Nama : Galih Prayoga
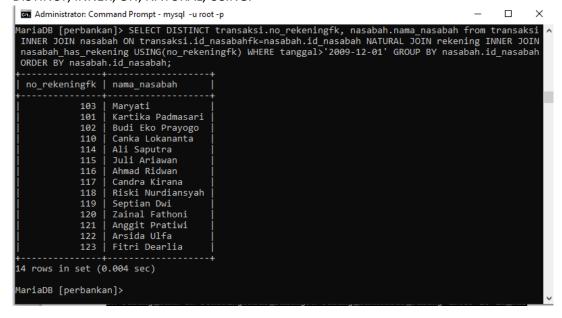
NIM : L200180006

Kelas : A

<p align="center">UAS Praktikum Sistem Basis Data</p>

1. Tampilkan no_rek, nama_nasabah yang melakukan transaksi di atas tanggal '1 Desember 2009' diurutkan berdasarkan id_nasabah Nb: masing2 id_nasabah menampilkan satu transaksi, tidak boleh berulang. (Kerjakan soal – soal menggunakan Using, On, Natural, Outer, Inner, Distinct)

   a. DISTINCT, OUTER, ON, NATURAL, USING:

   ```
   MariaDB [perbankan]> SELECT DISTINCT transaksi.no_rekeningfk, nasabah.nama_nasabah from transaksi
   RIGHT OUTER JOIN nasabah ON transaksi.id_nasabahfk=nasabah.id_nasabah NATURAL JOIN rekening RIGH
   T OUTER JOIN nasabah_has_rekening USING(no_rekeningfk) WHERE tanggal>'2009-12-01' GROUP BY nasaba
   h.id_nasabah ORDER BY nasabah.id_nasabah;
   +---------------+------------------+
   | no_rekeningfk | nama_nasabah     |
   +---------------+------------------+
   |           103 | Maryati          |
   |           101 | Kartika Padmasari|
   |           102 | Budi Eko Prayogo |
   |           110 | Canka Lokananta  |
   |           114 | Ali Saputra      |
   |           115 | Juli Ariawan     |
   |           116 | Ahmad Ridwan     |
   |           117 | Candra Kirana    |
   |           118 | Riski Nurdiansyah|
   |           119 | Septian Dwi      |
   |           120 | Zainal Fathoni   |
   |           121 | Anggit Pratiwi   |
   |           122 | Arsida Ulfa      |
   |           123 | Fitri Dearlia    |
   +---------------+------------------+
   14 rows in set (0.004 sec)

   MariaDB [perbankan]>
   ```

   b. DISTINCT, INNER, ON, NATURAL, USING:

   ```
   MariaDB [perbankan]> SELECT DISTINCT transaksi.no_rekeningfk, nasabah.nama_nasabah from transaksi
   INNER JOIN nasabah ON transaksi.id_nasabahfk=nasabah.id_nasabah NATURAL JOIN rekening INNER JOIN
   nasabah_has_rekening USING(no_rekeningfk) WHERE tanggal>'2009-12-01' GROUP BY nasabah.id_nasabah
   ORDER BY nasabah.id_nasabah;
   +---------------+------------------+
   | no_rekeningfk | nama_nasabah     |
   +---------------+------------------+
   |           103 | Maryati          |
   |           101 | Kartika Padmasari|
   |           102 | Budi Eko Prayogo |
   |           110 | Canka Lokananta  |
   |           114 | Ali Saputra      |
   |           115 | Juli Ariawan     |
   |           116 | Ahmad Ridwan     |
   |           117 | Candra Kirana    |
   |           118 | Riski Nurdiansyah|
   |           119 | Septian Dwi      |
   |           120 | Zainal Fathoni   |
   |           121 | Anggit Pratiwi   |
   |           122 | Arsida Ulfa      |
   |           123 | Fitri Dearlia    |
   +---------------+------------------+
   14 rows in set (0.004 sec)

   MariaDB [perbankan]>
   ```

2. Tampilkan id_nasabah, nama_cabang, jumlah saldo (dalam sisa saldo) dari masing2 id_nasabah dikurangi 75.000 untuk pembayaran SPP

(Kerjakan soal – soal menggunakan Having, Group By, Distinct)

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

MariaDB [perbankan]> SELECT DISTINCT nasabah_has_rekening.id_nasabahfk, cabang_bank.nama_cabang,
SUM(rekening.saldo-75000) AS 'Sisa Saldo' FROM nasabah_has_rekening JOIN rekening on nasabah_has_
rekening.no_rekeningfk=rekening.no_rekening JOIN cabang_bank ON rekening.kode_cabangfk=cabang_ban
k.kode_cabang GROUP BY id_nasabahfk 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 Semarang   |     425000  |
|          12 | Bank Rut Unit Tegal      |     325000  |
|          13 | Bank Rut Unit Wonogiri   |     225000  |
|          14 | Bank Rut Unit Ponorogo   |     285000  |
|          15 | Bank Rut Unit Pacitan    |     275000  |
|          16 | Bank Rut Unit Lamongan   |     225000  |
|          17 | Bank Rut Unit Ungaran    |     365000  |
|          18 | Bank Rut Unit Jakarta    |     525000  |
|          19 | Bank Rut Unit Indramayu  |     355000  |
|          20 | Bank Rut Unit Pekalongan |     375000  |
+-------------+--------------------------+-------------+
19 rows in set (0.008 sec)
```

3. Buatlah user baru dengan No. NIM 3 digit belakang. Kemudian beri privilege pada user, agar dapat melakukan CRUD. Kemudian berikan masing – masing contoh CRUD, setelah berhasil memeberikan hak akses pada user.

(Creat, Read, Update, Delete masing – masing diberi contoh.).

a. Membuat user

```
MariaDB [mysql]> create user '006'@'localhost' identified by '006';
Query OK, 0 rows affected (0.036 sec)

MariaDB [mysql]>
```

b. Memberi privilege pada user 006

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

MariaDB [mysql]> GRANT CREATE ON perbankan.* TO '006'@'localhost';
Query OK, 0 rows affected (0.010 sec)

MariaDB [mysql]> FLUSH PRIVILEGES;
Query OK, 0 rows affected (0.008 sec)

MariaDB [mysql]> GRANT SELECT ON perbankan.* TO '006'@'localhost';
Query OK, 0 rows affected (0.002 sec)

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

MariaDB [mysql]> GRANT UPDATE ON perbankan.* TO '006'@'localhost';
Query OK, 0 rows affected (0.002 sec)

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

```
MariaDB [mysql]> GRANT DELETE ON perbankan.* TO '006'@'localhost';
Query OK, 0 rows affected (0.002 sec)

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

MariaDB [mysql]> GRANT INSERT ON perbankan.* TO '006'@'localhost';
Query OK, 0 rows affected (0.002 sec)

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

MariaDB [mysql]>
```

c. Masuk dengan user 006

```
c:\xampp\mysql\bin>mysql -u 006 -p
Enter password: ***
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 290
Server version: 10.4.11-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
MariaDB [perbankan]>
```

d. Melakukan CRUD

i. Create

```
MariaDB [perbankan]> CREATE TABLE testing (user_id INTEGER, nama_user VARCHAR(45)
);
Query OK, 0 rows affected (0.086 sec)

MariaDB [perbankan]> SHOW TABLES;
+----------------------+
| Tables_in_perbankan  |
+----------------------+
| cabang_bank          |
| nasabah              |
| nasabah_has_rekening |
| rekening             |
| testing              |
| transaksi            |
+----------------------+
6 rows in set (0.001 sec)

MariaDB [perbankan]>
```

ii. Read

```
Administrator: Command Prompt - mysql  -u 006 -p                          —    □    ×

Your MariaDB connection id is 290
Server version: 10.4.11-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
MariaDB [perbankan]> SELECT*FROM cabang_bank;
+-------------+-------------------------+-----------------------+
| kode_cabang | nama_cabang             | alamat_cabang         |
+-------------+-------------------------+-----------------------+
| BRUB        | Bank Rut Unit Boyolali  | Jl. Ahmad Yani 45     |
| BRUC        | Bank Rut Unit Cilacap   | Jl. Rajawali 34       |
| BRUI        | Bank Rut Unit Indramayu | Jl. Garuda 15         |
| BRUJ        | Bank Rut Unit Jakarta   | Jl. Soekarno-Hatta 23 |
| BRUK        | Bank Rut Unit Klaten    | Jl. Suparman 23       |
| BRUL        | Bank Rut Unit Lamongan  | Jl. Singa 14          |
| BRUP        | Bank Rut Unit Pekalongan| Jl. Lawu 37           |
| BRUPA       | Bank Rut Unit Pacitan   | Jl. Selayar 44        |
| BRUPO       | Bank Rut Unit Ponorogo  | Jl. Sudirman 1        |
| BRUS        | Bank Rut Unit Surakarta | Jl. Slamet Riyadi 18  |
| BRUSE       | Bank Rut Unit Semarang  | Jl. Kartini 4         |
| BRUT        | Bank Rut Unit Tegal     | Jl. Rinjani 12        |
| BRUU        | Bank Rut Unit Ungaran   | Jl. Sisemut 45        |
| BRUW        | Bank Rut Unit Wonogiri  | Jl. A. Yani No.23     |
| BRUY        | Bank Rut Unit Yogyakarta| Jl. Anggrek 21        |
+-------------+-------------------------+-----------------------+
15 rows in set (0.001 sec)

MariaDB [perbankan]> _
```

iii.   Update

```
MariaDB [perbankan]> UPDATE cabang_bank set alamat_cabang="Jl. Mugiwara 30" WHERE
 kode_cabang="BRUU";
Query OK, 1 row affected (0.004 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [perbankan]> SELECT*FROM cabang_bank
    -> ;
+-------------+-------------------------+-----------------------+
| kode_cabang | nama_cabang             | alamat_cabang         |
+-------------+-------------------------+-----------------------+
| BRUB        | Bank Rut Unit Boyolali  | Jl. Ahmad Yani 45     |
| BRUC        | Bank Rut Unit Cilacap   | Jl. Rajawali 34       |
| BRUI        | Bank Rut Unit Indramayu | Jl. Garuda 15         |
| BRUJ        | Bank Rut Unit Jakarta   | Jl. Soekarno-Hatta 23 |
| BRUK        | Bank Rut Unit Klaten    | Jl. Suparman 23       |
| BRUL        | Bank Rut Unit Lamongan  | Jl. Singa 14          |
| BRUP        | Bank Rut Unit Pekalongan| Jl. Lawu 37           |
| BRUPA       | Bank Rut Unit Pacitan   | Jl. Selayar 44        |
| BRUPO       | Bank Rut Unit Ponorogo  | Jl. Sudirman 1        |
| BRUS        | Bank Rut Unit Surakarta | Jl. Slamet Riyadi 18  |
| BRUSE       | Bank Rut Unit Semarang  | Jl. Kartini 4         |
| BRUT        | Bank Rut Unit Tegal     | Jl. Rinjani 12        |
| BRUU        | Bank Rut Unit Ungaran   | Jl. Mugiwara 30       |
| BRUW        | Bank Rut Unit Wonogiri  | Jl. A. Yani No.23     |
| BRUY        | Bank Rut Unit Yogyakarta| Jl. Anggrek 21        |
+-------------+-------------------------+-----------------------+
15 rows in set (0.000 sec)

MariaDB [perbankan]> _
```

iv. Delete

```
MariaDB [perbankan]> DELETE FROM cabang_bank WHERE kode_cabang="BRUU";
Query OK, 1 row affected (0.005 sec)

MariaDB [perbankan]> SELECT*FROM cabang_bank;
+-------------+-------------------------+-----------------------+
| kode_cabang | nama_cabang             | alamat_cabang         |
+-------------+-------------------------+-----------------------+
| BRUB        | Bank Rut Unit Boyolali  | Jl. Ahmad Yani 45     |
| BRUC        | Bank Rut Unit Cilacap   | Jl. Rajawali 34       |
| BRUI        | Bank Rut Unit Indramayu | Jl. Garuda 15         |
| BRUJ        | Bank Rut Unit Jakarta   | Jl. Soekarno-Hatta 23 |
| BRUK        | Bank Rut Unit Klaten    | Jl. Suparman 23       |
| BRUL        | Bank Rut Unit Lamongan  | Jl. Singa 14          |
| BRUP        | Bank Rut Unit Pekalongan| Jl. Lawu 37           |
| BRUPA       | Bank Rut Unit Pacitan   | Jl. Selayar 44        |
| BRUPO       | Bank Rut Unit Ponorogo  | Jl. Sudirman 1        |
| BRUS        | Bank Rut Unit Surakarta | Jl. Slamet Riyadi 18  |
| BRUSE       | Bank Rut Unit Semarang  | Jl. Kartini 4         |
| BRUT        | Bank Rut Unit Tegal     | Jl. Rinjani 12        |
| BRUW        | Bank Rut Unit Wonogiri  | Jl. A. Yani No.23     |
| BRUY        | Bank Rut Unit Yogyakarta| Jl. Anggrek 21        |
+-------------+-------------------------+-----------------------+
14 rows in set (0.000 sec)
```

4. Menggunakan sub query

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

MariaDB [perkuliahan]> UPDATE mahasiswa_has_mata_kuliah SET mata_kulia
h_kode_matkul='UMS40511' WHERE mata_kuliah_kode_matkul=(SELECT kode_ma
tkul FROM mata_kuliah WHERE kode_matkul='TIF40501');
Query OK, 0 rows affected (0.000 sec)
Rows matched: 0  Changed: 0  Warnings: 0

MariaDB [perkuliahan]> SELECT*FROM mahasiswa_has_mata_kuliah;
+-----------------------+--------------+
| mata_kuliah_kode_matkul | mahasiswa_NIM |
+-----------------------+--------------+
| 4444                  |          130 |
| TIF00000              |          120 |
| TIF40502              |          122 |
| TIF40504              |          124 |
| TIF40505              |          125 |
| TIF40510              |          126 |
| TIF40513              |          129 |
| TIF40514              |          121 |
| UMS40503              |          123 |
| UMS40511              |          127 |
| UMS40512              |          128 |
+-----------------------+--------------+
11 rows in set (0.000 sec)

MariaDB [perkuliahan]>
```