_rekening, kode_cabangFK, pin, saldo
> VALUES(110,'BRUY',1234,550000);
Query OK, 1 row affected (0.03 sec)

MariaDB [perbankan]> INSERT INTO rekening(no_rekening, kode_cabangFK, pin, saldo
> VALUES(111,'BRUK',4321,150000);
Query OK, 1 row affected (0.10 sec)

MariaDB [perbankan]> INSERT INTO rekening(no_rekening, kode_cabangFK, pin, saldo
> VALUES(112,'BRUK',0123,300000);
Query OK, 1 row affected (0.11 sec)

MariaDB [perbankan]> INSERT INTO rekening(no_rekening, kode_cabangFK, pin, saldo
> VALUES(113,'BRUY',8888,255000);
Query OK, 1 row affected (0.08 sec)

MariaDB [perbankan]> _
```

- Tabel nasabah_has_rekening

```
K> VALUES(2,103);
Query OK, 1 row affected (0.09 sec)

MariaDB [perbankan]> INSERT INTO nasabah_has_rekening(id_nasabahFK, no_rekeningFK) VALUES(3,105);
Query OK, 1 row affected (0.12 sec)

MariaDB [perbankan]>
MariaDB [perbankan]> INSERT INTO nasabah_has_rekening(id_nasabahFK, no_rekeningFK) VALUES(3,106);
Query OK, 1 row affected (0.09 sec)

MariaDB [perbankan]> INSERT INTO nasabah_has_rekening(id_nasabahFK, no_rekeningFK) VALUES(4,101);
Query OK, 1 row affected (0.03 sec)

MariaDB [perbankan]> INSERT INTO nasabah_has_rekening(id_nasabahFK, no_rekeningFK) VALUES(4,107);
Query OK, 1 row affected (0.08 sec)

MariaDB [perbankan]> INSERT INTO nasabah_has_rekening(id_nasabahFK, no_rekeningFK) VALUES(5,102);
Query OK, 1 row affected (0.10 sec)

MariaDB [perbankan]> INSERT INTO nasabah_has_rekening(id_nasabahFK, no_rekeningFK) VALUES(5,107);
Query OK, 1 row affected (2.10 sec)

MariaDB [perbankan]> INSERT INTO nasabah_has_rekening(id_nasabahFK, no_rekeningFK) VALUES(6,109);
Query OK, 1 row affected (0.13 sec)

MariaDB [perbankan]> INSERT INTO nasabah_has_rekening(id_nasabahFK, no_rekeningFK) VALUES(7,109);
Query OK, 1 row affected (0.10 sec)

MariaDB [perbankan]> INSERT INTO nasabah_has_rekening(id_nasabahFK, no_rekeningFK) VALUES(8,111);
Query OK, 1 row affected (0.22 sec)

MariaDB [perbankan]> INSERT INTO nasabah_has_rekening(id_nasabahFK, no_rekeningFK) VALUES(9,110);
Query OK, 1 row affected (0.03 sec)

MariaDB [perbankan]> INSERT INTO nasabah_has_rekening(id_nasabahFK, no_rekeningFK) VALUES(10,113);
Query OK, 1 row affected (0.04 sec)

MariaDB [perbankan]> INSERT INTO nasabah_has_rekening(id_nasabahFK, no_rekeningFK) VALUES(8,112);
Query OK, 1 row affected (0.10 sec)

MariaDB [perbankan]> INSERT INTO nasabah_has_rekening(id_nasabahFK, no_rekeningFK) VALUES(10,108);
Query OK, 1 row affected (0.09 sec)

MariaDB [perbankan]>
```

- Tabel transaksi

```

MariaDB [perbankan]> INSERT INTO transaksi(no_transaksi, no_rekeningFK, id_transaksiFK, jenis_transaksi, tanggal, jumlah) VALUES(1,105,3,'debit',2009-11-10,50000);
ERROR 1054 (42S22): Unknown column 'id_transaksiFK' in 'field list'
MariaDB [perbankan]> INSERT INTO transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) VALUES(1,105,3,'debit',2009-11-10,50000);
Query OK, 1 row affected, 1 warning (0.13 sec)

MariaDB [perbankan]> INSERT INTO transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) VALUES(2,103,2,'debit',2009-11-10,40000);
Query OK, 1 row affected, 1 warning (0.10 sec)

MariaDB [perbankan]> INSERT INTO transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) VALUES(3,101,4,'kredit',2009-11-12,20000);
Query OK, 1 row affected, 1 warning (0.04 sec)

MariaDB [perbankan]> INSERT INTO transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) VALUES(4,106,3,'debit',2009-11-13,50000);
Query OK, 1 row affected, 1 warning (0.10 sec)

MariaDB [perbankan]> INSERT INTO transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) VALUES(5,107,5,'kredit',2009-11-13,30000);
Query OK, 1 row affected, 1 warning (0.08 sec)

MariaDB [perbankan]> INSERT INTO transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) VALUES(6,104,1,'kredit',2009-11-15,20000);
Query OK, 1 row affected, 1 warning (0.11 sec)

MariaDB [perbankan]> INSERT INTO transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) VALUES(7,110,9,'kredit',2009-11-15,15000);
Query OK, 1 row affected, 1 warning (0.09 sec)

MariaDB [perbankan]> INSERT INTO transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) VALUES(8,102,5,'debit',2009-11-16,20000);
Query OK, 1 row affected, 1 warning (0.09 sec)

MariaDB [perbankan]> INSERT INTO transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) VALUES(9,105,3,'kredit',2009-11-18,50000);
Query OK, 1 row affected, 1 warning (0.09 sec)

MariaDB [perbankan]> INSERT INTO transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) VALUES(10,107,4,'debit',2009-11-19,10000);
Query OK, 1 row affected, 1 warning (0.09 sec)

MariaDB [perbankan]> INSERT INTO transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) VALUES(11,103,2,'debit',2009-11-19,10000);

```

```
MariaDB [perbankan]> INSERT INTO transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) VALUES(11,103,2,'debit',2009-11-19,100000);
Query OK, 1 row affected, 1 warning (0.13 sec)

MariaDB [perbankan]> INSERT INTO transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) VALUES(12,104,1,'debit',2009-11-19,500000);
Query OK, 1 row affected, 1 warning (0.09 sec)

MariaDB [perbankan]> INSERT INTO transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) VALUES(13,107,4,'kredit',2009-11-20,200000);
Query OK, 1 row affected, 1 warning (0.07 sec)

MariaDB [perbankan]> INSERT INTO transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) VALUES(14,105,3,'debit',2009-11-21,400000);
Query OK, 1 row affected, 1 warning (0.18 sec)

MariaDB [perbankan]> INSERT INTO transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) VALUES(15,104,1,'kredit',2009-11-22,100000);
Query OK, 1 row affected, 1 warning (0.10 sec)

MariaDB [perbankan]> INSERT INTO transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) VALUES(16,101,4,'kredit',2009-11-22,200000);
Query OK, 1 row affected, 1 warning (0.09 sec)

MariaDB [perbankan]> INSERT INTO transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) VALUES(17,103,2,'debit',2009-11-22,500000);
Query OK, 1 row affected, 1 warning (0.15 sec)

MariaDB [perbankan]> INSERT INTO transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) VALUES(18,102,5,'debit',2009-11-25,500000);
Query OK, 1 row affected, 1 warning (0.10 sec)

MariaDB [perbankan]> INSERT INTO transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) VALUES(19,108,10,'debit',2009-11-26,100000);
Query OK, 1 row affected, 1 warning (0.12 sec)

MariaDB [perbankan]> INSERT INTO transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) VALUES(20,106,3,'kredit',2009-11-27,500000);
Query OK, 1 row affected, 1 warning (0.09 sec)

MariaDB [perbankan]> INSERT INTO transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) VALUES(21,103,2,'kredit',2009-11-28,200000);
Query OK, 1 row affected, 1 warning (0.15 sec)

MariaDB [perbankan]> INSERT INTO transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) VALUES(22,107,4,'debit',2009-11-29,100000);
Query OK, 1 row affected, 1 warning (0.10 sec)
```

```

MariaDB [perbankan]> INSERT INTO transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) VALUES(20,106,3,'kredit',2009-11-27,50000);
Query OK, 1 row affected, 1 warning (0.09 sec)

MariaDB [perbankan]> INSERT INTO transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) VALUES(21,103,2,'kredit',2009-11-28,20000);
Query OK, 1 row affected, 1 warning (0.15 sec)

MariaDB [perbankan]> INSERT INTO transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) VALUES(22,105,3,'kredit',2009-11-28,10000);
Query OK, 1 row affected, 1 warning (0.12 sec)

MariaDB [perbankan]> INSERT INTO transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) VALUES(23,102,5,'debit',2009-11-30,20000);
Query OK, 1 row affected, 1 warning (0.10 sec)

MariaDB [perbankan]> INSERT INTO transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) VALUES(24,104,1,'debit',2009-12-1,20000);
Query OK, 1 row affected, 1 warning (0.10 sec)

MariaDB [perbankan]> INSERT INTO transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) VALUES(25,103,2,'debit',2009-12-2,40000);
Query OK, 1 row affected, 1 warning (0.11 sec)

MariaDB [perbankan]> INSERT INTO transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) VALUES(26,101,4,'debit',2009-12-4,50000);
Query OK, 1 row affected, 1 warning (0.80 sec)

MariaDB [perbankan]> INSERT INTO transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) VALUES(27,103,2,'kredit',2009-12-5,10000);
Query OK, 1 row affected, 1 warning (0.17 sec)

MariaDB [perbankan]> INSERT INTO transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) VALUES(28,102,5,'kredit',2009-12-5,20000);
Query OK, 1 row affected, 1 warning (0.06 sec)

MariaDB [perbankan]> INSERT INTO transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) VALUES(29,109,7,'debit',2009-12-5,10000);
Query OK, 1 row affected, 1 warning (0.08 sec)

MariaDB [perbankan]> INSERT INTO transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) VALUES(30,110,9,'debit',2009-12-6,20000);
Query OK, 1 row affected, 1 warning (0.04 sec)

MariaDB [perbankan]>

```

4. Melakukan update untuk kasus – kasus berikut ini

- a. Nasabah dengan nama “Indri Hapsari” pindah alamat ke “Jalan Slamet Riyadi no. 34”

```

MariaDB [perbankan]> UPDATE nasabah SET alamat_nasabah = 'Jalan Slamet Riyadi No. 34' WHERE nama_nasabah = 'Indri Hapsari';
Query OK, 1 row affected (0.32 sec)
Rows matched: 1  Changed: 1  Warnings: 0

```

- b. Cabang dengan kode “BRUW” pindah ke alamat “Jalan A. Yani No. 23”

```

MariaDB [perbankan]> UPDATE cabang_bank SET alamat_cabang = 'Jalan A. Yani No. 23' WHERE kode_cabang = 'BRUW';
Query OK, 1 row affected (0.20 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [perbankan]>

```

5. Melakukan penghapusan untuk kasus - kasus berikut

a. Nasabah dengan id “7” menutup rekening

```
MariaDB [perbankan]> DELETE FROM nasabah WHERE id_nasabah = 7;  
Query OK, 1 row affected (0.18 sec)  
MariaDB [perbankan]>
```

b. Cabang dengan nama_cabang “Bank Rut Unit Magelang” menutup kantornya

```
MariaDB [perbankan]> DELETE FROM cabang_bank WHERE nama_cabang = 'Bank Rut Unit  
Magelang';  
Query OK, 1 row affected (0.12 sec)  
MariaDB [perbankan]>
```