

# LAPORAN AKHIR

## PRAKTIKUM BASIS DATA



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## Modul 1

# Praktikum 1

The screenshot shows a Windows desktop environment. In the center, a browser window displays the phpMyAdmin interface with the title "localhost / 127.0.0.1 | phpMyAdmin". On the left, the file explorer shows a database structure with databases like Baru, information\_schema, mysql, performance\_schema, phpmyadmin, and test. On the right, a large Command Prompt window is open, showing the following log output:

```
Baru
information_schema
mysql
performance_schema
phpmyadmin
test

[...]
C:\ Command Prompt - mysql -u root -p
Microsoft Windows [Version 10.0.10240]
(c) 2015 Microsoft Corporation. All rights reserved.

C:\Users\ASUS>cd..
C:\Users\cd..

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 16
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 |
| mysql |
| performance_schema |
| phpmyadmin |
| test |
+-----+
5 rows in set (0.00 sec)
```

The Command Prompt window has a scroll bar on the right. The status bar at the bottom of the window says "Datar perubahan".

Document1 - Microsoft Word

File Home Insert Page Layout References Mailings Review View

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Times New Roman 12 A A Aa Aa Aa B I U x x x A A Aa Aa Aa Aa B Cc Aa B B Cc Aa B B Cc Aa B B Cc Aa B B Cc L Aa B B Cc L Aa B B Cc L Aa B B Cc L

Font Paragraph Styles

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Command Prompt - mysql -u root -p

```
+-----+
5 rows in set (0.00 sec)

MariaDB [(none)]> create database L200170011;
Query OK, 1 row affected (0.00 sec)

MariaDB [(none)]> show databases;
+-----+
| Database |
+-----+
| information_schema |
| L200170011 |
| mysql |
| performance_schema |
| phpmyadmin |
| test |
+-----+
6 rows in set (0.00 sec)

MariaDB [(none)]> use L200170011;
Database changed
MariaDB [L200170011]> create table datadiri(
    -> nim varchar<20> primary key,
    -> nama varchar<255>,
    -> alamat varchar<255>);
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near '<20> primary key,
nama varchar<255>;' at line 2
MariaDB [L200170011]> create table datadiri(
```

```

CREATE TABLE `datadiri` (
  `nim` varchar(20) primary key,
  `nama` varchar(255),
  `alamat` varchar(255)
) ENGINE=InnoDB DEFAULT CHARSET=utf8;

```

Field	Type	Null	Key	Default	Extra
nim	varchar(20)	NO	PRI	NULL	
nama	varchar(255)	YES		NULL	
alamat	varchar(255)	YES		NULL	

## Tugas 1

### 1. Jelaskan mengapa dibutuhkan data!

Data diperlukan dalam segala hal, baik berupa pengukuran, pencatatan, pengumpulan informasi, maupun pengambilan keputusan semuanya memerlukan data. Dengan kata lain data sangat dibutuhkan karena informasi yang ada akan memberikan arti yang sangat penting baik untuk saat ini maupun untuk akan datang. Sehingga definisi dari data adalah informasi yang mengandung arti

### 2. Jelaskan manfaat database dan contohnya!

- Kecepatan dan Kemudahan
- Pemakaian Bersama-sama
- Kontrol data terpusat
- Menghemat biaya perangkat
- Keamanan Data
- Memudahkan dalam pembuatan Aplikasi baru

contohnya : saja perbankan yang memiliki cabang di setiap kotanya. Perusahaan Bank tersebut hanya memiliki satu database yang disimpan di server pusat, sedangkan cabang-cabangnya terhubung melalui jaringan komputer untuk mengakses database yang terletak di sever pusat tersebut.

### 3. Untuk menentukan jenis database yang digunakan, apa yang menjadi acuan dalam pemilihan database tersebut?

Acuan dalam pemilihan database adalah

1. Pendeskripsi kebutuhan informasi dan data
2. Spesifikasi data
3. Pemrosesan yang diperlukan oleh data
4. Pertimbangan keamanan
5. Kecocokan dengan tipe aplikasi
6. Bahasa query
7. Biaya tak langsung terhadap pemrosesan

#### **4.Jelaskan istilah atau terminology yang digunakan dalam Database (database,table, field, record)**

Istilah “database” berawal dari ilmu komputer. Meskipun kemudian artinya semakin luas, memasukkan hal-hal yang di luar bidang elektronika, artikel mengenai database komputer. Catatan yang mirip dengan database sebenarnya sudah ada sebelum revolusi industri yaitu dalam bentuk buku besar, kuitansi dan kumpulan data yang berhubungan dengan bisnis.

- a. Database: kumpulan data yang saling berhubungan satu dengan yang lainnya yang diaorganisasikan sesuai struktur tertentu dan disimpan dengan baik.
- b. Table : Tempat untuk menyimpan data, tabel terdiri dari field dan record..
- c. Field : menyatakan data terkecil yang memiliki makna. Field juga disebut atribut.
- d. Record : disebut juga dengan baris, yaitu satu bagian informasi yang disimpan dalam tabel, misal data seorang mahasiswa akan disimpan dalam satu record yang terdiri dari beberapa kolom/field.

#### **5.Bandingkan perbedaan pengolahan data secara manual dengan menggunakan system database.**

##### Sistem File Tradisional /manual

Sebelumnya, sistem yang digunakan untuk mengatasi semua permasalahan bisnis, menggunakan pengelolaan data secara tradisional dengan cara menyimpan record-record pada file-file yang terpisah yang disebut juga sistem pemrosesan file.

##### Sistem Basis Data

Seiring dengan berjalananya waktu, sistem pemrosesan file ditinggalkan karena masih bersifat manual yang kemudian dikembangkan sistem pemrosesan dengan pendekatan basis data.

Pada sistem ini record-record data disimpan pada satu tempat yakni basis data dan diantara program aplikasi maupun pemakai terdapat DBMS (Database Management System).

Perbedaan antara File Manajemen tradisional dan File Manajemen Database

File Manajemen Tradisional :	File Manajemen Database :
1. Program Oriented	1. Data Oriented
2. Kaku	2. Luwes
3. Adanya kerangkapan data	3. Terkontrolnya kerangkapan data

#### **6. Mengapa dibutuhkan DBMS?**

Karena Database Management System (DBMS) merupakan software yang digunakan untuk membangun sebuah sistem basis data yang berbasis komputerisasi. DBMS membantu dalam pemeliharaan dan pengolahan kumpulan data dalam jumlah besar. Sehingga dengan menggunakan DBMS tidak menimbulkan kekacauan dan dapat digunakan oleh pengguna sesuai dengan kebutuhan.

#### **7. type field**

nim	= varchar (20) ---> dapat menampung maks 20 digit
nama	=varchar(255)---> dapat menampung maks 255 digit
alamat	=varchar(255)---> dapat menampung maks 255 digit

## Modul 2

### Tugas

*Langkah 1.*

-Entities:

- Mahasiswa :menyimpan data pribadi semua mahasiswa
- Dosen :menyimpan data pribadi semua mahasiswa
- Mata Kuliah :menyimpan informasi semua mata kuliah
- Ruang Kuliah :menyimpan informasi semua ruang kuliah

*Langkah 2*

Attributes:

- Mahasiswa:
  - NIM\_Mahasiswa(PK) (varchar(45))
  - Nama\_Mahasiswa (varchar(255))
  - Alamat\_Mahasiswa (varchar(255))
- Dosen:
  - NIK\_Dosen(PK) (varchar(45))
  - Nama\_Dosen (varchar(255))
  - Alamat\_Dosen (varchar(255))
- Mata Kuliah:
  - Kode\_MK(PK) (varchar(45))
  - Nama\_MK (varchar(45))
  - SKS (Interger)
- Ruang Kuliah:
  - Kode\_Ruang(PK) (varchar(45))
  - Nama\_Ruang (varchar(45))
  - Tempat\_Ruang (varchar(45))

*Langkah 3*

	Mahasiswa	Dosen	Mata Kuliah	Ruang Kuliah
Mahasiswa	-	1:n	m:n	-
Dosen		-	1:n	-
Mata Kuliah			-	1:n
Ruang Kuliah				-

Hubungan:

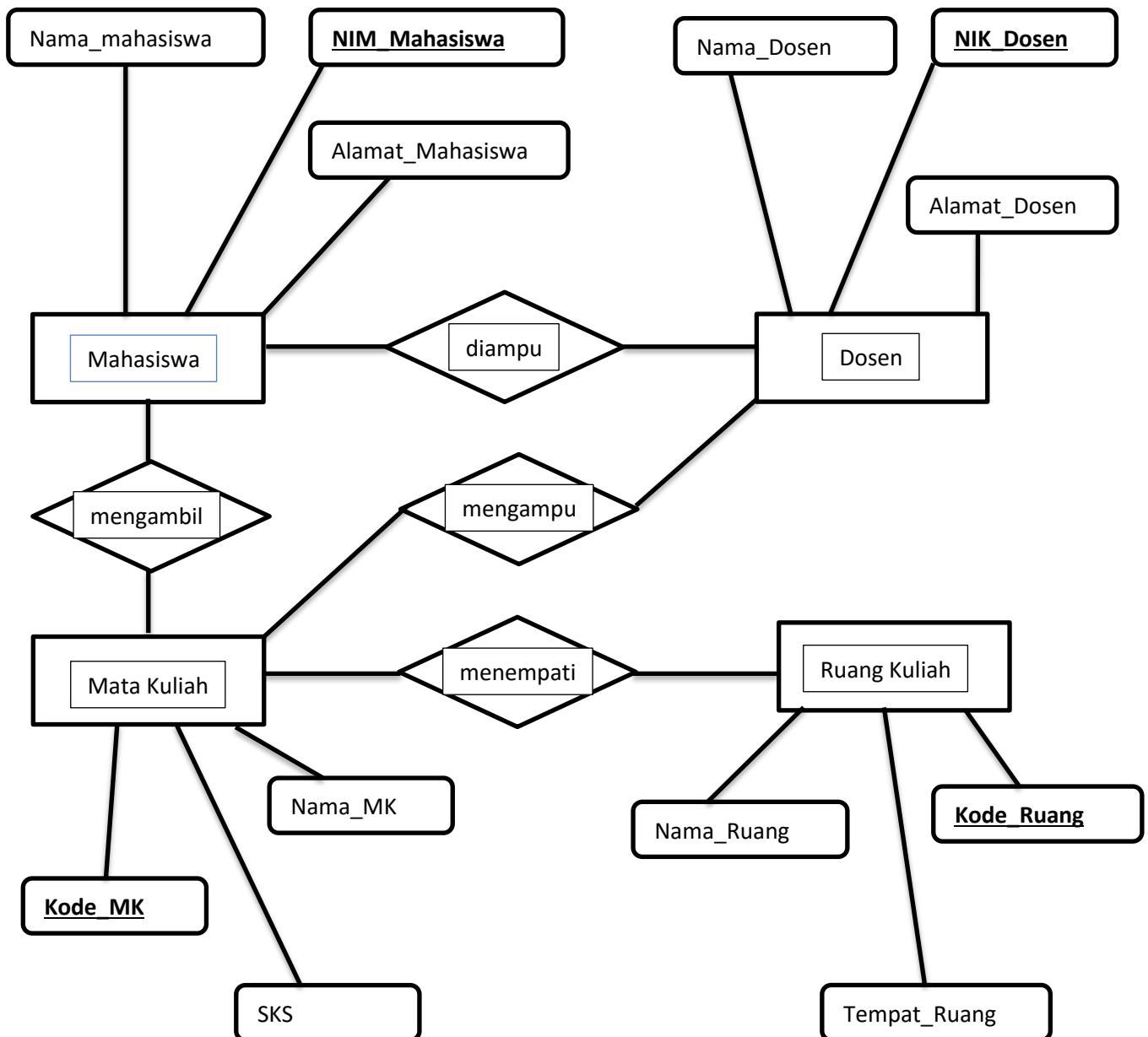
- Mahasiswa diampu dosen
  - Tabel utama :Mahasiswa
  - Tabel kedua :Dosen
  - Relationship :One-to-Many
  - Attribute Penghubung :NIK\_Dosen(FK\_NIM\_Mahasiswa di Dosen)
- Mahasiswa mengambil mata kuliah
  - Tabel utama :Mahasiswa,mata kuliah
  - Tabel kedua :mahasiswa\_take\_matakuliah
  - Relationship :Many-to-Many
  - Attribute Penghubung :NIM\_Mahasiswa,Kode\_MK(FK\_NIM\_Mahasiswa,

## Kode\_MK di mahasiswa\_take\_matakuliah)

- Dosen mengampu matakuliah
  - Tabel utama :Dosen
  - Tabel kedua :Mata Kuliah
  - Relationship :One-to-Many
  - Attribute Penghubung :Kode\_MK(FK\_NIK\_Dosen di Mata Kuliah)
- Mata kuliah menempati Ruang
  - Tabel utama :Mata Kuliah
  - Tabel kedua :Ruang
  - Relationship :One-to-Many
  - Attribute Penghubung :Kode\_Ruang(FK\_Kode\_Ruang di Mata kuliah)

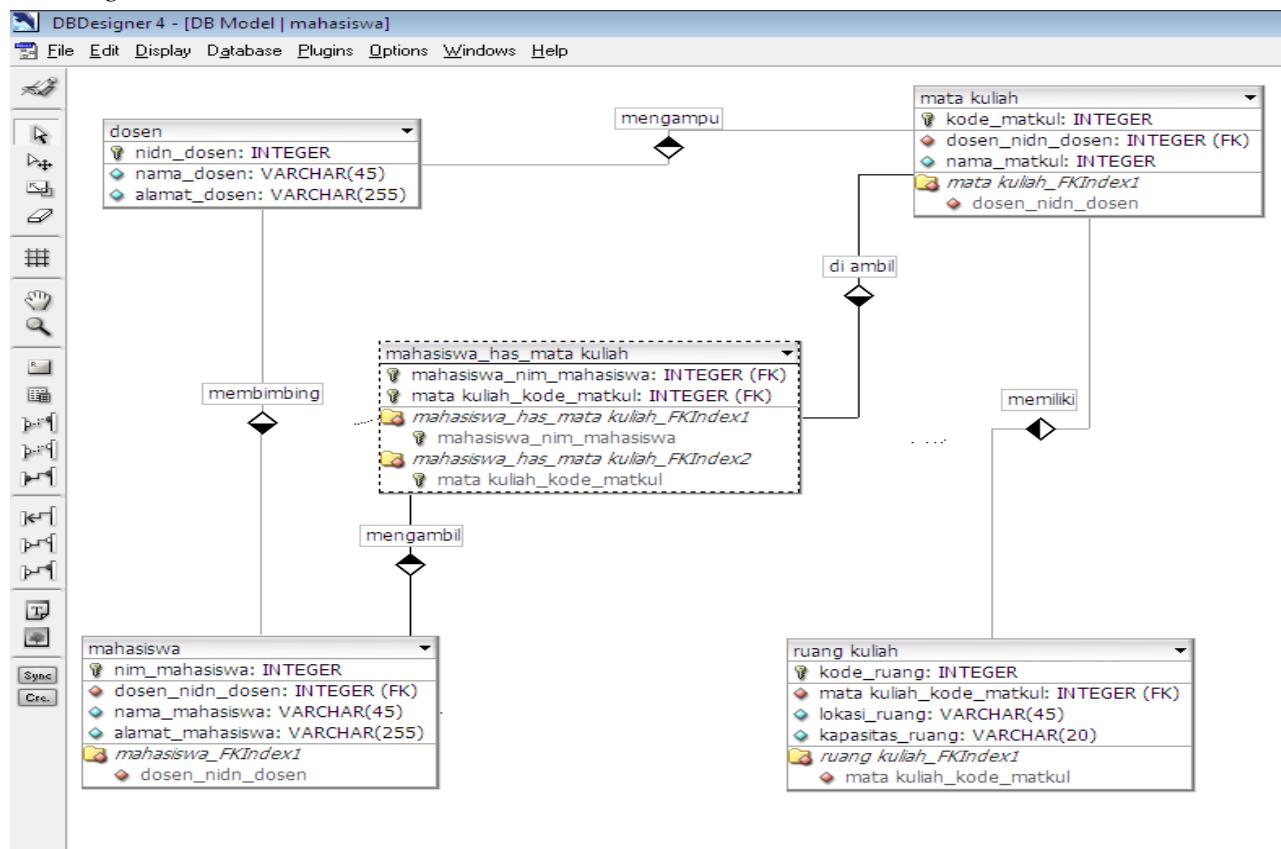
*Langkah 4*

Diagram ERD

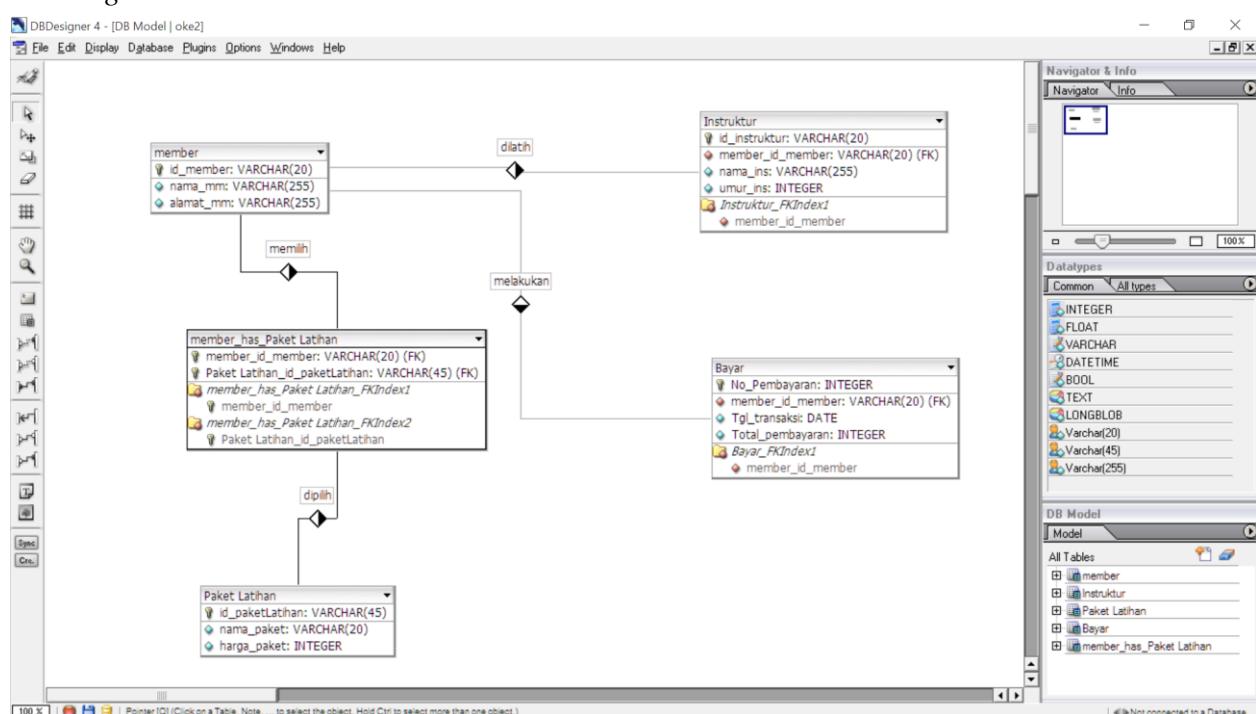


# Modul 3

ER Diagram Perkuliahan



ER Diagram GYM



# Modul 4

## Kegiatan praktikum

The screenshot shows a Windows desktop environment with two windows open. On the left is a Command Prompt window titled 'Command Prompt - mysql - u root - p'. It displays several MySQL commands being run, primarily related to creating tables for bank accounts ('nasabah') and branches ('cabang\_bank'). Some errors are visible, such as 'ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near' and 'ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'del'. Lines 1 through 10 are affected'.

The right window is the phpMyAdmin interface, showing the 'Сервер баз данных' (Server) tab. It lists the following details:

- Сервер: 127.0.0.1 via TCP/IP
- Тип сервера: MariaDB
- Соединение сервера SSL не используется
- Версия сервера: 10.1.37-MariaDB - mariadb.org binary distribution
- Версия протокола: 10
- Пользователь: root@localhost
- Кодировка сервера: UTF-8 Unicode (utf8)

Below this is the 'Веб-сервер' (Web Server) tab, which lists:

- Apache/2.4.37 (Win32) OpenSSL/1.0.2p PHP/5.6.39
- Версия клиента базы данных: libmysql - mysqld 5.0.11-dev - 20120503 - Slid: 761008b24596e12d4553bd41fc93cccd5bac2fe7a \$
- PHP расширение: mysqli curl mbstring
- Версия PHP: 5.6.39

The bottom section of the phpMyAdmin interface is labeled 'phpMyAdmin' and includes links to information about the version (4.8.4), documentation, the official website, and help.

The desktop taskbar at the bottom shows icons for File Explorer, Task View, Start, and a browser. The system tray indicates the date as 18/03/2019 and the time as 10:58.

This screenshot shows a second Command Prompt window on the desktop. It contains MySQL commands for creating tables 'rekening' and 'transaksi'. The 'rekening' table has columns 'kode\_rekening' (PRIMARY KEY), 'nama\_rekening' (VARCHAR(45)), and 'saldo' (INTEGER). The 'transaksi' table has columns 'no\_transaksi' (SERIAL PRIMARY KEY), 'id\_nasabahFK' (INTEGER REFERENCES 'nasabah'), and 'jumlah' (INTEGER).

The command 'MariaDB [perbankan]> show tables;' is run, followed by 'MariaDB [perbankan]> describe nasabah;'. The output shows the structure of the 'nasabah' table, which includes columns 'id' (PRIMARY KEY), 'kode\_cabang' (VARCHAR(20)), 'nama\_cabang' (VARCHAR(45)), 'alamat\_cabang' (VARCHAR(255)), and 'saldo' (INTEGER).

The desktop taskbar at the bottom shows icons for File Explorer, Task View, Start, and a browser. The system tray indicates the date as 18/03/2019 and the time as 10:59.

```
c:\ Command Prompt - mysql -u root -p
MariaDB [perbankan]> describe nasabah;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| id_nasabah | int(11) | NO | PRI | NULL |
| nama_nasabah | varchar(45) | NO | UNI | NULL |
| alamat_nasabah | varchar(255) | NO | | NULL |
+-----+-----+-----+-----+-----+
3 rows in set <0.00 sec>

MariaDB [perbankan]> describe cabang_bank;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| kode_cabang | varchar(20) | NO | PRI | NULL |
| nama_cabang | varchar(45) | NO | UNI | NULL |
| alamat_cabang | varchar(255) | NO | | NULL |
+-----+-----+-----+-----+-----+
3 rows in set <0.00 sec>

MariaDB [perbankan]> describe rekening;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| no_rekening | int(11) | NO | PRI | NULL |
| kode_cabangPK | varchar(20) | YES | | NULL |
| pin | varchar(20) | NO | | 1234 |
| saldo | int(11) | NO | | 0 |
+-----+-----+-----+-----+-----+
4 rows in set <0.00 sec>

MariaDB [perbankan]> describe transaksi;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| no_transaksi | bigint(20) unsigned | NO | PRI | NULL | auto_increment |
| id_nasabahPK | int(11) | YES | | NULL |
| no_rekeningPK | int(11) | YES | | NULL |
| jenis_transaksi | varchar(20) | NO | | debit |
| tanggal | datetime | NO | | CURRENT_TIMESTAMP |
| jumlah | int(11) | NO | | NULL |
+-----+-----+-----+-----+-----+
6 rows in set <0.00 sec>

MariaDB [perbankan]> describe nasabah_has_rekening;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| id_nasabahPK | int(11) | NO | PRI | NULL |
| no_rekeningPK | int(11) | NO | PRI | NULL |
+-----+-----+-----+-----+-----+
2 rows in set <0.00 sec>

MariaDB [perbankan]>
```

```
c:\ Command Prompt - mysql -u root -p
4 rows in set <0.00 sec>

MariaDB [perbankan]> describe transaksi;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| no_transaksi | bigint(20) unsigned | NO | PRI | NULL | auto_increment |
| id_nasabahPK | int(11) | YES | | NULL |
| no_rekeningPK | int(11) | YES | | NULL |
| jenis_transaksi | varchar(20) | NO | | debit |
| tanggal | datetime | NO | | CURRENT_TIMESTAMP |
| jumlah | int(11) | NO | | NULL |
+-----+-----+-----+-----+-----+
6 rows in set <0.00 sec>

MariaDB [perbankan]> describe nasabah_has_rekening;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| id_nasabahPK | int(11) | NO | PRI | NULL |
| no_rekeningPK | int(11) | NO | PRI | NULL |
+-----+-----+-----+-----+-----+
2 rows in set <0.00 sec>

MariaDB [perbankan]>
```

## Tugas



```
cmd Command Prompt - mysql -u root -p
Microsoft Windows [Version 6.1.7600]
Copyright © 2009 Microsoft Corporation. All rights reserved.

C:\Users\LBBSI-B>cd..
C:\Users>cd..

C:\>cd xamp\mysql\bin

C:\xamp\mysql\bin>mysql -u root -p
Enter password:
Welcome to the MariaDB monitor. Commands end with ; or \g.
Your MySQL connection id is 25
Server version: 10.1.37-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)]> create table mahasiswa(
    -> nim_nhs varchar(20), primary key,
    -> nama_nhs varchar(255) not null,
    -> alamat_nhs varchar(255) not null);
ERROR 1064 (3D000): No database selected
MariaDB [(none)]> create database universitas;
Query OK, 1 row affected (0.00 sec)

MariaDB [(none)]> use universitas;
Database changed
MariaDB [universitas]> create table mahasiswa(
    -> nim_nhs varchar(20), primary key,
    -> nama_nhs varchar(255) not null,
    -> alamat_nhs varchar(255) not null);
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'var
char(255) not null'
MariaDB [universitas]> create table mahasiswa(
    -> nim_nhs varchar(20), primary key,
    -> nama_nhs varchar(255) not null,
    -> alamat_nhs varchar(255) not null);
Query OK, 0 rows affected (0.22 sec)

MariaDB [universitas]> create table dosen(
    -> nik_ds varchar(20), primary key,
    -> nama_ds varchar(255) not null,
    -> alamat_ds varchar(255) not null);
Query OK, 0 rows affected (0.17 sec)

MariaDB [universitas]> create table matakuliah(
    -> kode_mk varchar(20), primary key,
    -> nmk varchar(255) REFERENCES dosen(nik_ds) ON DELETE C
        ASCADE ON UPDATE CASCADE,
    -> nama_mk varchar(25) not null,
    -> sks_mk varchar(10) not null);
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'C
onstraints
MariaDB [universitas]> create table matakuliah(
    -> kode_mk varchar(20), primary key,
    -> nmk varchar(255) REFERENCES dosen(nik_ds) ON DELETE C
        ASCADE ON UPDATE CASCADE,
    -> nama_mk varchar(25) not null,
    -> sks_mk varchar(10) not null);
Query OK, 0 rows affected (0.17 sec)

MariaDB [universitas]> create table matakuliah(
    -> kode_mk varchar(20), primary key,
    -> nmk varchar(255) REFERENCES dosen(nik_ds) ON DELETE C
        ASCADE ON UPDATE CASCADE,
    -> nama_mk varchar(25) not null,
    -> sks_mk varchar(10) not null,
    -> );
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'C
onstraints
MariaDB [universitas]> create table matakuliah(
    -> kode_mk varchar(20), primary key,
    -> nmk varchar(255) REFERENCES dosen(nik_ds) ON DELETE C
        ASCADE ON UPDATE CASCADE,
    -> nama_mk varchar(25) not null,
    -> sks_mk varchar(10) not null,
    -> );
Query OK, 0 rows affected (0.14 sec)

MariaDB [universitas]> create table ruang(
    -> nim_ruang varchar(20), primary key,
    -> kode_ruang varchar(20), REFERENCES matakuliah(kode_mk) ON DELETE CASCADE ON
        UPDATE CASCADE,
    -> nama_ruang varchar(25) not null,
    -> kapasitas_ruang varchar(10) not null);
Query OK, 0 rows affected (0.27 sec)

MariaDB [universitas]> create table mahasiswa_has_matkul(
    -> nim_nhsFK VARCHAR(20) REFERENCES mahasiswa(nim_nhs) ON DELETE CASCADE ON
        UPDATE CASCADE,
    -> nim_mhsFK VARCHAR(20) REFERENCES matakuliah(kode_mk) ON DELETE CASCADE ON
        UPDATE CASCADE,
    -> primary key(nim_nhsFK, kode_mkFK));
Query OK, 0 rows affected (0.24 sec)

MariaDB [universitas]> show tables;
+-----+
| Tables_in_universitas |
+-----+
```



```
cmd Command Prompt - mysql -u root -p
Microsoft Windows [Version 6.1.7600]
Copyright © 2009 Microsoft Corporation. All rights reserved.

C:\Users\LBBSI-B>cd..
C:\Users>cd..

C:\>cd xamp\mysql\bin

C:\xamp\mysql\bin>mysql -u root -p
Enter password:
Welcome to the MariaDB monitor. Commands end with ; or \g.
Your MySQL connection id is 25
Server version: 10.1.37-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 universitas;
Database changed
MariaDB [universitas]> create table mahasiswa(
    -> nim_nhs varchar(20), primary key,
    -> nama_nhs varchar(255) not null,
    -> alamat_nhs varchar(255) not null);
ERROR 1064 (3D000): No database selected
MariaDB [universitas]> create database universitas;
Query OK, 1 row affected (0.00 sec)

MariaDB [universitas]> use universitas;
Database changed
MariaDB [universitas]> create table mahasiswa(
    -> nim_nhs varchar(20), primary key,
    -> nama_nhs varchar(255) not null,
    -> alamat_nhs varchar(255) not null);
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'var
char(255) not null'
MariaDB [universitas]> create table mahasiswa(
    -> nim_nhs varchar(20), primary key,
    -> nama_nhs varchar(255) not null,
    -> alamat_nhs varchar(255) not null);
Query OK, 0 rows affected (0.22 sec)

MariaDB [universitas]> create table dosen(
    -> nik_ds varchar(20), primary key,
    -> nama_ds varchar(255) not null,
    -> alamat_ds varchar(255) not null);
Query OK, 0 rows affected (0.17 sec)

MariaDB [universitas]> create table matakuliah(
    -> kode_mk varchar(20), primary key,
    -> nmk varchar(255) REFERENCES dosen(nik_ds) ON DELETE C
        ASCADE ON UPDATE CASCADE,
    -> nama_mk varchar(25) not null,
    -> sks_mk varchar(10) not null);
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'C
onstraints
MariaDB [universitas]> create table matakuliah(
    -> kode_mk varchar(20), primary key,
    -> nmk varchar(255) REFERENCES dosen(nik_ds) ON DELETE C
        ASCADE ON UPDATE CASCADE,
    -> nama_mk varchar(25) not null,
    -> sks_mk varchar(10) not null,
    -> );
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'C
onstraints
MariaDB [universitas]> create table matakuliah(
    -> kode_mk varchar(20), primary key,
    -> nmk varchar(255) REFERENCES dosen(nik_ds) ON DELETE C
        ASCADE ON UPDATE CASCADE,
    -> nama_mk varchar(25) not null,
    -> sks_mk varchar(10) not null,
    -> );
Query OK, 0 rows affected (0.14 sec)

MariaDB [universitas]> create table ruang(
    -> nim_ruang varchar(20), primary key,
    -> kode_ruang varchar(20), REFERENCES matakuliah(kode_mk) ON DELETE CASCADE ON
        UPDATE CASCADE,
    -> nama_ruang varchar(25) not null,
    -> kapasitas_ruang varchar(10) not null);
Query OK, 0 rows affected (0.27 sec)

MariaDB [universitas]> create table mahasiswa_has_matkul(
    -> nim_nhsFK VARCHAR(20) REFERENCES mahasiswa(nim_nhs) ON DELETE CASCADE ON
        UPDATE CASCADE,
    -> nim_mhsFK VARCHAR(20) REFERENCES matakuliah(kode_mk) ON DELETE CASCADE ON
        UPDATE CASCADE,
    -> primary key(nim_nhsFK, kode_mkFK));
Query OK, 0 rows affected (0.24 sec)

MariaDB [universitas]> show tables;
+-----+
| Tables_in_universitas |
+-----+
```

```
c:\ Command Prompt - mysql -u root -p
-> kode_ruang varchar(20) primary key,
-> nana_ruang VARCHAR(20) REFERENCES matkul(nama_mk) ON DELETE CASCADE ON
UPDATE CASCADE
-> nana_ruang varchar(25) not null,
-> tempat_ruang varchar(10) not null;
Query OK, 0 rows affected (0.27 sec)

MariaDB [universitas]> create table mahasiswa_has_matkul(
-> nim_mhs VARCHAR(20) REFERENCES mahasiswa(nim_mhs) ON DELETE CASCADE ON
UPDATE CASCADE
-> kode_mkFK VARCHAR(20) REFERENCES matkul(kode_mk) ON DELETE CASCADE ON
UPDATE CASCADE
-> primary key(nim_mhsFK, kode_mkFK);
Query OK, 0 rows affected (0.24 sec)

MariaDB [universitas]> show tables;
+ Tables_in_universitas +
| Tables_in_universitas |
| dosen |
| mahasiswa |
| mahasiswa_has_matkul |
| matkul |
| ruang |
+-----+
5 rows in set <0.00 sec>

MariaDB [universitas]> describe dosen;
+ Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| nik_dos | varchar(20) | NO | PRI | NULL | |
| nama_dos | varchar(255) | NO | NULL | NULL | |
| alamat_dos | varchar(255) | NO | NULL | NULL | |
+-----+
3 rows in set <0.00 sec>

MariaDB [universitas]> describe mahasiswa;
+ Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| nim_mhs | varchar(20) | NO | PRI | NULL | |
| nama_mhs | varchar(255) | NO | NULL | NULL | |
| alamat_mhs | varchar(255) | NO | NULL | NULL | |
+-----+
3 rows in set <0.00 sec>

MariaDB [universitas]> describe matkulah;
+ Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| sks_mk | varchar(10) | NO | PRI | NULL | |
+-----+
4 rows in set <0.00 sec>

MariaDB [universitas]> describe ruang;
ERROR 1146 (42S02): Table 'universitas.ruang' doesn't exist
MariaDB [universitas]> describe ruang;
+ Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| kode_ruang | varchar(20) | NO | PRI | NULL | |
| kode_mkFK | varchar(20) | YES | NULL | NULL | |
| nana_ruang | varchar(25) | NO | NULL | NULL | |
| tempat_ruang | varchar(10) | NO | NULL | NULL | |
+-----+
4 rows in set <0.00 sec>

MariaDB [universitas]> describe mahasiswa_has_matkul;
+ Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| nim_mhsFK | varchar(20) | NO | PRI | NULL | |
| kode_mkFK | varchar(20) | NO | PRI | NULL | |
+-----+
2 rows in set <0.00 sec>

MariaDB [universitas]>
```

```
c:\ Command Prompt - mysql -u root -p
+-----+
| sks_mk | varchar(10) | NO | PRI | NULL | |
+-----+
4 rows in set <0.00 sec>

MariaDB [universitas]> describe ruang;
ERROR 1146 (42S02): Table 'universitas.ruang' doesn't exist
MariaDB [universitas]> describe ruang;
+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| kode_ruang | varchar(20) | NO | PRI | NULL | |
| kode_mkFK | varchar(20) | YES | NULL | NULL | |
| nana_ruang | varchar(25) | NO | NULL | NULL | |
| tempat_ruang | varchar(10) | NO | NULL | NULL | |
+-----+
4 rows in set <0.00 sec>

MariaDB [universitas]> describe mahasiswa_has_matkul;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| nim_mhsFK | varchar(20) | NO | PRI | NULL | |
| kode_mkFK | varchar(20) | NO | PRI | NULL | |
+-----+
2 rows in set <0.00 sec>

MariaDB [universitas]>
```

## Modul 5

Menambah nasabah.

```
MariaDB [modul_5]> INSERT INTO nasabah(id_nasabah, nama_nasabah, alamat_nasabah)
-> VALUES(11, 'Budi Murtopo', 'Jl. Perak 20'),
-> (12, 'Budi Subagiyo', 'Jl. AhmadYani 10'),
-> (13, 'Sumaryanto', 'Jl. Nanas 2'),
-> (14, 'Sulatan Wakanda', 'Jl. Asia Frika 1'),
-> (15, 'Rudi', 'Jl. Semangka 33'),
-> (16, 'Yerika', 'Jl. Salak 76'),
-> (17, 'Michele', 'Jl. Duku 56'),
-> (18, 'Kevin', 'Jl. Lemon 24'),
-> (19, 'Ahmad', 'Jl. Obama 8'),
-> (20, 'Ahmad Sudarmono', 'Jl. Donald 22');

MariaDB [modul_5]> 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 |
| 8 | Sari Murti | Jl. Pangandaran 11 |
| 9 | Canka Lokananta | Jl. Tidar 86 |
| 10 | Budi Murtono | Jl. Merak 22 |
| 11 | Budi Murtopo | Jl. Perak 20 |
| 12 | Budi Subagiyo | Jl. AhmadYani 10 |
| 13 | Sumaryanto | Jl. Nanas 2 |
| 14 | Sulatan Wakanda | Jl. Asia Frika 1 |
| 15 | Rudi | Jl. Semangka 33 |
| 16 | Yerika | Jl. Salak 76 |
| 17 | Michele | Jl. Duku 56 |
| 18 | Kevin | Jl. Lemon 24 |
| 19 | Ahmad | Jl. Obama 8 |
| 20 | Ahmad Sudarmono | Jl. Donald 22 |
+-----+-----+-----+
19 rows in set (0.06 sec)
```

Menambah cabang bank.

```
MariaDB [modul_5]> INSERT INTO cabang_bank(kode_cabang, nama_cabang, alamat_cabang)
-> VALUES('BRUA', 'Bank Rut Unit Aceh', 'Jl. Ahmad Yani 8'),
-> ('BRUC', 'Bank Rut Unit Cilacap', 'Jl. Tentara Pelajar 34'),
-> ('BRUD', 'Bank Rut Unit Demak', 'Jl. Slamet Raharjo 5'),
-> ('BRUBB', 'Bank Rut Unit Bangka Belitung', 'Jl. Kenangan 12'),
-> ('BRUS', 'Bank Rut Unit Surakarta', 'Jl. Slamet Riyadi 18'),
-> ('BRUSE', 'Bank Rut Unit Semarang', 'Jl. Nangka 22'),
-> ('BRUN', 'Bank Rut Unit Ngawi ', 'Jl. Slamet 6'),
-> ('BRUSD', 'Bank Rut Unit Sungai Danau', 'Jl. Gethek 2'),
-> ('BRUSI', 'Bank Rut Unit Solo Raya', 'Jl. Slamet Riyadi 33'),
-> ('BRUSR', 'Bank Rut Unit Surakarta', 'Jl. Slamet Riyadi 18'),
-> ('BRUSR', 'Bank Rut Unit Solo Raya', 'Jl. Slamet Riyadi 54'),
-> ('BRUSUR', 'Bank Rut Unit Surabaya', 'Jl. Slamet Riyadi 18'),
-> ('BRUW', 'Bank Rut Unit Wonogiri', 'Jl. A.Yani No.23'),
-> ('BRUY', 'Bank Rut Unit Yogyakarta', 'Jl. Anggrek 21');

MariaDB [modul_5]> select * from cabang_bank;
+-----+-----+-----+
| kode_cabang | nama_cabang | alamat_cabang |
+-----+-----+-----+
| BRUA | Bank Rut Unit Aceh | Jl. Ahmad Yani 8 |
| BRUB | Bank Rut Unit Boyolali | Jl. Ahmad yani 45 |
| BRUBB | Bank Rut Unit Bangka Belitung | Jl. Kenangan 12 |
| BRUC | Bank Rut Unit Cilacap | Jl. Tentara Pelajar 34 |
| BRUD | Bank Rut Unit Demak | Jl. Slamet Raharjo 5 |
| BRUK | Bank Rut Unit Klaten | Jl. Suparman 23 |
| BRUN | Bank Rut Unit Ngawi | Jl. Slamet 6 |
| BRUS | Bank Rut Unit Surakarta | Jl. Slamet Riyadi 18 |
| BRUSD | Bank Rut Unit Sungai Danau | Jl. Gethek 2 |
| BRUSE | Bank Rut Unit Semarang | Jl. Nangka 22 |
| BRUSI | Bank Rut Unit Sidoarjo | Jl. Slamet Riyadi 33 |
| BRUSR | Bank Rut Unit Solo Raya | Jl. Slamet Riyadi 54 |
| BRUSUR | Bank Rut Unit Surabaya | Jl. Slamet Riyadi 18 |
| BRUW | Bank Rut Unit Wonogiri | Jl. A.Yani No.23 |
| BRUY | Bank Rut Unit Yogyakarta | Jl. Anggrek 21 |
+-----+-----+-----+
15 rows in set (0.04 sec)
```

Menambah rekening.

```
MariaDB [modul_5]> INSERT INTO rekening(no_rekening, kode_cabangFK, pin, saldo)
-> VALUES('114', 'BRUC', '1112', '55000'),
-> ('115', 'BRUC', '1113', '35000'),
-> ('116', 'BRUS', '1114', '150000'),
-> ('117', 'BRUS', '1115', '546376'),
-> ('118', 'BRUSR', '1116', '333000'),
-> ('119', 'BRUD', '1117', '220000'),
-> ('120', 'BRUC', '1118', '1000000'),
-> ('121', 'BRUD', '1119', '20000'),
-> ('122', 'BRUD', '1120', '500000'),
-> ('123', 'BRUD', '1121', '12000');

MariaDB [modul_5]> select * from rekening;
+-----+-----+-----+-----+
| no_rekening | kode_cabangFK | pin | saldo |
+-----+-----+-----+-----+
| 101 | BRUS | 1111 | 5000000 |
| 102 | BRUS | 2222 | 3500000 |
| 103 | BRUS | 3333 | 7500000 |
| 104 | BRUM | 4444 | 9000000 |
| 105 | BRUM | 5555 | 2000000 |
| 106 | BRUS | 6666 | 3000000 |
| 107 | BRUS | 7777 | 10000000 |
| 108 | BRUB | 0000 | 50000000 |
| 109 | BRUB | 9999 | 0 |
| 110 | BRUY | 1234 | 5500000 |
| 111 | BRUK | 4321 | 1500000 |
| 112 | BRUK | 0123 | 3000000 |
| 113 | BRUY | 8888 | 2550000 |
| 114 | BRUC | 1112 | 550000 |
| 115 | BRUC | 1113 | 350000 |
| 116 | BRUS | 1114 | 1500000 |
| 117 | BRUS | 1115 | 546376 |
| 118 | BRUSR | 1116 | 333000 |
| 119 | BRUD | 1117 | 2200000 |
| 120 | BRUC | 1118 | 10000000 |
| 121 | BRUD | 1119 | 2000000 |
| 122 | BRUD | 1120 | 50000000 |
| 123 | BRUD | 1121 | 12000000 |
+-----+-----+-----+-----+
23 rows in set (0.04 sec)
```

Menambah nasabah\_has\_rekening.

```
MariaDB [modul_5]> INSERT INTO nasabah_has_rekening(id_nasabahFK, no_rekeningFK)
-> VALUES(11, 114),
-> (12,115),
-> (13,116),
-> (14,117),
-> (15,118),
-> (16,119),
-> (17,120),
-> (18,121),
-> (19,122),
-> (20,123);

MariaDB [modul_5]> select * from nasabah_has_rekening;
+-----+-----+
| id_nasabahFK | no_rekeningFK |
+-----+-----+
| 1 | 104 |
| 2 | 103 |
| 3 | 105 |
| 3 | 106 |
| 4 | 101 |
| 4 | 107 |
| 5 | 102 |
| 5 | 107 |
| 6 | 109 |
| 7 | 109 |
| 8 | 111 |
| 8 | 112 |
| 9 | 110 |
| 10 | 108 |
| 10 | 113 |
| 11 | 114 |
| 12 | 115 |
| 13 | 116 |
| 14 | 117 |
| 15 | 118 |
| 16 | 119 |
| 17 | 120 |
| 18 | 121 |
| 19 | 122 |
| 20 | 123 |
+-----+-----+
25 rows in set (0.03 sec)
```

## Menambah transaksi.

```
MariaDB [modul_51] > INSERT INTO transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah)
-> VALUES(31, 115, 12, 'debit', '2009-11-10', 55000),
-> (32, 115, 12, 'debit', '2009-11-10', 355000),
-> (33, 116, 13, 'debit', '2009-11-20', 355000),
-> (34, 117, 14, 'debit', '2009-11-10', 356000),
-> (35, 118, 15, 'debit', '2009-11-20', 356000),
-> (36, 119, 16, 'debit', '2009-11-10', 356000),
-> (37, 120, 17, 'debit', '2009-11-20', 356000),
-> (38, 121, 18, 'debit', '2009-11-10', 356000),
-> (39, 122, 19, 'debit', '2009-11-20', 200000),
-> (40, 123, 20, 'debit', '2009-11-10', 200000),
-> (41, 115, 12, 'kredit', '2009-11-20', 200000),
-> (42, 116, 13, 'kredit', '2009-11-22', 200000),
-> (43, 117, 14, 'debit', '2009-11-22', 200000),
-> (44, 118, 15, 'kredit', '2009-11-22', 500000),
-> (45, 119, 16, 'kredit', '2009-11-22', 500000),
-> (46, 120, 17, 'kredit', '2009-11-22', 500000),
-> (47, 121, 18, 'kredit', '2009-11-25', 500000),
-> (48, 122, 19, 'kredit', '2009-11-25', 500000),
-> (49, 123, 20, 'kredit', '2009-11-25', 342500),
-> (50, 115, 12, 'kredit', '2009-11-25', 342500);
MariaDB [modul_51] > select * from transaksi;
+-----+-----+-----+-----+-----+-----+
| no_transaksi | id_nasabahFK | no_rekeningFK | jenis_transaksi | tanggal | jumlah |
+-----+-----+-----+-----+-----+-----+
| 1 | 3 | 105 | debit | 2009-11-10 00:00:00 | 50000 |
| 2 | 2 | 103 | debit | 2009-11-10 00:00:00 | 40000 |
| 3 | 4 | 101 | kredit | 2009-11-12 00:00:00 | 20000 |
| 4 | 3 | 106 | debit | 2009-11-13 00:00:00 | 50000 |
| 5 | 5 | 107 | kredit | 2009-11-13 00:00:00 | 30000 |
| 6 | 1 | 104 | kredit | 2009-11-15 00:00:00 | 200000 |
| 7 | 9 | 110 | kredit | 2009-11-15 00:00:00 | 150000 |
| 8 | 5 | 102 | debit | 2009-11-16 00:00:00 | 20000 |
| 9 | 3 | 105 | kredit | 2009-11-18 00:00:00 | 50000 |
| 10 | 4 | 107 | debit | 2009-11-19 00:00:00 | 100000 |
| 11 | 2 | 103 | debit | 2009-11-19 00:00:00 | 100000 |
| 12 | 1 | 104 | debit | 2009-11-19 00:00:00 | 50000 |
| 13 | 4 | 107 | kredit | 2009-11-20 00:00:00 | 200000 |
| 14 | 3 | 105 | debit | 2009-11-21 00:00:00 | 40000 |
| 15 | 1 | 104 | kredit | 2009-11-22 00:00:00 | 100000 |
| 16 | 4 | 101 | kredit | 2009-11-22 00:00:00 | 20000 |
| 17 | 2 | 103 | debit | 2009-11-22 00:00:00 | 50000 |
| 18 | 5 | 102 | debit | 2009-11-25 00:00:00 | 50000 |
| 19 | 10 | 108 | debit | 2009-11-26 00:00:00 | 100000 |
| 20 | 3 | 106 | kredit | 2009-11-27 00:00:00 | 50000 |
| 21 | 2 | 103 | kredit | 2009-11-28 00:00:00 | 200000 |
| 22 | 3 | 105 | kredit | 2009-11-28 00:00:00 | 100000 |
| 23 | 5 | 102 | debit | 2009-11-30 00:00:00 | 20000 |
| 24 | 1 | 104 | debit | 2009-12-01 00:00:00 | 50000 |
| 25 | 2 | 103 | debit | 2009-12-02 00:00:00 | 40000 |
| 26 | 4 | 101 | debit | 2009-12-04 00:00:00 | 50000 |
| 27 | 2 | 103 | kredit | 2009-12-05 00:00:00 | 100000 |
| 28 | 5 | 102 | kredit | 2009-12-05 00:00:00 | 200000 |
| 29 | 7 | 109 | debit | 2009-12-05 00:00:00 | 100000 |
| 30 | 9 | 110 | debit | 2009-12-06 00:00:00 | 20000 |
| 31 | 12 | 115 | debit | 2009-11-10 00:00:00 | 55000 |
| 32 | 12 | 115 | debit | 2009-11-10 00:00:00 | 355000 |
| 33 | 13 | 116 | debit | 2009-11-20 00:00:00 | 355000 |
| 34 | 14 | 117 | debit | 2009-11-10 00:00:00 | 356000 |
| 35 | 15 | 118 | debit | 2009-11-20 00:00:00 | 356000 |
| 36 | 16 | 119 | debit | 2009-11-10 00:00:00 | 356000 |
| 37 | 17 | 120 | debit | 2009-11-20 00:00:00 | 356000 |
| 38 | 18 | 121 | debit | 2009-11-10 00:00:00 | 356000 |
| 39 | 19 | 122 | debit | 2009-11-20 00:00:00 | 200000 |
| 40 | 20 | 123 | debit | 2009-11-10 00:00:00 | 200000 |
| 41 | 12 | 115 | kredit | 2009-11-20 00:00:00 | 200000 |
| 42 | 13 | 116 | kredit | 2009-11-22 00:00:00 | 200000 |
| 43 | 14 | 117 | debit | 2009-11-22 00:00:00 | 200000 |
| 44 | 15 | 118 | kredit | 2009-11-22 00:00:00 | 500000 |
| 45 | 16 | 119 | kredit | 2009-11-22 00:00:00 | 500000 |
| 46 | 17 | 120 | kredit | 2009-11-22 00:00:00 | 500000 |
| 47 | 18 | 121 | kredit | 2009-11-25 00:00:00 | 500000 |
| 48 | 19 | 122 | kredit | 2009-11-25 00:00:00 | 500000 |
| 49 | 20 | 123 | kredit | 2009-11-25 00:00:00 | 342500 |
| 50 | 12 | 115 | kredit | 2009-11-25 00:00:00 | 342500 |
+-----+-----+-----+-----+-----+-----+
50 rows in set (0.05 sec)
```

# Modul 6

## Praktikum

Command Prompt - mysql -u root -p

```
20 rows in set <0.23 sec>
MariaDB [perbankan] > select nama_cabang, alamat_cabang from cabang_bank order by nama_cabang;
+-----+-----+
| nama_cabang | alamat_cabang |
+-----+-----+
| Bank Rtu Unit Balikpapan | Jl. Keempat 11 |
| Bank Rtu Unit Samarinda | Jl. Pemuda 14 |
| Bank Rtu Unit Belolali | Jl. Ahmad Yani 45 |
| Bank Rtu Unit Karanganyar | Jl. Tawangmangu 19 |
| Bank Rtu Unit Kartasura | Jl. Resenbilan 16 |
| Bank Rtu Unit Klaten | Jl. Suparmi 23 |
| Bank Rtu Unit Kendal | Jl. Pahlawan 63 |
| Bank Rtu Unit Pontianak | Jl. Medelayu 15 |
| Bank Rtu Unit Sanarinda | Jl. Melina 12 |
| Bank Rtu Unit Sraged | Jl. Pattimura 18 |
| Bank Rtu Unit Sukoharjo | Jl. Reseliuh 17 |
| Bank Rtu Unit Surabaya | Jl. Sutan Syadidi 18 |
| Bank Rtu Unit Tanjung Selor | Jl. Keenan 13 |
| Bank Rtu Unit Tarakan | Jl. Slamet Riyadi 22 |
| Bank Rtu Unit Wonogiri | Jl. Untung Suropati 12 |
| Bank Rtu Unit Yogyakarta | Jl. Hnggerek 21 |
+-----+-----+
16 rows in set <0.03 sec>
MariaDB [perbankan] > select no_rekening, pin, saldo from rekening order by saldo desc;
+-----+-----+-----+
| no_rekening | pin | saldo |
+-----+-----+-----+
| 108 | 8888 | 5000000 |
| 106 | 6666 | 3000000 |
| 115 | 1020 | 2500000 |
| 105 | 5555 | 2000000 |
| 113 | 8891 | 2000000 |
| 102 | 5556 | 1500000 |
| 102 | 2222 | 1000000 |
| 104 | 4444 | 900000 |
| 121 | 5506 | 900000 |
| 101 | 3333 | 700000 |
| 119 | 2234 | 500000 |
| 120 | 1144 | 500000 |
| 101 | 1111 | 500000 |
| 119 | 1010 | 400000 |
| 114 | 1212 | 300000 |
| 112 | 0123 | 300000 |
| 123 | 1997 | 300000 |
| 111 | 8881 | 255000 |
| 111 | 1111 | 200000 |
| 118 | 2233 | 120000 |
| 116 | 9911 | 100000 |
| 109 | 9999 | 0 |
+-----+-----+
23 rows in set <0.02 sec>
```

MySQL Workbench interface showing the connection configuration:

- Server: 127.0.0.1 via TCP/IP
- Port: 3306
- Protocol: MariaDB
- SSL: Tidak digunakan
- Version: 10.1.37-MariaDB - mariadb.org binary distribution
- Port: 3306
- User: pt@localhost

Windows taskbar at the bottom with icons for Start, File Explorer, Excel, Notepad, etc.

## Tugas

### No. 1

Command Prompt - mysql -u root -p

```
23 rows in set <0.02 sec>
MariaDB [perbankan] > select nama_nasabah, alamat_nasabah from nasabah order by nama_nasabah;
+-----+-----+
| nama_nasabah | alamat_nasabah |
+-----+-----+
| Andara | Jl. Pertama 26 |
| Bening | Jl. Agatis 10 |
| Budi Wijaya | Jl. Pemuda 10 |
| Budi Martono | Jl. Setiawati 22 |
| Canka Lokananta | Jl. Tidak 86 |
| Cinta | Jl. Ketiga 24 |
| Danindya | Jl. Aki Balai 22 |
| Ketut | Jl. Padmasari 15 |
| Khatulistiwaya | Jl. Ir. Soekarno 12 |
| Maryati | Jl. MT Haryono 31 |
| Muliana | Jl. Jend. Sudirman 97 |
| Pandan Wangi | Jl. Imam Bonjol 28 |
| Putri | Jl. Tidar 10 |
| Putri | Jl. Diponegoro 19 |
| Ranga | Jl. Kedua 80 |
| Sari Murti | Jl. Pangandaran 11 |
| Sriwulan Eka Jaya | Jl. Palmerah Baru 45 |
| Supawan | Jl. Henggaunin 81 |
| Sutopo | Jl. Jendral Sudirman 12 |
| Trianandya | Jl. Sutoyo 5 |
+-----+-----+
20 rows in set <0.00 sec>
MariaDB [perbankan] > select
```

MySQL Workbench interface showing the connection configuration:

- Server: 127.0.0.1 via TCP/IP
- Port: 3306
- Protocol: MariaDB
- SSL: Tidak digunakan
- Version: 10.1.37-MariaDB - mariadb.org binary distribution
- Port: 3306
- User: pt@localhost

Windows taskbar at the bottom with icons for Start, File Explorer, Excel, Notepad, etc.

## No.2

MySQL Command Prompt - mysql -u root -p

```
20 rows in set (0.00 sec)

MariaDB [perbankan]> select jenis_transaksi,jumlah from transaksi where jenis_transaksi='kredit';
+-----+-----+
| jenis_transaksi | jumlah |
+-----+-----+
| kredit          | 200000 |
| kredit          | 300000 |
| kredit          | 200000 |
| kredit          | 150000 |
| kredit          | 500000 |
| kredit          | 200000 |
| kredit          | 100000 |
| kredit          | 200000 |
| kredit          | 500000 |
| kredit          | 500000 |
| kredit          | 500000 |
| kredit          | 125000 |
| kredit          | 125000 |
| kredit          | 175000 |
| kredit          | 800000 |
| kredit          | 1300000 |
| kredit          | 1500000 |
+-----+-----+
24 rows in set (0.03 sec)

MariaDB [perbankan]>
```

10:49 AM 4/29/2019

## No.3

MySQL Command Prompt - mysql -u root -p

```
50 rows in set (0.00 sec)

MariaDB [perbankan]> select jenis_transaksi,jumlah from transaksi where tanggal='2009-11-21 00:00:00' order by jumlah;
+-----+-----+
| jenis_transaksi | jumlah |
+-----+-----+
| debit           | 400000 |
+-----+-----+
1 row in set (0.00 sec)

MariaDB [perbankan]>
```

10:54 AM 4/29/2019

## No.4

cx Command Prompt - mysql -u root -p

```

00:00 | 50000 | 37 | 16 | 118 | debit | 2009-12-11 00:
00:00 | 100000 | 4 | 14 | 120 | kredit | 2009-12-11 00:
00:00 | 50000 | 39 | 17 | 115 | kredit | 2009-12-12 00:
00:00 | 50000 | 40 | 16 | 118 | debit | 2009-12-12 00:
00:00 | 150000 | 41 | 18 | 119 | debit | 2009-12-14 00:
00:00 | 100000 | 42 | 12 | 114 | kredit | 2009-12-14 00:
00:00 | 125000 | 43 | 12 | 121 | kredit | 2009-12-14 00:
00:00 | 125000 | 44 | 16 | 118 | debit | 2009-12-15 00:
00:00 | 200000 | 45 | 13 | 117 | debit | 2009-12-15 00:
00:00 | 50000 | 46 | 14 | 120 | kredit | 2009-12-16 00:
00:00 | 175000 | 47 | 17 | 115 | kredit | 2009-12-17 00:
00:00 | 80000 | 48 | 10 | 113 | kredit | 2009-12-18 00:
00:00 | 130000 | 49 | 11 | 122 | debit | 2009-12-19 00:
00:00 | 200000 | 50 | 12 | 114 | kredit | 2009-12-20 00:
00:00 | 150000 |
6 rows in set <0.00 sec>
MariaDB [perbankan]> select jenis_transaksi.jumlah from transaksi where tanggal='2009-11-21 00:00:00' order by jumlah;
+-----+-----+
| jenis_transaksi | jumlah |
| debit | 40000 |
1 row in set <0.00 sec>
MariaDB [perbankan]> select nama_nasabah,jenis_transaksi.jumlah from nasabah.transaksi where nasabah.id_nasabah=transaksi.id_nasabahFK and jumlah=20000;
+-----+-----+-----+
| nama_nasabah | jenis_transaksi | jumlah |
| Kartika Padmasari | kredit | 20000 |
| Budi Eko Prayogo | debit | 20000 |
| Kartika Padmasari | kredit | 20000 |
| Budi Eko Prayogo | kredit | 20000 |
| Canka Lukananta | debit | 20000 |
| Puput | kredit | 20000 |
6 rows in set <0.00 sec>
MariaDB [perbankan]> 

```

11:00 AM  
4/29/2019

## No.5

cx Command Prompt - mysql -u root -p

```

00:00 | 44 | 16 | 118 | debit | 2009-12-15 00:
00:00 | 1 | 13 | 117 | debit | 2009-12-15 00:
00:00 | 50000 | 46 | 14 | 120 | kredit | 2009-12-16 00:
00:00 | 175000 | 47 | 17 | 115 | kredit | 2009-12-17 00:
00:00 | 80000 | 48 | 10 | 113 | kredit | 2009-12-18 00:
00:00 | 130000 | 49 | 11 | 122 | debit | 2009-12-19 00:
00:00 | 200000 | 50 | 12 | 114 | kredit | 2009-12-20 00:
00:00 | 150000 |
50 rows in set <0.00 sec>
MariaDB [perbankan]> select jenis_transaksi.jumlah from transaksi where tanggal='2009-11-21 00:00:00' order by jumlah;
+-----+-----+
| jenis_transaksi | jumlah |
| debit | 40000 |
1 row in set <0.00 sec>
MariaDB [perbankan]> select nama_nasabah,jenis_transaksi.jumlah from nasabah.transaksi where nasabah.id_nasabah=transaksi.id_nasabahFK and jumlah=20000;
+-----+-----+-----+
| nama_nasabah | jenis_transaksi | jumlah |
| Kartika Padmasari | kredit | 20000 |
| Budi Eko Prayogo | debit | 20000 |
| Kartika Padmasari | kredit | 20000 |
| Budi Eko Prayogo | kredit | 20000 |
| Canka Lukananta | debit | 20000 |
| Puput | kredit | 20000 |
6 rows in set <0.00 sec>
MariaDB [perbankan]> select nama_nasabah,alamat_nasabah from nasabah where nama_nasabah like='Suz%';
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near '=Suz%' at line 1
MariaDB [perbankan]> select nama_nasabah,alamat_nasabah from nasabah where nama_nasabah like 'Suz%';
+-----+-----+
| nama_nasabah | alamat_nasabah |
| Sutopo | Jl. Jendral Sudirman 12 |
| Suparman | Jl. Hasanudin 81 |
2 rows in set <0.00 sec>
MariaDB [perbankan]> 

```

11:05 AM  
4/29/2019

## Modul 7

# Tugas

No. 1

No.2

```
ca Command Prompt - mysql -u root -p

+-----+-----+-----+-----+
| Budi Eko Prayogo | Jl. Kantil 30 | kredit | 30000 |
| Budi Eko Prayogo | Jl. Kantil 30 | kredit | 200000 |
| Budi Martono | Jl. Merak 22 | kredit | 130000 |
| Canka Lokananta | Jl. Tidar 86 | kredit | 150000 |
| Danindya | Jl. Aki Balak 22 | kredit | 50000 |
| Danindya | Jl. Aki Balak 22 | kredit | 25000 |
| Kartika Padmasari | Jl. Manggis 15 | kredit | 200000 |
| Kartika Padmasari | Jl. Manggis 15 | kredit | 20000 |
| Kartika Padmasari | Jl. Manggis 15 | kredit | 20000 |
| Maryati | Jl. MT Haryono 31 | kredit | 200000 |
| Maryati | Jl. MT Haryono 31 | kredit | 100000 |
| Pandan Wangi | Jl. Imam Bonjol 20 | kredit | 50000 |
| Pandan Wangi | Jl. Imam Bonjol 20 | kredit | 80000 |
| Puput | Jl. AMD 10 | kredit | 125000 |
| Puput | Jl. AMD 10 | kredit | 125000 |
| Puput | Jl. AMD 10 | kredit | 150000 |
| Puput | Jl. AMD 10 | kredit | 20000 |
| Putri | Jl. Diponegoro 19 | kredit | 50000 |
| Putri | Jl. Diponegoro 19 | kredit | 175000 |
| Suparman | Jl. Hasanudin 81 | kredit | 50000 |
| Suparman | Jl. Hasanudin 81 | kredit | 100000 |
| Suparman | Jl. Hasanudin 81 | kredit | 50000 |
| Sutopo | Jl. Jendral Sudirman 12 | kredit | 200000 |
| Sutopo | Jl. Jendral Sudirman 12 | kredit | 100000 |
+-----+-----+-----+-----+
24 rows in set (0.03 sec)

MariaDB [perbankan]> select rekening.no_rekening, nasabah.nama_nasabah,transaksi.jenis_transaksi,transaksi.jumlah from rekening,nasabah,transaksi where rekening.no_reke
nasabah.id_nasabah=transaksi.id_nasabahFK and tanggal = '2009-11-21' order by nama_nasabah;
+-----+-----+-----+-----+
| no_rekening | nama_nasabah | jenis_transaksi | jumlah |
+-----+-----+-----+-----+
| 105 | Suparman | debit | 40000 |
+-----+-----+-----+-----+
1 row in set (0.01 sec)

MariaDB [perbankan]> select rekening.no_rekening, nasabah.nama_nasabah,transaksi.jenis_transaksi,transaksi.jumlah from rekening,nasabah,transaksi where rekening.no_reke
nasabah.id_nasabah=transaksi.id_nasabahFK and jumlah='20000';
+-----+-----+-----+-----+
| no_rekening | nama_nasabah | jenis_transaksi | jumlah |
+-----+-----+-----+-----+
+-----+-----+-----+-----+
0 rows in set (0.00 sec)
```

No.3

```
MariaDB [perbankan]> select rekening.no_rekening, nasabah.nama_nasabah,transaksi.jenis_transaksi,transaksi.jumlah from rekening,nasabah,transaksi where rekening.no_rekening=nasabah.id_nasabah=transaksi.id_nasabahFK and jumlah='2000';
+-----+-----+-----+-----+
| no_rekening | nama_nasabah | jenis_transaksi | jumlah |
+-----+-----+-----+-----+
| 101 | Kartika Padmasari | kredit | 20000 |
| 102 | Budi Eko Prayogo | debit | 20000 |
| 101 | Kartika Padmasari | kredit | 20000 |
| 102 | Budi Eko Prayogo | debit | 20000 |
| 110 | Canka Lokananta | debit | 20000 |
| 114 | Puput | kredit | 20000 |
+-----+-----+-----+-----+
6 rows in set (0.00 sec)

MariaDB [perbankan]> select no_rekening, nama_nasabah, alamat_nasabah from nasabah,rekening ,nasabah_has_rekening where nasabah.id_nasabah=nasabah_has_rekening.id_nasabah_has_rekening.no_rekeningFK and nama_nasabah like 'Su%';
+-----+-----+-----+
| no_rekening | nama_nasabah | alamat_nasabah |
+-----+-----+-----+
| 104 | Sutopo | Jl. Jendral Sudirman 12 |
| 105 | Suparman | Jl. Hasanudin 81 |
| 106 | Suparman | Jl. Hasanudin 81 |
+-----+-----+-----+
3 rows in set (0.19 sec)

MariaDB [perbankan]> select no_rekening as 'Nomor Rekening',nama_nasabah as 'Nama Nasabah',jumlah as 'Jumlah Transaksi' from rekening,nasabah,transaksi where rekening.nasabah.id_nasabah=transaksi.id_nasabahFK and jenis_transaksi='debit' order by nama_nasabah;
ERROR 1054 (42S22): Unknown column 'nama_nasabah' in 'order clause'
MariaDB [perbankan]> select no_rekening as 'Nomor Rekening',nama_nasabah as 'Nama Nasabah',jumlah as 'Jumlah Transaksi' from rekening,nasabah,transaksi where rekening.nasabah.id_nasabah=transaksi.id_nasabahFK and jenis_transaksi='debit' order by nama_nasabah;
+-----+-----+-----+
| Nomor Rekening | Nama Nasabah | Jumlah Transaksi |
+-----+-----+-----+

```

No.4

```
ca Command Prompt - mysql -u root -p
+-----+-----+-----+-----+
6 rows in set (0.00 sec)

MariaDB [perbankan]> select no_rekening, nama_nasabah, alamat_nasabah from nasabah,rekening ,nasabah_has_rekening where nasabah.id_nasabah=nasabah_has_rekening.id_nasabah_has_rekening.no_rekeningFK and nama_nasabah like 'Su%';
+-----+-----+-----+
| no_rekening | nama_nasabah | alamat_nasabah |
+-----+-----+-----+
| 104 | Sutopo | Jl. Jendral Sudirman 12 |
| 105 | Suparman | Jl. Hasanudin 81 |
| 106 | Suparman | Jl. Hasanudin 81 |
+-----+-----+-----+
3 rows in set (0.19 sec)
```

No.5

```
ca Command Prompt - mysql -u root -p
3 rows in set (0.19 sec)

MariaDB [perbankan]> select no_rekening as 'Nomor Rekening',nama_nasabah as 'Nama Nasabah',jumlah as 'Jumlah Transaksi' from rekening,nasabah,transaksi where rekening.nasabah.id_nasabah=transaksi.id_nasabahFK and jenis_transaksi='debit' order by nama_nasabah;
ERROR 1054 (42S22): Unknown column 'nama_nasabah' in 'order clause'
MariaDB [perbankan]> select no_rekening as 'Nomor Rekening',nama_nasabah as 'Nama Nasabah',jumlah as 'Jumlah Transaksi' from rekening,nasabah,transaksi where rekening.nasabah.id_nasabah=transaksi.id_nasabahFK and jenis_transaksi='debit' order by nama_nasabah;
+-----+-----+-----+
| Nomor Rekening | Nama Nasabah | Jumlah Transaksi |
+-----+-----+-----+
| 116 | Bening | 100000 |
| 102 | Budi Eko Prayogo | 20000 |
| 102 | Budi Eko Prayogo | 50000 |
| 119 | Budi Martono | 100000 |
| 108 | Budi Martono | 100000 |
| 110 | Canka Lokananta | 20000 |
| 122 | Danindya | 200000 |
| 123 | Danindya | 200000 |
| 107 | Kartika Padmasari | 100000 |
| 101 | Kartika Padmasari | 50000 |
| 118 | Khatulistiawara | 100000 |
| 118 | Khatulistiawara | 150000 |
| 118 | Khatulistiawara | 200000 |
| 103 | Maryati | 50000 |
| 103 | Maryati | 40000 |
| 103 | Maryati | 100000 |
| 103 | Maryati | 40000 |
| 117 | Muliана | 50000 |
| 117 | Muliана | 50000 |
| 106 | Suparman | 50000 |
| 105 | Suparman | 40000 |
| 105 | Suparman | 50000 |
| 104 | Sutopo | 50000 |
| 104 | Sutopo | 50000 |
| 109 | Trianindya | 100000 |
+-----+-----+-----+
26 rows in set (0.00 sec)

MariaDB [perbankan]>
```

# Modul 8

## Tugas

### No.1

```
MariaDB [perbankan] select distinct jenis_transaksi.jumlah as "Jumlah(Rp.)",count(jenis_transaksi)as "Total Transaksi" from transaksi T ,nasabah N where T.id_nasabah = N.nama_nasabah like "Kartika Padmasari%" GROUP BY T.jenis_transaksi order by T.jenis_transaksi;
ERROR 1054 <42S22>: Unknown column 'T.id_nasabah' in 'where clause'
MariaDB [perbankan] select distinct jenis_transaksi.jumlah as "Jumlah(Rp.)",count(jenis_transaksi)as "Total Transaksi" from transaksi T ,nasabah N where T.id_nasabahFK and N.nama_nasabah like "Kartika Padmasari%" GROUP BY T.jenis_transaksi i order by T.jenis_transaksi;
+-----+-----+-----+
| jenis_transaksi | Jumlah(Rp.) | Total Transaksi |
+-----+-----+-----+
| debit           |      50000 |          27 |
| kredit          |      20000 |          23 |
+-----+-----+-----+
2 rows in set <0.00 sec>
```

### No.2

```
C:\Windows\system32\cmd.exe - mysql -u root
nsaksi.id_nasabahFK and nasabah.nama_nasabah = "Maryati"AND transaksi.jenis_transaksi = "debit";
ERROR 1064 <42000>: You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'nasabah = transaksi.id_nasabahFK and nasabah.nama_nasabah = "Maryati"AND transak' at line 1
MariaDB [perbankan]
MariaDB [perbankan] select sum(transaksi.jumlah) as "Jumlah Saldo" FROM transaksi ,nasabah WHERE nasabah.id_nasabah = t ransaksi.id_nasabahFK AND nasabah.nama_nasabah = "Maryati"AND transaksi.jenis_transaksi = "debit";
+-----+
| Jumlah Saldo |
+-----+
|    777000 |
+-----+
1 row in set <0.00 sec>
```

### No.3

```
MariaDB [perbankan] select distinct kode_cabang,nama_cabang,count(jumlah)as "Jumlah Transaksi" from cabang_bank C,trans aksi T,rekening R where C.kode_cabang = R.kode_cabangFK AND T.no_rekeningFK = R.no_rekening GROUP BY C.kode_cabang;
+-----+-----+-----+
| kode_cabang | nama_cabang | Jumlah Transaksi |
+-----+-----+-----+
| BRUB       | Bank Rut Unit Boyolali |          1 |
| BRUK       | Bank Rut Unit Klaten |          2 |
| BRUM       | Bank Rut Unit Magelang |          4 |
| BRUS       | Bank Rut Unit Surakarta |         29 |
| BRWU       | Bank Rut Unit Wonogiri |          4 |
| BRUY       | Bank Rut Unit Yogyakarta |         10 |
+-----+-----+-----+
6 rows in set <0.04 sec>
```

### No.4

```
MariaDB [perbankan] SELECT nasabah.nama_nasabah as "Nama", rekening.saldo as "J
-> > umlah saldo" from nasabah, rekening where saldo between 500000 and 1000000 group
-> by id_nasabah;
+-----+-----+
| Nama          | J
umlah saldo |
+-----+-----+
| Sutopo        | 500000 |
| Maryati       | 500000 |
| Suparman     | 500000 |
| Kartika Padmasari | 500000 |
| Budi Eko Prayogo | 500000 |
| Satria Eka Jaya | 500000 |
| Indri Hapsari | 500000 |
| Sari Murti    | 500000 |
| Canka Lokananta | 500000 |
| Budi Murtono  | 500000 |
| Joko Ndo Kondo | 500000 |
| Jon Koplo    | 500000 |
| Anggit        | 500000 |
| Alvicky       | 500000 |
| Ihsan          | 500000 |
| kurnia         | 500000 |
| Alvix         | 500000 |
| Susilo         | 500000 |
| Sutopo        | 500000 |
| Luceng         | 500000 |
| Maryati       | 500000 |
+-----+-----+
21 rows in set <0.00 sec>
```

```
MariaDB [perbankan] select N.nama_nasabah as "Nama Nasabah", T.tanggal as 'Tanggal', T.jumlah as 'Jumlah (Rp.)'
```

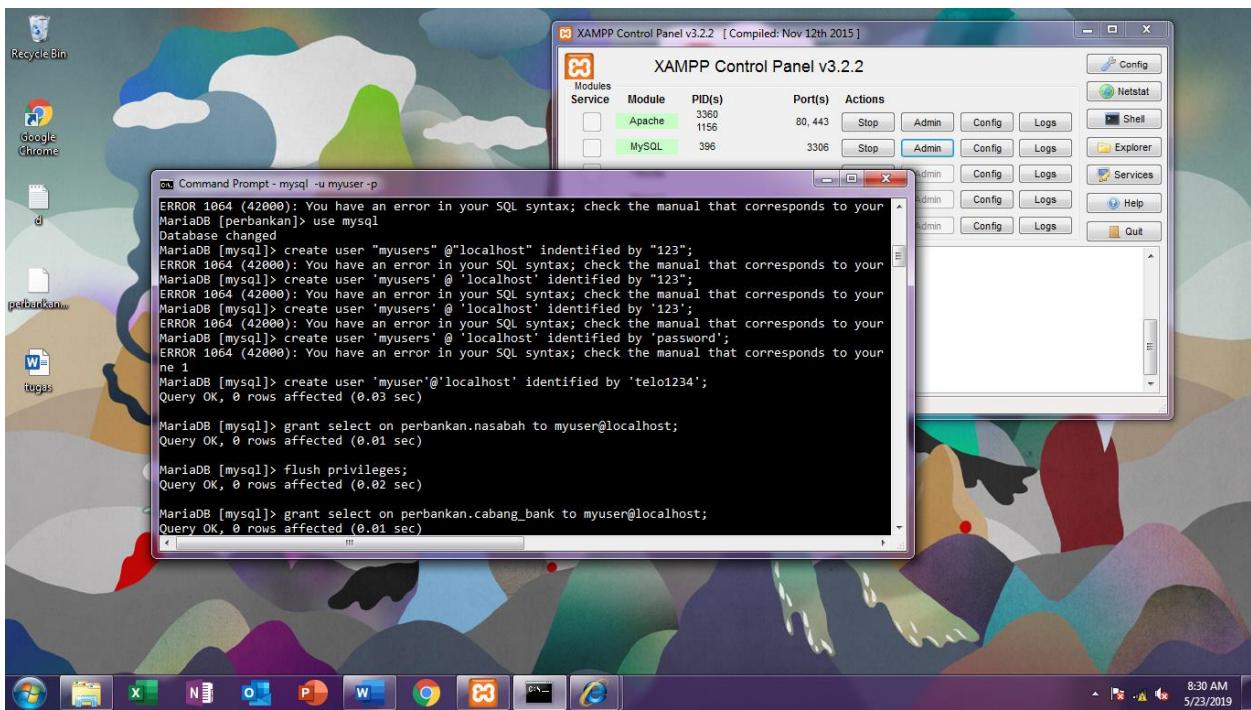
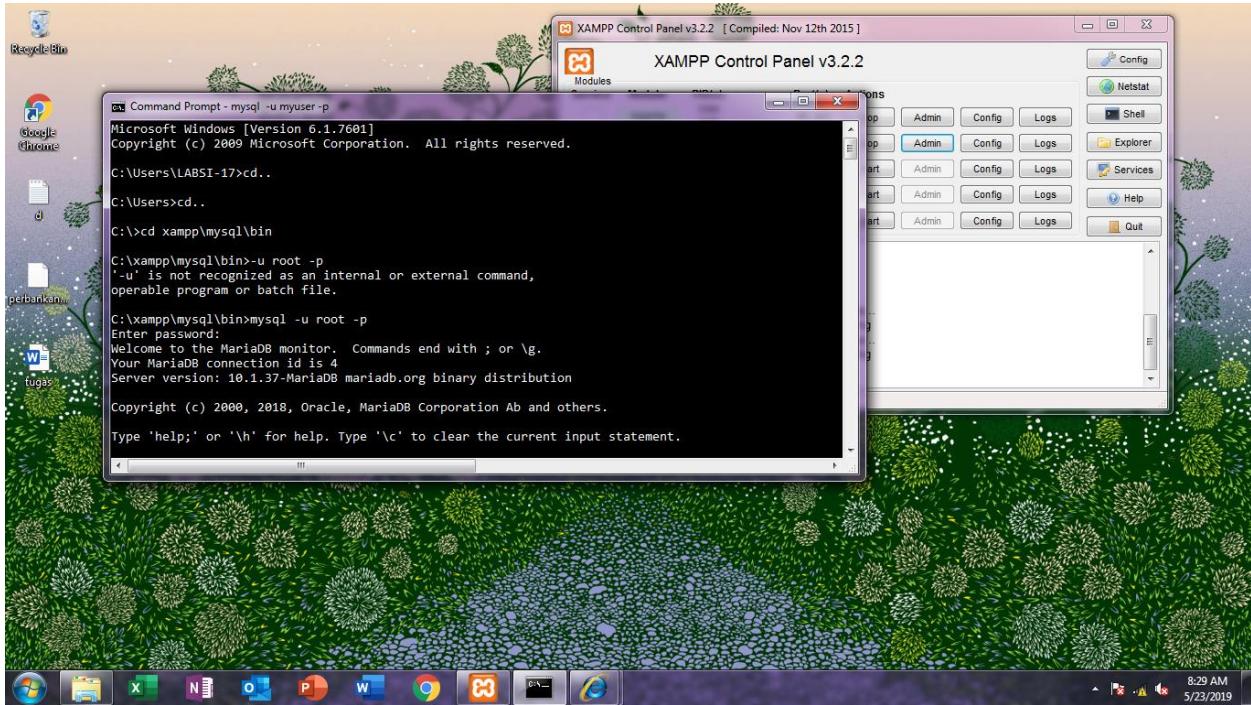
### No.5

```
MariaDB [perbankan] select N.nama_nasabah as "Nama Nasabah", T.tanggal as 'Tanggal', T.jumlah as 'Jumlah (Rp.)'
-> > > from nasabah N , transaksi T where N.id_nasabah = T.id_nasabahFK and T.jumlah >= 100000 order
-> by T.jumlah DESC;
+-----+-----+-----+
| Nama Nasabah | Tanggal | Jumlah (Rp.) |
+-----+-----+-----+
| Jon Koplo    | 2017-05-26 00:00:00 | 9700000 |
| Jon Koplo    | 2017-05-26 00:00:00 | 8500000 |
| Budi Eko Prayogo | 2017-05-26 00:00:00 | 7000000 |
| Anggit        | 2017-06-08 00:00:00 | 7000000 |
| Anggit        | 2017-06-08 00:00:00 | 7000000 |
| Maryati       | 2017-06-24 00:00:00 | 5000000 |
| Sutopo        | 2017-06-24 00:00:00 | 5200000 |
| Sari Murti    | 2017-06-24 00:00:00 | 3570000 |
| Budi Eko Prayogo | 2017-06-24 00:00:00 | 2000000 |
| Budi Murtono  | 2017-06-24 00:00:00 | 2500000 |
| Sutopo        | 2009-11-15 00:00:00 | 2000000 |
| Budi Eko Prayogo | 2009-12-05 00:00:00 | 2000000 |
| Maryati       | 2009-12-05 00:00:00 | 2000000 |
| Kartika Padmasari | 2009-11-20 00:00:00 | 2000000 |
| Canka Lokananta | 2009-11-15 00:00:00 | 1500000 |
| Indri Hapsari | 2012-06-24 00:00:00 | 1000000 |
| Satria Eka Jaya | 2012-06-24 00:00:00 | 2500000 |
| Kartika Padmasari | 2009-11-19 00:00:00 | 1000000 |
| Maryati       | 2009-11-19 00:00:00 | 1000000 |
| Sutopo        | 2009-11-19 00:00:00 | 1000000 |
| Budi Murtono  | 2009-11-26 00:00:00 | 1000000 |
| Suparman     | 2009-11-28 00:00:00 | 1000000 |
| Maryati       | 2009-12-05 00:00:00 | 1000000 |
| Indri Hapsari | 2009-12-05 00:00:00 | 1000000 |
+-----+-----+-----+
25 rows in set <0.00 sec>
```

```
MariaDB [perbankan]
```

# Modul 9

## praktikum



Recycle Bin

Google Chrome

perbankan...

tugas

8:30 AM 5/23/2019

XAMPP Control Panel v3.2.2 [ Compiled: Nov 12th 2015 ]

XAMPP Control Panel v3.2.2

Modules	Service	Module	PID(s)	Port(s)	Actions
		Apache	3360 1156	80, 443	Stop Admin Config Logs
		MySQL	396	3306	Stop Admin Config Logs

Config Netstat Shell Explorer Services Help Quit

Command Prompt - mysql -u myuser -p

```
MariaDB [mysql]> grant select on perbankan.cabang_bank to myuser@localhost;
Query OK, 0 rows affected (0.01 sec)

MariaDB [mysql]> flush privileges;
Query OK, 0 rows affected (0.00 sec)

MariaDB [mysql]> exit
Bye

C:\xampp\mysql\bin>mysql -u myuser -p
Enter password: *****
Welcome to the MariaDB monitor. Commands end with ; or \g.
Your MariaDB connection id is 5
Server version: 10.1.37-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 nasabah;
```

id_nasabah	nama_nasabah	alamat_nasabah
1	Sutopo	jalan jendral sudirman no.12
2	Maryati	jalan jendral sudirman no.12
3	Suparman	jalan jendral sudirman no.12
4	Kartika Padmasari	jalan jendral sudirman no.12
5	Budi Eko Prayogo	jalan jendral sudirman no.12
6	Satria Eka Jaya	jalan jendral sudirman no.12
7	Trianandya	jalan jendral sudirman no.12
8	Sari Murti	jalan jendral sudirman no.12
9	Canka Lokananta	jalan jendral sudirman no.12
10	Budi Martono	jalan jendral sudirman no.12
11	Danindya	jalan jendral sudirman no.12
12	Puput	jalan jendral sudirman no.12
13	Muliана	jalan jendral sudirman no.12
14	Putri	jalan jendral sudirman no.12
15	Bening	jalan jendral sudirman no.12
16	Khatulistiawara	jalan jendral sudirman no.12
17	Pandan Wangi	jalan jendral sudirman no.12
18	Andara	jalan jendral sudirman no.12
19	Rangga	jalan jendral sudirman no.12
20	Cinta	jalan jendral sudirman no.12
31	susilo	jalan jendral sudirman no.12
32	susilo	jalan jendral sudirman no.12
33	susilo	jalan jendral sudirman no.12
34	Susilo	jalan jendral sudirman no.12
212	tio	karanganyar*

25 rows in set (0.02 sec)

8:30 AM 5/23/2019

Recycle Bin

Google Chrome

perbankan...

tugas

8:30 AM 5/23/2019

XAMPP Control Panel v3.2.2 [ Compiled: Nov 12th 2015 ]

XAMPP Control Panel v3.2.2

Modules	Service	Module	PID(s)	Port(s)	Actions
		Apache	3360 1156	80, 443	Stop Admin Config Logs
		MySQL	396	3306	Stop Admin Config Logs

Config Netstat Shell Explorer Services Help Quit

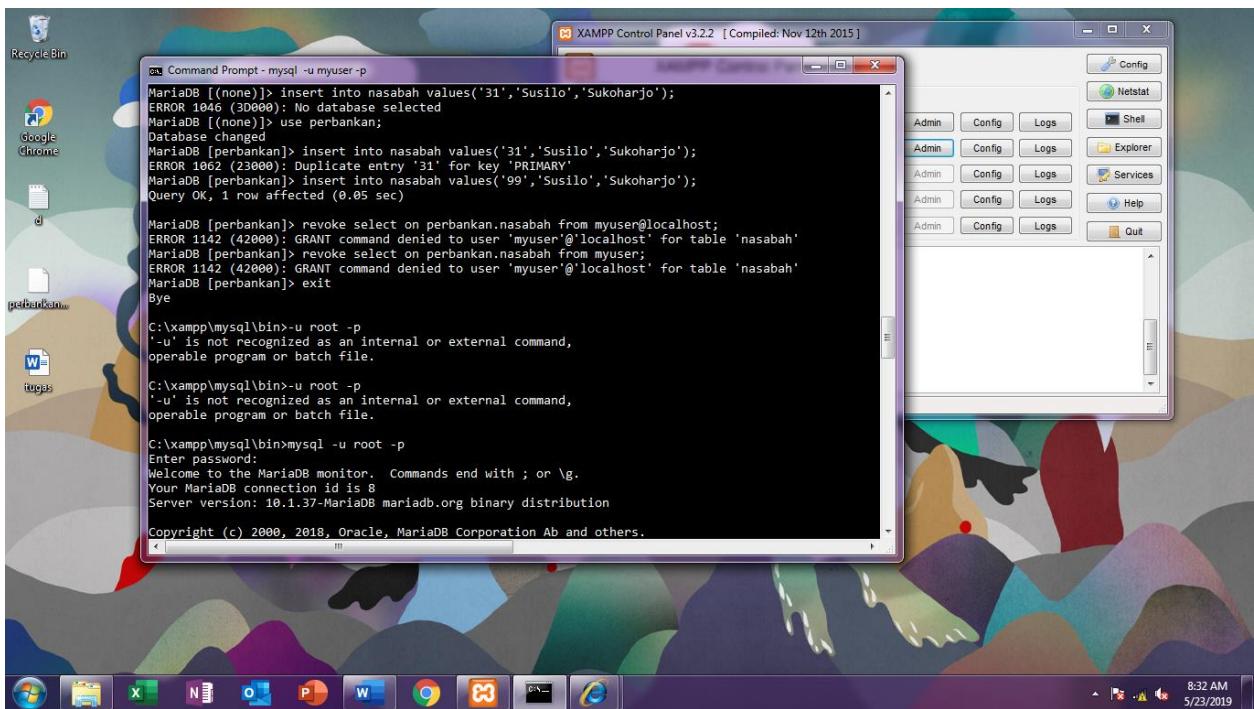
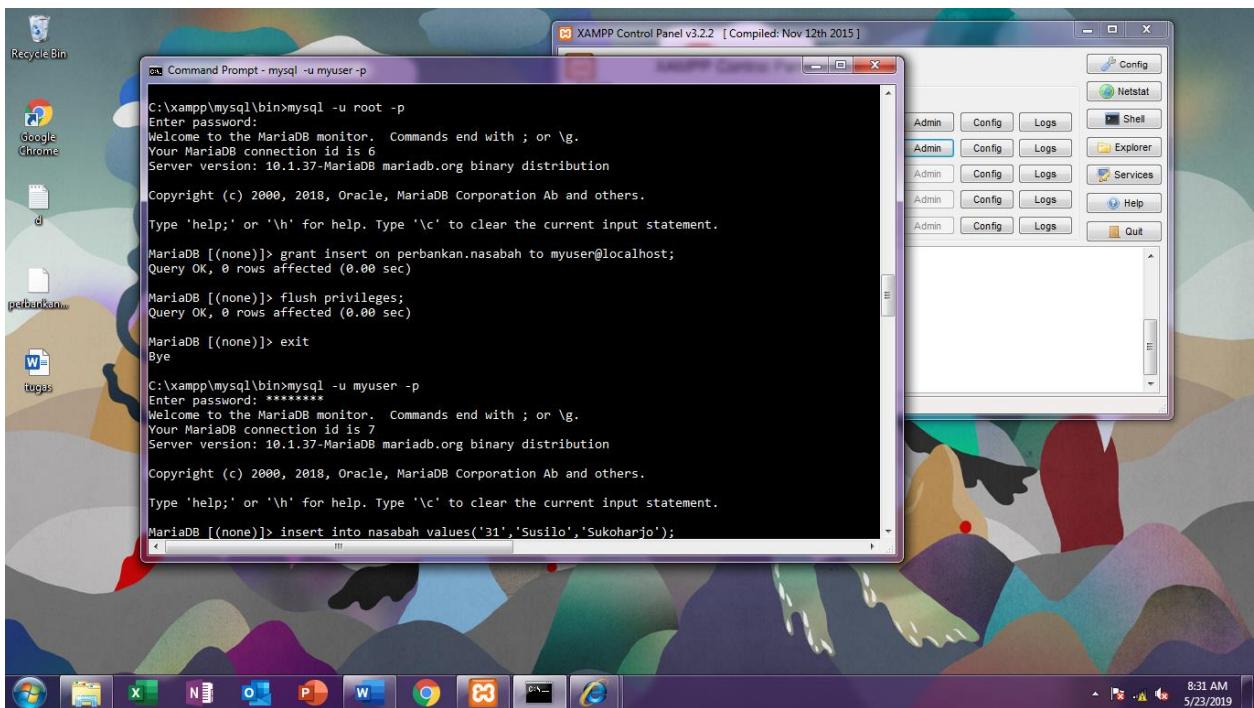
Command Prompt - mysql -u myuser -p

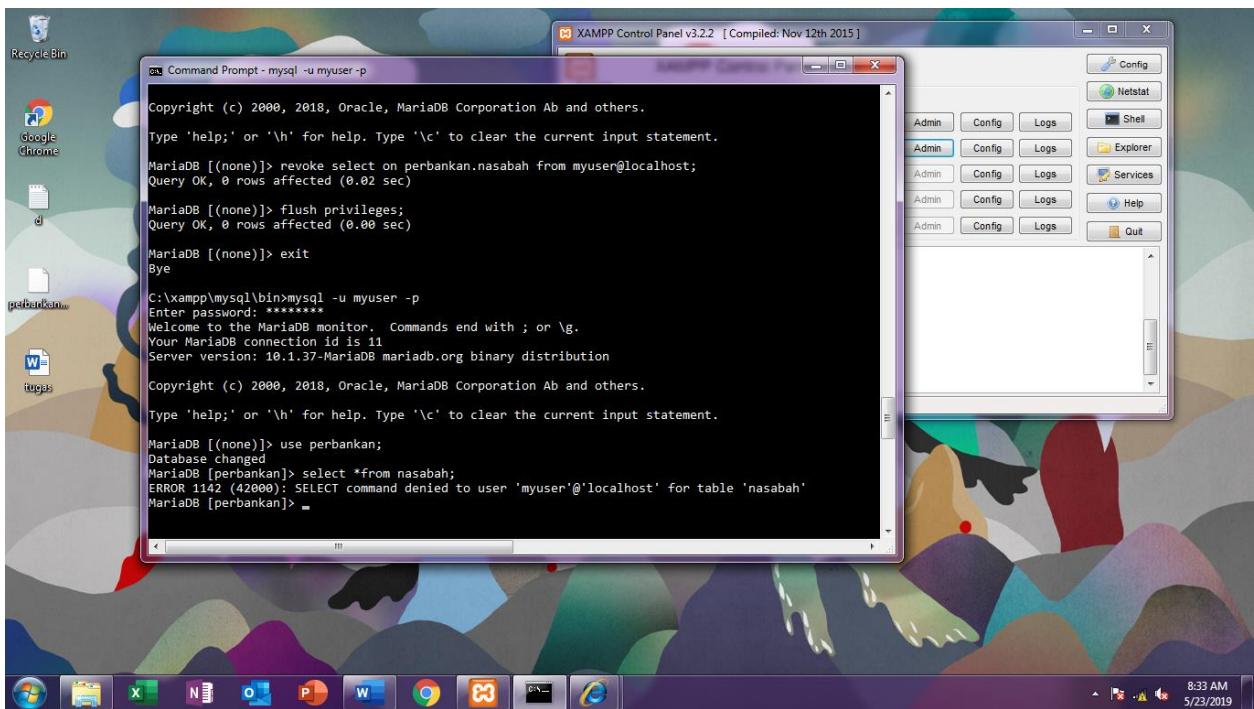
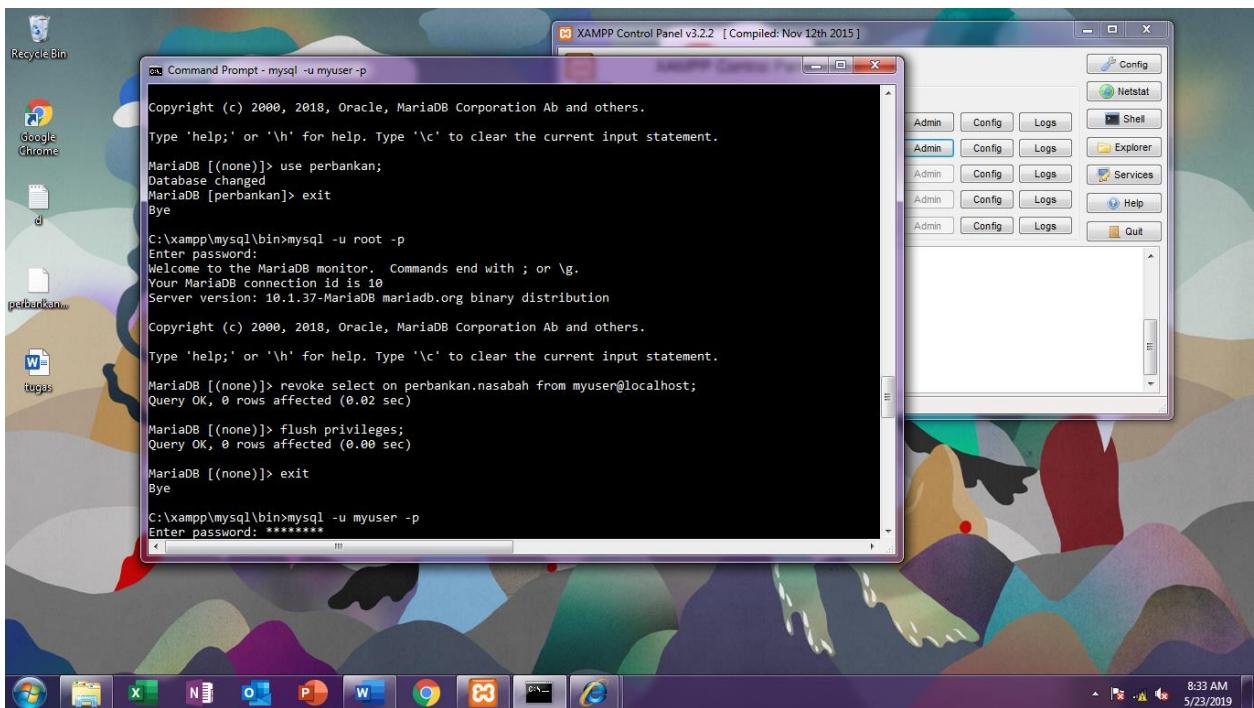
```
MariaDB [perbankan]> select * from nasabah;
```

id_nasabah	nama_nasabah	alamat_nasabah
1	Sutopo	jalan jendral sudirman no.12
2	Maryati	jalan jendral sudirman no.12
3	Suparman	jalan jendral sudirman no.12
4	Kartika Padmasari	jalan jendral sudirman no.12
5	Budi Eko Prayogo	jalan jendral sudirman no.12
6	Satria Eka Jaya	jalan jendral sudirman no.12
7	Trianandya	jalan jendral sudirman no.12
8	Sari Murti	jalan jendral sudirman no.12
9	Canka Lokananta	jalan jendral sudirman no.12
10	Budi Martono	jalan jendral sudirman no.12
11	Danindya	jalan jendral sudirman no.12
12	Puput	jalan jendral sudirman no.12
13	Muliана	jalan jendral sudirman no.12
14	Putri	jalan jendral sudirman no.12
15	Bening	jalan jendral sudirman no.12
16	Khatulistiawara	jalan jendral sudirman no.12
17	Pandan Wangi	jalan jendral sudirman no.12
18	Andara	jalan jendral sudirman no.12
19	Rangga	jalan jendral sudirman no.12
20	Cinta	jalan jendral sudirman no.12
31	susilo	jalan jendral sudirman no.12
32	susilo	jalan jendral sudirman no.12
33	susilo	jalan jendral sudirman no.12
34	Susilo	jalan jendral sudirman no.12
212	tio	karanganyar*

25 rows in set (0.02 sec)

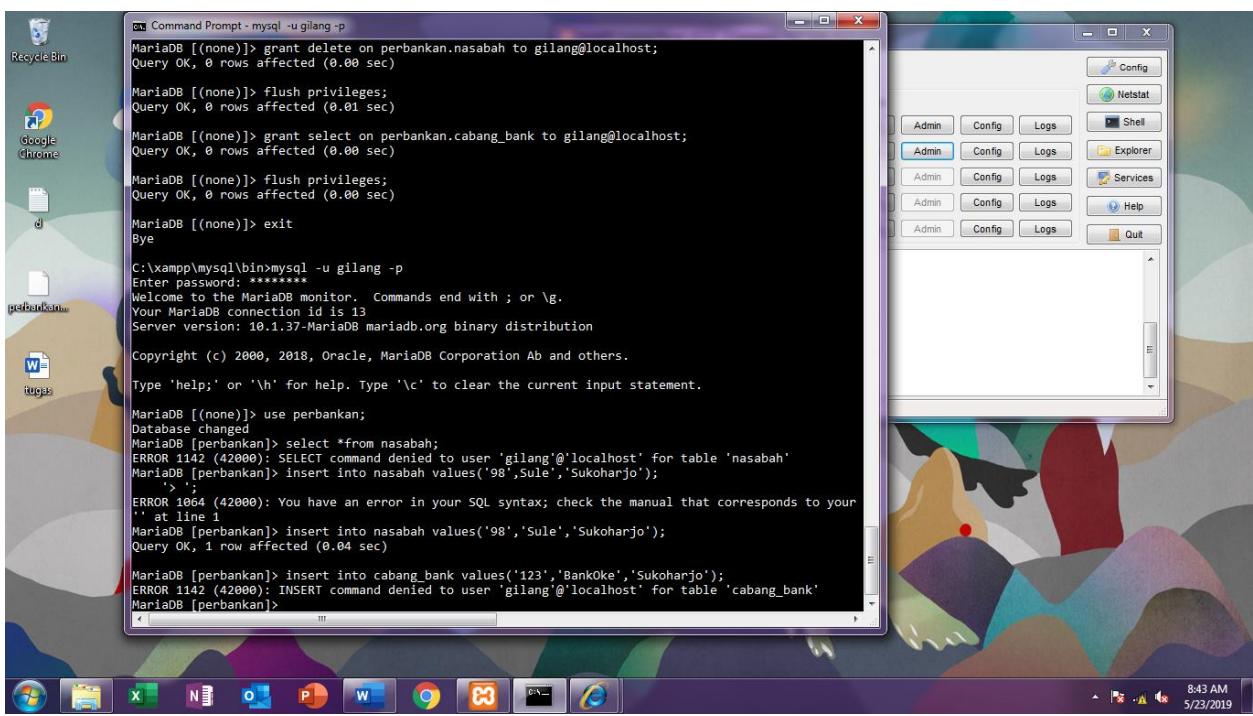
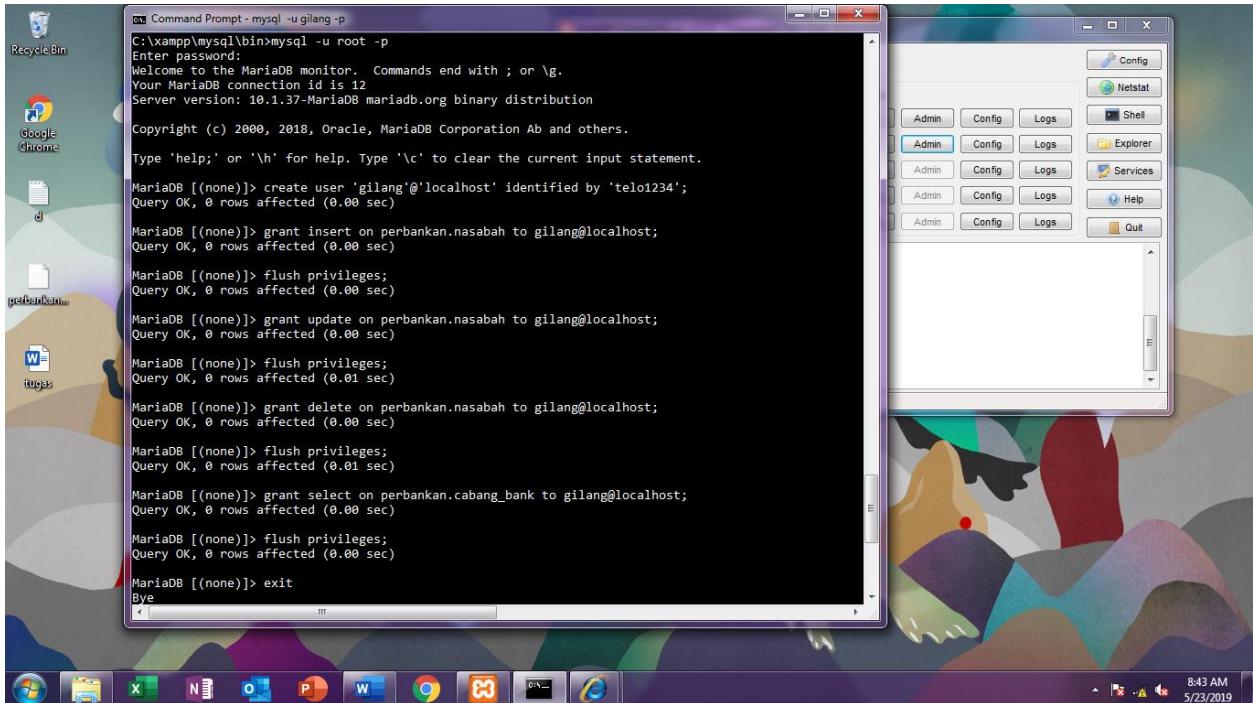
8:30 AM 5/23/2019





## Tugas

No.1,2 dan 3



No.4

-> pemberian akses mempengaruhi data dapat dirubah atau tidaknya

# Modul 10

## Tugas

No.1

```
 Command Prompt - mysql -u root -p
| dosen |
| mahasiswa |
| matkul |
| ruang_kuliah |
+-----+
5 rows in set (0.00 sec)

MariaDB [perkuliahhan]> select *from mahasiswa where nim_mhs not in ( select distinct link_mahasiswa_matkul.nim_mhsFK from link_mahasiswa_matkul where kode_mkFK='SBD4')
-> ;
ERROR 1054 (42S22): Unknown column 'nim_mhs' in 'IN/ALL/ANY subquery'
MariaDB [perkuliahhan]> select *from mahasiswa where nim not in ( select distinct link_mahasiswa_matkul.nimFK from link_mahasiswa_matkul where kode_matkulFK='SBD4');
ERROR 1054 (42S22): Unknown column 'link_mahasiswa_matkul.nimFK' in 'field list'
MariaDB [perkuliahhan]> select *from mahasiswa where nim not in ( select distinct link_mahasiswa_matkul.nim from link_mahasiswa_matkul where kode_matkul='SBD4');
+-----+-----+-----+-----+
| nim | nama | alamat | tgl_lahir |
+-----+-----+-----+-----+
| L200150083 | Diany Bima Saputra | Wonogiri | 1997-10-15 |
| L200150088 | Khofa Prayoga | Pemalang | 1997-08-10 |
| L200150099 | Purwatinah | Salatiga | 1997-03-01 |
| L200150112 | Dwi Pratiwi Putri | Bangka Belitung | 1998-01-01 |
| L200150113 | Ismi Kamelia Najib Putri | Nusa Tenggara Barat | 1997-02-11 |
| L200150117 | Widiyarti Endang Saputri | Wonogiri | 1997-02-11 |
| L200150118 | Rina Kurniasari | Wonogiri | 1997-11-11 |
| L200150123 | Danindya Puput Mulianna Putri | Kalimantan Timur | 1997-04-01 |
| L200150125 | Indra Bayu Candra Gupta | Wonogiri | 1993-08-28 |
| L200150127 | Lyon | Sukoharjo | 1995-12-01 |
| L200150128 | Sulthana Dzakira Drajat | Tangerang | 1998-01-14 |
| L200150129 | Fendy | Pekalongan | 1997-06-22 |
| L200150144 | Sam'an Alghozy | Banyuwangi | 1996-08-09 |
| L200150146 | Fakhruin Razi | Sukoharjo | 1997-04-23 |
| L200150001 | Khilyatin Ulin Fitri | Solo | 1997-10-05 |
+-----+-----+-----+-----+
15 rows in set (0.03 sec)

MariaDB [perkuliahhan]> update link_mahasiswa_matkul set kode_matkul = 'SBD4' where kode_matkul in(select kode_matkul from matkul where nama_matkul = 'Sistem Digital');
ERROR 1452 (23000): Cannot add or update a child row: a foreign key constraint fails ('perkuliahhan`.`link_mahasiswa_matkul', CONSTRAINT `fk_matkul_link_mahasiswa_matkul` FOREIGN KEY (`kode_matkul`) REFERENCES `matkul` (`kode_matkul`) ON DELETE CASCADE ON UPDATE CASCADE)
MariaDB [perkuliahhan]> update link_mahasiswa_matkul set kode_matkul = 'SBD4' where kode_matkul in(select kode_matkul from matkul where nama_matkul = 'Jaringan Komputer');
Query OK, 0 rows affected (0.00 sec)
Rows matched: 0 Changed: 0 Warnings: 0
ERROR 1054 (42S22): Unknown column 'link_mahasiswa_matkul.nimFK' in 'field list'
11:32 AM
5/27/2019
```

No.2

```
 Command Prompt - mysql -u root -p
| L200150001 | TIF008 | 80 |
| L200150001 | TIF010 | 70 |
+-----+
115 rows in set (0.00 sec)

MariaDB [perkuliahhan]> select mahasiswa.nim,mahasiswa.nama from mahasiswa,link_mahasiswa_matkul,matkul where mahasiswa.nim=link_mahasiswa_matkul.nim and matkul.kode_matkul and matkul.kode_dosen=(select kode_dosen from dosen where kode_dosen = "D001");
+-----+-----+
| nim | nama |
+-----+-----+
| L200150083 | Diany Bima Saputra |
| L200150088 | Khofa Prayoga |
| L200150099 | Purwatinah |
| L200150112 | Dwi Pratiwi Putri |
| L200150113 | Ismi Kamelia Najib Putri |
| L200150117 | Widiyarti Endang Saputri |
| L200150123 | Danindya Puput Mulianna Putri |
| L200150125 | Indra Bayu Candra Gupta |
| L200150127 | Lyon |
| L200150128 | Sulthana Dzakira Drajat |
| L200150129 | Fendy |
| L200150144 | Sam'an Alghozy |
| L200150146 | Fakhruin Razi |
| L200150001 | Khilyatin Ulin Fitri |
+-----+
14 rows in set (0.00 sec)

MariaDB [perkuliahhan]> =
| L200150117 | TIF002 | 80 |
+-----+
11:33 AM
5/27/2019
```

No.3

```
Command Prompt - mysql -u root -p
MariaDB [perkuliahinan]> update link_mahasiswa_matkul set kode_matkul = 'TIF002' where kode_matkul = (select kode_matkul from matkul where kode_matkul = 'TIF002')
Query OK, 0 rows affected (0.01 sec)
Rows matched: 14  Changed: 0  Warnings: 0

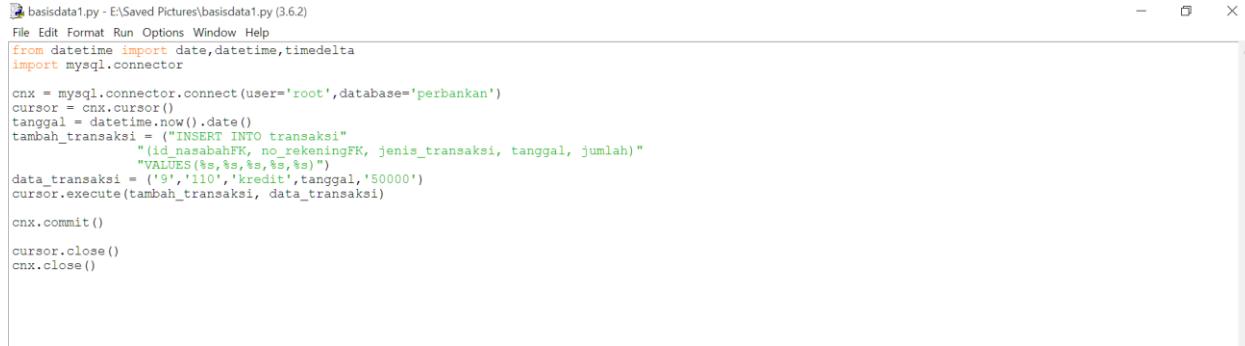
MariaDB [perkuliahinan]> select * from link_mahasiswa_matkul;
+-----+-----+-----+
| nim  | kode_matkul | nilai |
+-----+-----+-----+
| L200150083 | TIF001 | 70 |
| L200150083 | TIF002 | 60 |
| L200150083 | TIF003 | 70 |
| L200150083 | TIF004 | 88 |
| L200150083 | TIF005 | 79 |
| L200150088 | TIF001 | 80 |
| L200150088 | TIF002 | 80 |
| L200150088 | TIF003 | 80 |
| L200150088 | TIF004 | 80 |
| L200150088 | TIF005 | 80 |
| L200150088 | TIF006 | 80 |
| L200150088 | TIF007 | 84 |
| L200150088 | TIF008 | 80 |
| L200150088 | TIF010 | 80 |
| L200150099 | TIF001 | 70 |
| L200150099 | TIF002 | 80 |
| L200150099 | TIF003 | 70 |
| L200150099 | TIF004 | 70 |
| L200150099 | TIF005 | 90 |
| L200150099 | TIF006 | 80 |
| L200150099 | TIF007 | 74 |
| L200150099 | TIF008 | 70 |
| L200150099 | TIF010 | 70 |
| L200150112 | TIF001 | 90 |
| L200150112 | TIF002 | 70 |
| L200150112 | TIF003 | 70 |
| L200150112 | TIF004 | 80 |
| L200150112 | TIF005 | 70 |
| L200150112 | TIF008 | 70 |
| L200150112 | TIF010 | 70 |
| L200150113 | TIF001 | 70 |
| L200150113 | TIF002 | 60 |
| L200150113 | TIF003 | 70 |
| L200150113 | TIF004 | 80 |
| L200150113 | TIF005 | 70 |
| L200150113 | TIF008 | 70 |
| L200150113 | TIF010 | 80 |
| L200150117 | TIF001 | 80 |
| L200150117 | TIF002 | 80 |
| L200150117 | TIF003 | 70 |
| L200150117 | TIF004 | 88 |
| L200150117 | TIF005 | 89 |
| L200150117 | TIF006 | 80 |
| L200150117 | TIF007 | 81 |
| L200150118 | TIF001 | 80 |
| L200150118 | TIF002 | 80 |
| L200150118 | TIF006 | 80 |
+-----+-----+-----+
```

# Modul 11

## Tugas

No.1

-insert



```
basisdata1.py - E:\Saved Pictures\basisdata1.py (3.6.2)
File Edit Format Run Options Window Help
from datetime import date,datetime,timedelta
import mysql.connector

cnx = mysql.connector.connect(user='root',database='perbankan')
cursor = cnx.cursor()
tanggal = datetime.now().date()
tambah_transaksi = ("INSERT INTO transaksi"
                     "(id_nasabahFK, no_rekeningFK, jenis_transaksi, tanggal, jumlah)"
                     "VALUES(%s,%s,%s,%s,%s)")
data_transaksi = ('9','110','kredit',tanggal,'50000')
cursor.execute(tambah_transaksi, data_transaksi)

cnx.commit()

cursor.close()
cnx.close()
```

-update

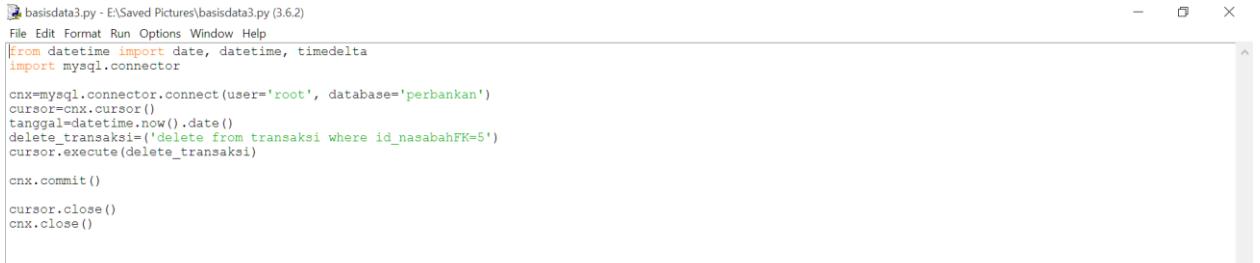


```
Basisdata2 (2).py - E:\Saved Pictures\Basisdata2 (2).py (3.6.2)
File Edit Format Run Options Window Help
from datetime import date, datetime, timedelta
import mysql.connector

cnx=mysql.connector.connect(user='root', database='perbankan')
cursor=cnx.cursor()
tanggal=datetime.now().date()
update_transaksi=('update transaksi set jumlah=%s where no_rekeningFK=%s')
data_update=('70000', '110')
cursor.execute(update_transaksi, data_update)

cnx.commit()
cursor.close()
cnx.close()
```

-delete



```
basisdata3.py - E:\Saved Pictures\basisdata3.py (3.6.2)
File Edit Format Run Options Window Help
from datetime import date, datetime, timedelta
import mysql.connector

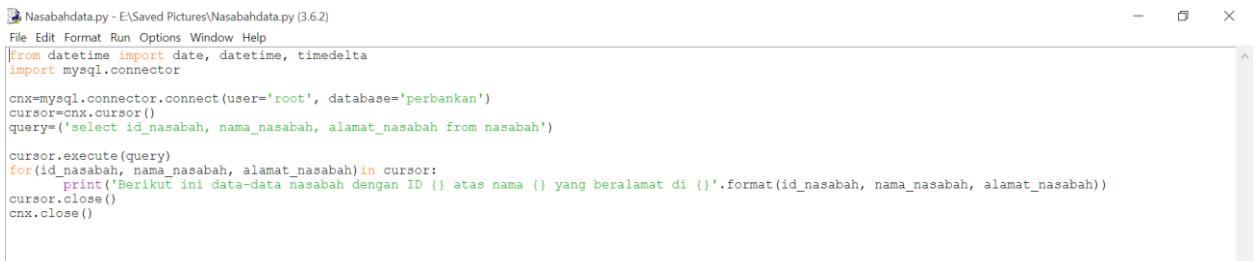
cnx=mysql.connector.connect(user='root', database='perbankan')
cursor=cnx.cursor()
tanggal=datetime.now().date()
delete_transaksi=('delete from transaksi where id_nasabahFK=5')
cursor.execute(delete_transaksi)

cnx.commit()

cursor.close()
cnx.close()
```

No.2.

-data nasabah

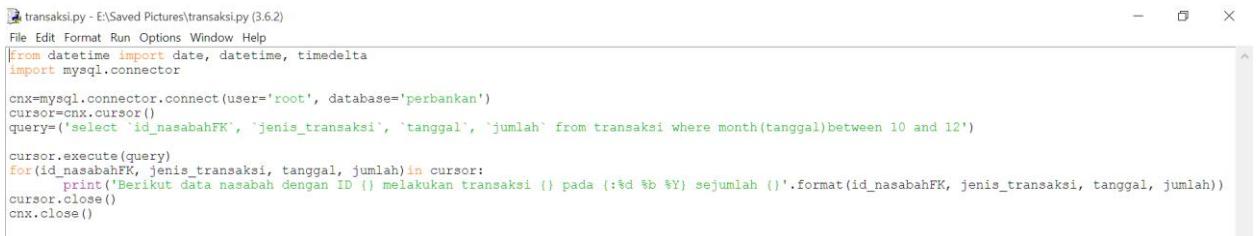


```
Nasabahdata.py - E:\Saved Pictures\Nasabahdata.py (3.6.2)
File Edit Format Run Options Window Help
from datetime import date, datetime, timedelta
import mysql.connector

cnx=mysql.connector.connect(user='root', database='perbankan')
cursor=cnx.cursor()
query='select id_nasabah, nama_nasabah, alamat_nasabah from nasabah'

cursor.execute(query)
for(id_nasabah, nama_nasabah, alamat_nasabah) in cursor:
    print('Berikut ini data-data nasabah dengan ID {} atas nama {} yang beralamat di {}'.format(id_nasabah, nama_nasabah, alamat_nasabah))
cursor.close()
cnx.close()
```

- Data nasabah yang melakukan transaksi antara Oktober-Desember



```
transaksi.py - E:\Saved Pictures\transaksi.py (3.6.2)
File Edit Format Run Options Window Help
from datetime import date, datetime, timedelta
import mysql.connector

cnx=mysql.connector.connect(user='root', database='perbankan')
cursor=cnx.cursor()
query='select `id_nasabahFK`, `jenis_transaksi`, `tanggal`, `jumlah` from transaksi where month(tanggal)between 10 and 12'

cursor.execute(query)
for(id_nasabahFK, jenis_transaksi, tanggal, jumlah) in cursor:
    print('Berikut data nasabah dengan ID {} melakukan transaksi {} pada {:d %b %Y} sejumlah {}'.format(id_nasabahFK, jenis_transaksi, tanggal, jumlah))
cursor.close()
cnx.close()
```