

**NAMA : ROSSANTI KUSUMADEWI**

**NIM : L200170092**

**KELAS : D**

**MODUL : 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!

**Keuntungan Database**

Adapun keuntungan database terhadap sistem pemrosesan adalah:

- 1) Kemubajiran data berkurang.
- 2) Integritas data dapat selalu terjaga.
- 3) Berbagai data dapat selalu dilakukan oleh setiap user.
- 4) Penggunaan data lebih mudah.
- 5) Konsistensi data dapat selalu terjaga.

**Manfaat Database**

- a) Sebagai komponen utama atau penting dalam sistem informasi, karena merupakan dasar dalam menyediakan informasi.
- b) Menentukan kualitas informasi yaitu cepat, akurat, dan relevan, sehingga informasi yang disajikan tidak basi. Informasi dapat dikatakan bernilai bila manfaatnya lebih efektif dibandingkan dengan biaya mendapatkannya.
- c) Mengatasi kerangkapan data (redundancy data).
- d) Menghindari terjadinya inkonsistensi data.
- e) Mengatasi kesulitan dalam mengakses data.
- f) Menyusun format yang standar dari sebuah data.
- g) Penggunaan oleh banyak pemakai (multiple user). Sebuah database bisa dimanfaatkan sekaligus secara bersama oleh banyak pengguna (multiuser).
- h) Melakukan perlindungan dan pengamanan data. Setiap data hanya bisa diakses atau dimanipulasi oleh pihak yang diberi otoritas dengan memberikan login dan password terhadap masing-masing data.
- i) Agar pemakai mampu menyusun suatu pandangan (view) abstraksi dari data. Hal ini bertujuan menyederhanakan interaksi antara pengguna dengan sistemnya dan database dapat mempre-

sentasikan pandangan yang berbeda kepada para pengguna, programmer dan administratornya.

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

yang menjadi acuan dalam pemilihan database adalah sebagai berikut.

- a) Pendeskripsian kebutuhan informasi dan data
- b) Spesifikasi data
- c) Pemrosesan yang diperlukan oleh data
- d) Pertimbangan keamanan
- e) Kecocokan dengan tipe aplikasi
- f) Bahasa query
- g) Biaya tak langsung terhadap pemrosesan

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

Database: Sekumpulan data yang saling berhubungan untuk mencapai suatu tujuan.

Tabel: Merupakan hal yang paling mendasar dalam hal penyimpanan data yang terdiri dari field dan record.

Field (kolom): Merupakan elemen dari tabel yang berisikan informasi tertentu yang spesifik tentang subjudul tabel pada sebuah item data.

Syarat-syarat pembentukan Field Name pada tabel:

- a) Harus Unik atau Spesifik
- b) Boleh disingkat
- c) Pemisah sebagai pengganti spasi dalam pembentuk field adalah tanda lambang "\_"

Contoh: Kode Barang menjadi KdBarang, KodeBrg, Kd\_Brg, Kd\_Barang.

Record (baris): Sekumpulan data yang saling berkaitan tentang sebuah subjek tertentu, misalnya data seorang siswa akan disimpan dalam record yang terdiri dari beberapa kolom / field.

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

Pengolahan data secara manual segala bentuk pengolahan juga dilakukan secara manual (disusun, dihitung atau dibuat laporannya secara manual). Cara ini tentu saja membutuhkan ekstra tenaga dan waktu. Dan lebih sering lagi, diperlukan pengumpulan data-data yang sejenis secara berkali-kali dan dilakukan juga pengolahan dan pembuatan laporan secara berkali-kali pula.

Sedangkan pengolahan data pada sistem database lebih praktis, dapat meminimalkan duplikasi data, integritas data tinggi, keamanan lebih terjamin, dan sharing data lebih mudah.

## 6. Mengapa dibutuhkan DBMS?

Tujuan utama DBMS adalah untuk menyediakan tinjauan abstrak dari data bagi user. Jadi sistem menyembunyikan informasi mengenai bagaimana data disimpan dan dirawat, tetapi data tetap dapat diambil dengan efisien. Pertimbangan efisien yang digunakan adalah bagaimana merancang struktur data yang kompleks, tetapi tetap dapat digunakan oleh pengguna yang masih awam, tanpa mengetahui kompleksitas struktur data. Basis data menjadi penting karena munculnya beberapa masalah bila tidak menggunakan data yang terpusat, seperti adanya duplikasi data, hubungan antar data tidak jelas, organisasi data dan update menjadi rumit.

## 7. Pada percobaan diatas ada beberapa field yang tipe data dan ukurannya berbeda. Jelaskan!

Pada tabel Mhs, ada 6 field yaitu: NIM, NAMA, TEMPAT\_LAHIR, TANGGAL\_LAHIR, ALAMAT, TELEPON. Masing-masing field diatur sesuai tipe data yang dibutuhkan, pada field NIM diatur tipe data text, berarti pada record dapat diisikan data berupa teks huruf, angka, dan simbol-simbol lain. Ukuran tipe data pada field NIM diatur sepanjang 10, artinya digit maksimum yang dapat dimasukkan ke dalam record adalah 10 digit. Jika data yang dimasukkan lebih dari 10 digit, maka digit ke-11 dan berikutnya tidak akan terbaca. Untuk pengaturan maksimum defaultnya sendiri adalah sepanjang 255 digit. Kemudian pada field NAMA, sama-sama diatur tipe data text, namun panjang ukurannya berbeda, yaitu 30, artinya kita dapat memasukkan digit maksimum ke dalam record yaitu sepanjang 30 digit, melebihi 30 data ke-31 dan seterusnya tidak akan terbaca. Pada field TANGGAL\_LAHIR diatur tipe date/time yang berarti pada record dapat diisikan data berupa angka dan simbol.

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**NIM : L200170092**

**Kelas : D**

**Modul : 2**

### **KEGIATAN PRAKTIKUM**

1. Buatlah rancangan sebuah database untuk menangani data-data kuliah. Data-data yang akan ditanganinya adalah: data pribadi mengenai mahasiswa, data pribadi mengenai dosen, data mata kuliah dan data ruang kelas. Mahasiswa boleh mengambil lebih dari satu mata kuliah, dan satu mata kuliah boleh diambil oleh dari satu mahasiswa sekaligus (joint account). Buatlah ER Diagram manual untuk kasus tersebut dari tahap 1 sampai tahap 4!

Jawab :

1. Menentukan entities :
  - a. Mahasiswa : menyimpan data pribadi mahasiswa
  - b. Dosen : menyimpan data pribadi dosen
  - c. Ruang\_Kelas : menyimpan informasi ruang kelas
  - d. Mata\_Kuliah : menyimpan informasi mata kuliah
2. Menentukan attributes masing-masing entity sesuai kebutuhan database
  - a) Mahasiswa :
    - NIM : nomor induk mahasiswa yang dimiliki setiap mahasiswa (varchar(25)) **PK**
    - Nama\_Mahasiswa : nama lengkap mahasiswa (varchar(255))
    - Alamat\_Mahasiswa : alamat lengkap mahasiswa (varchar(255))
  - b) Dosen :
    - NIP : nomor induk pegawai yang dimiliki setiap pegawai (varchar(25)) **PK**
    - Nama\_Dosen : nama lengkap dosen (varchar(255))
    - Alamat\_Dosen : alamat lengkap dosen (varchar(255))
  - c) Ruang\_Kelas :
    - Kode\_Ruang : kode ruang kuliah (varchar(25)) **PK**
    - Nama\_Ruang : nama ruang kuliah (varchar(45))
  - d) Mata\_Kuliah :
    - Kode\_MK : kode mata kuliah (varchar(25)) **PK**
    - Nama\_MK : nama mata kuliah (varchar(45))

### 3. Menentukan relationship (hubungan) antar entitas

	Mahasiswa	Dosen	Mata_Kuliah	Ruang_Kelas
Mahasiswa	-	m:n	-	m:n
Dosen		-	m:n	-
Mata_Kuliah			-	m:n
Ruang_Kelas				

#### Hubungan

- Dosen mengajar Mahasiswa :
  - Tabel Utama : Mahasiswa, dosen
  - Tabel kedua :

dosen\_has\_mahasiswa

- Relationship : m:n
- Attribute penghubung : NIM , NIP
- Mata\_Kuliah menggunakan Ruang\_Kelas :
  - Tabel Utama : Mata\_Kuliah, Ruang\_Kelas
  - Tabel kedua : MK\_has\_Ruang
  - Relationship : m:n
  - Attribute penghubung : Kode\_MK, Kode\_Ruang
- Ruang\_Kelas ditempati Mahasiswa:
  - Tabel Utama : Ruang\_Kelas, Mahasiswa
  - Tabel kedua : ruang\_has\_mahasiswa
  - Relationship : m:n
  - Attribute penghubung : NIM , Kode\_Ruang
- Dosen mengampu Mata\_Kuliah:
  - Tabel Utama : dosen, matakuliah
  - Tabel kedua : dosen\_has\_MK
  - Relationship : m:n
  - Attribute penghubung : NIP, Kode\_MK

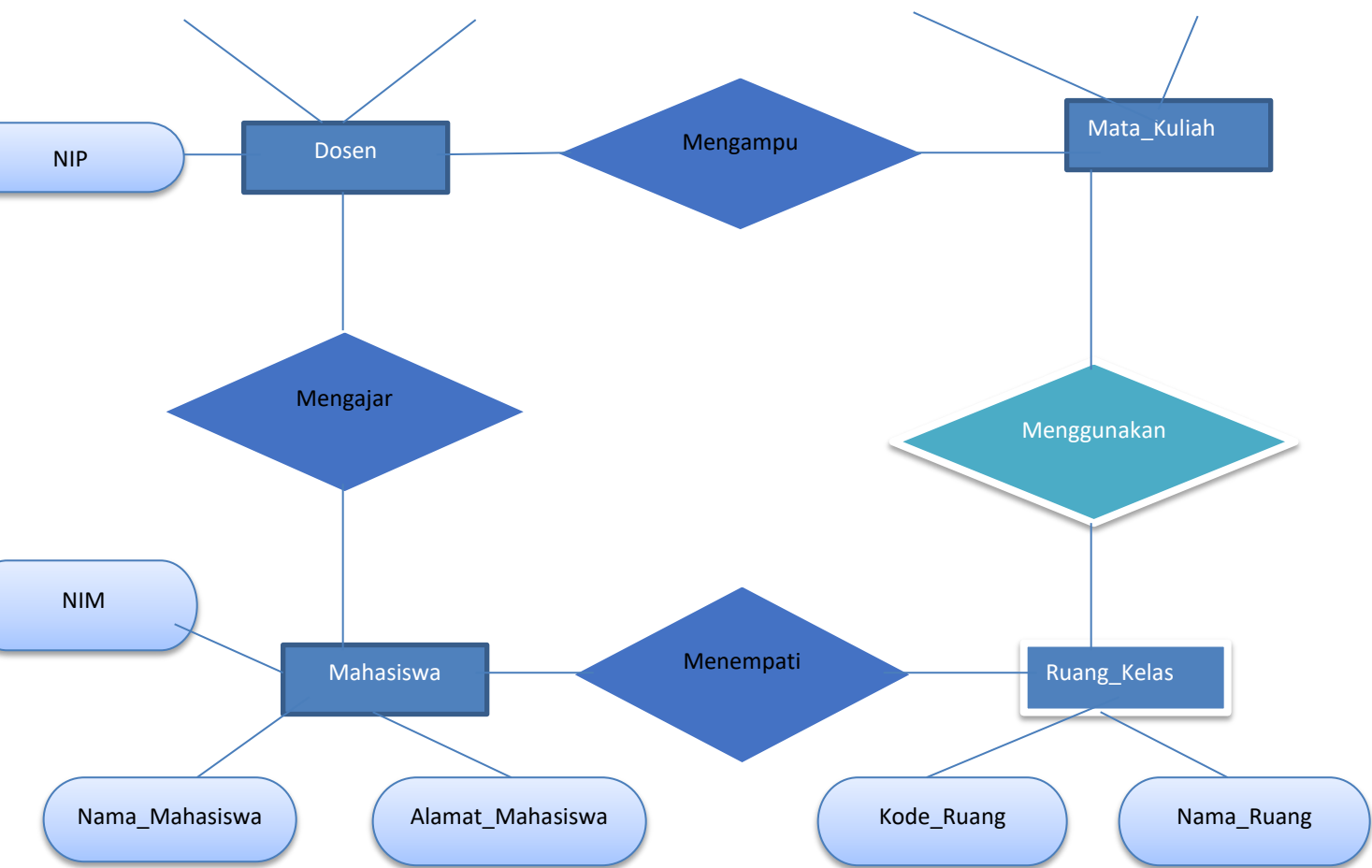
### 4. Menggambar Diagram ER

Alamat\_Dosen

Nama\_Dosen

Kode\_MK

Nama\_MK



2. Ambil contoh sembarang database (harus berbeda untuk setiap mahasiswa). Buatlah rancangan ER Diagram manual database tersebut dari tahap 1 sampai 4, dengan ketentuan database minimal mengandung 4 buah entitas.

Jawab:

1. Menentukan entities :
  - a. Bandara : menyimpan data bandara
  - b. Pilot : menyimpan data pilot
  - c. Penumpang : menyimpan informasi penumpang
  - d. Pesawat : menyimpan informasi pesawat

2. Menentukan atributes masing-masing entity sesuai kebutuhan database

a) Bandara :

- Id\_Bandara : kode bandara (varchar(25)) **PK**
- Nama\_Bandara : nama bandara (varchar(255))
- Kategori\_Bandara : kategori bandara (varchar(255))

b) Pilot :

- Id\_Pilot : kode yang dimiliki setiap pilot (varchar(25)) **PK**
- Nama\_Pilot : nama lengkap pilot (varchar(255))
- Gender\_Pilot : gender pilot yang menjalankan pesawat (varchar(10))

c) Penumpang :

- Kode\_Penumpang : kode penumpang pesawat (varchar(25)) **PK**
- Nama\_Penumpang : nama lengkap penumpang (varchar(255))
- Gender\_Penumpang : gender penumpang yang menaiki pesawat (varchar(10))
- Alamat\_Penumpang : alamat lengkap penumpang (varchar(255))

d) Pesawat :

- Kode\_Pesawat : kode setiap pesawat (varchar(25)) **PK**
- Jenis\_Pesawat : jenis pesawat (varchar(45))
- Kapasitas\_Pesawat (varchar(10))

3. Menentukan relationship (hubungan) antar entitas

	Bandara	Pilot	Penumpang	Pesawat
Bandara	-	m:n	m:n	m:n
Pilot		-	m:n	m:n
Penumpang			-	m:n
Pesawat				

**Hubungan**

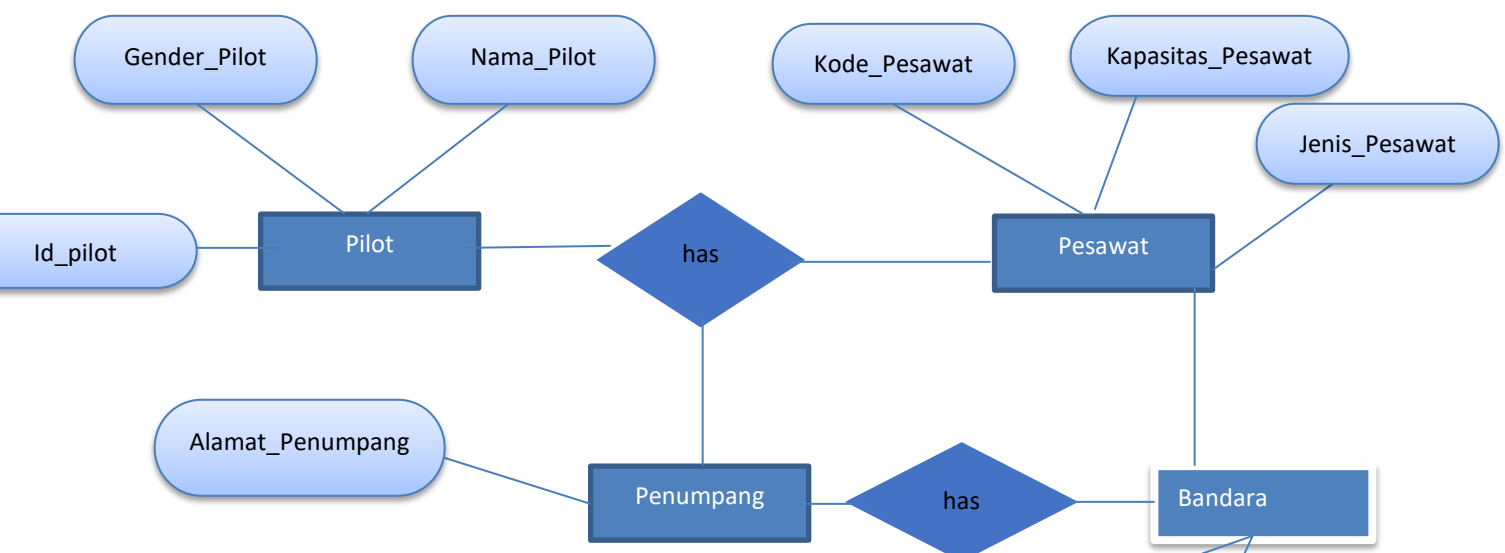
- Pesawat transit di Bandara :
  - Tabel Utama : Pesawat, Bandara

ra

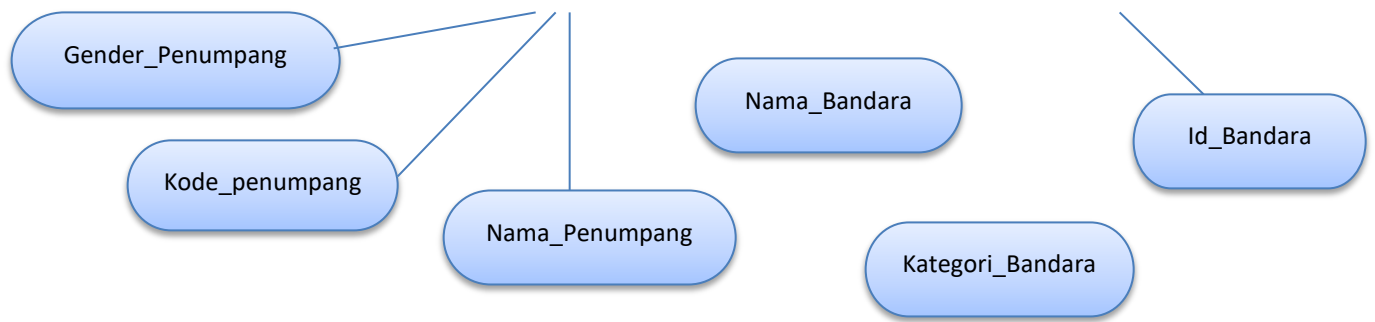
- Tabel kedua : pesawat\_has\_bandara
- Relationship : 1-n
- Attribute penghubung : id\_Bandara, Kode\_Pesawat
- Penumpang menaiki Pesawat :
  - Tabel Utama : Penumpang, Pesawat
  - Tabel kedua : Pesawat\_has\_penumpang
  - Relationship : 1-n

- Attribute penghubung : kode\_pesawat, id\_penumpang
- Pilot berada di Bandara :
  - Tabel Utama : Pilot,Bandara
  - Tabel kedua : Bandara\_has\_Pilot
  - Relationship : 1-n
  - Attribute penghubung : id\_pilot, id\_Bandara
- Pilot membawa penumpang :
  - Tabel Utama : Pilot, penumpang
  - Tabel kedua : pilot\_has\_penumpang
  - Relationship : m:n
  - Attribute penghubung : id\_pilot, id\_penumpang

#### 4. Menggambar Diagram ER







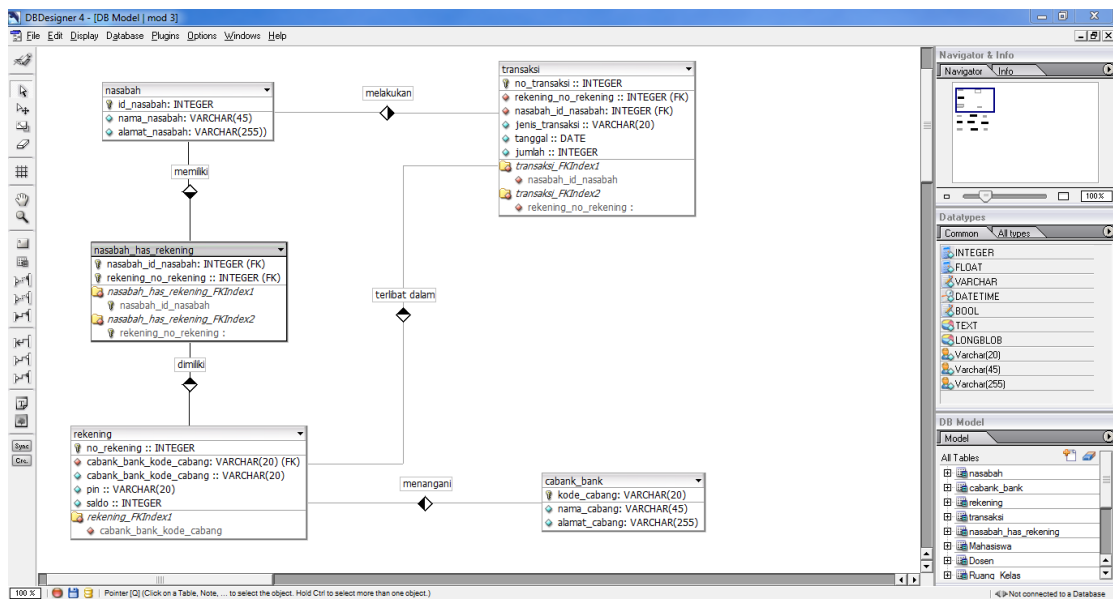
NAMA : ROSSANTI KUSUMADEWI

NIM : L200170092

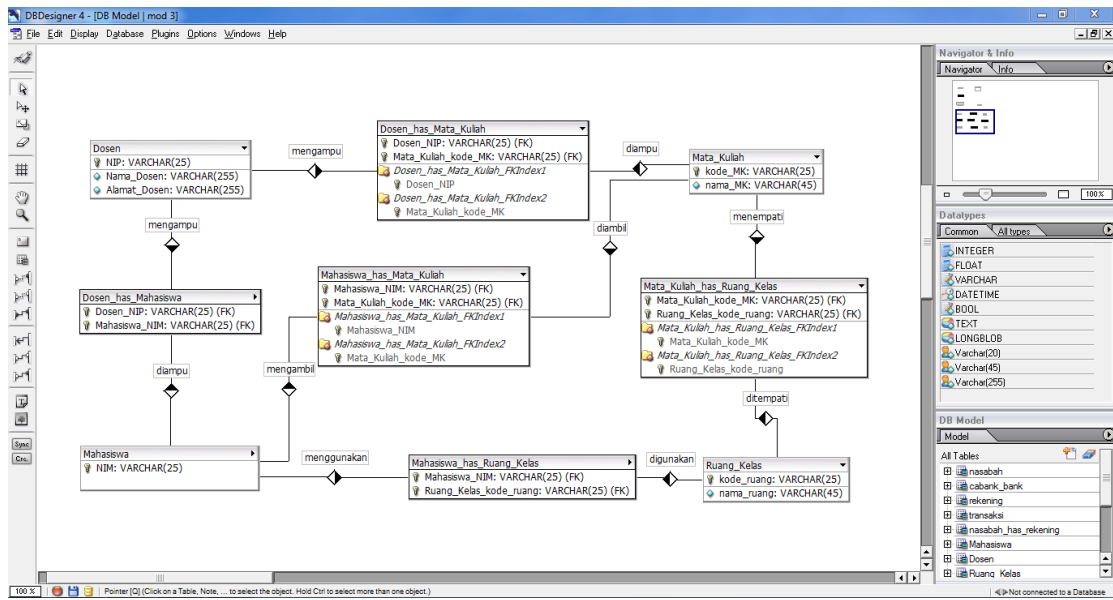
KELAS : B

Modul : 3

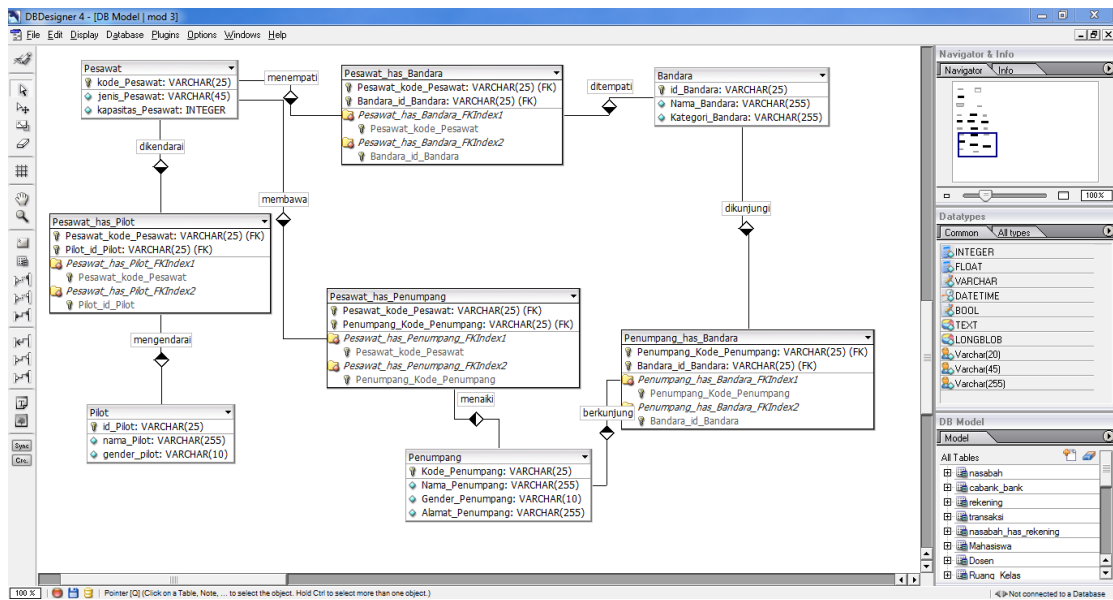
### KEGIATAN PRAKTIKUM



## TUGAS 1



## TUGAS 2



Nama : Rossanti Kusumadewi

NIM : L200170092

Kelas : D

Modul : 4

### TUGAS MODUL 4

- Membuat implementasi rancangan database yang menangani data kuliah pada modul 2 ke dalam program mysql.

```
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 2
Server version: 10.1.30-MariaDB mariadb.org binary distribution

Copyright (c) 2000, 2017, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> create database Universitas;
Query OK, 1 row affected (0.08 sec)

MariaDB [(none)]> use Universitas;
Database changed
```

```
MariaDB [Universitas]>
MariaDB [Universitas]> CREATE TABLE Dosen(
  -> nip_dosen INTEGER PRIMARY KEY NOT NULL,
  -> nama_dosen VARCHAR(200) NOT NULL,
  -> alamat_dosen VARCHAR(200) NOT NULL
  -> );
Query OK, 0 rows affected (0.28 sec)

MariaDB [Universitas]> CREATE TABLE Mahasiswa(
  -> nim_mahasiswa VARCHAR(10) PRIMARY KEY NOT NULL,
  -> nama_mahasiswa VARCHAR(200) NOT NULL,
  -> alamat_mahasiswa VARCHAR(200) 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 ')' at line 5
MariaDB [Universitas]> CREATE TABLE Mahasiswa(
  -> nim_mahasiswa VARCHAR(10) PRIMARY KEY NOT NULL,
  -> nama_mahasiswa VARCHAR(200) OT NULL,
  -> alamat_mahasiswa VARCHAR(200) 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 'NULL,
)' at line 3
MariaDB [Universitas]> CREATE TABLE Mahasiswa(
  -> nim_mahasiswa VARCHAR(10) PRIMARY KEY NOT NULL,
  -> nama_mahasiswa VARCHAR(200) NOT NULL,
  -> alamat_mahasiswa VARCHAR(200) NOT NULL
  -> );
Query OK, 0 rows affected (0.20 sec)

MariaDB [Universitas]> CREATE TABLE Ruang_Kelas
  -> (kode_ruang PRIMARY KEY NOT NULL,
  -> nama_ruang
  -> );
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 'PRIMARY KEY
NOT NULL,
nama_ruang' at line 2
MariaDB [Universitas]> CREATE TABLE Ruang(
  -> kode_ruang VARCHAR(25) PRIMARY KEY NOT NULL,
  -> nama_ruang VARCHAR(100) NOT NULL
  -> );
Query OK, 0 rows affected (0.18 sec)
```

```

MariaDB [Universitas]> CREATE TABLE Ruang_Kelas
  -> (kode_ruang PRIMARY KEY NOT NULL,
  -> nama_ruang
  -> );
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 'PRIMARY KEY
NOT NULL,
nama_ruang' at line 2
MariaDB [Universitas]> CREATE TABLE Ruang(
  -> kode_ruang VARCHAR(25) PRIMARY KEY NOT NULL,
  -> nama_ruang VARCHAR(100) NOT NULL
  -> );
Query OK, 0 rows affected (0.18 sec)

MariaDB [Universitas]> CREATE TABLE MatKul(
  -> kode_MK VARCHAR(25) PRIMARY KEY NOT NULL,
  -> nama_MK VARCHAR(100) NOT NULL
  -> );
Query OK, 0 rows affected (0.18 sec)

MariaDB [Universitas]> show table;
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 '' at line 1

MariaDB [Universitas]> show tables;
+-----+
| Tables_in_universitas |
+-----+
| dosen                  |
| mahasiswa              |
| matkul                 |
| ruang                  |
+-----+
4 rows in set (0.10 sec)

MariaDB [Universitas]>

```

- Mengimplementasikan hasil rancangan database yang menangani bandara pada tugas modul 2 ke dalam program mysql.

```

C:\xampp\mysql\bin>mysql -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 3
Server version: 10.1.30-MariaDB mariadb.org binary distribution

Copyright (c) 2000, 2017, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

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

MariaDB [(none)]> use Bandara;
Database changed
MariaDB [Bandara]> create table bandara(
  -> id_bandara VARCHAR(20) PRIMARY KEY,
  -> nama_bandara VARCHAR(100) NOT NULL,
  -> kategori_bandara VARCHAR(100) NOT NULL
  -> );
Query OK, 0 rows affected (0.54 sec)

MariaDB [Bandara]> create table pilot(
  -> id_pilot VARCHAR(25) PRIMARY KEY NOT NULL,
  -> nama_pilot VARCHAR ;
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 '' at line 3

MariaDB [Bandara]> create table pilot(
  -> id_pilot VARCHAR(25) PRIMARY KEY NOT NULL,
  -> nama_pilot VARCHAR(200) NOT NULL,
  -> gender_pilot VARCHAR(10) NOT NULL
  -> );
Query OK, 0 rows affected (0.15 sec)

MariaDB [Bandara]> create table penumpang(
  -> kode_penumpang VARCHAR(25) PRIMARY KEY NOT NULL,
  -> nama_penumpang VARCHAR(200)
  -> N;
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 '' at line 4

```

```

C:\xampp\mysql\bin>mysql -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 3
Server version: 10.1.30-MariaDB mariadb.org binary distribution

Copyright (c) 2000, 2017, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

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

MariaDB [(none)]> use Bandara;
Database changed
MariaDB [Bandara]> create table bandara(
  -> id_bandara VARCHAR(20) PRIMARY KEY,
  -> nama_bandara VARCHAR(100) NOT NULL,
  -> kategori_bandara VARCHAR(100) NOT NULL
  -> );
Query OK, 0 rows affected (0.54 sec)

MariaDB [Bandara]> create table pilot(
  -> id_pilot VARCHAR(25) PRIMARY KEY NOT NULL,
  -> nama_pilot VARCHAR(200) NOT NULL,
  -> gender_pilot VARCHAR(10) NOT NULL
  -> );
Query OK, 0 rows affected (0.15 sec)

MariaDB [Bandara]> create table penumpang(
  -> kode_penumpang VARCHAR(25) PRIMARY KEY NOT NULL,
  -> nama_penumpang VARCHAR(200)
  -> N;
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 '' at line 4

MariaDB [Bandara]> create table pesawat(
  -> kode_pesawat VARCHAR(25) PRIMARY KEY NOT NULL,
  -> id_pilotFK VARCHAR(25) REFERENCES pilot(id_pilot)
  -> ON DELETE SET NULL ON UPDATE CASCADE,
  -> jenis_pesawat VARCHAR(45) NOT NULL,
  -> kapasitas_pesawat VARCHAR(10)
  -> );
Query OK, 0 rows affected (0.83 sec)

MariaDB [Bandara]> create table penumpang(
  -> kode_penumpang VARCHAR(20) PRIMARY KEY NOT NULL,
  -> nama_penumpang VARCHAR(200).;
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 '.' at line 3

MariaDB [Bandara]> create table penumpang(
  -> id_penumpang VARCHAR(200) PRIMARY KEY NOT NULL,
  -> nama_penumpang VARCHAR(200) NOT NULL,
  -> gender_penumpang VARCHAR(10) NOT NULL,
  -> alamat_penumpang VARCHAR(200) NOT NULL
  -> );
Query OK, 0 rows affected (0.14 sec)

MariaDB [Bandara]> show tables;
+-----+
| Tables_in_bandara |
+-----+
| bandara            |
| penumpang          |
| pesawat            |
| pilot              |
+-----+
4 rows in set (0.10 sec)

MariaDB [Bandara]> exit
Bye
C:\xampp\mysql\bin>

```

Nama : Rossanti Kusumadewi  
NIM : L200170092  
Kelas : D  
Modul : 5

Langkah-langkah Praktikum :

1. Jalankan XAMPP Control Panel lalu jalankan server Apache dan MySQL



2. Buka Command Prompt dan login sebagai root ke MySQL

```
cmd Command Prompt - mysql -u root -p
Microsoft Windows [Version 10.0.17134.648]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Customer>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 2
Server version: 10.1.30-MariaDB mariadb.org binary distribution

Copyright (c) 2000, 2017, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> show databases
-> ;
```

3. Pilih data base perbankan dengan perintah “use perbankan”

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

4. Masukkan data-data kedalam database perbankan  
a. Nasabah

```
MariaDB [perbankan]> INSERT INTO nasabah(id_nasabah, nama_nasabah, alamat_nasabah)  
-> VALUES(1, 'Sutopo', 'Jl. Jendral Sudirman 12'),  
-> (2, 'Maryati', 'Jl. MT. Haryono 31'),  
-> (3, 'Suparman', 'Jl. Hasanudin 81'),  
-> (4, 'Kartika Padnasari', '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. Pangandaran 11'),  
-> (9, 'Canka Lokananta', 'Jl. Tidar 86'),  
-> (10, 'Budi Murtono', 'Jl. Merak 22');  
Query OK, 10 rows affected (0.02 sec)  
Records: 10 Duplicates: 0 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 Padnasari | 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. Pangandaran 11 |  
9 | Canka Lokananta | Jl. Tidar 86 |  
10 | Budi Murtono | Jl. Merak 22 |  
+-----+-----+-----+  
10 rows in set (0.00 sec)
```

- b. Cabang Bank

```
C:\Windows\system32\cmd.exe - mysql -u root  
  
MariaDB [perbankan]>  
MariaDB [perbankan]> INSERT INTO cabang_bank(kode_cabang, nama_cabang, alamat_cabang)  
-> VALUES('BRUS', 'Bank Rut Unit Surakarta', 'Jl. Slamet Riyadi 18'),  
-> ('BRUM', 'Bank Rut Unit Magelang', 'Jl. P. Tendean 63'),  
-> ('BRUB', 'Bank Rut Unit Boyolali', 'Jl. Ahmad Yani 45'),  
-> ('BRUY', 'Bank Rut Unit Yogyakarta', 'Jl. Anggrek 21'),  
-> ('BRUW', 'Bank Rut Unit Wonogiri', 'Jl. Untung Suropati 12');  
Query OK, 5 rows affected (0.02 sec)  
Records: 5 Duplicates: 0 Warnings: 0  
  
MariaDB [perbankan]> select * from cabang_bank;  
+-----+-----+-----+  
kode_cabang | nama_cabang | alamat_cabang |  
+-----+-----+-----+  
BRUB | Bank Rut Unit Boyolali | Jl. Ahmad Yani 45 |  
BRUM | Bank Rut Unit Magelang | Jl. P. Tendean 63 |  
BRUS | Bank Rut Unit Surakarta | Jl. Slamet Riyadi 18 |  
BRUW | Bank Rut Unit Wonogiri | Jl. Untung Suropati 12 |  
BRUY | Bank Rut Unit Yogyakarta | Jl. Anggrek 21 |  
+-----+-----+-----+  
5 rows in set (0.00 sec)  
  
MariaDB [perbankan]>
```

- c. Rekening

```

C:\Windows\system32\cmd.exe - mysql -u root
MariaDB [perbankan]> INSERT INTO rekening(no_rekening, kode_cabangFK, pin, saldo)
-> VALUES(101, 'BRUS', 1111, 500000),
-> (102, 'BRUS', 2222, 350000),
-> (103, 'BRUS', 3333, 750000),
-> (104, 'BRUM', 4444, 900000),
-> (105, 'BRUM', 5555, 2000000),
-> (106, 'BRUS', 6666, 3000000),
-> (107, 'BRUS', 7777, 1000000),
-> (108, 'BRUB', 0000, 5000000),
-> (109, 'BRUB', 9999, 0),
-> (110, 'BRUY', 1234, 550000),
-> (111, 'BRUK', 4321, 150000),
-> (112, 'BRUK', 0123, 300000),
-> (113, 'BRUY', 8888, 255000);
Query OK, 13 rows affected (0.02 sec)
Records: 13 Duplicates: 0 Warnings: 0

MariaDB [perbankan]> select * from rekening;
+----+-----+-----+-----+
| no_rekening | kode_cabangFK | pin   | saldo |
+----+-----+-----+-----+
| 101         | BRUS          | 1111  | 500000 |
| 102         | BRUS          | 2222  | 350000 |
| 103         | BRUS          | 3333  | 750000 |
| 104         | BRUM          | 4444  | 900000 |
| 105         | BRUM          | 5555  | 2000000 |
| 106         | BRUS          | 6666  | 3000000 |
| 107         | BRUS          | 7777  | 1000000 |
| 108         | BRUB          | 0000  | 5000000 |
| 109         | BRUB          | 9999  | 0       |
| 110         | BRUY          | 1234  | 550000 |
| 111         | BRUK          | 4321  | 150000 |
| 112         | BRUK          | 0123  | 300000 |
| 113         | BRUY          | 8888  | 255000 |
+----+-----+-----+-----+
13 rows in set (0.00 sec)

MariaDB [perbankan]> _

```

d. Nasabah\_has\_rekening

```

C:\Windows\system32\cmd.exe - mysql -u root
MariaDB [perbankan]>
MariaDB [perbankan]> INSERT INTO nasabah_has_rekening(id_nasabahFK, no_rekeningFK)
-> VALUES(1, 104),
-> (2, 103),
-> (3, 105),
-> (3, 106),
-> (4, 101),
-> (4, 107),
-> (5, 102),
-> (5, 109),
-> (6, 109),
-> (7, 109),
-> (8, 111),
-> (9, 110),
-> (10, 113),
-> (8, 112),
-> (10, 108);
Query OK, 15 rows affected (0.05 sec)
Records: 15 Duplicates: 0 Warnings: 0

MariaDB [perbankan]> select * from nasabah_has_rekening;
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 'fro
n nasabah_has_rekening' at line 1
MariaDB [perbankan]> select * from nasabah_has_rekening;
+----+-----+
| id_nasabahFK | no_rekeningFK |
+----+-----+
| 1             | 104           |
| 2             | 103           |
| 3             | 105           |
| 3             | 106           |
| 4             | 101           |
| 4             | 107           |
| 5             | 102           |
| 5             | 109           |
| 6             | 109           |
| 7             | 109           |
| 8             | 111           |
| 9             | 110           |
| 10            | 113           |
| 8             | 112           |
| 10            | 108           |
+----+-----+
15 rows in set (0.00 sec)

MariaDB [perbankan]>

```

e. Transaksi



C:\WINDOWS\system32\cmd.exe - mysql -u root

```
MariaDB [perbankan]> insert into transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, jumlah)
-> values (1, 105, 3, 'debit', 50000),
-> (2, 103, 2, 'debit', 40000),
-> (3, 101, 4, 'kredit', 20000),
-> (4, 106, 3, 'debit', 30000),
-> (5, 107, 5, 'kredit', 50000),
-> (6, 104, 1, 'kredit', 20000),
-> (7, 110, 9, 'kredit', 150000),
-> (8, 102, 5, 'debit', 20000),
-> (9, 105, 3, 'kredit', 50000),
-> (10, 107, 4, 'debit', 100000),
-> (11, 103, 2, 'debit', 100000),
-> (12, 104, 1, 'debit', 50000),
-> (13, 107, 4, 'kredit', 200000),
-> (14, 105, 3, 'debit', 40000),
-> (16, 101, 4, 'kredit', 20000),
-> (17, 103, 2, 'debit', 50000),
-> (18, 102, 5, 'debit', 50000),
-> (19, 108, 10, 'debit', 100000),
-> (20, 106, 3, 'redit', 50000),
-> (21, 103, 2, 'kredit', 200000),
-> (22, 105, 3, 'kredit', 100000),
-> (23, 102, 5, 'debit', 20000),
-> (24, 104, 1, 'debit', 50000),
-> (25, 103, 2, 'debit', 40000),
-> (26, 101, 4, 'debit', 50000),
-> (27, 103, 2, 'kredit', 100000),
-> (28, 102, 5, 'kredit', 200000),
-> (29, 109, 7, 'debit', 100000),
-> (30, 110, 9, 'debit', 20000);
Query OK, 29 rows affected (0.15 sec)
Records: 29 Duplicates: 0 Warnings: 0
```

C:\WINDOWS\system32\cmd.exe - mysql -u root

```
-> (27, 103, 2, 'kredit', 100000),
-> (28, 102, 5, 'kredit', 200000),
-> (29, 109, 7, 'debit', 100000),
-> (30, 110, 9, 'debit', 20000);
Query OK, 29 rows affected (0.15 sec)
Records: 29 Duplicates: 0 Warnings: 0
```

MariaDB [perbankan]> select \* from transaksi;

no_transaksi	id_nasabahFK	no_rekeningFK	jenis_transaksi	tanggal	jumlah
1	3	105	debit	2019-03-31 13:54:23	50000
2	2	103	debit	2019-03-31 13:54:23	40000
3	4	101	kredit	2019-03-31 13:54:23	20000
4	3	106	debit	2019-03-31 13:54:23	30000
5	5	107	kredit	2019-03-31 13:54:23	50000
6	1	104	kredit	2019-03-31 13:54:23	20000
7	9	110	kredit	2019-03-31 13:54:23	150000
8	5	102	debit	2019-03-31 13:54:23	20000
9	3	105	kredit	2019-03-31 13:54:23	50000
10	4	107	debit	2019-03-31 13:54:23	100000
11	2	103	debit	2019-03-31 13:54:23	100000
12	1	104	debit	2019-03-31 13:54:23	50000
13	4	107	kredit	2019-03-31 13:54:23	200000
14	3	105	debit	2019-03-31 13:54:23	40000
16	4	101	kredit	2019-03-31 13:54:23	20000
17	2	103	debit	2019-03-31 13:54:23	50000
18	5	102	debit	2019-03-31 13:54:23	50000
19	10	108	debit	2019-03-31 13:54:23	100000
20	3	106	redit	2019-03-31 13:54:23	50000
21	2	103	kredit	2019-03-31 13:54:23	200000
22	3	105	kredit	2019-03-31 13:54:23	100000
23	5	102	debit	2019-03-31 13:54:23	20000
24	1	104	debit	2019-03-31 13:54:23	50000
25	2	103	debit	2019-03-31 13:54:23	40000
26	4	101	debit	2019-03-31 13:54:23	50000
27	2	103	kredit	2019-03-31 13:54:23	100000
28	5	102	kredit	2019-03-31 13:54:23	200000
29	7	109	debit	2019-03-31 13:54:23	100000
30	9	110	debit	2019-03-31 13:54:23	20000

29 rows in set (0.00 sec)

MariaDB [perbankan]>

5. Lakukan update untuk kasus-kasus berikut:

a. Nasabah dengan nama “Indri Hapsari” pindah ke alamat “Jalan Slamet Riyadi No. 24”

- Sebelum di UPDATE

```
C:\Windows\system32\cmd.exe - mysql -u root
02/21/2019 12:22 PM <DIR> Users
02/29/2019 10:17 AM <DIR> Windows
02/22/2019 02:48 PM <DIR>xampp
2 File(s) 16,336,736 bytes
8 Dir(s) 192,821,354,496 bytes free

c:\>cd xampp
c:\xampp>cd mysql\bin
c:\xampp\mysql\bin>mysql -u root
Welcome to the MariaDB monitor. Commands end with ; or \g.
Your MariaDB connection id is 16
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)]>
MariaDB [(none)]> create database perbankan;
Query OK, 1 row affected (0.00 sec)

MariaDB [(none)]> use perbankan;
Database changed
MariaDB [perbankan]> INSERT INTO nasabah(id_nasabah, nama_nasabah, alamat_nasabah)
VALUES(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. Pangandaran 11'),
(9, 'Canka Lokananta', 'Jl. Tidar 86'),
(10, 'Budi Murtono', 'Jl. Merak 22');
Query OK, 10 rows affected (0.02 sec)
Records: 10 Duplicates: 0 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. Pangandaran 11 |
| 9 | Canka Lokananta | Jl. Tidar 86 |
| 10 | Budi Murtono | Jl. Merak 22 |
+----+-----+-----+
10 rows in set (0.00 sec)
```

- Setelah di UPDATE

```
C:\WINDOWS\system32\cmd.exe - mysql -u root
MariaDB [perbankan]> update nasabah set alamat_nasabah = 'Jalan Slamet Riyadi No. 34' WHERE nama_nasabah = 'Indri Hapsari';
Query OK, 1 row affected (0.00 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 | Jalan Slamet Riyadi No. 34 |
| 8 | Sari Murti | Jl. Pangandaran 11 |
| 9 | Canka Lokananta | Jl. Tidar 86 |
| 10 | Budi Murtono | Jl. Merak 22 |
+----+-----+-----+
10 rows in set (0.00 sec)

MariaDB [perbankan]>
```

b. Cabang dengan kode "BRUW" pindah ke alamat "Jalan A. Yani No. 23"

- Sebelum kode "BRUW" pindah ke alamat "Jalan A. Yani No. 23 atau sebelum di UPDATE

```
C:\Windows\system32\cmd.exe - mysql -u root

MariaDB [perbankan]> INSERT INTO cabang_bank(kode_cabang, nama_cabang, alamat_cabang)
VALUES('BRUS', 'Bank Rut Unit Surakarta', 'Jl. Slamet Riyadi 18'),
('BRUM', 'Bank Rut Unit Magelang', 'Jl. P. Tondan 63'),
('BRUB', 'Bank Rut Unit Boyolali', 'Jl. Ahmad Yani 45'),
('BRUY', 'Bank Rut Unit Yogyakarta', 'Jl. Anggrek 21'),
('BRUW', 'Bank Rut Unit Wonogiri', 'Jl. Untung Surapati 12');
Query OK, 5 rows affected (0.02 sec)
Records: 5 Duplicates: 0 Warnings: 0

MariaDB [perbankan]> select * from cabang_bank;
+----+-----+-----+
| kode_cabang | nama_cabang | alamat_cabang |
+----+-----+-----+
| BRUB       | Bank Rut Unit Boyolali | Jl. Ahmad Yani 45 |
| BRUM       | Bank Rut Unit Magelang | Jl. P. Tondan 63 |
| BRUS       | Bank Rut Unit Surakarta | Jl. Slamet Riyadi 18 |
| BRUW       | Bank Rut Unit Wonogiri | Jl. Untung Surapati 12 |
| BRUY       | Bank Rut Unit Yogyakarta | Jl. Anggrek 21 |
+----+-----+-----+
5 rows in set (0.00 sec)

MariaDB [perbankan]>
```

- Setelah di UPDATE

```
C:\WINDOWS\system32\cmd.exe - mysql -u root

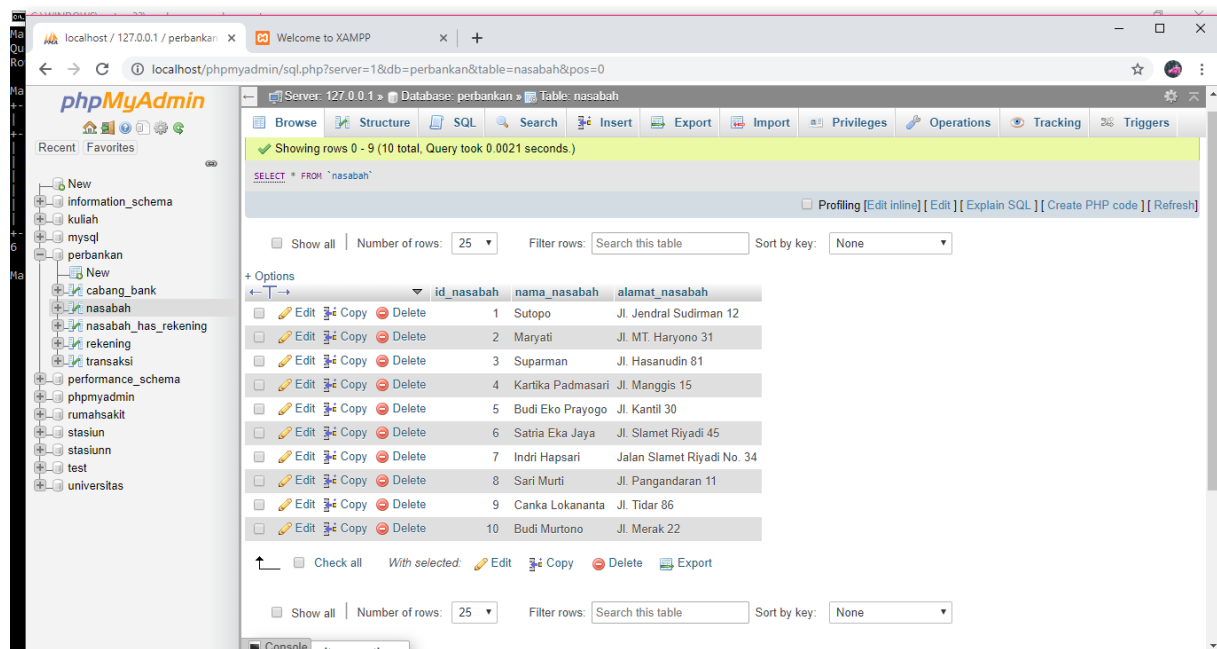
MariaDB [perbankan]> UPDATE cabang_bank SET alamat_cabang = 'Jalan A. Yani No. 23' WHERE kode_cabang = 'BRUW';
Query OK, 1 row affected (0.05 sec)
Rows matched: 1 Changed: 1 Warnings: 0

MariaDB [perbankan]> select * from cabang_bank;
+----+-----+-----+
| kode_cabang | nama_cabang | alamat_cabang |
+----+-----+-----+
| BRUB       | Bank Rut Unit Boyolali | Jl. Ahmad Yani 45 |
| BRUK       | Bank Rut Unit Klaten | Jl. Suparman 23 |
| BRUM       | Bank Rut Unit Magelang | Jl. P. Tondan 63 |
| BRUS       | Bank Rut Unit Surakarta | Jl. Slamet Riyadi 18 |
| BRUW       | Bank Rut Unit Wonogiri | Jalan A. Yani No. 23 |
| BRUY       | Bank Rut Unit Yogyakarta | Jl. Anggrek 21 |
+----+-----+-----+
6 rows in set (0.00 sec)

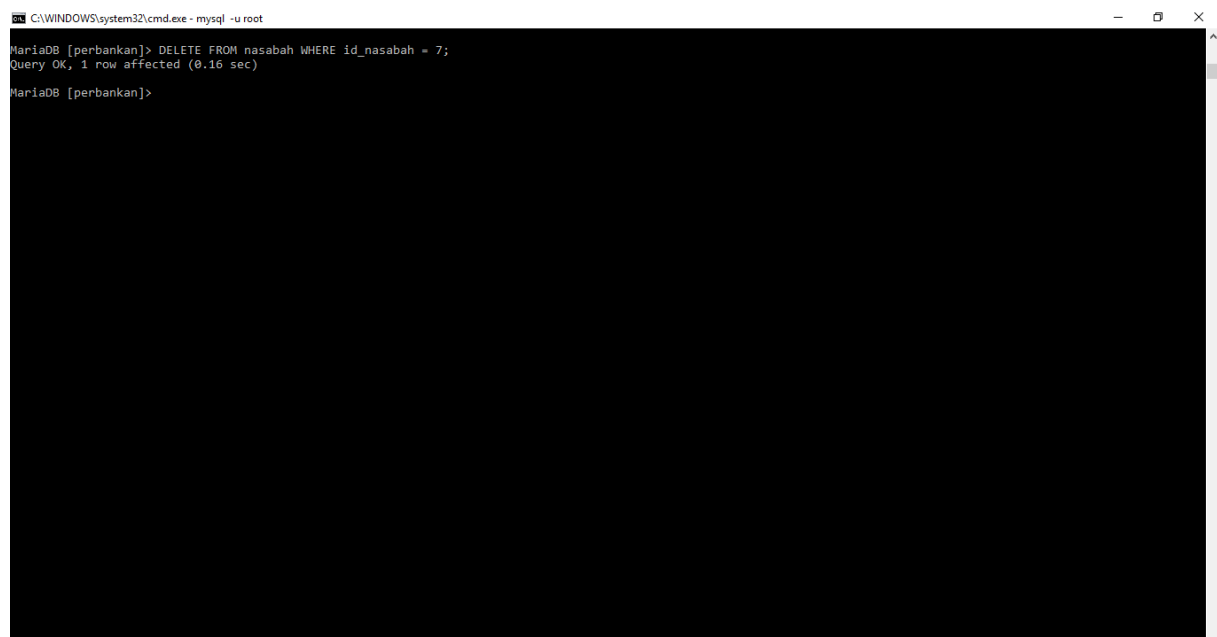
MariaDB [perbankan]>
```

a. Nasabah dengan id "7" menutup rekeningnya

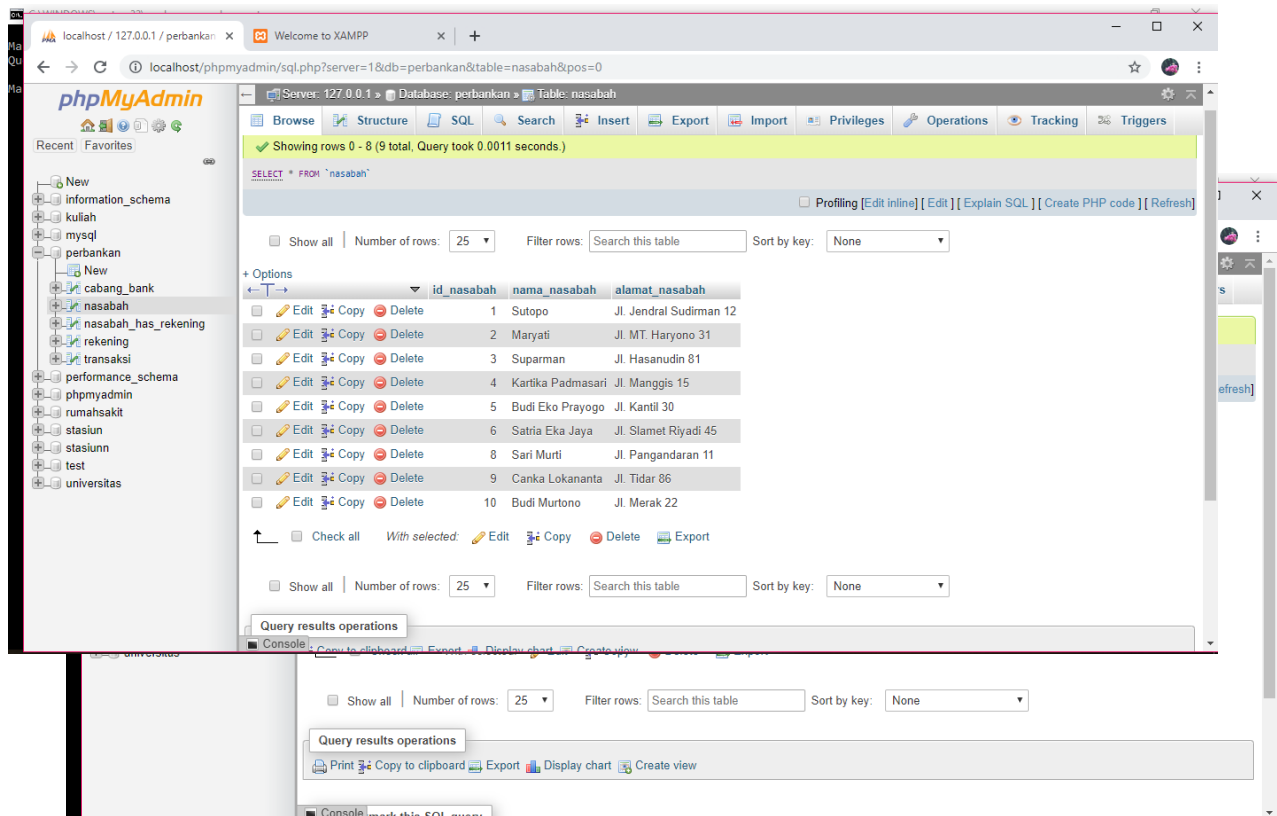
- Sebelum melakukan penghapusan



- Proses Penghapusan



- Setelah Melakukan Penghapusan



- Proses Penghapusan

```
MariaDB [perbankan]> DELETE from cabang_bank
    -> WHERE nama_cabang = 'Bank Rut Unit Magelang';
Query OK, 1 row affected (0.07 sec)
```

## TUGAS

Masukkan beberapa record ke setiap tabel dalam database yang telah dibuat (Masing-masing 10 record untuk tabel master dan 20 record untuk tabel transaksi)

>> Nasabah

```
C:\WINDOWS\system32\cmd.exe - mysql -u root
MariaDB [perbankan]> insert into nasabah(id_nasabah, nama_nasabah, alamat_nasabah)
-> value (11, 'Risa Ayu Agustina', 'Jl. Gatak 12'),
-> (12, 'Yasin Dwi', 'Jl. Teratai 23'),
-> (13, 'Tits Ulfa', 'Jl. Mawar 34'),
-> (14, 'Nurul Arifia', 'Jl. Diponegoro 20'),
-> (15, 'Rossanti', 'Jl. Menco 56'),
-> (16, 'Chelsea Angieta', 'Jl. Gonilan 10'),
-> (17, 'Tika Pratiwi', 'Jl. Suprpto 15'),
-> (18, 'Annisa Fisabila', 'Jl. Gatotkaca 7'),
-> (19, 'Salsabila', 'Jl. Gajah Mada 13'),
-> (20, 'Putri Monita', 'Jl. Tandean 1');
Query OK, 10 rows affected (0.13 sec)
Records: 10 Duplicates: 0 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. Kanthi 30 |
| 6 | Satria Eko Jaya | Jl. Slamet Riyadi 45 |
| 8 | Sari Murti | Jl. Pangandaran 11 |
| 9 | Canka Lokananta | Jl. Tidar 86 |
| 10 | Budi Murtono | Jl. Merak 22 |
| 11 | Risa Ayu Agustina | Jl. Gatak 12 |
| 12 | Yasin Dwi | Jl. Teratai 23 |
| 13 | Tits Ulfa | Jl. Mawar 34 |
| 14 | Nurul Arifia | Jl. Diponegoro 20 |
| 15 | Rossanti | Jl. Menco 56 |
| 16 | Chelsea Angieta | Jl. Gonilan 10 |
| 17 | Tika Pratiwi | Jl. Suprpto 15 |
| 18 | Annisa Fisabila | Jl. Gatotkaca 7 |
```

>> Cabang\_bank

```
C:\WINDOWS\system32\cmd.exe - mysql -u root
MariaDB [perbankan]> insert into cabang_bank(kode_cabang, nama_cabang, alamat_cabang)
-> value ('BRUP', 'Bank Rut Unit Purwodadi', 'Jl. Danyang 20'),
-> ('BRUD', 'Bank Rut Unit Demak', 'Jl. Senopati 2'),
-> ('BRUR', 'Bank Rut Unit Rembang', 'Jl. Rembang 8'),
-> ('BRUA', 'Bank Rut Unit Aceh', 'Jl. Tulip 19'),
-> ('BRUN', 'Bank Rut Unit Ngawi', 'Jl. Malioboro 27'),
-> ('BRUT', 'Bank Rut Unit Tawangmangu', 'Jl. Tawangmangu 34'),
-> ('BRUJ', 'Bank Rut Unit Jepara', 'Jl. Jepara 5'),
-> ('BRUL', 'Bank Rut Unit Lamongan', 'Jl. Lamongan 3'),
-> ('BRUC', 'Bank Rut Unit Cilacap', 'Jl. Maos 16'),
-> ('BRUI', 'Bank Rut Unit Indramayu', 'Jl. S. Parman 20');
Query OK, 10 rows affected (0.06 sec)
Records: 10 Duplicates: 0 Warnings: 0

MariaDB [perbankan]> select * from cabang_bank;
+-----+-----+-----+
| kode_cabang | nama_cabang | alamat_cabang |
+-----+-----+-----+
| BRUA | Bank Rut Unit Aceh | Jl. Tulip 19 |
| BRUB | Bank Rut Unit Boyolali | Jl. Ahmad Yani 45 |
| BRUC | Bank Rut Unit Cilacap | Jl. Maos 16 |
| BRUD | Bank Rut Unit Demak | Jl. Senopati 2 |
| BRUI | Bank Rut Unit Indramayu | Jl. S. Parman 20 |
| BRUJ | Bank Rut Unit Jepara | Jl. Jepara 5 |
| BRUK | Bank Rut Unit Klaten | Jl. Suparman 23 |
| BRUL | Bank Rut Unit Lamongan | Jl. Lamongan 3 |
| BRUN | Bank Rut Unit Ngawi | Jl. Malioboro 27 |
| BRUP | Bank Rut Unit Purwodadi | Jl. Danyang 20 |
| BRUR | Bank Rut Unit Rembang | Jl. Rembang 8 |
| BRUS | Bank Rut Unit Surakarta | Jl. Slamet Riyadi 18 |
| BRUT | Bank Rut Unit Tawangmangu | Jl. Tawangmangu 34 |
| BRUW | Bank Rut Unit Wonogiri | Jalan A. Yani No. 23 |
```

```
C:\WINDOWS\system32\cmd.exe - mysql -u root

MariaDB [perbankan]> insert into rekening(no_rekening, kode_cabangFK, pin, saldo)
-> values(114, 'BRUP', 1404, 5000000),
-> (115, 'BRUD', 2345, 300000),
-> (116, 'BRUR', 7890, 280000),
-> (117, 'BRUA', 6543, 3500000),
-> (118, 'BRUN', 3254, 200000),
-> (119, 'BRUT', 4321, 300000),
-> (120, 'BRUJ', 7788, 900000),
-> (121, 'BRUL', 3322, 600000),
-> (122, 'BRUC', 1278, 700000),
-> (123, 'BRUI', 5498, 250000);
Query OK, 10 rows affected (0.08 sec)
Records: 10 Duplicates: 0 Warnings: 0
```

>> Rekening

```
C:\WINDOWS\system32\cmd.exe - mysql -u root

MariaDB [perbankan]> insert into rekening(no_rekening, kode_cabangFK, pin, saldo)
-> values(114, 'BRUP', 1404, 5000000),
-> (115, 'BRUD', 2345, 300000),
-> (116, 'BRUR', 7890, 280000),
-> (117, 'BRUA', 6543, 3500000),
-> (118, 'BRUN', 3254, 200000),
-> (119, 'BRUT', 4321, 300000),
-> (120, 'BRUJ', 7788, 900000),
-> (121, 'BRUL', 3322, 600000),
-> (122, 'BRUC', 1278, 700000),
-> (123, 'BRUI', 5498, 250000);
Query OK, 10 rows affected (0.08 sec)
Records: 10 Duplicates: 0 Warnings: 0

MariaDB [perbankan]> select * from rekening;
+-----+-----+-----+-----+
| no_rekening | kode_cabangFK | pin | saldo |
+-----+-----+-----+-----+
| 101 | BRUS | 1111 | 500000 |
| 102 | BRUS | 2222 | 350000 |
| 103 | BRUS | 3333 | 750000 |
| 104 | BRUM | 4444 | 900000 |
| 105 | BRUM | 5555 | 2000000 |
| 106 | BRUS | 6666 | 3000000 |
| 107 | BRUS | 7777 | 1000000 |
| 108 | BRUB | 0 | 5000000 |
| 109 | BRUB | 9999 | 0 |
| 110 | BRUY | 1234 | 550000 |
| 111 | BRUK | 4321 | 150000 |
| 112 | BRUK | 123 | 300000 |
| 113 | BRUY | 8888 | 255000 |
| 114 | BRUP | 1404 | 5000000 |
| 115 | BRUD | 2345 | 300000 |
| 116 | BRUR | 7890 | 280000 |
| 117 | BRUA | 6543 | 3500000 |
| 118 | BRUN | 3254 | 200000 |
| 119 | BRUT | 4321 | 300000 |
| 120 | BRUJ | 7788 | 900000 |
| 121 | BRUL | 3322 | 600000 |
| 122 | BRUC | 1278 | 700000 |
| 123 | BRUI | 5498 | 250000 |
+-----+-----+-----+-----+
23 rows in set (0.00 sec)
```

>> Nasabah\_has\_rekening

```

C:\WINDOWS\system32\cmd.exe - mysql -u root
MariaDB [perbankan]> 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);
Query OK, 10 rows affected (0.09 sec)
Records: 10 Duplicates: 0 Warnings: 0

MariaDB [perbankan]> 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 |
+-----+-----+

```

>> Transaksi

```

MariaDB [perbankan]> insert into transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, jumlah)
-> values(31, 114, 3, 'debit', 60000),
-> (32, 115, 2, 'debit', 80000),
-> (33, 116, 4, 'kredit', 70000),
-> (34, 117, 3, 'debit', 90000),
-> (35, 118, 5, 'kredit', 40000),
-> (36, 119, 1, 'kredit', 200000),
-> (37, 120, 9, 'kredit', 150000),
-> (38, 121, 5, 'debit', 20000),
-> (39, 122, 3, 'kredit', 40000),
-> (40, 123, 4, 'debit', 800000),
-> (41, 115, 2, 'debit', 900000),
-> (42, 114, 1, 'debit', 550000),
-> (43, 117, 4, 'kredit', 7500000),
-> (44, 119, 3, 'debit', 950000),
-> (45, 118, 4, 'kredit', 420000),
-> (46, 116, 2, 'debit', 100000),
-> (47, 120, 5, 'debit', 300000),
-> (48, 108, 10, 'debit', 100000),
-> (49, 106, 3, 'redit', 50000),
-> (50, 106, 3, 'redit', 50000);
Query OK, 20 rows affected (0.08 sec)
Records: 20 Duplicates: 0 Warnings: 0

```



C:\WINDOWS\system32\cmd.exe - mysql -u root

at line 1  
MariaDB [perbankan]> select \* from transaksi;

no_transaksi	id_nasabahFK	no_rekeningFK	jenis_transaksi	tanggal	jumlah
1	3	105	debit	2019-03-31 13:54:23	50000
2	2	103	debit	2019-03-31 13:54:23	40000
3	4	101	kredit	2019-03-31 13:54:23	20000
4	3	106	debit	2019-03-31 13:54:23	30000
5	5	107	kredit	2019-03-31 13:54:23	50000
6	1	104	kredit	2019-03-31 13:54:23	200000
7	9	110	kredit	2019-03-31 13:54:23	150000
8	5	102	debit	2019-03-31 13:54:23	20000
9	3	105	kredit	2019-03-31 13:54:23	50000
10	4	107	debit	2019-03-31 13:54:23	100000
11	2	103	debit	2019-03-31 13:54:23	100000
12	1	104	debit	2019-03-31 13:54:23	50000
13	4	107	kredit	2019-03-31 13:54:23	200000
14	3	105	debit	2019-03-31 13:54:23	40000
16	4	101	kredit	2019-03-31 13:54:23	20000
17	2	103	debit	2019-03-31 13:54:23	50000
18	5	102	debit	2019-03-31 13:54:23	50000
19	10	108	debit	2019-03-31 13:54:23	100000
20	3	106	redit	2019-03-31 13:54:23	50000
21	2	103	kredit	2019-03-31 13:54:23	200000
22	3	105	kredit	2019-03-31 13:54:23	100000
23	5	102	debit	2019-03-31 13:54:23	20000
24	1	104	debit	2019-03-31 13:54:23	50000
25	2	103	debit	2019-03-31 13:54:23	40000
26	4	101	debit	2019-03-31 13:54:23	50000
27	2	103	kredit	2019-03-31 13:54:23	100000
28	5	102	kredit	2019-03-31 13:54:23	200000
29	7	109	debit	2019-03-31 13:54:23	100000
30	9	110	debit	2019-03-31 13:54:23	20000
31	3	114	debit	2019-03-31 15:13:13	60000
32	2	115	debit	2019-03-31 15:13:13	80000
33	4	116	kredit	2019-03-31 15:13:13	70000
34	3	117	debit	2019-03-31 15:13:13	90000
35	5	118	kredit	2019-03-31 15:13:13	40000
36	1	119	kredit	2019-03-31 15:13:13	200000
37	9	120	kredit	2019-03-31 15:13:13	150000
38	5	121	debit	2019-03-31 15:13:13	20000
39	3	122	kredit	2019-03-31 15:13:13	40000
40	4	123	debit	2019-03-31 15:13:13	800000

C:\WINDOWS\system32\cmd.exe - mysql -u root

40	4	123	debit	2019-03-31 15:13:13	800000
41	2	115	debit	2019-03-31 15:13:13	900000
42	1	114	debit	2019-03-31 15:13:13	550000
43	4	117	kredit	2019-03-31 15:13:13	750000
44	3	119	debit	2019-03-31 15:13:13	950000
45	4	118	kredit	2019-03-31 15:13:13	420000
46	2	116	debit	2019-03-31 15:13:13	100000
47	5	120	debit	2019-03-31 15:13:13	300000
48	10	108	debit	2019-03-31 15:13:13	100000
49	3	106	redit	2019-03-31 15:13:13	50000
50	3	106	redit	2019-03-31 15:13:13	50000

49 rows in set (0.00 sec)

MariaDB [perbankan]>

Nama : Rossanti Kusumadewi

NIM : L200170092

Kelas : D

Modul : 6

1.

```
C:\> Command Prompt - mysql -u root -p
15 rows in set (0.00 sec)

MariaDB [perbankann]> select * from nasabah ORDER BY nama_nasabah;
+-----+-----+-----+
| id_nasabah | nama_nasabah | alamat_nasabah |
+-----+-----+-----+
| 13 | Anggit | Solo |
| 5 | Budi Eko Prayogo | Jl. Kantil 30 |
| 10 | Budi Murtono | Jl. Merak 22 |
| 9 | Canka Lokananta | Jl. Tidar 86 |
| 7 | Indri Hapsari | Jl. Sutoyo 5 |
| 11 | Joko Ndo Kondo | Jl. Bareng jadian kagak |
| 12 | Jon Koplo | Jl. Angin Besar 12 |
| 4 | Kartika Padmasari | Jl. Manggis 15 |
| 2 | Maryati | Jl. MT. Haryono 31 |
| 2000 | Maryati | Jl. MT Haryono 31 |
| 8 | Sari Murti | Jl. Pangandaran 11 |
| 6 | Satria Eka Jaya | Jl. Slamet Riyadi 45 |
| 3 | Suparman | Jl. Hasanudin 81 |
| 1000 | Sutopo | Jl. Jendral Sudirman |
| 1 | Sutopo | Jl. Jendral Sudirman 12 |
+-----+-----+-----+
15 rows in set (0.00 sec)

MariaDB [perbankann]>
```

2.

```
C:\> Command Prompt - mysql -u root -p
MariaDB [perbankann]> select janis_transaksi, jumlah FROM transaksi WHERE jenis_transaksi='kredit';
ERROR 1054 (42S22): Unknown column 'janis_transaksi' in 'field list'
MariaDB [perbankann]> select jenis_transaksi, jumlah FROM transaksi where jenis_transaksi='kredit';
+-----+-----+
| jenis_transaksi | jumlah |
+-----+-----+
| kredit | 20000 |
| kredit | 30000 |
| kredit | 200000 |
| kredit | 150000 |
| kredit | 50000 |
| kredit | 200000 |
| kredit | 100000 |
| kredit | 20000 |
| kredit | 50000 |
| kredit | 200000 |
| kredit | 100000 |
| kredit | 100000 |
| kredit | 200000 |
| kredit | 50000 |
| kredit | 250000 |
| kredit | 130000 |
| kredit | 357000 |
| kredit | 50000 |
| kredit | 50000 |
| kredit | 520000 |
| kredit | 50000 |
| kredit | 50000 |
| kredit | 50000 |
+-----+-----+
23 rows in set (0.00 sec)

MariaDB [perbankann]>
```

3. Command Prompt - mysql -u root -p

```
1 row in set (0.04 sec)

MariaDB [perbankann] > select jenis_transaksi, jumlah FROM transaksi where tanggal
='2009-11-21' order by jumlah;
+-----+-----+
| jenis_transaksi | jumlah |
+-----+-----+
| debit           | 40000  |
+-----+-----+
1 row in set (0.00 sec)

MariaDB [perbankann] >
```

4. MariaDB [perbankann] > 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  | debit          | 20000  |
| Canka Lokananta   | debit          | 20000  |
+-----+-----+-----+
5 rows in set (0.00 sec)

MariaDB [perbankann] >
```

5. MariaDB [perbankann] > 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 |
| Sutopo       | Jl. Jendral Sudirman |
+-----+-----+
3 rows in set (0.00 sec)

MariaDB [perbankann] >
```

Nama : Rossanti Kusumadewi

NIM : L200170092

Kelas : D

Modul : 7

1.

```
MariaDB [perbankan]> select nama_nasabah, alamat_nasabah, jenis_transaksi, jumlah
from nasabah, transaksi where nasabah.id_nasabah = transaksi.id_nasabahFK and
jenis_transaksi = 'kredit' order by nama_nasabah;
```

nama_nasabah	alamat_nasabah	jenis_transaksi	jumlah
Budi Eko Prayogo	Jl. Kantil 30	kredit	30000
Budi Eko Prayogo	Jl. Kantil 30	kredit	200000
Budi Murtono	Jl. Merak 22	kredit	250000
Canka Lokananta	Jl. Tidar 86	kredit	150000
Indri Hapsari	Jl. Sutoyo 5	kredit	130000
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	100000
Maryati	Jl. MT. Haryono 31	kredit	200000
Sari Murti	Jl. Pangandaran 11	kredit	357000
Suparman	Jl. Hasanudin 81	kredit	50000
Suparman	Jl. Hasanudin 81	kredit	50000
Suparman	Jl. Hasanudin 81	kredit	100000
Sutopo	Jl. Jendral Sudirman 12	kredit	200000
Sutopo	Jl. Jendral Sudirman 12	kredit	520000
Sutopo	Jl. Jendral Sudirman 12	kredit	100000

```
17 rows in set (0.00 sec)

MariaDB [perbankan]>
```

2.

```
MariaDB [perbankan]> select no_rekening, nama_nasabah, jenis_transaksi, jumlah f
rom rekening,nasabah,transaksi where rekening.no_rekening = transaksi.no_rekenin
gFK and nasabah.id_nasabah = transaksi.id_nasabahFK and tanggal ='2009-11-21' or
der by nama_nasabah;
```

no_rekening	nama_nasabah	jenis_transaksi	jumlah
105	Suparman	debit	40000

```
1 row in set (0.00 sec)

MariaDB [perbankan]>
```

3.

```

MariaDB [perbankan]> select no_rekening, nama_nasabah, jenis_transaksi, jumlah f
rom rekening,nasabah, transaksi where rekening.no_rekening = transaksi.no_rekeni
ngFK and nasabah.id_nasabah = transaksi.id_nasabahFK and jumlah = '20000';
+-----+-----+-----+-----+
| 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 |
+-----+-----+-----+-----+
5 rows in set (0.04 sec)

MariaDB [perbankan]>

```

4.

```

MariaDB [perbankan]> select no_rekening,nama_nasabah,alamat_nasabah from rekenin
g,nasabah,nasabah_has_rekening where nasabah.id_nasabah = nasabah_has_rekening.i
d_nasabahFK and rekening.no_rekening = nasabah_has_rekening.no_rekeningFK and na
ma_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 (0.00 sec)

```

5.

```

MariaDB [perbankan]> select no_rekening as 'Nomor Rekening', nama_nasabah as 'Na
ma Nasabah', jumlah as 'Jumlah Transaksi' from rekening,nasabah,transaksi where
rekening.no_rekening = transaksi.no_rekeningFK and nasabah.id_nasabah = transaks
i.id_nasabahFK and jenis_transaksi = 'debit' order by nama_nasabah;
+-----+-----+-----+
| Nomor Rekening | Nama Nasabah | Jumlah Transaksi |
+-----+-----+-----+
| 109 | Anggit | 700000 |
| 109 | Anggit | 700000 |
| 109 | Anggit | 700000 |
| 109 | Anggit | 700000 |
| 102 | Budi Eko Prayogo | 20000 |
| 102 | Budi Eko Prayogo | 20000 |
| 103 | Budi Eko Prayogo | 263000 |
| 102 | Budi Eko Prayogo | 50000 |
| 110 | Budi Eko Prayogo | 26000 |
| 108 | Budi Murtono | 100000 |
| 110 | Canka Lokananta | 20000 |
| 109 | Indri Hapsari | 100000 |
| 101 | Jon Koplo | 9700000 |
| 101 | Jon Koplo | 8500000 |
| 107 | Kartika Padmasari | 100000 |
| 101 | Kartika Padmasari | 50000 |
| 103 | Maryati | 40000 |
| 103 | Maryati | 50000 |
| 103 | Maryati | 40000 |
| 110 | Maryati | 547000 |
| 103 | Maryati | 100000 |
| 106 | Satria Eka Jaya | 125000 |
| 106 | Suparman | 50000 |
| 105 | Suparman | 40000 |
| 105 | Suparman | 50000 |
| 104 | Sutopo | 50000 |
| 104 | Sutopo | 50000 |
+-----+-----+-----+
27 rows in set (0.00 sec)

```

NAMA : ROSSANTI KUSUMADEWI

NIM : L200170092

KELAS : D

MODUL : 8

## TUGAS PRAKTIKUM

1. Tampilkan jenis transaksi, jumlah transaksi dalam RP dan total transaksi untuk nasabah yang berakhiran 'Kartika Padmasari' untuk masing-masing jenis transaksi!

```
C:\Windows\system32\cmd.exe - mysql -u root -p
2 rows in set (0.00 sec)

MariaDB [perbankan]> select jenis_transaksi as "Jenis Transaksi", jumlah as "Rp",
count(jumlah) as "Total Transaksi" from nasabah, transaksi where nasabah.id_nasabah =
nasabah.id_nasabahFK and nasabah.nama_nasabah = 'Kartika Padmasari' group by jenis_transaksi;
+-----+-----+-----+
| Jenis Transaksi | Rp   | Total Transaksi |
+-----+-----+-----+
| debit          | 50000 | 26              |
| kredit         | 20000 | 24              |
+-----+-----+-----+
2 rows in set (0.00 sec)
```

2. Berapa jumlah transaksi yang ditangani oleh masing-masing cabang bank?

```
C:\Windows\system32\cmd.exe - mysql -u root -p
1 row in set (0.03 sec)

MariaDB [perbankan]> select sum(saldo) as "Total Saldo" from nasabah, rekening,
nasabah_has_rekening where nasabah.id_nasabah=nasabah_has_rekening.id_nasabahFK
and rekening.no_rekening=nasabah_has_rekening.no_rekeningFK and nasabah.nama_nasabah = 'Masyati';
+-----+
| Total Saldo |
+-----+
| 750000      |
+-----+
1 row in set (0.00 sec)
```

3. Tampilkan jumlah transaksi yang ditangani oleh masing-masing cabang bank!

```
MariaDB [perbankan]> select count(jumlah), nama_cabang from transaksi, cabang_bank,
nasabah_has_rekening where rekening.no_rekening=transaksi.no_rekeningFK and cabang_bank.kode_cabang=rekening.kode_cabangFK group by cabang_bank.nama_cabang;
+-----+-----+
| count(jumlah) | nama_cabang |
+-----+-----+
| 3             | Bank Rut Unit Balikpapan |
| 2             | Bank Rut Unit Berau      |
| 2             | Bank Rut Unit Bopelali   |
| 3             | Bank Rut Unit Karanganyar |
| 1             | Bank Rut Unit Kartasura   |
| 8             | Bank Rut Unit Kegalang    |
| 1             | Bank Rut Unit Pontianak   |
| 2             | Bank Rut Unit Samarinda   |
| 2             | Bank Rut Unit Sekeloaarjo |
| 10            | Bank Rut Unit Surakarta   |
| 1             | Bank Rut Unit Tanjung Selor |
| 4             | Bank Rut Unit Tarakan     |
| 3             | Bank Rut Unit Yogyakarta |
+-----+-----+
13 rows in set (0.00 sec)
```

4. Tampilkan nama nasabah dan jumlah saldo yang memiliki saldo antara Rp 500.000 sampai Rp 2.000.000!

```
MariaDB [perbankan]> SELECT nama_nasabah, rekening.saldo FROM rekening, nasabah,
nasabah_has_rekening where rekening.no_rekening = nasabah_has_rekening.no_rekeningFK
and nasabah.id_nasabah = nasabah_has_rekening.id_nasabahFK and saldo BETWEEN
'500000' AND '2000000';
+-----+-----+
| nama_nasabah | saldo |
+-----+-----+
| Sutopo       | 900000 |
| Masyati      | 750000 |
| Kartika Padmasari | 500000 |
| Canka Lokananta | 550000 |
| Budi Murtono | 500000 |
+-----+-----+
5 rows in set (0.00 sec)
```

5. Tampilkan nama nasabah, tanggal transaksi dan jumlah transaksi dalam Rp dimana jumlah transaksi di atas Rp 100.000 dan urutkan berdasarkan jumlah transaksi dari besar ke kecil!

```

MariaDB [perbankan]> SELECT nasabah.nama_nasabah AS 'Nama Nasabah', transaksi.ta
nggal AS 'Tanggal Transaksi', SUM(transaksi.jumlah) AS 'Jumlah(Rp)' FROM nasabah
, transaksi WHERE nasabah.id_nasabah = transaksi.id_nasabahFK and transaksi.juml
ah > 100000 group by nasabah.nama_nasabah, transaksi.tanggal, transaksi.jumlah 0
ORDER BY jumlah DESC;
+-----+-----+-----+
| Nama Nasabah | Tanggal Transaksi | Jumlah(Rp) |
+-----+-----+-----+
| Jon Koplo    | 2017-05-26 00:00:00 | 9700000 |
| Jon Koplo    | 2017-05-26 00:00:00 | 8500000 |
| Anggit       | 2017-05-26 00:00:00 | 7000000 |
| Anggit       | 2017-06-08 00:00:00 | 2100000 |
| Maryati      | 2017-05-24 00:00:00 | 5470000 |
| Sutopo       | 2017-05-26 00:00:00 | 5200000 |
| Sari Murti   | 2017-05-24 00:00:00 | 3570000 |
| Budi Eko Prayogo | 2017-06-14 00:00:00 | 2630000 |
| Budi Murtono | 2017-05-24 00:00:00 | 2500000 |
| Maryati      | 2009-11-20 00:00:00 | 2000000 |
| Sutopo       | 2009-11-15 00:00:00 | 2000000 |
| Budi Eko Prayogo | 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 | 2017-05-24 00:00:00 | 1300000 |
| Satria Eka Jaya | 2017-05-24 00:00:00 | 1250000 |
+-----+-----+-----+
16 rows in set (0.00 sec)

```

**MODUL : 9**





NAMA : ROSSANTI KUSUMADEWI

NIM : L200170092

KELAS : D

MODUL : 10

#### KEGIATAN PRAKTIKUM

1. Menampilkan detail data nasabah yang pernah melakukan transaksi kredit dengan menggunakan syntax subquery.

```
MariaDB [(none)]> use perbankan;
Database changed
MariaDB [(perbankan)]> SELECT * FROM nasabah where nasabah.id_nasabah IN (select DISTINCT
-> transaksi.id_nasabahFK from transaksi where jenis_transaksi='kredit');
+-----+-----+-----+
| id_nasabah | nama_nasabah | alamat_nasabah |
+-----+-----+-----+
| 1 | Sutopo | Jl. Jendral Sudirman 12 |
| 2 | Maryati | Jl. MT Haryono 31 |
| 3 | Suparman | Jl. Hasanudin Bl |
| 4 | Kantiika Padmasari | Jl. Mangrove 14 |
| 5 | Budi Edo Prasoso | Jl. Kentil 20 |
| 6 | Canka Lukmanata | Jl. Tidar 06 |
| 7 | Budi Hartono | Jl. Merak 22 |
| 8 | Dantadua | Jl. Aki Balak 22 |
| 9 | Pungut | Jl. AMD 10 |
| 10 | Putri | Jl. Diponegoro 19 |
| 11 | Paudan Wanyu | Jl. Iman Bungul 20 |
+-----+-----+-----+
11 rows in set (0.20 sec)
```

2. Menampilkan detail data nasabah yang tidak pernah melakukan segala jenis transaksi dengan menggunakan syntax subquery.

```
MariaDB [(perbankan)]> SELECT * FROM nasabah where nasabah.id_nasabah NOT IN
-> (select DISTINCT transaksi.id_nasabahFK from transaksi);
+-----+-----+-----+
| id_nasabah | nama_nasabah | alamat_nasabah |
+-----+-----+-----+
| 6 | Satria Eka Jaya | Jl. Slamet Riyadi 45 |
| 11 | Sani Murti | Jl. Pangandayan 11 |
| 11 | Andara | Jl. Pertama 26 |
| 11 | Ranga | Jl. Kedua 80 |
| 11 | Cinta | Jl. Ketiga 24 |
| 11 | Aiseng | Kalimantan |
| 11 | Nana | Magetan |
| 11 | Kori | Solo |
| 11 | Sana | Sarangan |
| 11 | Sunu | Bojonegoro |
| 11 | Fitri | ngawi |
+-----+-----+-----+
11 rows in set (0.00 sec)
```

3. Menampilkan cabang bank yang memiliki nilai rata-rata saldo paling besar untuk seluruh rekening dalam cabang bank menggunakan syntax subquery.

```
MariaDB [(perbankan)]> SELECT cabang_bank.kode_cabang, cabang_bank.nama_cabang,
-> AVG(rekening.saldo) as rata2 from cabang_bank, rekening where
-> cabang_bank.kode_cabang=rekening.kode_cabangFK group by
-> cabang_bank.kode_cabang having rata2 >= ALL (select AVG(saldo)
-> FROM rekening group by kode_cabangFK);
+-----+-----+-----+
| kode_cabang | nama_cabang | rata2 |
+-----+-----+-----+
| BRUB | Bank Rut Unit Boyolali | 25000000.0000 |
+-----+-----+-----+
1 row in set (0.18 sec)
```

- Menampilkan data transaksi yang melibatkan jumlah uang lebih besar dari rata-rata keseluruhan transaksi yang pernah dilakukan menggunakan syntax subquery

```

MariaDB [prebankan1] > SELECT * FROM transaksi where jumlah > (SELECT AVG(jumlah) FROM
  transaksi);

```

id_transaksi	id_mahasiswa	id_dosen	jenis_transaksi	tanggal	jumlah
1	1	1	uang	2020-01-01	1000000
2	2	2	uang	2020-01-01	1000000
3	3	3	uang	2020-01-01	1000000
4	4	4	uang	2020-01-01	1000000
5	5	5	uang	2020-01-01	1000000
6	6	6	uang	2020-01-01	1000000
7	7	7	uang	2020-01-01	1000000
8	8	8	uang	2020-01-01	1000000
9	9	9	uang	2020-01-01	1000000
10	10	10	uang	2020-01-01	1000000
11	11	11	uang	2020-01-01	1000000
12	12	12	uang	2020-01-01	1000000
13	13	13	uang	2020-01-01	1000000
14	14	14	uang	2020-01-01	1000000
15	15	15	uang	2020-01-01	1000000
16	16	16	uang	2020-01-01	1000000
17	17	17	uang	2020-01-01	1000000
18	18	18	uang	2020-01-01	1000000
19	19	19	uang	2020-01-01	1000000
20	20	20	uang	2020-01-01	1000000

24 rows in set (0.00 sec)

## TUGAS PRAKTIKUM

- Ambil salah satu mata kuliah. Tampilkan daftar mahasiswa yang tidak mengambil mata kuliah tersebut.

```

MariaDB [modul_10] > SELECT mahasiswa.nim from mahasiswa, matkul, link_mahasiswa_matkul
  where mahasiswa.nim = link_mahasiswa_matkul.nim and matkul.kode_matkul
  = link_mahasiswa_matkul.kode_matkul and mahasiswa.nim not in (select
  link_mahasiswa_matkul.nim from link_mahasiswa_matkul where kode_matkul
  = 'TIF001') group by mahasiswa.nim;

```

nim
L200150135

1 row in set (0.01 sec)

```

MariaDB [modul_10] > select * from link_mahasiswa_matkul where kode_matkul = 'TIF001';

```

nim	kode_matkul	nilai
L200150088	TIF001	70
L200150090	TIF001	70
L200150092	TIF001	70
L200150113	TIF001	70
L200150114	TIF001	70
L200150117	TIF001	70
L200150119	TIF001	70
L200150120	TIF001	70
L200150123	TIF001	70
L200150124	TIF001	70
L200150125	TIF001	70
L200150126	TIF001	70
L200150127	TIF001	70
L200150128	TIF001	70
L200150129	TIF001	70
L200150130	TIF001	70
L200150131	TIF001	70
L200150132	TIF001	70
L200150133	TIF001	70
L200150134	TIF001	70
L200150135	TIF001	70
L200150136	TIF001	70
L200150137	TIF001	70
L200150138	TIF001	70
L200150139	TIF001	70
L200150140	TIF001	70
L200150141	TIF001	70
L200150142	TIF001	70
L200150143	TIF001	70
L200150144	TIF001	70
L200150145	TIF001	70
L200150146	TIF001	70
L200150147	TIF001	70
L200150148	TIF001	70
L200150149	TIF001	70
L200150150	TIF001	70
L200150151	TIF001	70
L200150152	TIF001	70
L200150153	TIF001	70
L200150154	TIF001	70
L200150155	TIF001	70
L200150156	TIF001	70
L200150157	TIF001	70
L200150158	TIF001	70
L200150159	TIF001	70
L200150160	TIF001	70
L200150161	TIF001	70
L200150162	TIF001	70
L200150163	TIF001	70
L200150164	TIF001	70
L200150165	TIF001	70
L200150166	TIF001	70
L200150167	TIF001	70
L200150168	TIF001	70
L200150169	TIF001	70
L200150170	TIF001	70
L200150171	TIF001	70
L200150172	TIF001	70
L200150173	TIF001	70
L200150174	TIF001	70
L200150175	TIF001	70
L200150176	TIF001	70
L200150177	TIF001	70
L200150178	TIF001	70
L200150179	TIF001	70
L200150180	TIF001	70
L200150181	TIF001	70
L200150182	TIF001	70
L200150183	TIF001	70
L200150184	TIF001	70
L200150185	TIF001	70
L200150186	TIF001	70
L200150187	TIF001	70
L200150188	TIF001	70
L200150189	TIF001	70
L200150190	TIF001	70
L200150191	TIF001	70
L200150192	TIF001	70
L200150193	TIF001	70
L200150194	TIF001	70
L200150195	TIF001	70
L200150196	TIF001	70
L200150197	TIF001	70
L200150198	TIF001	70
L200150199	TIF001	70
L200150200	TIF001	70
L200150201	TIF001	70
L200150202	TIF001	70
L200150203	TIF001	70
L200150204	TIF001	70
L200150205	TIF001	70
L200150206	TIF001	70
L200150207	TIF001	70
L200150208	TIF001	70
L200150209	TIF001	70
L200150210	TIF001	70
L200150211	TIF001	70
L200150212	TIF001	70
L200150213	TIF001	70
L200150214	TIF001	70
L200150215	TIF001	70
L200150216	TIF001	70
L200150217	TIF001	70
L200150218	TIF001	70
L200150219	TIF001	70
L200150220	TIF001	70
L200150221	TIF001	70
L200150222	TIF001	70
L200150223	TIF001	70
L200150224	TIF001	70
L200150225	TIF001	70
L200150226	TIF001	70
L200150227	TIF001	70
L200150228	TIF001	70
L200150229	TIF001	70
L200150230	TIF001	70
L200150231	TIF001	70
L200150232	TIF001	70
L200150233	TIF001	70
L200150234	TIF001	70
L200150235	TIF001	70
L200150236	TIF001	70
L200150237	TIF001	70
L200150238	TIF001	70
L200150239	TIF001	70
L200150240	TIF001	70
L200150241	TIF001	70
L200150242	TIF001	70
L200150243	TIF001	70
L200150244	TIF001	70
L200150245	TIF001	70
L200150246	TIF001	70
L200150247	TIF001	70
L200150248	TIF001	70
L200150249	TIF001	70
L200150250	TIF001	70
L200150251	TIF001	70
L200150252	TIF001	70
L200150253	TIF001	70
L200150254	TIF001	70
L200150255	TIF001	70
L200150256	TIF001	70
L200150257	TIF001	70
L200150258	TIF001	70
L200150259	TIF001	70
L200150260	TIF001	70
L200150261	TIF001	70
L200150262	TIF001	70
L200150263	TIF001	70
L200150264	TIF001	70
L200150265	TIF001	70
L200150266	TIF001	70
L200150267	TIF001	70
L200150268	TIF001	70
L200150269	TIF001	70
L200150270	TIF001	70
L200150271	TIF001	70
L200150272	TIF001	70
L200150273	TIF001	70
L200150274	TIF001	70
L200150275	TIF001	70
L200150276	TIF001	70
L200150277	TIF001	70
L200150278	TIF001	70
L200150279	TIF001	70
L200150280	TIF001	70
L200150281	TIF001	70
L200150282	TIF001	70
L200150283	TIF001	70
L200150284	TIF001	70
L200150285	TIF001	70
L200150286	TIF001	70
L200150287	TIF001	70
L200150288	TIF001	70
L200150289	TIF001	70
L200150290	TIF001	70
L200150291	TIF001	70
L200150292	TIF001	70
L200150293	TIF001	70
L200150294	TIF001	70
L200150295	TIF001	70
L200150296	TIF001	70
L200150297	TIF001	70
L200150298	TIF001	70
L200150299	TIF001	70
L200150300	TIF001	70
L200150301	TIF001	70
L200150302	TIF001	70
L200150303	TIF001	70
L200150304	TIF001	70
L200150305	TIF001	70
L200150306	TIF001	70
L200150307	TIF001	70
L200150308	TIF001	70
L200150309	TIF001	70
L200150310	TIF001	70
L200150311	TIF001	70
L200150312	TIF001	70
L200150313	TIF001	70
L200150314	TIF001	70
L200150315	TIF001	70
L200150316	TIF001	70
L200150317	TIF001	70
L200150318	TIF001	70
L200150319	TIF001	70
L200150320	TIF001	70
L200150321	TIF001	70
L200150322	TIF001	70
L200150323	TIF001	70
L200150324	TIF001	70
L200150325	TIF001	70
L200150326	TIF001	70
L200150327	TIF001	70
L200150328	TIF001	70
L200150329	TIF001	70
L200150330	TIF001	70
L200150331	TIF001	70
L200150332	TIF001	70
L200150333	TIF001	70
L200150334	TIF001	70
L200150335	TIF001	70
L200150336	TIF001	70
L200150337	TIF001	70
L200150338	TIF001	70
L200150339	TIF001	70
L200150340	TIF001	70
L200150341	TIF001	70
L200150342	TIF001	70
L200150343	TIF001	70
L200150344	TIF001	70
L200150345	TIF001	70
L200150346	TIF001	70
L200150347	TIF001	70
L200150348	TIF001	70
L200150349	TIF001	70
L200150350	TIF001	70
L200150351	TIF001	70
L200150352	TIF001	70
L200150353	TIF001	70
L200150354	TIF001	70
L200150355	TIF001	70
L200150356	TIF001	70
L200150357	TIF001	70
L200150358	TIF001	70
L200150359	TIF001	70
L200150360	TIF001	70
L200150361	TIF001	70
L200150362	TIF001	70
L200150363	TIF001	70
L200150364	TIF001	70
L200150365	TIF001	70
L200150366	TIF001	70
L200150367	TIF001	70
L200150368	TIF001	70
L200150369	TIF001	70
L200150370	TIF001	70
L200150371	TIF001	70
L200150372	TIF001	70
L200150373	TIF001	70
L200150374	TIF001	70
L200150375	TIF001	70
L200150376	TIF001	70
L200150377	TIF001	70
L200150378	TIF001	70
L200150379	TIF001	70
L200150380	TIF001	70
L200150381	TIF001	70
L200150382	TIF001	70
L200150383	TIF001	70
L200150384	TIF001	70
L200150385	TIF001	70
L200150386	TIF001	70
L200150387	TIF001	70
L200150388	TIF001	70
L200150389	TIF001	70
L200150390	TIF001	70
L200150391	TIF001	70
L200150392	TIF001	70
L200150393	TIF001	70
L200150394	TIF001	70
L200150395	TIF001	70
L200150396	TIF001	70
L200150397	TIF001	70
L200150398	TIF001	70
L200150399	TIF001	70
L200150400	TIF001	70
L200150401	TIF001	70
L200150402	TIF001	70
L200150403	TIF001	70
L200150404	TIF001	70
L200150405	TIF001	70
L200150406	TIF001	70
L200150407	TIF001	70
L200150408	TIF001	70
L200150409	TIF001	70
L200150410	TIF001	70
L200150411	TIF001	70
L200150412	TIF001	70
L200150413	TIF001	70
L200150414	TIF001	70
L200150415	TIF001	70
L200150416	TIF001	70
L200150417	TIF001	70
L200150418	TIF001	70
L200150419	TIF001	70
L200150420	TIF001	70
L200150421	TIF001	70
L200150422	TIF001	70
L200150423	TIF001	70
L200150424	TIF001	70
L200150425	TIF001	70
L200150426	TIF001	70
L200150427	TIF001	70
L200150428	TIF001	70
L200150429	TIF001	70
L200150430	TIF001	70
L200150431	TIF001	70
L200150432	TIF001	70
L200150433	TIF001	70
L200150434	TIF001	70
L200150435	TIF001	70
L200150436	TIF001	70
L200150437	TIF001	70
L200150438	TIF001	70
L200150439	TIF001	70
L200150440	TIF001	70
L200150441	TIF001	70
L200150442	TIF001	70
L200150443	TIF001	70
L200150444	TIF001	70
L200150445	TIF001	70
L200150446	TIF001	70
L200150447	TIF001	70
L200150448	TIF001	70
L200150449	TIF001	70
L200150450	TIF001	70
L200150451	TIF001	70
L200150452	TIF001	70
L200150453	TIF001	70
L200150454	TIF001	70
L200150455	TIF001	70
L200150456	TIF001	70
L200150457	TIF001	70
L200150458	TIF001	70
L200150459	TIF001	70
L200150460	TIF001	70

3. Karena satu mata kuliah (A) dihilangkan, seluruh mahasiswa yang mengambil mata kuliah tersebut dipindahkan untuk mengambil mata kuliah lain (B). Lakukan update data menggunakan syntax subquery.

```
MariaDB [modul_1B1] > update link_mahasiswa_matkul AS lmm1 SET lmm1.kode_matkul
-> = 'TIF010' WHERE lmm1.nim IN (select DISTINCT mahasiswa.nim FROM
-> mahasiswa WHERE lmm1.kode_matkul = 'TIF009');
Query OK, 0 rows affected (0.00 sec)
Rows matched: 0 Changed: 0 Warnings: 0
MariaDB [modul_1B1] > _
```

NAMA : ROSSANTI KUSUMADEWI

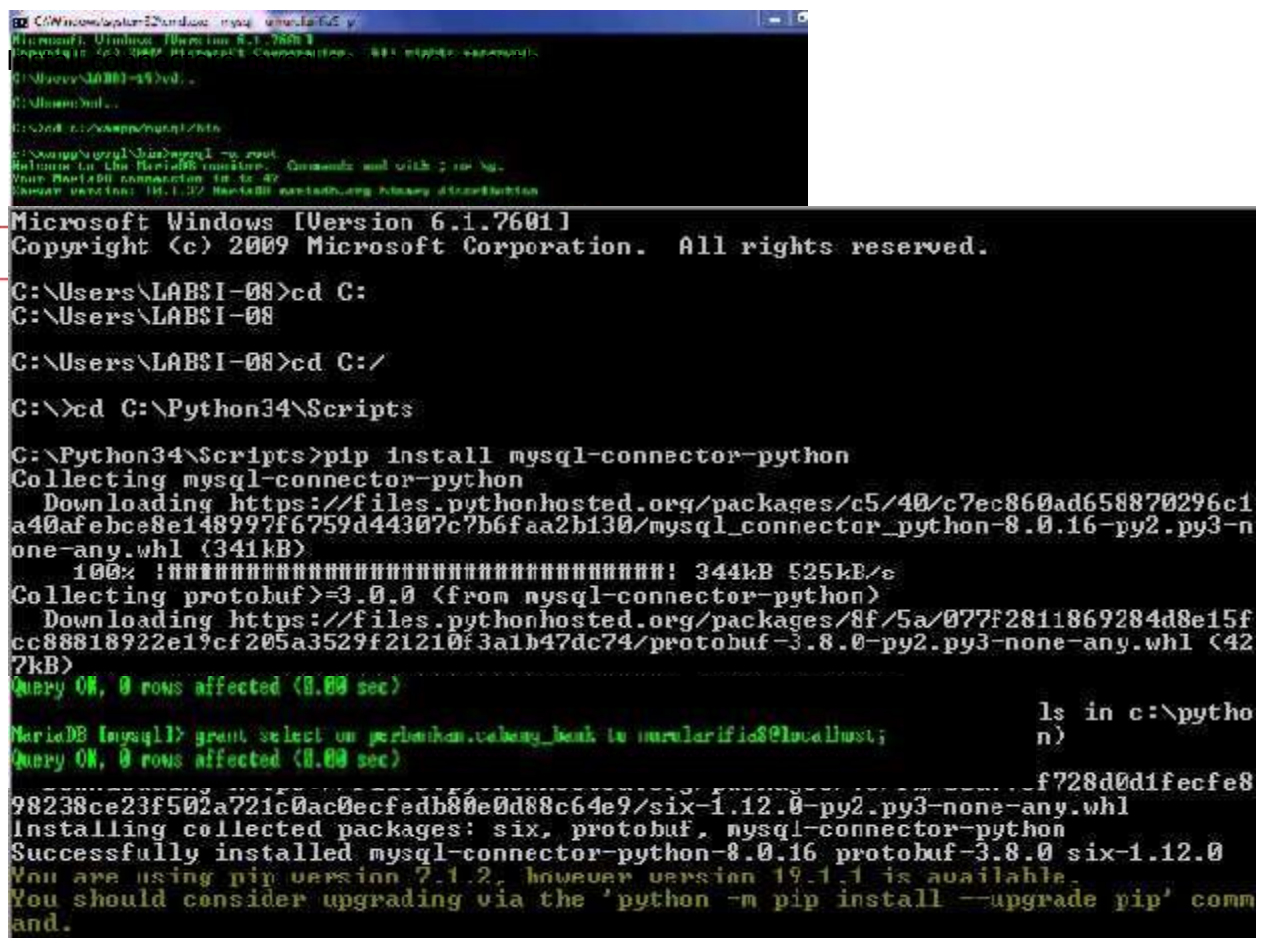
NIM : L200170092

KELAS : D

MODUL : 11

### KEGIATAN PRAKTIKUM

1.



```
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

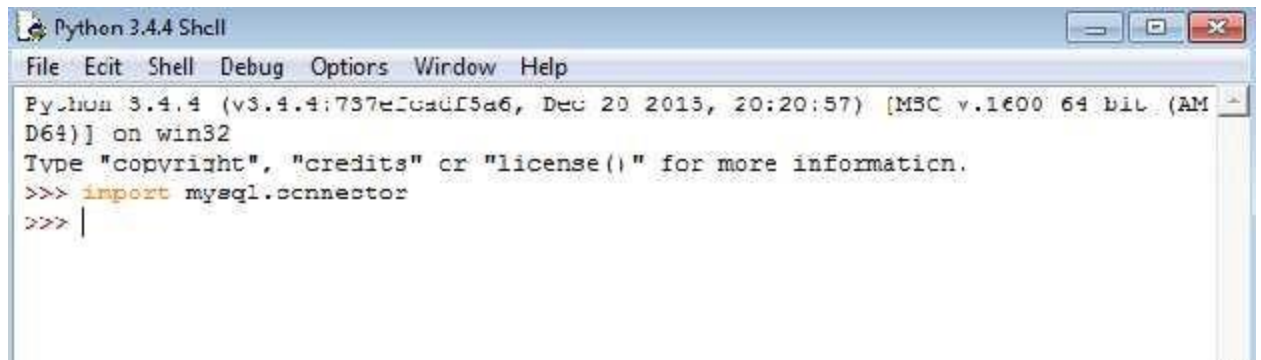
C:\Users\LABSI-08>cd C:
C:\Users\LABSI-08>cd C:/
C:\>cd C:\Python34\Scripts
C:\Python34\Scripts>pip install mysql-connector-python
Collecting mysql-connector-python
  Downloading https://files.pythonhosted.org/packages/c5/40/c7ec860ad658870296c1a40afebce8e148997f6759d44307c7b6faa2b130/mysql_connector_python-8.0.16-py2.py3-none-any.whl (341kB)
    100% |#####| 344kB 525kB/s
Collecting protobuf>=3.0.0 (from mysql-connector-python)
  Downloading https://files.pythonhosted.org/packages/8f/5a/077f2811869284d8e15fcc88818922e19cf205a3529f21210f3a1b47dc74/protobuf-3.8.0-py2.py3-none-any.whl (427kB)
Query OK, 0 rows affected (0.00 sec)

ls in c:\python
MariaDB [mysql]> grant select on perlmanan.vcbany_bank to marlarific8@localhost;
Query OK, 0 rows affected (0.00 sec)

f728d0d1fecfe8
98238ce23f502a721c0ac0ecfedb80e0d88c64e9/six-1.12.0-py2.py3-none-any.whl
Installing collected packages: six, protobuf, mysql-connector-python
Successfully installed mysql-connector-python-8.0.16 protobuf-3.8.0 six-1.12.0
You are using pip version 7.1.2, however version 19.1.1 is available.
You should consider upgrading via the 'python -m pip install --upgrade pip' command.
```

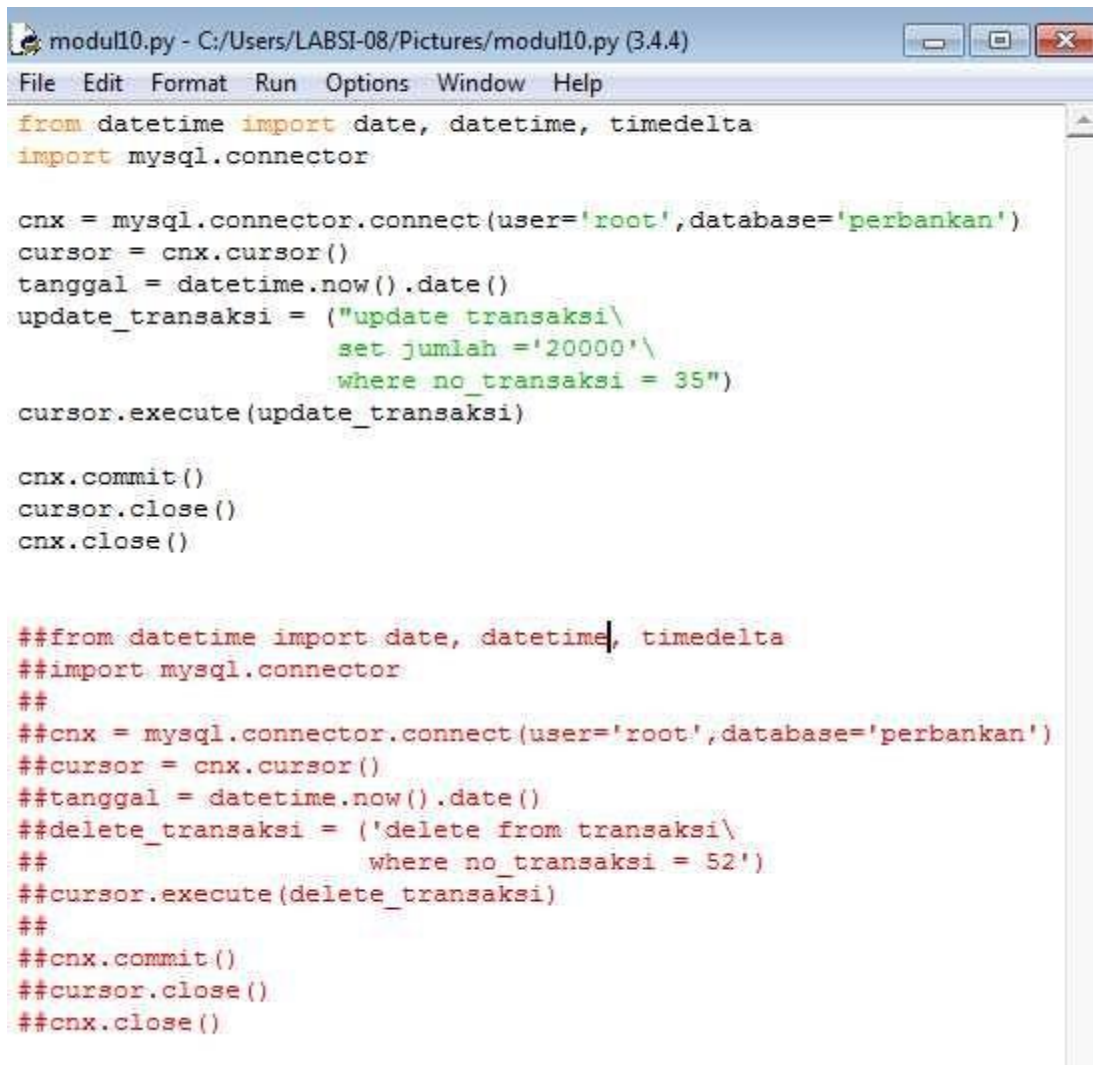
2. Cek import mysql.connector



A screenshot of a Python 3.4.4 Shell window. The window has a title bar with the text "Python 3.4.4 Shell" and standard Windows window controls (minimize, maximize, close). Below the title bar is a menu bar with the following items: File, Edit, Shell, Debug, Options, Window, and Help. The main area of the window contains the following text:

```
Python 3.4.4 (v3.4.4:737e1ca0f5a6, Dec 20 2013, 20:20:57) [MSC v.1600 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>> import mysql.connector
>>> |
```

3. Tulis code pada shell python



```
modul10.py - C:/Users/LABSI-08/Pictures/modul10.py (3.4.4)
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 ='20000'\
                    where no_transaksi = 35")
cursor.execute(update_transaksi)

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

##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 no_transaksi = 52')
##cursor.execute(delete_transaksi)
##
##cnx.commit()
##cursor.close()
##cnx.close()
```

#### 4. Masuk ke Command Prompt

```
C:\Python34\Scripts>cd C:/xampp/mysql/bin

C:\xampp\mysql\bin>mysql -u root
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 32
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 transaksi;
```

	no_transaksi	id_nasabahFK	no_rekeningFK	jenis_transaksi	tanggal
	jumlah				
	32	3	105	debit	2009-11-10 00:00:00
00:00	50000	2	103	debit	2009-11-10 00:00:00
	33	4	101	kredit	2009-11-12 00:00:00
00:00	40000	3	106	debit	2009-11-13 00:00:00
	34	5	107	kredit	2009-11-13 00:00:00
00:00	20000	1	104	kredit	2009-11-15 00:00:00
	35	9	110	kredit	2009-11-15 00:00:00
00:00	50000	5	102	debit	2009-11-16 00:00:00
	36	3	105	kredit	2009-11-18 00:00:00
00:00	30000	4	107	debit	2009-11-19 00:00:00
	37	2	103	debit	2009-11-19 00:00:00
00:00	200000	1	104	debit	2009-11-19 00:00:00
	38	4	107	kredit	2009-11-20 00:00:00
00:00	150000	3	105	debit	2009-11-21 00:00:00
	39	1	104	kredit	2009-11-22 00:00:00
00:00	20000	4	101	kredit	2009-11-22 00:00:00
	40				
00:00	50000				
	41				
00:00	100000				
	42				
00:00	100000				
	43				
00:00	50000				
	44				
00:00	200000				
	45				
00:00	40000				
	46				
00:00	100000				
	47				
00:00	20000				

## TUGAS

## 1. Insert transaksi

```
#modul1.py - C:\xampp\htdocs\modul1.py (27.14)
File Edit Format Run Options Window Help
Python 2.7.14 Shell Debug Options Window Help
Python 2.7.14 (tags/2.7.14:84471635ed, Sep 16 2017
, 20:18:30) [MSC v.1500 32 bit (Intel)] on win
32
Type "copyright", "credits()" or "license()" for
more (formatted help)
>>>
===== RESTART: Shell >>>
C:\xampp\htdocs>
>>>

#from datetime import date, datetime, timedelta
#import mysql.connector

#conn = mysql.connector.connect(user='root', database='perlbankn1')
#cursor = conn.cursor()
#tanggal = datetime.now().date()
#query = "INSERT INTO transaksi VALUES (%s,%s,%s,%s,%s,%s)"
#data_transaksi = ('', 'DEBIT', '1000', 'kredit', tanggal, '1000')
#cursor.execute(query % data_transaksi)

#conn.commit()
#cursor.close()
#conn.close()

#from datetime import date, datetime, timedelta
#import mysql.connector

#conn = mysql.connector.connect(user='root', database='perlbankn1')
#cursor = conn.cursor()
#tanggal = datetime.now().date()
#query = "INSERT INTO transaksi VALUES (%s,%s,%s,%s,%s,%s)"
#data_transaksi = ('', 'DEBIT', '1000', 'kredit', tanggal, '1000')
#cursor.execute(query % data_transaksi)

#conn.commit()
#cursor.close()
#conn.close()
```



- Update nasabah

```
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 nasabah
                    set nama_nasabah = 'anggi'
                    where id_nasabah = 2")
cursor.execute(update_transaksi)

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

##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 no_transaksi = 52')
##cursor.execute(delete_transaksi)
##
##cnx.commit()
##cursor.close()
##cnx.close()
```

- Hasil



- Update transaksi

```
modul10.py - 63\diptariya\modul10.py (2.7.14)
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 ='20000'\
                    where no_transaksi = 35")
cursor.execute(update_transaksi)

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

##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 VALUES (%s, %s, %s, %s, %s, %s)')
##
##
##data_transaksi = ('', '36', '150', 'kredit', tanggal, '70000')
##cursor.execute(tambah_transaksi, data_transaksi)
##
##cnx.commit()
##cursor.close()
##cnx.close()
```

- Hasil :

Options

a. Sebelum

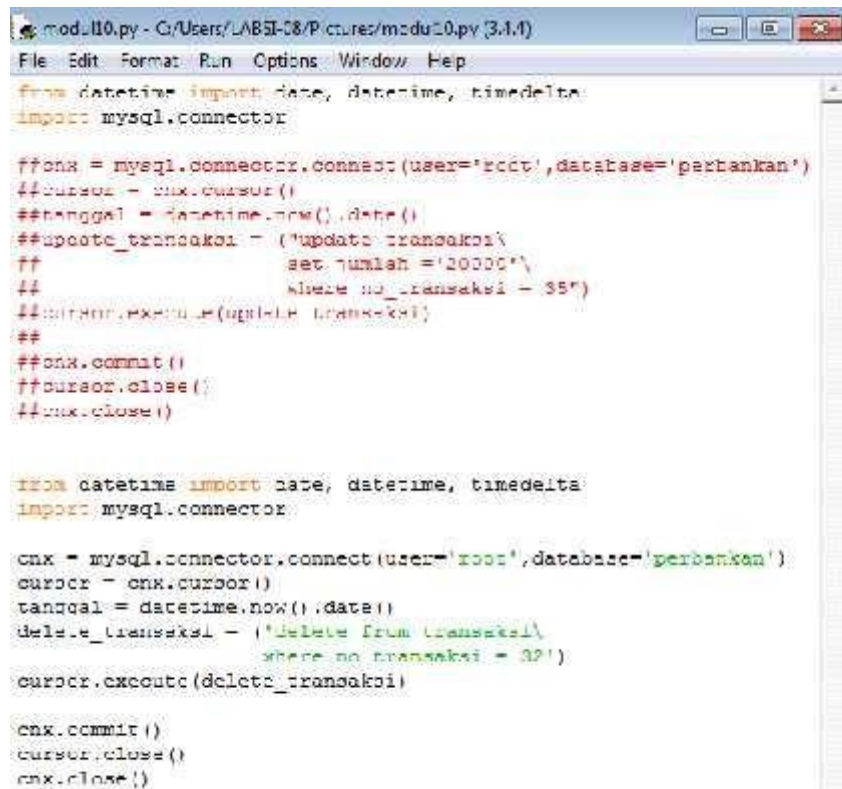
	no_transaksi	id_nasabahFK	no_rekeningFK	jenis_transaksi	tanggal	jumlah
Edit Copy Delete	32	3	105	debit	2009-11-10 00:00:00	50000
Edit Copy Delete	33	2	103	debit	2009-11-10 00:00:00	40000
Edit Copy Delete	34	4	101	kredit	2009-11-12 00:00:00	20000
Edit Copy Delete	35	3	106	debit	2009-11-13 00:00:00	50000
Edit Copy Delete	36	5	107	kredit	2009-11-13 00:00:00	30000
Edit Copy Delete	37	1	104	kredit	2009-11-15 00:00:00	200000
Edit Copy Delete	38	9	110	kredit	2009-11-15 00:00:00	150000
Edit Copy Delete	39	5	102	debit	2009-11-16 00:00:00	20000
Edit Copy Delete	40	3	105	kredit	2009-11-18 00:00:00	50000
Edit Copy Delete	41	4	107	debit	2009-11-19 00:00:00	100000
Edit Copy Delete	42	2	103	debit	2009-11-19 00:00:00	100000
Edit Copy Delete	43	1	104	debit	2009-11-19 00:00:00	50000
Edit Copy Delete	44	4	107	kredit	2009-11-20 00:00:00	200000
Edit Copy Delete	45	3	105	debit	2009-11-21 00:00:00	40000
Edit Copy Delete	46	1	104	kredit	2009-11-22 00:00:00	100000
Edit Copy Delete	47	4	101	kredit	2009-11-22 00:00:00	20000

Options

b. Setelah

	no_transaksi	id_nasabahFK	no_rekeningFK	jenis_transaksi	tanggal	jumlah
Edit Copy Delete	32	3	105	debit	2009-11-10 00:00:00	50000
Edit Copy Delete	33	2	103	debit	2009-11-10 00:00:00	40000
Edit Copy Delete	34	4	101	kredit	2009-11-12 00:00:00	20000
Edit Copy Delete	35	3	106	debit	2009-11-13 00:00:00	20000
Edit Copy Delete	36	5	107	kredit	2009-11-13 00:00:00	30000
Edit Copy Delete	37	1	104	kredit	2009-11-15 00:00:00	200000
Edit Copy Delete	38	9	110	kredit	2009-11-15 00:00:00	150000
Edit Copy Delete	39	5	102	debit	2009-11-16 00:00:00	20000
Edit Copy Delete	40	3	105	kredit	2009-11-18 00:00:00	50000
Edit Copy Delete	41	4	107	debit	2009-11-19 00:00:00	100000
Edit Copy Delete	42	2	103	debit	2009-11-19 00:00:00	100000
Edit Copy Delete	43	1	104	debit	2009-11-19 00:00:00	50000
Edit Copy Delete	44	4	107	kredit	2009-11-20 00:00:00	200000
Edit Copy Delete	45	3	105	debit	2009-11-21 00:00:00	40000

- Delete transaksi



```
modul10.py - G:/Users/LABSI-08/Pictures/modul10.py (3.4.4)
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 = '20000',
#                    where no_transaksi = 35')
#cursor.execute(update_transaksi)
##
##cnx.commit()
##cursor.close()
##cnx.close()

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 no_transaksi = 32')
cursor.execute(delete_transaksi)

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

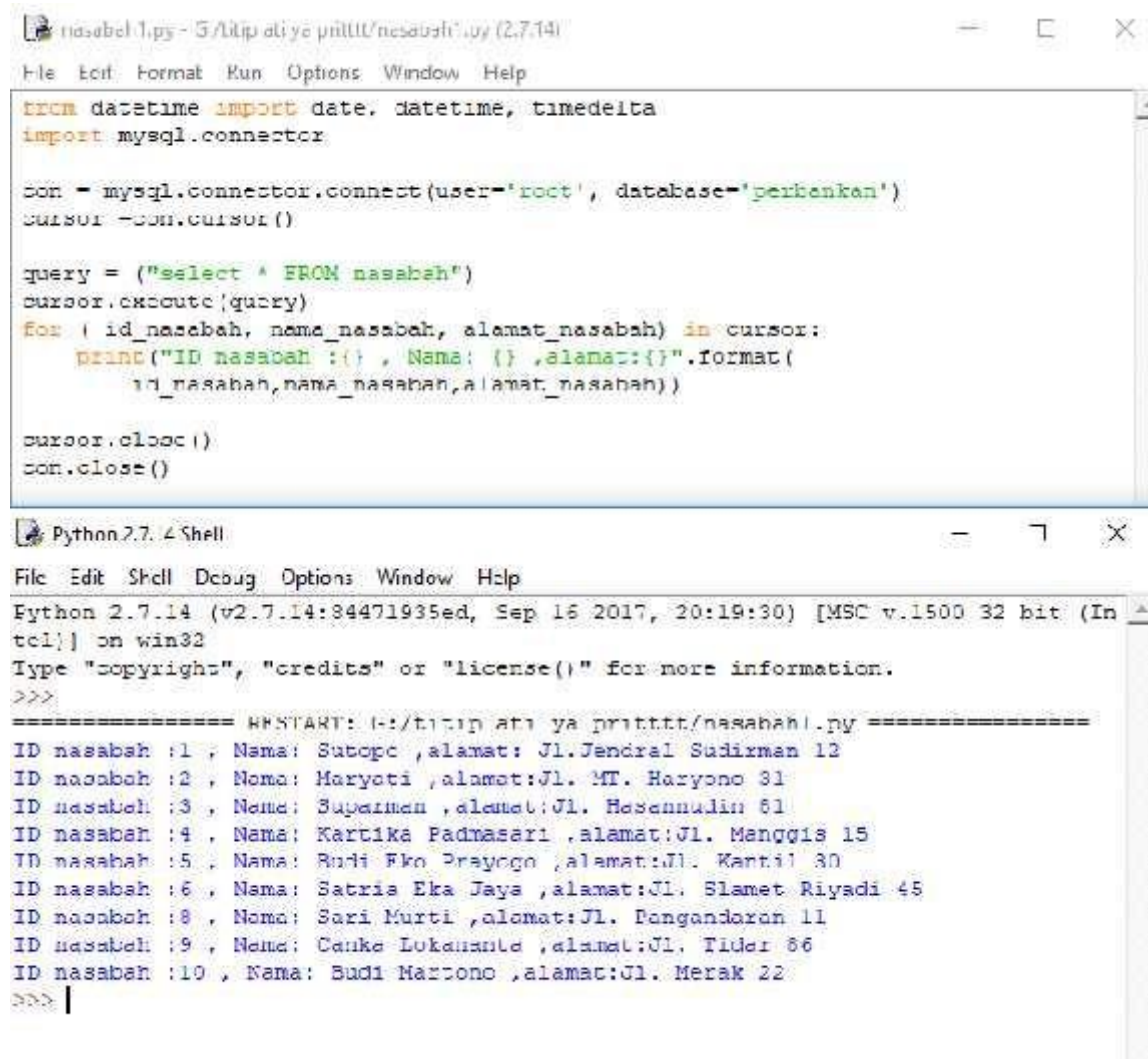


## Hasil

			no_transaksi	id_nasabah-R	no_rekening-R	jenis_transaksi	ta
			33	2	103	debit	20
			34	4	101	kredit	20
			35	3	106	debit	20
			36	5	107	kredit	20
			37	1	104	kredit	20
			38	9	110	kredit	20
			39	6	102	debit	20
			40	3	105	kredit	20
			41	4	107	debit	20
			42	2	103	debit	20
			43	1	104	debit	20
			44	4	107	kredit	20
			45	3	105	debit	20
			46	1	104	kredit	20
			47	4	101	kredit	20
			48	2	103	debit	20

## 2. Buatlah kode program python untuk

mendapat a. Data Nasabah



The image shows two windows from a Windows operating system. The top window is a Python IDE titled 'nasabah1.py - 5/titip ati ya pritttt/nasabah1.py (2.7.14)'. It contains a Python script that connects to a MySQL database named 'perbankan' using the 'root' user. The script executes a SQL query to select all data from a table named 'nasabah'. The output of the script is displayed in the bottom window, which is a command prompt titled 'Python 2.7.4 Shell'. The output shows 10 rows of data, each with an ID, a name, and an address.

```
from datetime import date, datetime, timedelta
import mysql.connector

con = mysql.connector.connect(user='root', database='perbankan')
cursor = con.cursor()

query = ("select * FROM nasabah")
cursor.execute(query)
for (id_nasabah, nama_nasabah, alamat_nasabah) in cursor:
    print("ID nasabah : {}, Nama: {}, alamat: {}".format(
        id_nasabah, nama_nasabah, alamat_nasabah))

cursor.close()
con.close()
```

```
Python 2.7.14 (v2.7.14:84471935ed, Sep 16 2017, 20:19:30) [MSC v.1500 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: In: /titip ati ya pritttt/nasabah1.py =====
ID nasabah :1 , Nama: Subopo ,alamat: Jl.Jendral Sudirman 12
ID nasabah :2 , Nama: Maryoti ,alamat:Jl. MT. Haryono 31
ID nasabah :3 , Nama: Supaiman ,alamat:Jl. Hosennudin 61
ID nasabah :4 , Nama: Kartika Padmasari ,alamat:Jl. Menggis 15
ID nasabah :5 , Nama: Rudi Eko Prayogo ,alamat:Jl. Karti 30
ID nasabah :6 , Nama: Satria Eka Jaya ,alamat:Jl. Slamet Riyadi 45
ID nasabah :8 , Nama: Sari Murti ,alamat:Jl. Pangandaran 11
ID nasabah :9 , Nama: Canke Lukmanate ,alamat:Jl. Tider 86
ID nasabah :10 , Nama: Budi Martono ,alamat:Jl. Merak 22
>>>
```

b. Data nasabah yang melakukan transaksi antara Bulan Oktober sampai Desember

```
File Edit Format Run Options Window Help
--> datetime import date, datetime, timedelta
import mysql.connector

cnx = mysql.connector.connect(user='root', database='perbankan')
cursor = cnx.cursor()

query = "select nasabah.id_nasabah, nasabah.nama_nasabah, transaksi.tanggal FROM nasabah,transaksi "
cursor.execute(query)
for (id_nasabah, nama_nasabah, tanggal) in cursor:
    print("ID nasabah:[] , nama: [], tanggal:[]".format(
        id_nasabah, nama_nasabah, tanggal))
cursor.close()
cnx.close()
```

===== RESTART: D:\semester4\praktikum basis data\sbd modul11\nasabah2.py =====

```
ID nasabah :3 ,Nama: Superman ,tanggal:2009-11-10 00:00:00
ID nasabah :2 ,Nama: Maryati ,tanggal:2009-11-10 00:00:00
ID nasabah :4 ,Nama: Kartika Padmasari ,tanggal:2009-11-12 00:00:00
ID nasabah :3 ,Nama: Superman ,tanggal:2009-11-13 00:00:00
ID nasabah :5 ,Nama: Budi Eko Prayogo ,tanggal:2009-11-13 00:00:00
ID nasabah :1 ,Nama: Sutopo ,tanggal:2009-11-15 00:00:00
ID nasabah :9 ,Nama: Canka Lokananta ,tanggal:2009-11-15 00:00:00
ID nasabah :5 ,Nama: Budi Eko Prayogo ,tanggal:2009-11-16 00:00:00
ID nasabah :3 ,Nama: Superman ,tanggal:2009-11-18 00:00:00
ID nasabah :4 ,Nama: Kartika Padmasari ,tanggal:2009-11-19 00:00:00
ID nasabah :2 ,Nama: Maryati ,tanggal:2009-11-19 00:00:00
ID nasabah :1 ,Nama: Sutopo ,tanggal:2009-11-19 00:00:00
ID nasabah :4 ,Nama: Kartika Padmasari ,tanggal:2009-11-20 00:00:00
ID nasabah :3 ,Nama: Superman ,tanggal:2009-11-21 00:00:00
ID nasabah :1 ,Nama: Sutopo ,tanggal:2009-11-22 00:00:00
ID nasabah :4 ,Nama: Kartika Padmasari ,tanggal:2009-11-22 00:00:00
ID nasabah :2 ,Nama: Maryati ,tanggal:2009-11-22 00:00:00
ID nasabah :5 ,Nama: Budi Eko Prayogo ,tanggal:2009-11-25 00:00:00
ID nasabah :10 ,Nama: Budi Murtono ,tanggal:2009-11-26 00:00:00
ID nasabah :3 ,Nama: Superman ,tanggal:2009-11-27 00:00:00
ID nasabah :2 ,Nama: Maryati ,tanggal:2009-11-28 00:00:00
ID nasabah :3 ,Nama: Superman ,tanggal:2009-11-28 00:00:00
ID nasabah :5 ,Nama: Budi Eko Prayogo ,tanggal:2009-11-30 00:00:00
ID nasabah :1 ,Nama: Sutopo ,tanggal:2009-12-01 00:00:00
ID nasabah :2 ,Nama: Maryati ,tanggal:2009-12-02 00:00:00
ID nasabah :4 ,Nama: Kartika Padmasari ,tanggal:2009-12-04 00:00:00
ID nasabah :2 ,Nama: Maryati ,tanggal:2009-12-05 00:00:00
ID nasabah :5 ,Nama: Budi Eko Prayogo ,tanggal:2009-12-05 00:00:00
ID nasabah :7 ,Nama: Indri Hapsari ,tanggal:2009-12-05 00:00:00
```