Nama   **: Nur Fitria Melani**
NIM   **: L200180012**
Kelas   **: A**
Hari, Tanggal   **: Senin, 13 Juli 2020**

UAS PRAKTIKUM SISTEM BASIS DATA

1. Menampilkan no_rekening, nama_nasabah yang melakukan transaksi di atas tanggal '1 Desember 2009' diurutkan berdasarkan id_nasabah *Nb: masing-masing id_nasabah menampilkan satu transaksi, tidak boleh berulang.*

- Menggunakan DISTINCT, INNER JOIN, ON, NATURAL JOIN, USING

```
MariaDB [perbankan]> SELECT DISTINCT rekening.no_rekening, nasabah.nama_nasabah FROM transaksi INNER JOIN
 nasabah ON transaksi.id_nasabah=nasabah.id_nasabah NATURAL JOIN rekening INNER JOIN nasabah_has_rekening
 USING(no_rekening) WHERE tanggal > "2009-12-1" GROUP BY nasabah.id_nasabah ORDER BY nasabah.id_nasabah;
+------------+------------------+
| no_rekening | nama_nasabah    |
+------------+------------------+
|        103 | Maryati          |
|        101 | Kartika Padmasari |
|        102 | Budi Eko Prayogo |
|        110 | Canka Lokananta  |
|        118 | Kim              |
|        115 | Dodo             |
|        117 | Dimas            |
|        121 | Caca Marica      |
|        114 | Amelia           |
|        122 | Echa             |
|        116 | Melani           |
|        119 | Lani             |
|        123 | Fitria           |
|        120 | Hana             |
+------------+------------------+
14 rows in set (0.005 sec)
```

- Menggunakan DISTINCT, OUTER JOIN, ON, NATURAL JOIN, USING

```
MariaDB [perbankan]> SELECT DISTINCT rekening.no_rekening, nasabah.nama_nasabah FROM transaksi LEFT OUTER
 JOIN nasabah ON transaksi.id_nasabah=nasabah.id_nasabah NATURAL JOIN rekening LEFT OUTER JOIN nasabah_ha
s_rekening USING(no_rekening) WHERE tanggal> "2009-12-1" GROUP BY nasabah.id_nasabah ORDER BY nasabah.id_
nasabah;
+------------+------------------+
| no_rekening | nama_nasabah    |
+------------+------------------+
|        109 | NULL             |
|        103 | Maryati          |
|        101 | Kartika Padmasari |
|        102 | Budi Eko Prayogo |
|        110 | Canka Lokananta  |
|        118 | Kim              |
|        115 | Dodo             |
|        117 | Dimas            |
|        121 | Caca Marica      |
|        114 | Amelia           |
|        122 | Echa             |
|        116 | Melani           |
|        119 | Lani             |
|        123 | Fitria           |
|        120 | Hana             |
+------------+------------------+
15 rows in set (0.002 sec)
```

2. Menampilkan id_nasabah, nama_cabang, jumlah saldo (dalam sisa saldo) dari masing-masing id_nasabah dikurangi 75.000 untuk pembayaran SPP
Menggunakan Having, Group By, Distinct

```
MariaDB [perbankan]> SELECT DISTINCT nasabah_has_rekening.id_nasabahFK, cabang_bank.nama_cabang, SUM(reken
ing.saldo-75000) as "Sisa Saldo" FROM nasabah_has_rekening JOIN rekening ON nasabah_has_rekening.no_rekeni
ngFK=rekening.no_rekening JOIN cabang_bank ON rekening.kode_cabangFK=cabang_bank.kode_cabang GROUP BY id_n
asabahFK HAVING SUM(rekening.saldo)>=0;
+--------------+-------------------------+------------+
| id_nasabahFK | nama_cabang             | Sisa Saldo |
+--------------+-------------------------+------------+
|            2 | Bank Rut Unit Surakarta |     675000 |
|            3 | Bank Rut Unit Surakarta |    2925000 |
|            4 | Bank Rut Unit Surakarta |    1350000 |
|            5 | Bank Rut Unit Surakarta |    1200000 |
|            6 | Bank Rut Unit Boyolali  |     -75000 |
|            7 | Bank Rut Unit Boyolali  |     -75000 |
|            8 | Bank Rut Unit Klaten    |     300000 |
|            9 | Bank Rut Unit Yogyakarta|     475000 |
|           10 | Bank Rut Unit Boyolali  |    5105000 |
|           11 | Bank Rut Unit Pacitan   |    1225000 |
|           12 | Bank Rut Unit Semarang  |     575000 |
|           13 | Bank Rut Unit Surabaya  |     725000 |
|           14 | Bank Rut Unit Bekasi    |    2325000 |
|           15 | Bank Rut Unit Madiun    |     325000 |
|           16 | Bank Rut Unit Tegal     |     725000 |
|           17 | Bank Rut Unit Ngawi     |     625000 |
|           18 | Bank Rut Unit Sragen    |    1925000 |
|           19 | Bank Rut Unit Bandung   |     875000 |
|           20 | Bank Rut Unit Cilacap   |     925000 |
+--------------+-------------------------+------------+
19 rows in set (0.003 sec)
```

3. Membuat user baru dengan **012** (No. NIM 3 digit belakang). Kemudian beri privilege pada user, agar dapat melakukan CRUD. Kemudian berikan masing – masing contoh CRUD, setelah berhasil memberikan hak akses pada user.
   - Membuat user baru dengan 3 digit NIM terakhir

```
MariaDB [(none)]> use mysql
Database changed
MariaDB [mysql]> create user '012'@'localhost' identified by '012';
Query OK, 0 rows affected (0.008 sec)
```

- Memberi privileges pada user

```
MariaDB [mysql]> grant create on perbankan.nasabah to '012'@'localhost';
Query OK, 0 rows affected (0.004 sec)

MariaDB [mysql]> flush privileges;
Query OK, 0 rows affected (0.004 sec)

MariaDB [mysql]> grant insert on perbankan.nasabah to '012'@'localhost';
Query OK, 0 rows affected (0.004 sec)

MariaDB [mysql]> flush privileges;
Query OK, 0 rows affected (0.001 sec)

MariaDB [mysql]> grant update on perbankan.nasabah to '012'@'localhost';
Query OK, 0 rows affected (0.003 sec)

MariaDB [mysql]> flush privileges;
Query OK, 0 rows affected (0.001 sec)

MariaDB [mysql]> grant delete on perbankan.nasabah to '012'@'localhost';
Query OK, 0 rows affected (0.004 sec)

MariaDB [mysql]> flush privileges;
Query OK, 0 rows affected (0.001 sec)

MariaDB [mysql]> grant select on perbankan.nasabah to '012'@'localhost';
Query OK, 0 rows affected (0.004 sec)

MariaDB [mysql]> flush privileges;
Query OK, 0 rows affected (0.001 sec)
```

- Masuk sebagai user baru

```
C:\xampp\xampp\mysql\bin>mysql -u 012 -p
Enter password: ***
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 315
Server version: 10.4.13-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)]> use perbankan;
Database changed
```

- Contoh CRUD
  - **INSERT**

```
MariaDB [perbankan]> insert into nasabah values (31, "Nana", "Sragen");
Query OK, 1 row affected (0.007 sec)

MariaDB [perbankan]> select *from nasabah;
+------------+-------------------+-------------------------+
| id_nasabah | nama_nasabah      | alamat_nasabah          |
+------------+-------------------+-------------------------+
|          1 | Sutopo            | Jl. Jendral Sudirman 12 |
|          2 | Maryati           | Jl. MT. Haryono 31      |
|          3 | Suparman          | Jl. Hasanudin 81        |
|          4 | Kartika Padmasari | Jl. Manggis 15          |
|          5 | Budi Eko Prayogo  | Jl. Kantil 30           |
|          6 | Satria Eka Jaya   | Jl. Slamet Riyadi 45    |
|          7 | Indri Hapsari     | Jl. Sutoyo 5            |
|          8 | Sari Murti        | Jl. Pengandaran 11      |
|          9 | Canka Lokananta   | Jl. Tidar 86            |
|         10 | Budi Murtono      | Jl. Merak 22            |
|         31 | Nana              | Sragen                  |
+------------+-------------------+-------------------------+
11 rows in set (0.001 sec)
```

- **SELECT**

```
MariaDB [perbankan]> select *from nasabah;
+-----------+-----------------+------------------------+
| id_nasabah | nama_nasabah    | alamat_nasabah         |
+-----------+-----------------+------------------------+
|         1 | Sutopo          | Jl. Jendral Sudirman 12 |
|         2 | Maryati         | Jl. MT. Haryono 31      |
|         3 | Suparman        | Jl. Hasanudin 81       |
|         4 | Kartika Padmasari | Jl. Manggis 15       |
|         5 | Budi Eko Prayogo | Jl. Kantil 30         |
|         6 | Satria Eka Jaya | Jl. Slamet Riyadi 45   |
|         7 | Indri Hapsari   | Jl. Sutoyo 5           |
|         8 | Sari Murti      | Jl. Pengandaran 11     |
|         9 | Canka Lokananta | Jl. Tidar 86           |
|        10 | Budi Murtono    | Jl. Merak 22           |
|        31 | Nana            | Sragen                 |
+-----------+-----------------+------------------------+
11 rows in set (0.001 sec)
```

- **UPDATE**

```
MariaDB [perbankan]> update nasabah set nama_nasabah="Nana Dian" where id_nasabah=31;
Query OK, 1 row affected (0.004 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [perbankan]> select *from nasabah;
+-----------+-----------------+------------------------+
| id_nasabah | nama_nasabah    | alamat_nasabah         |
+-----------+-----------------+------------------------+
|         1 | Sutopo          | Jl. Jendral Sudirman 12 |
|         2 | Maryati         | Jl. MT. Haryono 31      |
|         3 | Suparman        | Jl. Hasanudin 81       |
|         4 | Kartika Padmasari | Jl. Manggis 15       |
|         5 | Budi Eko Prayogo | Jl. Kantil 30         |
|         6 | Satria Eka Jaya | Jl. Slamet Riyadi 45   |
|         7 | Indri Hapsari   | Jl. Sutoyo 5           |
|         8 | Sari Murti      | Jl. Pengandaran 11     |
|         9 | Canka Lokananta | Jl. Tidar 86           |
|        10 | Budi Murtono    | Jl. Merak 22           |
|        31 | Nana Dian       | Sragen                 |
+-----------+-----------------+------------------------+
11 rows in set (0.000 sec)
```

- **DELETE**

```
MariaDB [perbankan]> delete from nasabah where id_nasabah=31;
Query OK, 1 row affected (0.005 sec)

MariaDB [perbankan]> select *from nasabah;
+-----------+-----------------+------------------------+
| id_nasabah | nama_nasabah    | alamat_nasabah         |
+-----------+-----------------+------------------------+
|         1 | Sutopo          | Jl. Jendral Sudirman 12 |
|         2 | Maryati         | Jl. MT. Haryono 31      |
|         3 | Suparman        | Jl. Hasanudin 81       |
|         4 | Kartika Padmasari | Jl. Manggis 15       |
|         5 | Budi Eko Prayogo | Jl. Kantil 30         |
|         6 | Satria Eka Jaya | Jl. Slamet Riyadi 45   |
|         7 | Indri Hapsari   | Jl. Sutoyo 5           |
|         8 | Sari Murti      | Jl. Pengandaran 11     |
|         9 | Canka Lokananta | Jl. Tidar 86           |
|        10 | Budi Murtono    | Jl. Merak 22           |
+-----------+-----------------+------------------------+
10 rows in set (0.001 sec)
```

4. Mata kuliah A tidak memenuhi standar kebijakan prodi akan pengadaan/pengelenggaraan kelas karena <10 mahasiswa disebabkan kurang minatnya mahasiswa akan mata kuliah A. Sehingga mahasiswa yang mengambil mata kuliah A diharuskan revisi ke mata kuliah lain (atau yang sudah terselenggara).

```
Command Prompt - mysql  -u root -p                                                          —    □    ×

MariaDB [data_kuliah]> select *from mahasiswa_has_matakuliah;
+--------+-----------+
| nimFK  | kode_mkFK |
+--------+-----------+
| INF02  | TI03      |
| INF03  | TI05      |
| INF01  | TI08      |
| INF09  | TI04      |
| INF04  | TI07      |
| INF10  | TI09      |
| INF08  | TI06      |
| INF06  | TI10      |
| TI01   | INF05     |
| INF02  | TI03      |
+--------+-----------+
10 rows in set (0.012 sec)

MariaDB [data_kuliah]> update mahasiswa_has_matakuliah set kode_mkFK='TI06' where kode_mkFK = (SELECT kode_mk from mata
kuliah where kode_mk='TI03');
Query OK, 2 rows affected (0.007 sec)
Rows matched: 2  Changed: 2  Warnings: 0

MariaDB [data_kuliah]> select *from mahasiswa_has_matakuliah;
+--------+-----------+
| nimFK  | kode_mkFK |
+--------+-----------+
| INF02  | TI06      |
| INF03  | TI05      |
| INF01  | TI08      |
| INF09  | TI04      |
| INF04  | TI07      |
| INF10  | TI09      |
| INF08  | TI06      |
| INF06  | TI10      |
| TI01   | INF05     |
| INF02  | TI06      |
+--------+-----------+
10 rows in set (0.000 sec)

MariaDB [data_kuliah]>
```