

LATIHAN MODUL 3

PRAKTIKUM BASIS DATA

Data Manipulation Language (DML)

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PROGRAM STUDI TEKNIK INFORMATIKA

JURUSAN TEKNIK ELEKTRO INFORMATIKA DAN SISTEM FISIS

INSTITUT TEKNOLOGI SUMATERA

LAMPUNG SELATAN

2022

Latihan

Buatlah database dengan nama : “Bank_ITERA”

```
XAMPP for Windows - mysql -u root -p
MariaDB [(none)]> create database Bank_ITERA;
Query OK, 1 row affected (0.002 sec)

MariaDB [(none)]> use bank_itera;
Database changed
MariaDB [bank_itera]> create table rekening (no_rekening varchar(6), kode_cabang char(5), pin varchar(6), saldo int(11), primary key (no_rekening)) engine=innodb;
Query OK, 0 rows affected (0.489 sec)

MariaDB [bank_itera]> show databases;
+-----+
| Database |
+-----+
| bank_itera |
| information_schema |
| kell |
| mysql |
| performance_schema |
| phpmyadmin |
| teori_mtk |
| test |
| univ |
+-----+
9 rows in set (0.185 sec)
```

Masukkan data dan buat tabel “rekening”.

```
XAMPP for Windows - mysql -u root -p
MariaDB [(none)]> use bank_itera;
Database changed
MariaDB [bank_itera]> desc rekening;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| no_rekening | varchar(6) | NO | PRI | NULL | |
| kode_cabang | char(5) | YES | | NULL | |
| pin | varchar(6) | YES | | NULL | |
| saldo | int(11) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.043 sec)

MariaDB [bank_itera]> insert into rekening value ('120023', 'JGJ01', '837242', 500000), ('120087', 'JGJ02', '112233', 2150000), ('140932', 'J0J02', '024422', 1200000), ('220983', 'SMG12', '732312', 5422000), ('332102', 'JKT48', '228883', 400500);
Query OK, 5 rows affected (0.118 sec)
Records: 5 Duplicates: 0 Warnings: 0

MariaDB [bank_itera]> select * from rekening;
+-----+-----+-----+-----+
| no_rekening | kode_cabang | pin | saldo |
+-----+-----+-----+-----+
| 120023 | JGJ01 | 837242 | 500000 |
| 120087 | JGJ02 | 112233 | 2150000 |
| 140932 | J0J02 | 024422 | 1200000 |
| 220983 | SMG12 | 732312 | 5422000 |
| 332102 | JKT48 | 228883 | 400500 |
+-----+-----+-----+-----+
5 rows in set (0.001 sec)

MariaDB [bank_itera]> create table transaksi (no_transaksi int(11), no_rekening varchar(6), jenis_transaksi varchar(10), tgl_transaksi datetime, jumlah int(11), primary key (no_transaksi)) engine=innodb;
```

Buat dan masukkan data berikut ke dalam tabel “transaksi”.

```

XAMPP for Windows - mysql -u root -p
MariaDB [bank_itera]> create table transaksi (no_transaksi int(11), no_rekening varchar(6), jenis_transaksi varchar(10), tgl_transaksi
datetime, jumlah int(11), primary key (no_transaksi)) engine=innodb;
Query OK, 0 rows affected (0.274 sec)

MariaDB [bank_itera]> desc transaksi;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| no_transaksi | int(11) | NO | PRI | NULL | |
| no_rekening | varchar(6) | YES | | NULL | |
| jenis_transaksi | varchar(10) | YES | | NULL | |
| tgl_transaksi | datetime | YES | | NULL | |
| jumlah | int(11) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.095 sec)

MariaDB [bank_itera]> insert into transaksi values (1, '220983', 'DEBET', '2022-06-12 12:00:45', 500000), (2, '220983', 'DEBET', '2022
-06-13 08:20:33', 2150000), (3, '140932', 'ATM', '2022-06-14 10:56:52', 100000), (4, '140932', 'ATM', '2022-06-14 15:16:23', 100000),
(5, '120087', 'DEBET', '2022-06-15 15:03:33', 1250000), (6, '220983', 'ATM', '2022-06-15 15:32:15', 150000), (7, '220983', 'ATM', '202
2-06-15 15:40:12', 100000), (8, '220983', 'DEBET', '2022-06-16 08:23:23', 2500000);
Query OK, 8 rows affected (0.145 sec)
Records: 8 Duplicates: 0 Warnings: 0

```

```

MariaDB [bank_itera]> select * from transaksi;
+-----+-----+-----+-----+-----+
| no_transaksi | no_rekening | jenis_transaksi | tgl_transaksi | jumlah |
+-----+-----+-----+-----+-----+
| 1 | 220983 | DEBET | 2022-06-12 12:00:45 | 500000 |
| 2 | 220983 | DEBET | 2022-06-13 08:20:33 | 2150000 |
| 3 | 140932 | ATM | 2022-06-14 10:56:52 | 100000 |
| 4 | 140932 | ATM | 2022-06-14 15:16:23 | 100000 |
| 5 | 120087 | DEBET | 2022-06-15 15:03:33 | 1250000 |
| 6 | 220983 | ATM | 2022-06-15 15:32:15 | 150000 |
| 7 | 220983 | ATM | 2022-06-15 15:40:12 | 100000 |
| 8 | 220983 | DEBET | 2022-06-16 08:23:23 | 2500000 |
+-----+-----+-----+-----+-----+
8 rows in set (0.001 sec)

```

Ubah nilai pin menjadi “450817” dari rekening dengan no_rekening “220983” untuk mengubah data yang telah ada dapat menggunakan perintah UPDATE rekening set (kolom yang ingin diubah) WHERE (kondisi)

```
XAMPP for Windows - mysql -u root -p
MariaDB [bank_itera]> UPDATE rekening set pin = 450817 where no_rekening = 220983;
Query OK, 1 row affected (0.175 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [bank_itera]> select * from rekening;
+-----+-----+-----+-----+
| no_rekening | kode_cabang | pin      | saldo  |
+-----+-----+-----+-----+
| 120023      | JGJ01       | 837242   | 500000 |
| 120087      | JGJ02       | 112233   | 2150000 |
| 140932      | JGJ02       | 024422   | 1200000 |
| 220983      | SMG12       | 450817   | 5422000 |
| 332102      | JKT48       | 228883   | 400500 |
+-----+-----+-----+-----+
5 rows in set (0.001 sec)
```

Ubah tanggal_transaksi menjadi 2022-06-17 20:34:22 dari no_transaksi adalah “6”.

```
MariaDB [bank_itera]> UPDATE transaksi set tgl_transaksi = '2022-06-17 20:34:22' where no_transaksi = 6;
Query OK, 1 row affected (0.086 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

Tampilkan semua data dari tabel transaksi.

```
MariaDB [bank_itera]> select * from transaksi;
+-----+-----+-----+-----+-----+
| no_transaksi | no_rekening | jenis_transaksi | tgl_transaksi      | jumlah |
+-----+-----+-----+-----+-----+
| 1            | 220983      | DEBET           | 2022-06-12 12:00:45 | 500000 |
| 2            | 220983      | DEBET           | 2022-06-13 08:20:33 | 2150000 |
| 3            | 140932      | ATM             | 2022-06-14 10:56:52 | 1000000 |
| 4            | 140932      | ATM             | 2022-06-14 15:16:23 | 1000000 |
| 5            | 120087      | DEBET           | 2022-06-15 15:03:33 | 1250000 |
| 6            | 220983      | ATM             | 2022-06-17 20:34:22 | 1500000 |
| 7            | 220983      | ATM             | 2022-06-15 15:40:12 | 1000000 |
| 8            | 220983      | DEBET           | 2022-06-16 08:23:23 | 2500000 |
+-----+-----+-----+-----+-----+
8 rows in set (0.001 sec)
```

Tampilkan 5 transaksi terakhir data dari tabel transaksi desc yaitu untuk pengurutan data dari bawah sedangkan asc untuk pengurutan data dari atas

```
XAMPP for Windows - mysql -u root -p
MariaDB [bank_itera]> select * from transaksi order by no_transaksi desc limit 5;
+-----+-----+-----+-----+-----+
| no_transaksi | no_rekening | jenis_transaksi | tgl_transaksi      | jumlah |
+-----+-----+-----+-----+-----+
| 8            | 220983      | DEBET           | 2022-06-16 08:23:23 | 2500000 |
| 7            | 220983      | ATM             | 2022-06-15 15:40:12 | 1000000 |
| 6            | 220983      | ATM             | 2022-06-17 20:34:22 | 1500000 |
| 5            | 120087      | DEBET           | 2022-06-15 15:03:33 | 1250000 |
| 4            | 140932      | ATM             | 2022-06-14 15:16:23 | 1000000 |
+-----+-----+-----+-----+-----+
5 rows in set (0.001 sec)
```

Tampilkan data transaksi pada tanggal 2022-06-15.

```
MariaDB [bank_itera]> select * from transaksi where tgl_transaksi like '2022-06-15%';
+-----+-----+-----+-----+-----+
| no_transaksi | no_rekening | jenis_transaksi | tgl_transaksi      | jumlah |
+-----+-----+-----+-----+-----+
| 5            | 120087      | DEBET           | 2022-06-15 15:03:33 | 1250000 |
| 7            | 220983      | ATM             | 2022-06-15 15:40:12 | 1000000 |
+-----+-----+-----+-----+-----+
2 rows in set (0.056 sec)
```

Tampilkan data transaksi pada tanggal 2022-06-14 dan 2022-06-15.

```
MariaDB [bank_itera]> select * from transaksi where tgl_transaksi between '2022-06-14 00:00:00' and '2022-06-15 23:59:59';
```

no_transaksi	no_rekening	jenis_transaksi	tgl_transaksi	jumlah
3	140932	ATM	2022-06-14 10:56:52	100000
4	140932	ATM	2022-06-14 15:16:23	100000
5	120087	DEBET	2022-06-15 15:03:33	1250000
7	220983	ATM	2022-06-15 15:40:12	100000

```
4 rows in set, 1 warning (0.032 sec)
```

Tampilkan transaksi terakhir dari pada tanggal 2022-06-15.

```
XAMPP for Windows - mysql -u root -p
MariaDB [bank_itera]> select * from transaksi order by tgl_transaksi like '2022-06-15%' asc limit 1;
```

no_transaksi	no_rekening	jenis_transaksi	tgl_transaksi	jumlah
8	220983	DEBET	2022-06-16 08:23:23	2500000

```
1 row in set (0.029 sec)
```

```
MariaDB [bank_itera]> select * from transaksi order by tgl_transaksi like '2022-06-15%' desc limit 1;
```

no_transaksi	no_rekening	jenis_transaksi	tgl_transaksi	jumlah
5	120087	DEBET	2022-06-15 15:03:33	1250000

```
1 row in set (0.001 sec)
```

Tampilkan seluruh data pada tabel rekening yang berasal dari Jogja.

```
XAMPP for Windows - mysql -u root -p
MariaDB [bank_itera]> select * from rekening where kode_cabang like 'JGJ%';
```

no_rekening	kode_cabang	pin	saldo
120023	JGJ01	837242	500000
120087	JGJ02	112233	2150000

```
2 rows in set (0.001 sec)
```

Hapus data pada rekening yang memiliki no_rekening "120087".

```
MariaDB [bank_itera]> delete from rekening where no_rekening = "120087";
Query OK, 1 row affected (0.063 sec)
```

```
MariaDB [bank_itera]> select * from rekening;
```

no_rekening	kode_cabang	pin	saldo
120023	JGJ01	837242	500000
140932	JGJ02	024422	1200000
220983	SMG12	450817	5422000
332102	JKT48	228883	400500

```
4 rows in set (0.001 sec)
```

Tampilkan kode no_rekening dan kode_cabang dari nasabah yang memiliki saldo antara 500000 dan 3000000.

```
MariaDB [bank_itera]> select no_rekening, kode_cabang from rekening where saldo between '500000' and '3000000';
```

no_rekening	kode_cabang
120023	JGJ01
140932	JGJ02

```
2 rows in set (0.023 sec)
```

Tampilkan total transaksi yang terjadi pada tanggal 15 Juni 2022.

```

XAMPP for Windows - mysql -u root -p
MariaDB [bank_itera]> select sum(jumlah) from transaksi where tgl_transaksi between '2022-06-14 00:00:00' and '2022-06-15 23:59:59';
+-----+
| sum(jumlah) |
+-----+
|      1550000 |
+-----+
1 row in set (0.065 sec)

```

Tampilkan seluruh dana transaksi yang pernah dilakukan oleh no_rekening “220983”.

```

MariaDB [bank_itera]> select jumlah from transaksi where no_rekening like '220983%';
+-----+
| jumlah |
+-----+
| 500000 |
| 2150000 |
| 150000 |
| 100000 |
| 2500000 |
+-----+
5 rows in set (0.001 sec)

```

Tampilkan rata-rata dana transaksi yang terjadi antara tanggal 13 Juni 2022 s.d 15 Juni 2022.

```

MariaDB [bank_itera]> select avg(jumlah) from transaksi where tgl_transaksi between '2022-06-13 00:00:00' and '2022-06-15 23:59:59';
+-----+
| avg(jumlah) |
+-----+
| 740000.0000 |
+-----+
1 row in set (0.038 sec)

```

Tampilkan banyaknya transaksi yang dilakukan oleh masing-masing pemilik rekening.

```

XAMPP for Windows - mysql -u root -p
MariaDB [bank_itera]> select no_rekening, count(*), sum(jumlah) as 'Banyak Transaksi' from transaksi where no_rekening = '220983';
+-----+-----+-----+
| no_rekening | count(*) | Banyak Transaksi |
+-----+-----+-----+
| 220983      | 5        | 5400000          |
+-----+-----+-----+
1 row in set (0.056 sec)

MariaDB [bank_itera]> select no_rekening, count(*), sum(jumlah) as 'Banyak Transaksi' from transaksi where no_rekening = '140932';
+-----+-----+-----+
| no_rekening | count(*) | Banyak Transaksi |
+-----+-----+-----+
| 140932      | 2        | 200000           |
+-----+-----+-----+
1 row in set (0.001 sec)

MariaDB [bank_itera]> select no_rekening, count(*), sum(jumlah) as 'Banyak Transaksi' from transaksi where no_rekening = '120087';
+-----+-----+-----+
| no_rekening | count(*) | Banyak Transaksi |
+-----+-----+-----+
| 120087      | 1        | 125000           |
+-----+-----+-----+
1 row in set (0.001 sec)

```

Tampilkan seluruh transaksi pada bulan Juni 2022.

```

XAMPP for Windows - mysql -u root -p
MariaDB [bank_itera]> select * from transaksi where tgl_transaksi like '2022-06%';
+-----+-----+-----+-----+-----+
| no_transaksi | no_rekening | jenis_transaksi | tgl_transaksi      | jumlah |
+-----+-----+-----+-----+-----+
| 1            | 220983      | DEBET           | 2022-06-12 12:00:45 | 500000 |
| 2            | 220983      | DEBET           | 2022-06-13 08:20:33 | 2150000 |
| 3            | 140932      | ATM             | 2022-06-14 10:56:52 | 100000 |
| 4            | 140932      | ATM             | 2022-06-14 15:16:23 | 100000 |
| 5            | 120087      | DEBET           | 2022-06-15 15:03:33 | 1250000 |
| 6            | 220983      | ATM             | 2022-06-17 20:34:22 | 150000 |
| 7            | 220983      | ATM             | 2022-06-15 15:40:12 | 100000 |
| 8            | 220983      | DEBET           | 2022-06-16 08:23:23 | 2500000 |
+-----+-----+-----+-----+-----+
8 rows in set (0.001 sec)

```

Tampilkan seluruh transaksi yang dilakukan oleh masing-masing pemilik rekening.

```
XAMPP for Windows - mysql -u root -p
MariaDB [bank_itera]> select * from transaksi where no_rekening = '220983';
+-----+-----+-----+-----+-----+
| no_transaksi | no_rekening | jenis_transaksi | tgl_transaksi | jumlah |
+-----+-----+-----+-----+-----+
| 1 | 220983 | DEBET | 2022-06-12 12:00:45 | 500000 |
| 2 | 220983 | DEBET | 2022-06-13 08:20:33 | 2150000 |
| 6 | 220983 | ATM | 2022-06-17 20:34:22 | 150000 |
| 7 | 220983 | ATM | 2022-06-15 15:40:12 | 100000 |
| 8 | 220983 | DEBET | 2022-06-16 08:23:23 | 2500000 |
+-----+-----+-----+-----+-----+
5 rows in set (0.001 sec)

MariaDB [bank_itera]> select * from transaksi where no_rekening = '140932';
+-----+-----+-----+-----+-----+
| no_transaksi | no_rekening | jenis_transaksi | tgl_transaksi | jumlah |
+-----+-----+-----+-----+-----+
| 3 | 140932 | ATM | 2022-06-14 10:56:52 | 100000 |
| 4 | 140932 | ATM | 2022-06-14 15:16:23 | 100000 |
+-----+-----+-----+-----+-----+
2 rows in set (0.001 sec)

MariaDB [bank_itera]> select * from transaksi where no_rekening = '120087';
+-----+-----+-----+-----+-----+
| no_transaksi | no_rekening | jenis_transaksi | tgl_transaksi | jumlah |
+-----+-----+-----+-----+-----+
| 5 | 120087 | DEBET | 2022-06-15 15:03:33 | 1250000 |
+-----+-----+-----+-----+-----+
1 row in set (0.001 sec)
```