

# LAPORAN PRAKTIKUM SISTEM BASIS DATA

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## MODUL 1 ( Pengenalan dan Instalasi MySQL )

NAMA : RIZA FRISNANDA  
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NAMA ASSISTANT LAB : REGITA CAHYA  
TANGGAL PRAKTIKUM : 25/02/2019

### Tugas

#### 1. Jelaskan mengapa dibutuhkan data!

- Data adalah informasi yang mengandung arti. Maka dari itu data sangat dibutuhkan karena informasi yang ada akan memberikan arti yang sangat penting baik untuk saat ini maupun untuk akan datang.

#### 2. Jelaskan manfaat database dan contohnya!

- a. Mengurangi duplikasi data.
- b. Hubungan data dapat di tingkatkan.
- c. Mengurangi pemborosan tempat simpanan luar.
- d. Mempermudah dalam melakukan akses terhadap data.
- e. Memperoleh kembali data dengan mudah dan cepat.

#### Contoh :

- a. Universitas = Pengelolaan pendaftaran Alumni.
- b. Bank = Pengelolaan data nasabah, akunting, semua transaksi perbankan.
- c. Penjualan = Pengelolaan data customer , produk, penjualan.

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

- a. Deskripsikan 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 tidak langsung terhadap pemrosesan.

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

- a. Database : Kumpulan data yang saling berhubungan satu dengan yang lainnya yang diorganisasikan 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.

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

- Pengolahan data secara manual lebih mengandalkan operasi dengan bantuan tangan dan alat seperti pensil, pulpen, kertas, dll. Maka dari itu pengolahan ini lebih membutuhkan banyak berkas dan penyimpanan untuk menyimpan berbagai data dan informasi, keamanannya pun lebih rentan, data terbatas untuk dibagi, integritas data kurang. Sifatnya konkret. 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?**

- 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. DBMS merupakan perantara bagi pemakai dengan basis data.

**7. Pada percobaan di atas ada beberapa field yang tipe data dan ukurannya berbeda. Jelaskan!**

- Pada tabel Mhs, terdapat 6 field yaitu NIM, NAMA, TEMPAT\_LAHIR, TANGGAL\_LAHIR, ALAMAT, TELEPON.
- Pada Field NIM, diatur tipe data text berarti pada record dapat diisi data berupa teks huruf, angka, dan symbol. Ukuran data

pada field NIM diatur sepanjang 10 digit artinya dapat memasukan digit ke dalam record sepanjang 10 digit. Jika data yang dimasukkan lebih dari 10 digit, digit selanjutnya tidak akan terbaca. Untuk pengaturan maksimum defaultnya sendiri adalah sepanjang 255 digit.

- Pada field NAMA, diatur tipe data text. Ukuran data pada field NAMA diatur sepanjang 30 digit artinya dapat memasukan digit ke dalam record sepanjang 30 digit. Jika data yang dimasukkan lebih dari 30 digit, digit selanjutnya tidak akan terbaca.
- Pada field TANGGAL\_LAHIR , diatur tipe date/time yang berarti pada record diisikan data berupa angka dan symbol.
- Pada field TELEPON, diatur tipe integer, berarti pada record dapat diisikan angka saja.

# LAPORAN PRAKTIKUM SISTEM BASIS DATA

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## MODUL 2 ( Perancangan Basis Data )

NAMA : RIZA FRISNANDA  
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NAMA ASSISTANT LAB : REGITA CAHYA  
TANGGAL PRAKTIKUM : 04/03/2019

## Tugas

### 1. Mahasiswa

#### 1. Menentukan entities (object-object dasar) yang perlu ada di database.

- Mahasiswa : menyimpan semua data pribadi tentang mahasiswa
- Dosen : menyimpan semua data pribadi tentang dosen
- Mata Kuliah : menyimpan semua data pribadi tentang mata kuliah
- Ruang Kelas : menyimpan semua data pribadi tentang ruang kelas

#### 2. Menentukan Attributes (sifat-sifat) masing-masing *entity* sesuai kebutuhan database.

- Mahasiswa :
  - NIM : (varchar(45)) PK
  - Nama : (varchar (45))
  - Alamat : (varchar (255))
- Dosen :
  - NIDN : (varchar(45)) PK
  - Nama : (varchar (45))
  - Alamat : (varchar (255))
- Mata Kuliah :
  - Kode MK : (varchar(45)) PK
  - Jadwal : (varchar (255))
  - SKS : (varchar (255))
- Ruang Kelas :
  - Kode Kelas : (varchar(45)) PK

- Nama Ruang : (varchar (255))
- Tempat Ruang : (varchar (255))

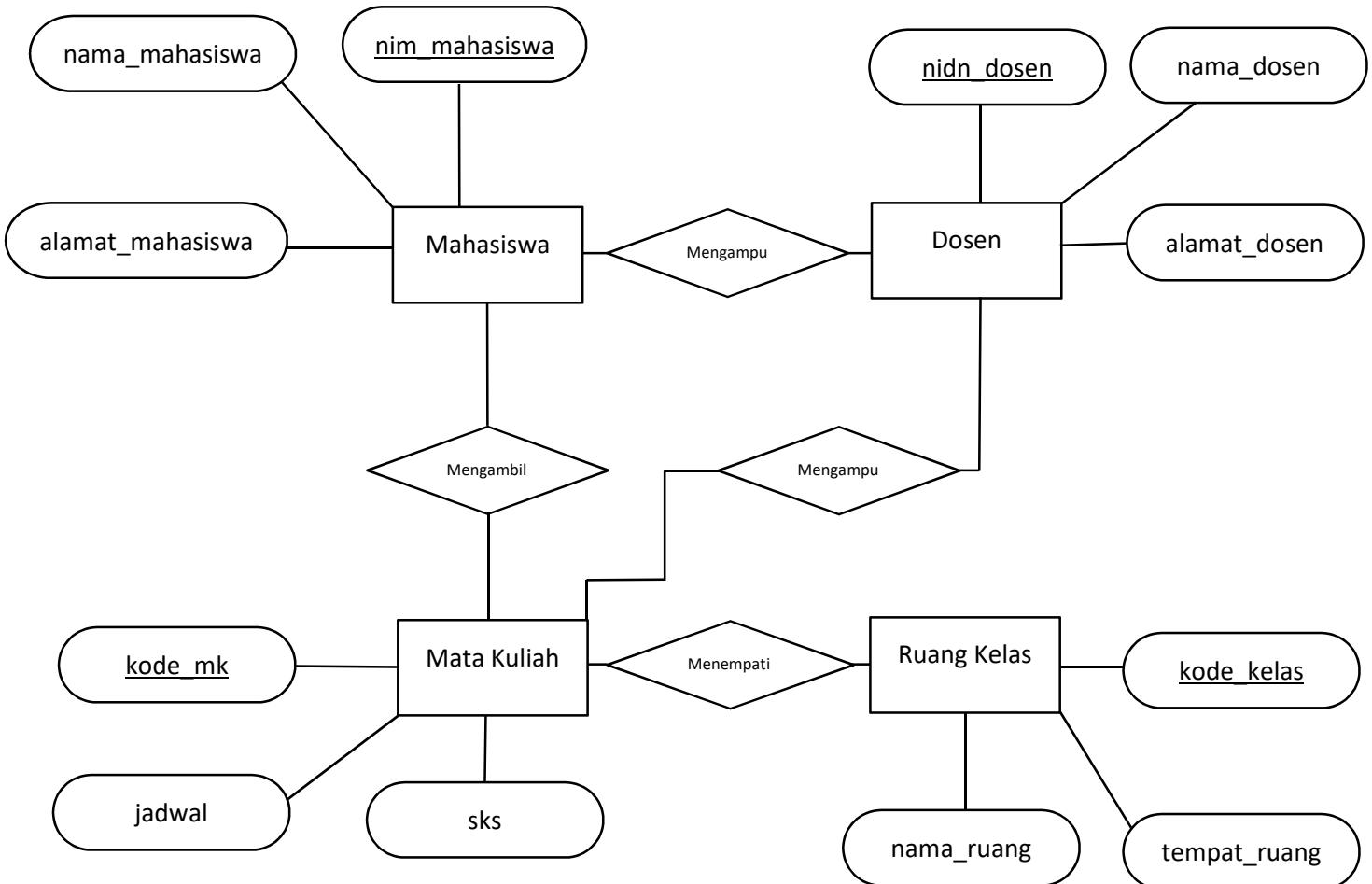
### 3. Menentukan relationship (hubungan) antar entitas.

	<b>Mahasiswa</b>	<b>Dosen</b>	<b>Mata Kuliah</b>	<b>Ruang Kelas</b>
<b>Mahasiswa</b>	-	m :n	m :n	-
<b>Dosen</b>		-	m :n	-
<b>Mata Kuliah</b>			-	1 :n
<b>Ruang Kelas</b>				-

#### Hubungan :

- Dosen mengampu Mahasiswa:
  - Tabel Utama : Dosen, Mahasiswa
  - Tabel Kedua : Mahasiswa
  - Relationship : Many-to-many ( m:n )
  - Attribute penghubung : nidn\_dosen, nim\_mahasiswa (FK nidn\_dosen, nim\_mahasiswa di dosen\_teach\_mahasiswa)
- Mahasiswa mengambil Mata Kuliah :
  - Tabel Utama : Mahasiswa, Mata Kuliah
  - Tabel Kedua : Mata Kuliah
  - Relationship : Many-to-many ( m:n )
  - Attribute penghubung : nim\_mahasiswa, kode\_mk (FK nim\_mahasiswa, kode\_mk di mahasiswa\_take\_mata\_kuliah)
- Dosen mengampu Mata Kuliah :
  - Tabel Utama : Dosen, Mata Kuliah
  - Tabel Kedua : Mata Kuliah
  - Relationship : Many-to-many ( m:n )
  - Attribute penghubung : nidn\_dosen, kode\_mk (FK nidn\_dosen, kode\_mk di dosen\_teach\_mata\_kuliah)
- Mata Kuliah menempati Ruang Kelas :
  - Tabel Utama : Mata Kuliah
  - Tabel Kedua : Ruang Kelas
  - Relationship : One-to-many ( 1:n )
  - Attribute penghubung : kode\_mk (FK kode\_mk di ruang\_kelas)

#### 4. Menggambar ERD Diagram



## 2. E-Rapor SD

### 1. Menentukan entities (object-object dasar) yang perlu ada di database.

- Guru : menyimpan semua data pribadi tentang guru
- Siswa : menyimpan semua data pribadi tentang siswa
- Orang Tua/Wali : menyimpan semua data pribadi tentang orang tua/wali
- Mata Pelajaran : menyimpan semua data pribadi tentang mata pelajaran

### 2. Menentukan Attributes (sifat-sifat) masing-masing *entity* sesuai kebutuhan database.

- Guru :
  - NIP : (varchar(45)) PK
  - Nama : (varchar (45))
  - Alamat : (varchar (255))
- Siswa :
  - No\_induk : (varchar(45)) PK
  - Nama : (varchar (45))
  - Alamat : (varchar (255))
- Orang Tua/Wali :
  - NIK : (integer(45)) PK
  - Nama : (varchar (255))
  - Jenis\_kelamin : (varchar (255))
- Mata Pelajaran :
  - Kode\_mapel : (varchar(45)) PK
  - Nilai : (varchar (255))
  - Kkm : (varchar (255))

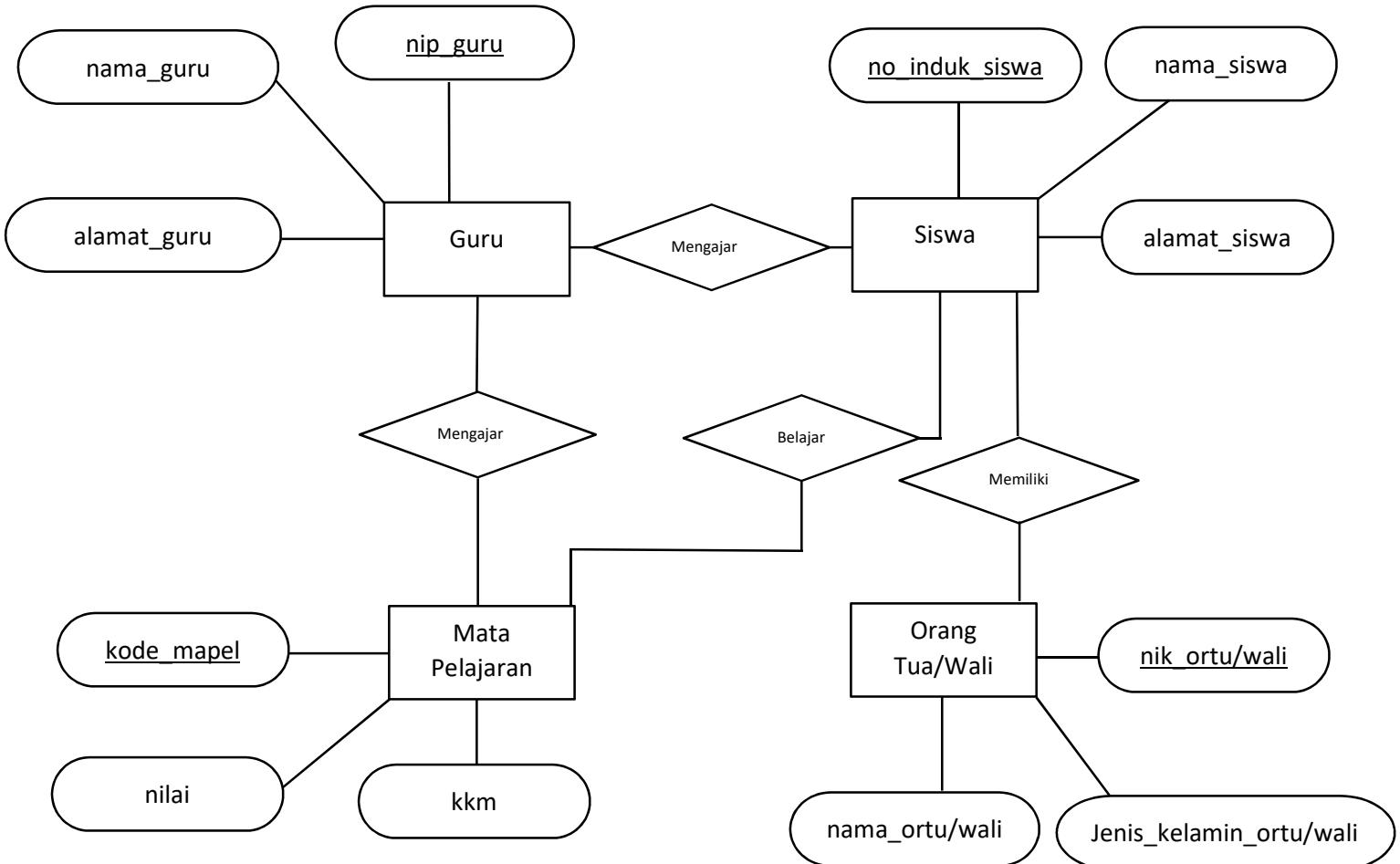
### 3. Menentukan relationship (hubungan) antar entitas.

	Guru	Siswa	Orang Tua/Wali	Mata Pelajaran
Guru	-	m:n	-	m:n
Siswa		-	1 :1	m:n
Orang Tua/Wali			-	-
Mata Pelajaran				-

## **Hubungan :**

- Guru mengajar Siswa :
  - Tabel Utama : Guru, Siswa
  - Tabel Kedua : Siswa
  - Relationship : Many-to-many ( m:n )
  - Attribute penghubung : nip\_guru, no\_induk\_siswa (FK nip\_guru, no\_induk\_siswa di guru\_teach\_siswa)
- Guru mengajar Mata Pelajaran :
  - Tabel Utama : Guru, Mata Pelajaran
  - Tabel Kedua : Mata Pelajaran
  - Relationship : Many-to-many ( m:n )
  - Attribute penghubung : nip\_guru, kode\_mapel (FK nip\_guru, kode\_mapel di guru\_teach\_mata\_pelajaran)
- Siswa belajar Mata Pelajaran :
  - Tabel Utama : Siswa, Mata Pelajaran
  - Tabel Kedua : Mata Pelajaran
  - Relationship : Many-to-many ( m:n )
  - Attribute penghubung : no\_induk\_siswa, kode\_mapel (FK no\_induk\_siswa di siswa\_study\_mata\_pelajaran)
- Siswa memiliki Orang Tua/Wali :
  - Tabel Utama : Siswa
  - Tabel Kedua : Orang Tua/Wali
  - Relationship : One-to-one ( 1:1 )
  - Attribute penghubung : no\_induk\_siswa (FK no\_induk\_siswa di Orang Tua/Wali)

#### 4. Menggambar ERD Diagram



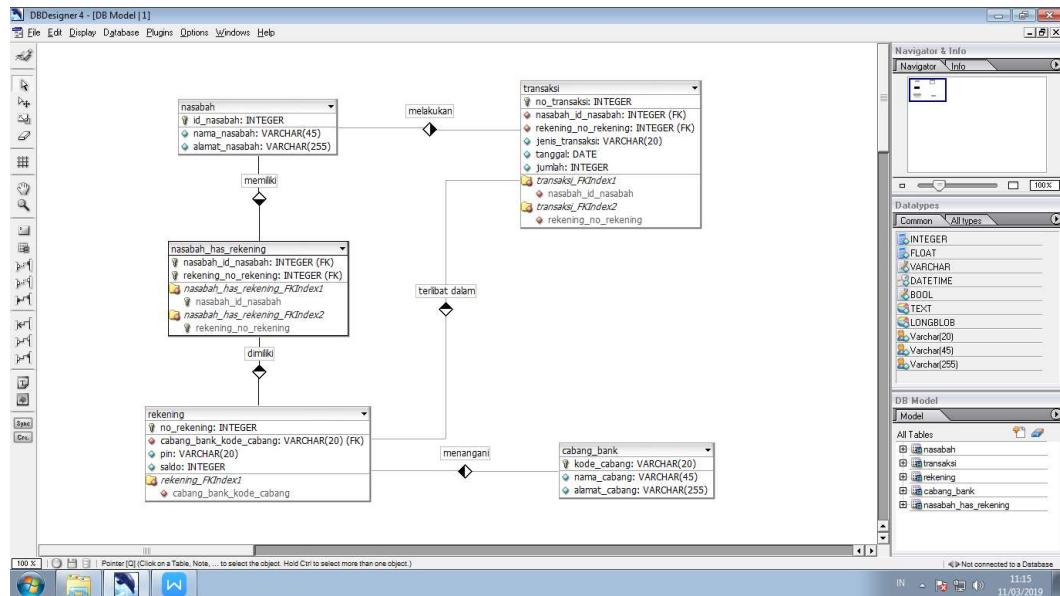
# LAPORAN PRAKTIKUM SISTEM BASIS DATA

## MODUL 3 ( Perancangan E-R Diagram dengan DB Designer )

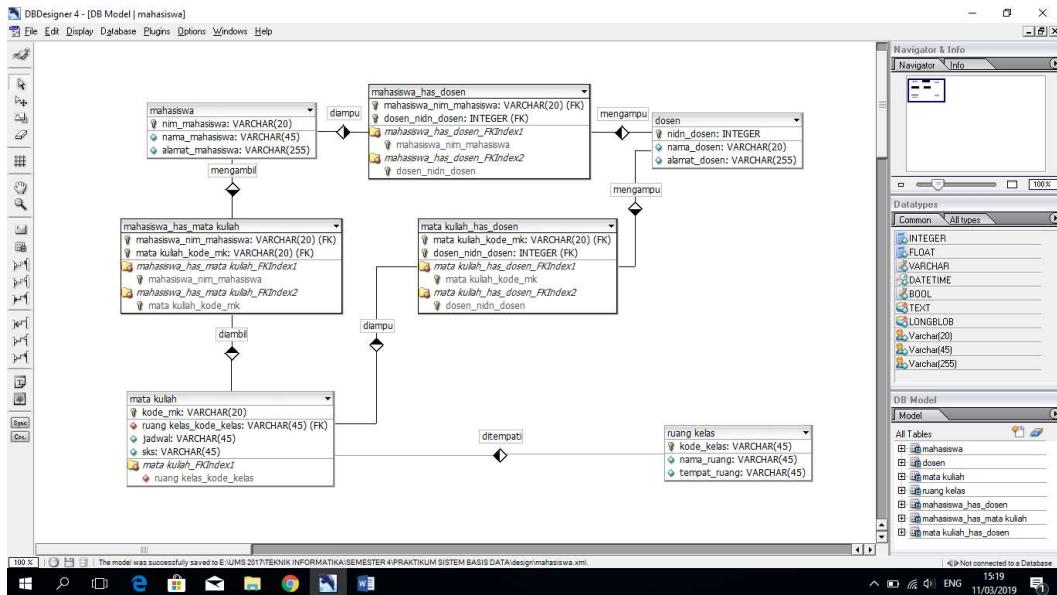
NAMA : RIZA FRISNANDA  
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KELAS : A  
NAMA ASSISTANT LAB : REGITA CAHYA  
TANGGAL PRAKTIKUM : 11/03/2019

### Tugas

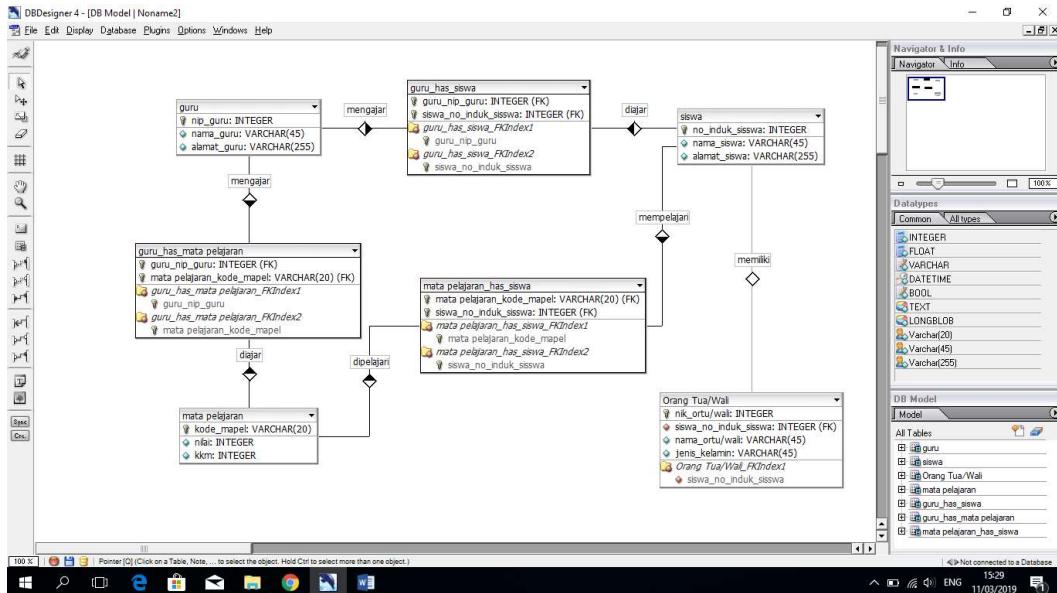
#### 1. Transaksi Perbankan



## 2. Mahasiswa



## 3. E-Rapor SD



# LAPORAN PRAKTIKUM SISTEM BASIS DATA

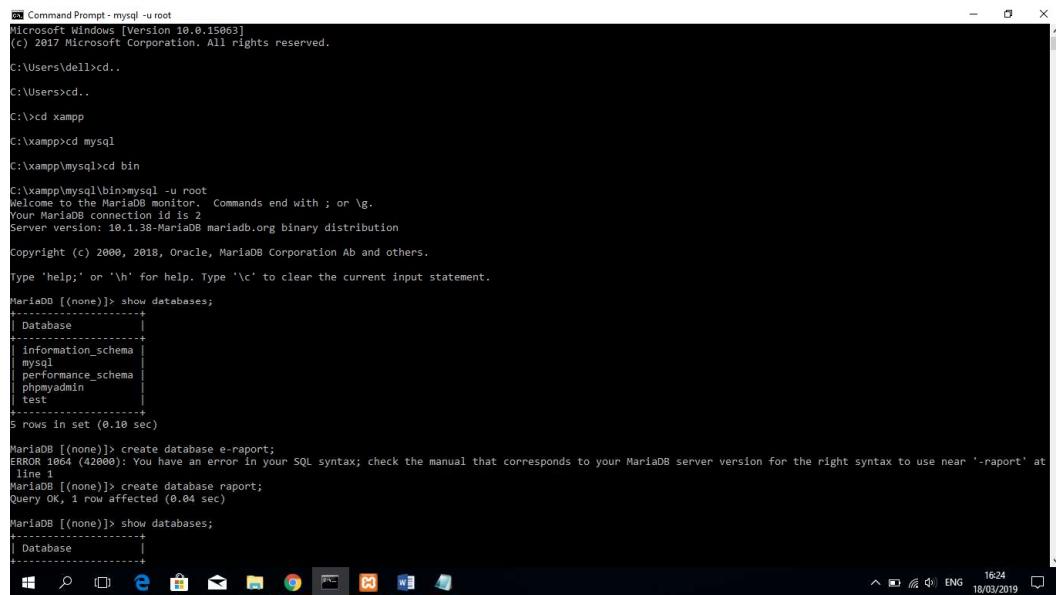
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## MODUL 4 ( Data Definition Language ( DDL ) )

NAMA : RIZA FRISNANDA  
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KELAS : A  
NAMA ASSISTANT LAB : REGITA CAHYA  
TANGGAL PRAKTIKUM : 18/03/2019

### Tugas database report

### Cara Membuat



```
Command Prompt - mysql -u root
Microsoft Windows [Version 10.0.15063]
(c) 2017 Microsoft Corporation. All rights reserved.

C:\Users\dell>cd..
C:\Users>cd..
C:\>cd xampp
C:\xampp>cd mysql
C:\xampp\mysql>cd bin
C:\xampp\mysql\bin>mysql -u root
Welcome to the MariaDB monitor. Commands end with ; or \g.
Your MariaDB connection id is 2
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 (0.10 sec)

MariaDB [(none)]> create database e-raport;
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 '-raport' at
line 1
MariaDB [(none)]> create database raport;
Query OK, 1 row affected (0.04 sec)

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

```
Command Prompt - mysql -u root
MariaDB [(none)]> show databases;
+-----+
| Database      |
+-----+
| information_schema |
| mysql          |
| performance_schema |
| phpmyadmin     |
| report         |
| test           |
+-----+
6 rows in set (0.00 sec)

MariaDB [(none)]> use report;
Database changed
MariaDB [report]> create table siswa;
ERROR 1113 (42000): A table must have at least 1 column
MariaDB [report]> create table siswa(
    > no_induk_siswa integer(20) primary key,
    > nama_siswa varchar(45),
    > alamat_siswa(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 '(255)' at line 3
MariaDB [report]> create table siswa(
    > no_induk_siswa integer(20) primary key,
    > nama_siswa varchar(45),
    > alamat_siswa varchar(255));
Query OK, 0 rows affected (0.29 sec)

MariaDB [report]> show tables;
+-----+
| Tables_in_report |
+-----+
| siswa           |
+-----+
1 row in set (0.00 sec)

MariaDB [report]> create table guru(
    > nip_guru integer(20) primary key,
    > nama_guru varchar(45),
    > alamat_guru varchar(255));
Query OK, 0 rows affected (0.25 sec)

16:24
18/03/2019
```

```
Command Prompt - mysql -u root
MariaDB [report]> create table mata_pelajaran(
    > kode_mapel varchar(20) primary key,
    > nilai integer(20),
    > kkm integer(20));
Query OK, 0 rows affected (0.28 sec)

MariaDB [report]> create table orang_tua(
    > nik_ortu integer(20) primary key,
    > no_induk_siswafk integer(20) preferences siswa(no_induk_siswa) on delete cascade on update cascade,
    > nama_ortu varchar(45),
    > jenis_kelamin varchar(45));
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 'siswa(no_in
duk_siswa)' or delete cascade on update cascade,
name_ortu varchar(45) at line 3
MariaDB [report]> create table orang_tua(
    > nik_ortu integer(20) primary key,
    > no_induk_siswafk integer(20) preferences siswa(no_induk_siswa) on delete cascade on update cascade,
    > nama_ortu varchar(45),
    > jenis_kelamin varchar(45));
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 'siswa(no_in
duk_siswa)' or delete cascade on update cascade,
name_ortu varchar(45) at line 3
MariaDB [report]> desc siswa;
+-----+-----+-----+-----+-----+-----+
| Field        | Type      | Null | Key | Default | Extra   |
+-----+-----+-----+-----+-----+-----+
| no_induk_siswa | int(20)  | NO   | PRI | NULL    |          |
| nama_siswa   | varchar(45) | YES  |     | NULL    |          |
| alamat_siswa | varchar(255) | YES  |     | NULL    |          |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.12 sec)

MariaDB [report]> show tables;
+-----+
| Tables_in_report |
+-----+
| guru            |
| mata_pelajaran |
| siswa           |
+-----+
3 rows in set (0.00 sec)

MariaDB [report]> create table orang_tua(
16:25
18/03/2019
```

```
Command Prompt - mysql -u root
MariaDB [raport] create table orang_tua(
    -> nik_ortu integer(20) primary key,
    -> no_induk_siswafk integer(20) references siswa(no_induk_siswa) on delete cascade on update cascade,
    -> nama_ortu varchar(45),
    -> jenis_kelamin varchar(45));
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 'delete casc
ade on update cascade' at line 3
MariaDB [raport] create table orang_tua(
    -> nik_ortu integer(20) primary key,
    -> no_induk_siswafk integer(20) references siswa(no_induk_siswa) on delete cascade on update cascade,
    -> nama_ortu varchar(45),
    -> jenis_kelamin varchar(45));
Query OK, 0 rows affected (0.25 sec)

MariaDB [raport] show tables;
+-----+
| Tables_in_raport |
+-----+
| guru           |
| mata_pelajaran |
| orang_tua      |
| siswa          |
+-----+
4 rows in set (0.00 sec)

MariaDB [raport] desc orang_tua;
+-----+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| nik_ortu | int(20) | NO   | PRI | NULL    |       |
| no_induk_siswafk | int(20) | YES  |     | NULL    |       |
| nama_ortu | varchar(45) | YES  |     | NULL    |       |
| jenis_kelamin | varchar(45) | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.08 sec)

MariaDB [raport] create table guru_has_siswa(
    -> nip_guruPk integer(20) references guru(nip_guru) on delete cascade on update cascade,date cascade,
    -> no_induk_siswafk integer(20) references siswa(no_induk_siswa) on delete cascade on update cascade);
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 'cascade,
no_induk_siswafk integer(20) references siswa(no_induk_siswa) on delete' at line 2
MariaDB [raport] create table guru_has_siswa(
    -> nip_guruPk integer(20) references guru(nip_guru) on delete cascade on update cascade,
    -> no_induk_siswafk integer(20) references siswa(no_induk_siswa) on delete cascade on update cascade);
Query OK, 0 rows affected (0.26 sec)

MariaDB [raport] desc guru_has_siswa;
+-----+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| nip_guruPk | int(20) | YES  |     | NULL    |       |
| no_induk_siswafk | int(20) | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.02 sec)

MariaDB [raport] create table guru_has_mata_pelajaran(
    -> nip_guruPk integer(20) references guru(nip_guru) on delete cascade on update cascade,
    -> kode_mapelfk varchar(20) references mata_pelajaran(kode_mapel) on delete cascade on update cascade);
Query OK, 0 rows affected (0.30 sec)

MariaDB [raport] desc guru_has_mata_pelajaran;
+-----+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| nip_guruPk | int(20) | YES  |     | NULL    |       |
| kode_mapelfk | varchar(20) | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.10 sec)

MariaDB [raport] create table mata_pelajaran_has_siswa(
    -> kode_mapelfk varchar(20) references mata_pelajaran(kode_mapel) on delete cascade on update cascade,
    -> no_induk_siswafk integer(20) references siswa(no_induk_siswa) on delete cascade on update cascade);
Query OK, 0 rows affected (0.26 sec)

MariaDB [raport] desc mata_pelajaran_has_siswa;
+-----+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| kode_mapelfk | varchar(20) | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+

```

```
Command Prompt - mysql -u root
MariaDB [raport] create table guru_has_siswa(
    -> nip_guruPk integer(20) references guru(nip_guru) on delete cascade on update cascade,date cascade,
    -> no_induk_siswafk integer(20) references siswa(no_induk_siswa) on delete cascade on update cascade);
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 'cascade,
no_induk_siswafk integer(20) references siswa(no_induk_siswa) on delete' at line 2
MariaDB [raport] create table guru_has_siswa(
    -> nip_guruPk integer(20) references guru(nip_guru) on delete cascade on update cascade,
    -> no_induk_siswafk integer(20) references siswa(no_induk_siswa) on delete cascade on update cascade);
Query OK, 0 rows affected (0.26 sec)

MariaDB [raport] desc guru_has_siswa;
+-----+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| nip_guruPk | int(20) | YES  |     | NULL    |       |
| no_induk_siswafk | int(20) | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.02 sec)

MariaDB [raport] create table guru_has_mata_pelajaran(
    -> nip_guruPk integer(20) references guru(nip_guru) on delete cascade on update cascade,
    -> kode_mapelfk varchar(20) references mata_pelajaran(kode_mapel) on delete cascade on update cascade);
Query OK, 0 rows affected (0.30 sec)

MariaDB [raport] desc guru_has_mata_pelajaran;
+-----+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| nip_guruPk | int(20) | YES  |     | NULL    |       |
| kode_mapelfk | varchar(20) | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.10 sec)

MariaDB [raport] create table mata_pelajaran_has_siswa(
    -> kode_mapelfk varchar(20) references mata_pelajaran(kode_mapel) on delete cascade on update cascade,
    -> no_induk_siswafk integer(20) references siswa(no_induk_siswa) on delete cascade on update cascade);
Query OK, 0 rows affected (0.26 sec)

MariaDB [raport] desc mata_pelajaran_has_siswa;
+-----+-----+-----+-----+-----+-----+
| Field | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| kode_mapelfk | varchar(20) | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+

```

```
Command Prompt - mysql -u root
MariaDB [raport]> desc mata_pelajaran_has_siswa;
+-----+-----+-----+-----+-----+
| Field | Type  | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| kode_mapel_fk | varchar(20) | YES |   | NULL |       |
| no_Induk_siswafk | int(20) | YES |   | NULL |       |
+-----+-----+-----+-----+-----+
2 rows in set (0.02 sec)

MariaDB [raport]> show databases;
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| performance_schema |
| phpmyadmin |
| raport |
| test |
+-----+
6 rows in set (0.00 sec)

MariaDB [raport]> show tables;
+-----+
| Tables_in_raport |
+-----+
| guru |
| guru_has_mata_pelajaran |
| guru_has_siswa |
| mata_pelajaran |
| mata_pelajaran_has_siswa |
| orang_tua |
| siswa |
+-----+
7 rows in set (0.00 sec)

MariaDB [raport]> desc guru;
+-----+-----+-----+-----+-----+
| Field | Type  | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| nip_guru | int(20) | NO | PRI | NULL |       |
| nama_guru | varchar(45) | YES |   | NULL |       |
| alamat_guru | varchar(255) | YES |   | NULL |       |
+-----+-----+-----+-----+-----+
3 rows in set (0.02 sec)

16:26 18/03/2019
```

## Hasil

```
Command Prompt - mysql -u root
+-----+-----+-----+-----+-----+
2 rows in set (0.02 sec)

MariaDB [raport]> show databases;
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| performance_schema |
| phpmyadmin |
| raport |
| test |
+-----+
6 rows in set (0.00 sec)

MariaDB [raport]> show tables;
+-----+
| Tables_in_raport |
+-----+
| guru |
| guru_has_mata_pelajaran |
| guru_has_siswa |
| mata_pelajaran |
| mata_pelajaran_has_siswa |
| orang_tua |
| siswa |
+-----+
7 rows in set (0.00 sec)

MariaDB [raport]> desc guru;
+-----+-----+-----+-----+-----+
| Field | Type  | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| nip_guru | int(20) | NO | PRI | NULL |       |
| nama_guru | varchar(45) | YES |   | NULL |       |
| alamat_guru | varchar(255) | YES |   | NULL |       |
+-----+-----+-----+-----+-----+
3 rows in set (0.02 sec)

MariaDB [raport]> desc guru_has_mata_pelajaran;
+-----+-----+-----+-----+-----+
| Field | Type  | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
16:20 18/03/2019
```

```
Command Prompt - mysql -u root
MariaDB [raport]> desc guru_has_mata_pelajaran;
+-----+-----+-----+-----+-----+
| Field | Type  | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| nip_gurufk | int(20) | YES |   | NULL |
| kode_mapelfk | varchar(20) | YES |   | NULL |
+-----+-----+-----+-----+-----+
2 rows in set (0.08 sec)

MariaDB [raport]> desc guru_has_siswa;
+-----+-----+-----+-----+-----+
| Field | Type  | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| nip_gurufk | int(20) | YES |   | NULL |
| no_Induk_siswafk | int(20) | YES |   | NULL |
+-----+-----+-----+-----+-----+
2 rows in set (0.11 sec)

MariaDB [raport]> desc mata_pelajaran;
+-----+-----+-----+-----+-----+
| Field | Type  | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| kode_mapel | varchar(20) | NO | PRI | NULL |
| nilai | int(20) | YES |   | NULL |
| kkm | int(20) | YES |   | NULL |
+-----+-----+-----+-----+-----+
3 rows in set (0.02 sec)

MariaDB [raport]> desc mata_pelajaran_has_siswa;
+-----+-----+-----+-----+-----+
| Field | Type  | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| kode_mapelfk | varchar(20) | YES |   | NULL |
| no_Induk_siswafk | int(20) | YES |   | NULL |
+-----+-----+-----+-----+-----+
2 rows in set (0.02 sec)

MariaDB [raport]> desc orang_tua;
+-----+-----+-----+-----+-----+
| Field | Type  | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| nik_ortu | int(20) | NO | PRI | NULL |
| no_Induk_siswafk | int(20) | YES |   | NULL |
+-----+-----+-----+-----+-----+
2 rows in set (0.02 sec)
```

```
Command Prompt - mysql -u root
MariaDB [raport]> desc mata_pelajaran;
+-----+-----+-----+-----+-----+
| Field | Type  | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| kode_mapel | varchar(20) | NO | PRI | NULL |
| nilai | int(20) | YES |   | NULL |
| kkm | int(20) | YES |   | NULL |
+-----+-----+-----+-----+-----+
3 rows in set (0.02 sec)

MariaDB [raport]> desc mata_pelajaran_has_siswa;
+-----+-----+-----+-----+-----+
| Field | Type  | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| kode_mapelfk | varchar(20) | YES |   | NULL |
| no_Induk_siswafk | int(20) | YES |   | NULL |
+-----+-----+-----+-----+-----+
2 rows in set (0.02 sec)

MariaDB [raport]> desc orang_tua;
+-----+-----+-----+-----+-----+
| Field | Type  | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| nik_ortu | int(20) | NO | PRI | NULL |
| no_Induk_siswafk | int(20) | YES |   | NULL |
| nama_ortu | varchar(45) | YES |   | NULL |
| jenis_kelamin | varchar(45) | YES |   | NULL |
+-----+-----+-----+-----+-----+
4 rows in set (0.02 sec)

MariaDB [raport]> desc siswa;
+-----+-----+-----+-----+-----+
| Field | Type  | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| no_Induk_siswa | int(20) | NO | PRI | NULL |
| nama_siswa | varchar(45) | YES |   | NULL |
| alamat_siswa | varchar(255) | YES |   | NULL |
+-----+-----+-----+-----+-----+
3 rows in set (0.02 sec)

MariaDB [raport]>
```

# LAPORAN PRAKTIKUM SISTEM BASIS DATA

## MODUL 5 ( Data Manipulation Language ( DML ) )

NAMA : RIZA FRISNANDA  
NIM : L200170001  
KELAS : A  
NAMA ASSISTANT LAB : REGITA CAHYA  
TANGGAL PRAKTIKUM : 25/03/2019

### 1. Menambah nasabah

Kode :

```
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'>;
```

Hasil :

```
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 |
| 7 | Sari Murti | Jl. Pangandaran 11 |
| 8 | Canka Lokananta | Jl. Tidar 86 |
| 9 | Budi Murtono | Jl. Merak 22 |
| 10 | Budi Murtopo | Jl. Perak 20 |
| 11 | Budi Subagiyo | Jl. AhmadYani 10 |
| 12 | Sumaryanto | Jl. Nanas 2 |
| 13 | Sulatan Wakanda | Jl. Asia Frika 1 |
| 14 | Rudi | Jl. Semangka 33 |
| 15 | Yerika | Jl. Salak 76 |
| 16 | Michele | Jl. Duku 56 |
| 17 | Kevin | Jl. Lemon 24 |
| 18 | Ahmad | Jl. Obama 8 |
| 19 | Ahmad Sudarmono | Jl. Donald 22 |
+-----+-----+-----+
19 rows in set (0.06 sec)
```

## 2. Menambah cabang bank

Kode :

```
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 Surabaya', 'Jl. Slamet Riyadi 18'),
-> ('BRUSR', 'Bank Rut Unit Solo Raya', 'Jl. Slamet Riyadi 54'),
-> ('BRUSUR', 'Bank Rut Unit Wonogiri', 'Jl. A.Yani No.23'),
-> ('BRUY', 'Bank Rut Unit Yogyakarta', 'Jl. Anggrek 21');
```

Hasil :

```
MariaDB [modul_5]> select * from cabang_bank;
+-----+-----+-----+
| kode_cabang | nama_cabang | alamat_cabang |
+-----+-----+-----+
| BRUA | Bank Rut Unit Aceh | Jl. Ahmad Yani 8 |
| BRUBB | Bank Rut Unit Boyolali | Jl. Ahmad yani 45 |
| BRUC | Bank Rut Unit Bangka Belitung | Jl. Kenangan 12 |
| BRUD | Bank Rut Unit Cilacap | Jl. Tentara Pelajar 34 |
| BRUK | 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 Semarang | Jl. Slamet Riyadi 18 |
| BRUSD | Bank Rut Unit Sungai Danau | Jl. Gethek 2 |
| BRUSE | Bank Rut Unit Surakarta | 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 |
| BRWU | Bank Rut Unit Wonogiri | Jl. A.Yani No.23 |
| BRUY | Bank Rut Unit Yogyakarta | Jl. Anggrek 21 |
+-----+-----+-----+
15 rows in set (0.04 sec)
```

## 3. Menambah rekening

Kode :

```
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');
```

Hasil :

MariaDB [modul_5]> 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	
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	

#### 4. Menambah nasabah\_has\_rekening

Kode :

```
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);
```

Hasil :

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

## 5. Menambah transaksi

Kode :

```
MariaDB [modul_5]> 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);
```

Hasil :

kesimpulan dari percobaan diatas adalah saat kita memasukkan record ke dalam database maka secara otomatis data di dalam database bertambah dan sesuai pada table yang ada

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)

# LAPORAN PRAKTIKUM SISTEM BASIS DATA

---

## MODUL 6 ( Query Standart dan Variasinya )

NAMA : RIZA FRISNANDA  
NIM : L200170001  
KELAS : A  
NAMA ASSISTANT LAB : ONY  
TANGGAL PRAKTIKUM : 29/04/2019

### E. Tugas

1. Tampilkan nama nasabah dan alamat nasabah diurutkan berdasarkan nama nasabah!

nama_nasabah	alamat_nasabah
Andara	Jl. Pertama 26
Bening	Jl. Agatis 10
Budi Eko Prayogo	Jl. Kantil 30
Budi Martono	Jl. Merak 22
Canka Lokananta	Jl. Tidar 86
Cinta	Jl. Ketiga 24
Danindya	Jl. Aki Balak 22
Kartika Padmasari	Jl. Manggis 15
Khatulistiawara	Jl. Ir. Soekarno 12
Maryati	Jl. MT Haryono 31
Muliana	Jl. Jend. Sudirman 97
Pandan Wangi	Jl. Imam Bonjol 20
Puput	Jl. AMD 10
Putri	Jl. Diponegoro 19
Rangga	Jl. Kedua 80
Sari Murti	Jl. Pangandaran 11
Satria Eka Jaya	Jl. Slamet Riyadi 45
Suparnan	Jl. Hasanudin 81
Sutopo	Jl. Jendral Sudirman 12
Trianandya	Jl. Sutoyo 5

20 rows in set (0.00 sec)

2. Tampilkan jenis transaksi dan jumlah transaksi dimana jenis transaksinya adalah kredit!

```
MariaDB [perbankan]> select jenis_transaksi,jumlah from transaksi where jenis_transaksi like "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          | 20000 |
| kredit          | 25000 |
| kredit          | 50000 |
| kredit          | 50000 |
| kredit          | 50000 |
| kredit          | 125000 |
| kredit          | 125000 |
| kredit          | 175000 |
| kredit          | 80000 |
| kredit          | 130000 |
| kredit          | 150000 |
+-----+-----+
4 rows in set <0.00 sec>
```

3. Tampilkan jenis transaksi dan jumlah transaksi yang melakukan transaksi pada tanggal 21 November 2009 dan diurutkan berdasarkan jumlah transaksi!

```
MariaDB [perbankan]> 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>
```

4. Tampilkan nama nasabah, jenis transaksi dan jumlah transaksi dimana jumlah transaksi = Rp 20.000!

```
MariaDB [perbankan]> select nama_nasabah,jenis_transaksi, jumlah from nasabah, transaksi where nasabah.id_nasabah = transaksi.id_nasabahPK 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 |
| Puput | kredit | 20000 |
+-----+-----+-----+
6 rows in set <0.00 sec>
```

5. Tampilkan nama nasabah dan alamat nasabah dimana nama nasabah diawali dengan kata 'Su'!

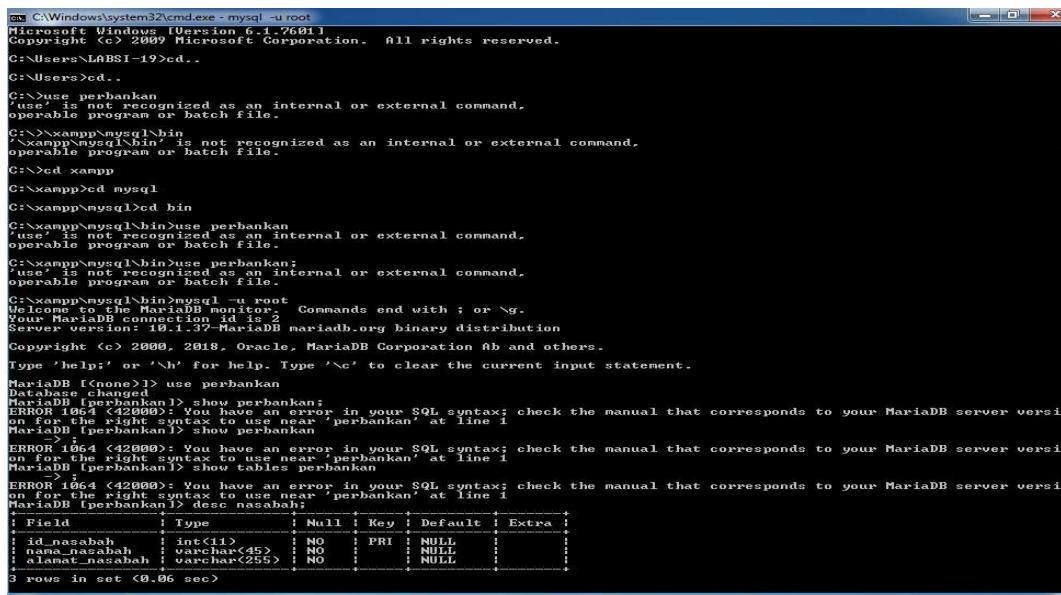
```
MariaDB [perbankan]> select nama_nasabah,alamat_nasabah from nasabah where nama_nasabah like "Su%";  
+-----+-----+  
| nama_nasabah | alamat_nasabah |  
+-----+-----+  
| Sutopo      | Jl. Jendral Sudirman 12 |  
| Suparman    | Jl. Hasanudin 81  |  
+-----+-----+  
2 rows in set <0.00 sec>
```

# LAPORAN PRAKTIKUM SISTEM BASIS DATA

## MODUL 7 ( JOIN )

NAMA : RIZA FRISNANDA  
NIM : L200170001  
KELAS : A  
NAMA ASSISTANT LAB : ONY  
TANGGAL PRAKTIKUM : 13/05/2019

### E. Tugas



```
ex C:\Windows\system32\cmd.exe - mysql -u root
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\LABSI-19>cd..
C:\Users>d..
C:\>use perbankan
'use' is not recognized as an internal or external command,
operable program or batch file.

C:\>>>xampp\mysql\bin
'>\xampp\mysql\bin' is not recognized as an internal or external command,
operable program or batch file.

C:\>>d xampp
C:\>>d mysql
C:\>>xampp\mysql\bin
C:\>>xampp\mysql\bin>use perbankan
'use' is not recognized as an internal or external command,
operable program or batch file.

C:\>>xampp\mysql\bin>use perbankan;
'use' is not recognized as an internal or external command,
operable program or batch file.

C:\>>xampp\mysql\bin>mysql -u root
MySQL [(none)]> use perbankan
Commands end with ; or \g.
Your MariaDB connection id is 2
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)]> show perbankan;
ERROR 1064 <42000>: You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server versi
on for the right syntax to use near 'perbankan' at line 1
MariaDB [(perbankan)]> show tables perbankan
ERROR 1064 <42000>: You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server versi
on for the right syntax to use near 'perbankan' at line 1
MariaDB [(perbankan)]> desc nasabah;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| id_nasabah | int<11> | NO | PRI | NULL |
| nama_nasabah | varchar<45> | NO | NULL |
| alamat_nasabah | varchar<255> | NO | NULL |
+-----+-----+-----+-----+-----+
3 rows in set (0.06 sec)
```

```

ex: C:\Windows\system32\cmd.exe - mysql -u root
MariaDB [perbankan]> select nama_nasabah, alamat_nasabah, jenis_transaksi, jumlah from nasabah_transaksi where jenis_transaksi = 'kredit' and nasabah.id_nasabah = transaksi.id_nasabahFK order by nama_nasabah;
ERROR 1146 (42S02): Table 'perbankan.nasabah' doesn't exist
MariaDB [perbankan]> select nama_nasabah, alamat_nasabah, jenis_transaksi, jumlah from nasabah_transaksi where jenis_transaksi = 'kredit' and nasabah.id_nasabah = transaksi.id_nasabahFK order by nama_nasabah;
+-----+-----+-----+-----+
| nama_nasabah | alamat_nasabah | jenis_transaksi | jumlah |
+-----+-----+-----+-----+
| Budi Eko Prayogo | Jl. Kantil 30 | kredit | 300000 |
| 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. Sutopo 5 | kredit | 130000 |
| Kartika Padmasari | Jl. Manggis 15 | kredit | 100000 |
| Kartika Padmasari | Jl. Manggis 15 | kredit | 200000 |
| Kartika Padmasari | Jl. Manggis 15 | kredit | 200000 |
| Maryati | Jl. MT. Haryono 31 | kredit | 200000 |
| Sari Murti | Jl. Pangandaran 11 | kredit | 357000 |
| Suparman | Jl. Hasanudin 81 | kredit | 100000 |
| Suparman | Jl. Hasanudin 81 | kredit | 500000 |
| Suparman | Jl. Hasanudin 81 | kredit | 500000 |
| Suparman | Jl. Hasanudin 81 | kredit | 100000 |
| Sutopo | Jl. Jendral Sudirman 12 | kredit | 520000 |
| Sutopo | Jl. Jendral Sudirman 12 | kredit | 100000 |
| Sutopo | Jl. Jendral Sudirman 12 | kredit | 200000 |
17 rows in set <0.01 sec>

MariaDB [perbankan]> select no_transaksiPK,nama_nasabah,jenis_transaksi,jumlah from nasabah_transaksi where tanggal ='2009-11-21' and nasabah.id = transaksi.id_nasabahFK order by nama_nasabah;
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.id = transaksi.id_nasabahFK' at line 1
MariaDB [perbankan]> select rekening.no_rekening,nasabah.nama_nasabah,transaksi.jenis_transaksi,transaksi.jumlah FROM rekening,nasabah,transaksi where rekening.no_rekening=transaksi.no_rekeningPK and nasabah.id_nasabah=transaksi.id_nasabahFK and tanggal ='2009-11-21' order by nama_nasabah;
+-----+-----+-----+-----+
| no_rekening | nama_nasabah | jenis_transaksi | jumlah |
+-----+-----+-----+-----+
| 195 | 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_rekening=transaksi.no_rekeningPK and nasabah.id_nasabah=transaksi.id_nasabahFK and jumlah = '20000';
+-----+-----+-----+-----+
| no_rekening | nama_nasabah | jenis_transaksi | jumlah |
+-----+-----+-----+-----+
| 191 | Kartika Padmasari | kredit | 20000 | |
| 192 | Budi Eko Prayogo | debit | 20000 |
| 191 | Kartika Padmasari | kredit | 20000 |
| 192 | Budi Eko Prayogo | debit | 20000 |
| 193 | Canka Lokananta | debit | 20000 |
| 194 | Kartika Padmasari | kredit | 200000 |
| 195 | Maryati | Jl. MT. Haryono 31 | kredit | 100000 |
| 196 | Sari Murti | Jl. Pangandaran 11 | kredit | 357000 |
| 197 | Suparman | Jl. Hasanudin 81 | kredit | 100000 |
| 198 | Suparman | Jl. Hasanudin 81 | kredit | 500000 |
| 199 | Suparman | Jl. Hasanudin 81 | kredit | 500000 |
| 200 | Sutopo | Jl. Jendral Sudirman 12 | kredit | 520000 |
| 201 | Sutopo | Jl. Jendral Sudirman 12 | kredit | 100000 |
| 202 | Sutopo | Jl. Jendral Sudirman 12 | kredit | 200000 |
5 rows in set <0.01 sec>

MariaDB [perbankan]> select no_transaksiPK,nama_nasabah,jenis_transaksi,jumlah from nasabah_transaksi where tanggal ='2009-11-21' and nasabah.id = transaksi.id_nasabahFK order by nama_nasabah;
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 'id_nasabahFK' at line 1
MariaDB [perbankan]> select rekening.no_rekening,nasabah.nama_nasabah,transaksi.jenis_transaksi,transaksi.jumlah FROM rekening,nasabah,transaksi where rekening.no_rekening=transaksi.no_rekeningPK and nasabah.id_nasabah=transaksi.id_nasabahFK and tanggal ='2009-11-21' order by nama_nasabah;
+-----+-----+-----+-----+
| no_rekening | nama_nasabah | jenis_transaksi | jumlah |
+-----+-----+-----+-----+
| 195 | 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_rekening=transaksi.no_rekeningPK and nasabah.id_nasabah=transaksi.id_nasabahFK and jumlah = '20000';
+-----+-----+-----+-----+
| no_rekening | nama_nasabah | jenis_transaksi | jumlah |
+-----+-----+-----+-----+
| 191 | Kartika Padmasari | kredit | 20000 |
| 192 | Budi Eko Prayogo | debit | 20000 |
| 191 | Kartika Padmasari | kredit | 20000 |
| 192 | Budi Eko Prayogo | debit | 20000 |
| 193 | Canka Lokananta | debit | 20000 |
5 rows in set <0.01 sec>

MariaDB [perbankan]> select no_rekening,nama_nasabah,alamat_nasabah from nasabah,rekening,nasabah_has_rekening where nasabah.id_nasabah=nasabah_has_rekening.id_nasabahFK and rekening.no_rekening=nasabah_has_rekening.no_rekeningPK and nama_nasabah like '%su%';
+-----+-----+-----+
| no_rekening | nama_nasabah | alamat_nasabah |
+-----+-----+-----+
| 194 | Sutopo | Jl. Jendral Sudirman 12 |
| 195 | Suparman | Jl. Hasanudin 81 |
| 196 | Suparman | Jl. Hasanudin 81 |
3 rows in set <0.01 sec>

MariaDB [perbankan]> 

```

```

ex: C:\Windows\system32\cmd.exe - mysql -u root
MariaDB [perbankan]> select no_transaksiPK,nama_nasabah,jenis_transaksi,jumlah from nasabah_transaksi where tanggal ='2009-11-21' and nasabah.id = transaksi.id_nasabahFK order by nama_nasabah;
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 'id_nasabahFK' at line 1
MariaDB [perbankan]> select rekening.no_rekening,nasabah.nama_nasabah,transaksi.jenis_transaksi,transaksi.jumlah FROM rekening,nasabah,transaksi where rekening.no_rekening=transaksi.no_rekeningPK and nasabah.id_nasabah=transaksi.id_nasabahFK and tanggal ='2009-11-21' order by nama_nasabah;
+-----+-----+-----+-----+
| no_rekening | nama_nasabah | jenis_transaksi | jumlah |
+-----+-----+-----+-----+
| 195 | 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_rekening=transaksi.no_rekeningPK and nasabah.id_nasabah=transaksi.id_nasabahFK and jumlah = '20000';
+-----+-----+-----+-----+
| no_rekening | nama_nasabah | jenis_transaksi | jumlah |
+-----+-----+-----+-----+
| 191 | Kartika Padmasari | kredit | 20000 |
| 192 | Budi Eko Prayogo | debit | 20000 |
| 191 | Kartika Padmasari | kredit | 20000 |
| 192 | Budi Eko Prayogo | debit | 20000 |
| 193 | Canka Lokananta | debit | 20000 |
5 rows in set <0.01 sec>

MariaDB [perbankan]> select no_rekening,nama_nasabah,alamat_nasabah from nasabah,rekening,nasabah_has_rekening where nasabah.id_nasabah=nasabah_has_rekening.id_nasabahFK and rekening.no_rekening=nasabah_has_rekening.no_rekeningPK and nama_nasabah like '%su%';
+-----+-----+-----+
| no_rekening | nama_nasabah | alamat_nasabah |
+-----+-----+-----+
| 194 | Sutopo | Jl. Jendral Sudirman 12 |
| 195 | Suparman | Jl. Hasanudin 81 |
| 196 | Suparman | Jl. Hasanudin 81 |
3 rows in set <0.01 sec>

MariaDB [perbankan]> 

```

```

C:\Windows\system32\cmd.exe - mysql -u root
+-----+-----+-----+
| 101 | Kartika Padmasari | kredit | 20000 |
| 102 | Budi Eko Prayogo | debit  | 20000 |
| 110 | Canka Lokananta  | debit  | 20000 |
+-----+-----+-----+
5 rows in set <0.01 sec>

MariaDB [perbankan]> select no_rekening,nama_nasabah,alamat_nasabah from nasabah,rekening,nasabah_has_rekening where nasabah.id_nasabah=nasabah_has_rekening.id_nasabahFK and rekening.no_rekening=nasabah_has_rekening.no_rekeningPK and nama_nasabah like 'S%';
+-----+-----+-----+
| no_rekening | nama_nasabah | alamat_nasabah |
+-----+-----+-----+
| 104 | Sutopo       | Jl. Jendral Sudirman 12 |
| 105 | Suparnan     | Jl. Hasanudin 81      |
| 106 | Suparnan     | Jl. Hasanudin 81      |
+-----+-----+-----+
3 rows in set <0.01 sec>

MariaDB [perbankan]> select no_rekening as 'Nomor Rekening',nama_nasabah as 'Nama Nasabah',jumlah as 'Jumlah Transaksi' from rekening,nasabah,transaksi where rekening.no_rekening=transaksi.no_rekeningPK and nasabah.id_nasabah=transaksi.id_nasabah and transaksi.jenis_transaksi='debit' order by nama_nasabah;
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 'as'Nomor Rekening',nama_nasabah as 'Nama Nasabah',jumlah as 'Jumlah Transaksi' from rekening,nasabah,transaksi where rekening.no_rekening=transaksi.no_rekeningPK and nasabah.id_nasabah=transaksi.id_nasabah and transaksi.jenis_transaksi='debit' at line 1
MariaDB [perbankan]> select no_rekening as 'Nomor Rekening',nama_nasabah as 'Nama Nasabah',jumlah as 'Jumlah Transaksi' from rekening,nasabah,transaksi where rekening.no_rekening=transaksi.no_rekeningPK and nasabah.id_nasabah=transaksi.id_nasabah and jenis_transaksi = 'debit' order by nama_nasabah;
+-----+-----+-----+
| Nomor Rekening | Nama Nasabah | Jumlah Transaksi |
+-----+-----+-----+
| 109 | Anggit       | 7000000          |
| 100 | Anggit       | 7000000          |
| 109 | Anggit       | 7000000          |
| 109 | Anggit       | 7000000          |
| 102 | Budi Eko Prayogo | 2630000          |
| 102 | Budi Eko Prayogo | 2600000          |
| 110 | Budi Eko Prayogo | 2600000          |
| 106 | Budi Eko Prayogo | 2600000          |
| 102 | Budi Eko Prayogo | 2600000          |
| 108 | Budi Murtono   | 1000000          |
| 111 | Canka Lokananta | 200000          |
| 109 | Dwi Hapsari    | 1000000          |
| 101 | Jon Koplo     | 27000000          |
| 101 | Jon Koplo     | 8500000          |
| 102 | Kartika Padmasari | 1000000          |
| 101 | Kartika Padmasari | 500000          |
| 103 | Maryati       | 480000          |
| 103 | Maryati       | 480000          |
| 110 | Maryati       | 547000          |
| 103 | Maryati       | 1000000          |
| 103 | Maryati       | 480000          |
| 106 | Satria Eka Jaya | 125000          |
| 106 | Suparnan     | 500000          |
| 106 | Suparnan     | 500000          |
| 105 | Suparnan     | 400000          |
| 104 | Sutopo       | 500000          |
| 104 | Sutopo       | 500000          |
+-----+-----+-----+
27 rows in set <0.00 sec>

MariaDB [perbankan]> 

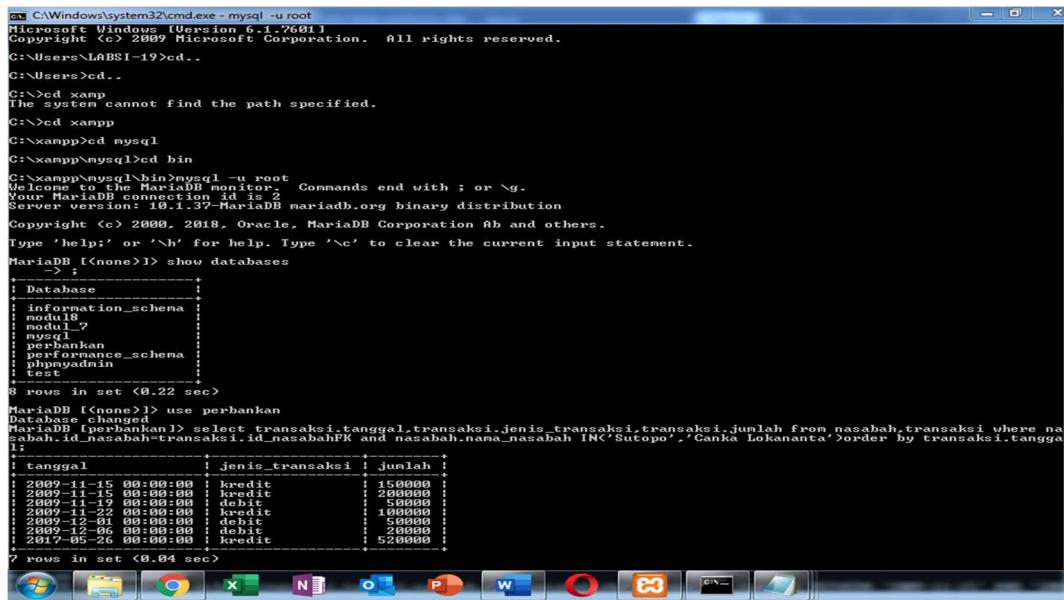
```

# LAPORAN PRAKTIKUM SISTEM BASIS DATA

## MODUL 8 ( Aggregasi )

NAMA : RIZA FRISNANDA  
NIM : L200170001  
KELAS : A  
NAMA ASSISTANT LAB : ONY  
TANGGAL PRAKTIKUM : 20/05/2019

### E. Tugas



```
ex C:\Windows\system32\cmd.exe - mysql -u root
Microsoft Windows [Version 6.1.7601]
Copyright <>> 2009 Microsoft Corporation. All rights reserved.
C:\Users\LABSI-19>cd..
C:\Users>cd ..
C:\>cd xamp
The system cannot find the path specified.
C:\>cd xampp
C:\xampp>cd mysql
C:\xampp\mysql>cd bin
C:\xampp\mysql\bin>mysql -u root
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 12
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)]> show databases
->;
+-----+
| Database |
+-----+
| information_schema |
| modul18 |
| modul19 |
| mysql |
| perbankan |
| performance_schema |
| phpmyadmin |
| test |
+-----+
8 rows in set <0.22 sec>
MariaDB [(none)]> use perbankan
Database changed
MariaDB [perbankan]> select transaksi.tanggal,transaksi.jenis_transaksi,jumlah from nasabah.transaksi where nasabah.id_nasabah=transaksi.id_nasabahFK and nasabah.nama_nasabah IN 'Sutopo','Canka Lekananta' order by transaksi.tanggal
+-----+-----+-----+
| tanggal | jenis_transaksi | jumlah |
+-----+-----+-----+
| 2009-11-15 00:00:00 | kredit | 150000 |
| 2009-11-15 00:00:00 | kredit | 200000 |
| 2009-11-19 00:00:00 | debit | 100000 |
| 2009-11-22 00:00:00 | kredit | 100000 |
| 2009-12-01 00:00:00 | debit | 50000 |
| 2009-12-05 00:00:00 | debit | 50000 |
| 2017-05-26 00:00:00 | kredit | 520000 |
+-----+-----+-----+
7 rows in set <0.04 sec>
```

```

c:\Windows\system32\cmd.exe - mysql -u root
7 rows in set <0.04 sec>
MariaDB [perbankan]> select transaksi.tanggal,nasabah.nama_nasabah,where transaksi.tanggal BETWEEN '2009-11-15' AND '2009-11-20' AND nasabah.id_nasabah=transaksi.id_nasabahFK order by transaksi.tanggal,nasabah.nama_nasabah;
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 'where transaksi.tanggal BETWEEN '2009-11-15' AND '2009-11-20' AND nasabah.id_nasabah' at line 1
MariaDB [perbankan]> select transaksi.tanggal,nasabah.nama_nasabah,transaksi.jenis_transaksi.jumlah from nasabah,nasabah where transaksi.tanggal BETWEEN '2009-11-15' AND '2009-11-20' AND nasabah.id_nasabah=transaksi.id_nasabahFK order by transaksi.tanggal,nasabah.nama_nasabah;
+-----+-----+-----+
| tanggal | nama_nasabah | jenis_transaksi | jumlah |
+-----+-----+-----+
| 2009-11-15 00:00:00 | Canka Lokananta | kredit | 1500000 |
| 2009-11-15 00:00:00 | Sutopo | kredit | 2000000 |
| 2009-11-16 00:00:00 | Budi Eko Prayogo | debit | 200000 |
| 2009-11-16 00:00:00 | Kartika Padmasari | debit | 500000 |
| 2009-11-19 00:00:00 | Kartika Padmasari | debit | 1000000 |
| 2009-11-19 00:00:00 | Maryati | debit | 1000000 |
| 2009-11-19 00:00:00 | Kartika Padmasari | debit | 500000 |
| 2009-11-20 00:00:00 | Kartika Padmasari | kredit | 2000000 |
+-----+-----+-----+
8 rows in set <0.00 sec>
MariaDB [perbankan]> select transaksi.jenis_transaksi as "Jenis Transaksi", sum(jumlah) as "Jumlah <Rp>" from transaksi group by
-> transaksi.jenis_transaksi order by transaksi.jenis_transaksi;
+-----+-----+
| Jenis Transaksi | Jumlah <Rp> |
+-----+-----+
| debit | 22891000 |
| kredit | 29770000 |
+-----+-----+
2 rows in set <0.00 sec>
MariaDB [perbankan]> select jenis_transaksi as "Jenis Transaksi",MAX(jumlah)AS "Transaksi Terbesar",MIN(jumlah) AS "Transaksi Terkecil"from
-> transaksi group by transaksi.jenis_transaksi order by transaksi.jenis_transaksi;
+-----+-----+-----+
| Jenis Transaksi | Transaksi Terbesar | Transaksi Terkecil |
+-----+-----+-----+
| debit | 9700000 | 20000 |
| kredit | 5200000 | 20000 |
+-----+-----+
2 rows in set <0.00 sec>
MariaDB [perbankan]> select jenis_transaksi as "Jenis Transaksi",SUM(jumlah) as "Jumlah<Rp>.COUNT(Jumlah) as "Jumlah Transaksi" from transaksi where tanggal between '2009-11-1' and '2009-11-30' group by transaksi.jenis_transaksi order by transaksi.jenis_transaksi;
-> ;
-> select jenis_transaksi as "Jenis Transaksi",sum(jumlah) as "Jumlah <Rp>",count(jumlah) as "Jumlah Transaksi" from transaksi where tanggal between '2009-11-1' and '2009-11-30' group by transaksi.jenis_transaksi order by transaksi.jenis_transaksi;
-> ;
-> exit
-> ;

```

```

c:\Windows\system32\cmd.exe - mysql -u root
nisi_transaksi;
-> exit
-> Bye
Ctrl-C -- exit!
C:\>xamp\mysql\bin>mysql -u root
Welcome to the MariaDB monitor. Commands end with ; or \g.
You are connected to host localhost port 3306
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)]> select jenis_transaksi as "Jenis Transaksi", sum(jumlah) as "Jumlah <Rp>", count(jumlah) as "Jumlah Transaksi" from transaksi where tanggal between '2009-11-1' and '2009-11-30' group by transaksi.jenis_transaksi order by transaksi.jenis_transaksi;
ERROR 1046 (3D000): No database selected
MariaDB [(none)]> use perbankan
Database changed
MariaDB [perbankan]> select jenis_transaksi as "Jenis Transaksi", sum(jumlah) as "Jumlah <Rp>", count(jumlah) as "Jumlah Transaksi" from transaksi where tanggal between '2009-11-1' and '2009-11-30' group by transaksi.jenis_transaksi order by transaksi.jenis_transaksi;
+-----+-----+
| Jenis Transaksi | Jumlah <Rp> | Jumlah Transaksi |
+-----+-----+
| debit | 6700000 | 12 |
| kredit | 1120000 | 11 |
+-----+-----+
2 rows in set <0.00 sec>
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 and N.nama_nasabah like "%Kartika Padmasari%" GROUP BY T.jenis_transaksi
error: bin-jenis_transaksi: column 'T.id_nasabah' in 'where clause'
ERROR 1054 (42000): 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
+-----+-----+
| Jenis_transaksi | Jumlah<Rp.> | Total Transaksi |
+-----+-----+
| debit | 50000 | 27 |
| kredit | 20000 | 23 |
+-----+-----+
2 rows in set <0.00 sec>
MariaDB [perbankan]> select distinct jenis_transaksi, jumlah as "Jumlah<Rp.>, count(jenis_transaksi) as "Total Transaksi" from transaksi T, nasabah N where T.id_nasabahPK = N.id_nasabah and N.nama_nasabah like "%Kartika Padmasari%" group by T.jenis_transaksi order by T.jenis_transaksi;
+-----+-----+
| jenis_transaksi | Jumlah<Rp.> | Total Transaksi |
+-----+-----+
| debit | 100000 | 2 |
| kredit | 20000 | 3 |
+-----+-----+
2 rows in set <0.00 sec>
MariaDB [perbankan]> select sum(transaksi.jumlah)as "Jumlah Saldo" FROM transaksi,nasabah where nasabah.id_nasabah = transaksi.id_nasabahFK and nasabah.nama_nasabah = "Maryati"AND transaksi.jenis_transaksi = "debit";

```

```

c:\Windows\system32\cmd.exe - mysql -u root
MariaDB [perbankan]> select sum(transaksi.jumlah) as "Jumlah Saldo" FROM transaksi, nasabah WHERE nasabah.id_nasabah = transaksi.id_nasabahPK AND nasabah.nama_nasabah = "Maryati" AND transaksi.jenis_transaksi = "debit";
+-----+
| Jumlah Saldo |
+-----+
| 777000 |
1 row in set <0.00 sec>

MariaDB [perbankan]> select distinct kode_cabang,nama_cabang, count(jumlah) as "Jumlah Transaksi" from cabang_bank C,transaksi T,rekening R where C.kode_cabang = R.kode_cabangFK AND T.no_rekeningPK = R.no_rekening GROUP BY C.kode_cabang;
+-----+-----+-----+
| kode_cabang | nama_cabang | Jumlah Transaksi |
+-----+-----+-----+
| BRUB | Bank Rtu Unit Boyolali | 1 |
| BRBK | Bank Rtu Unit Blitar | 2 |
| BRBM | Bank Rtu Unit Magelang | 4 |
| BRBS | Bank Rtu Unit Surakarta | 29 |
| BRBT | Bank Rtu Unit Batu | 1 |
| BRBVY | Bank Rtu Unit Yogyakarta | 10 |
6 rows in set <0.04 sec>

MariaDB [perbankan]> SELECT nasabah.nama_nasabah as "Nama", rekening.saldo as "Jumlah saldo" FROM nasabah, rekening WHERE saldo between 5000000 and 10000000 group by id_nasabah;
+-----+-----+
| Nama | Jumlah saldo |
+-----+-----+
| Sutopo | 5000000 |
| Maryati | 5000000 |
| Sitiapman | 5000000 |
| Kartika Padmasari | 5000000 |
| Budi Eko Prayogo | 5000000 |
| Satria Eka Jaya | 5000000 |
| Indri Hapsari | 5000000 |
| Sari Murti | 5000000 |
| Canka LokaNanta | 5000000 |
| Budi Murtono | 5000000 |
| Joko Ndo Kondo | 5000000 |
| Jon Koplo | 5000000 |
| Anggit | 5000000 |
| Aliwicky | 5000000 |
| Ihsan | 5000000 |
| kurnia | 5000000 |
| Susilo | 5000000 |
| Sutopo | 5000000 |
| Lestary | 5000000 |
| Luceng | 5000000 |
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.>' from nasabah N, transaksi T where N.id_nasabah = T.id_nasabahPK and T.jumlah >= 100000 order by T.jumlah DESC;
+-----+-----+-----+
| Nama Nasabah | Tanggal | Jumlah <Rp.> |
+-----+-----+-----+
| Jon Koplo | 2017-05-26 00:00:00 | 9700000 |
| Budi Murtono | 2017-05-26 00:00:00 | 8500000 |
| Anggit | 2017-06-08 00:00:00 | 7000000 |
| Ihsan | 2017-06-08 00:00:00 | 7000000 |
| kurnia | 2017-06-08 00:00:00 | 7000000 |
| Susilo | 2017-06-08 00:00:00 | 7000000 |
| Sutopo | 2017-06-08 00:00:00 | 7000000 |
| Lestary | 2017-05-24 00:00:00 | 5470000 |
| Sutopo | 2017-05-24 00:00:00 | 5500000 |
| Sari Murti | 2017-05-24 00:00:00 | 3520000 |
| Budi Eko Prayogo | 2017-06-14 00:00:00 | 2530000 |
| Budi Murtono | 2017-05-26 00:00:00 | 2500000 |
| Sutopo | 2009-11-15 00:00:00 | 2000000 |
| Budi Eko Prayogo | 2009-12-05 00:00:00 | 2000000 |
| Hery | 2009-11-15 00:00:00 | 2000000 |
| Kartika Padmasari | 2009-11-20 00:00:00 | 2000000 |
| Canka LokaNanta | 2009-11-15 00:00:00 | 1500000 |
| Ihsan | 2009-11-15 00:00:00 | 1500000 |
| Satria Eka Jaya | 2017-05-24 00:00:00 | 1250000 |
| Kartika Padmasari | 2009-11-19 00:00:00 | 1000000 |
| Hery | 2009-11-15 00:00:00 | 1000000 |
| Sutopo | 2009-11-22 00:00:00 | 1000000 |
| Budi Murtono | 2009-11-26 00:00:00 | 1000000 |
| Sutopo | 2009-12-05 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]>

```

```

c:\Windows\system32\cmd.exe - mysql -u root
+-----+-----+-----+
| Nama Nasabah | Tanggal | Jumlah <Rp.> |
+-----+-----+-----+
| Jon Koplo | 2017-05-26 00:00:00 | 9700000 |
| Budi Murtono | 2017-05-26 00:00:00 | 8500000 |
| Anggit | 2017-06-08 00:00:00 | 7000000 |
| Ihsan | 2017-06-08 00:00:00 | 7000000 |
| kurnia | 2017-06-08 00:00:00 | 7000000 |
| Susilo | 2017-06-08 00:00:00 | 7000000 |
| Sutopo | 2017-06-08 00:00:00 | 7000000 |
| Lestary | 2017-05-24 00:00:00 | 5470000 |
| Sutopo | 2017-05-24 00:00:00 | 5500000 |
| Sari Murti | 2017-05-24 00:00:00 | 3520000 |
| Budi Eko Prayogo | 2017-06-14 00:00:00 | 2530000 |
| Budi Murtono | 2017-05-26 00:00:00 | 2500000 |
| Sutopo | 2009-11-15 00:00:00 | 2000000 |
| Budi Eko Prayogo | 2009-12-05 00:00:00 | 2000000 |
| Hery | 2009-11-15 00:00:00 | 2000000 |
| Kartika Padmasari | 2009-11-20 00:00:00 | 2000000 |
| Canka LokaNanta | 2009-11-15 00:00:00 | 1500000 |
| Ihsan | 2009-11-15 00:00:00 | 1500000 |
| Satria Eka Jaya | 2017-05-24 00:00:00 | 1250000 |
| Kartika Padmasari | 2009-11-19 00:00:00 | 1000000 |
| Hery | 2009-11-15 00:00:00 | 1000000 |
| Sutopo | 2009-11-22 00:00:00 | 1000000 |
| Budi Murtono | 2009-11-26 00:00:00 | 1000000 |
| Sutopo | 2009-12-05 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>

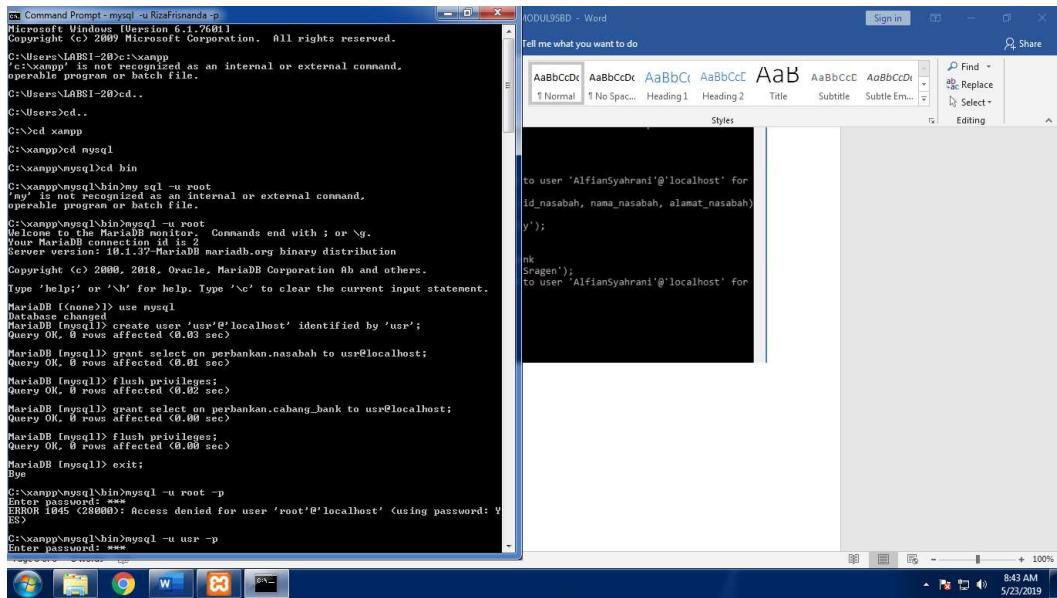
MariaDB [perbankan]>

```

# LAPORAN PRAKTIKUM SISTEM BASIS DATA

## MODUL 9 ( Data Control Language )

NAMA : RIZA FRISNANDA  
NIM : L200170001  
KELAS : A  
NAMA ASSISTANT LAB : ONY  
TANGGAL PRAKTIKUM : 23/05/2019



The screenshot shows a Windows desktop environment. On the left, there is a Command Prompt window titled 'Command Prompt - mysql -u RizaFrisnanda -p'. The window displays a series of MySQL commands and their execution results. On the right, there is a Microsoft Word document titled 'MODUL9SD - Word' containing some text and styling options.

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

C:\Users\LABSI-20>c:xampp
'c:xampp' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\LABSI-20>cd..
C:\>cd xampp
C:\xampp>cd mysql
C:\xampp\xampp\bin>mysql -u root
'mysql' is not recognized as an internal or external command,
operable program or batch file.

C:\xampp\xampp\bin>mysql -u root
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 2
Server version: 10.1.37-MariaDB mariadb.org binary distribution

Copyright (c) 2009, 2018, Oracle, MariaDB Corporation Ab and others.

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

MariaDB [(none)]> use mysql
Database changed
MariaDB [(none)]> create user 'usr'@'localhost' identified by 'usr';
Query OK, 0 rows affected (0.03 sec)

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

MariaDB [(mysql)]> flush privileges;
Query OK, 0 rows affected (0.02 sec)

MariaDB [(mysql)]> grant select on perbankan.cabang_bank to usr@localhost;
Query OK, 0 rows affected (0.00 sec)

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

MariaDB [(mysql)]> exit;
Bye

C:\xampp\xampp\bin>mysql -u root -p
Enter password: ***
ERROR 1045 (28000): Access denied for user 'root'@'localhost' (using password: YES)

C:\xampp\xampp\bin>mysql -u usr -p
Enter password: ***
```

Command Prompt - mysql -u RizaFrisnanda -p

```
C:\xampp\mysql\bin>mysql -u user -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 4
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 | Jl. Jendral Sudirman 12 |
| 2 | Maryati | Jl. Mt. Haryono 31 |
| 3 | Suparmam | Jl. Hasanudin 81 |
| 4 | Mulyana Padmasari | Jl. Tidar 15 |
| 5 | Budi Eko Prayogo | Jl. Kartini 36 |
| 6 | Patria Ika Jaya | Jl. Santika Riyadi 45 |
| 7 | Iman Harjani | Jl. Setiabudi 16 |
| 8 | Sari Murti | Jl. Pangandaran 11 |
| 9 | Cipta Kusumanta | Jl. Timur 16 |
| 10 | Ladi Nurul | Jl. Selatan 22 |
| 11 | Joko Ndo Kondo | Jl. Barong Jadian Kagak |
| 12 | Jon Koplo | Jl. Angin Besar 12 |
| 13 | Udin | Solo |
| 14 | udin | palur |
| 15 | ***** | SELONG MATAHARI |
| 16 | Sutopo | Jl. Jendral Sudirman |
| 17 | Maryati | Jl. Mt Haryono 31 |
+-----+-----+-----+
17 rows in set (0.00 sec)

MariaDB [perbankan]> insert into nasabah values('31','Suci Ida','Subharjo');
ERROR 1142 (<42000>): INSERT command denied to user 'user'@'localhost' for table 'nasabah'
MariaDB [perbankan]> exit;
Bye

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 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)]> revoke select on perbankan.nasabah from user@localhost;
Query OK, 0 rows affected (0.01 sec)

MariaDB [(none)]> flush privileges;
```

Command Prompt - mysql -u RizaFrisnanda -p

```
MariaDB [(none)]> flush privileges;
Query OK, 0 rows affected (0.00 sec)

MariaDB [(none)]> exit;
Bye

C:\xampp\mysql\bin>mysql -u user -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 6
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;
ERROR 1142 (<42000>): SELECT command denied to user 'user'@'localhost' for table 'nasabah'
MariaDB [perbankan]> exit;
Bye

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 7
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 mysql;
Database changed
MariaDB [mysql]> create user 'RizaFrisnanda'@'localhost' identified by 'voke';
Query OK, 0 rows affected (0.00 sec)

MariaDB [mysql]> grant insert on perbankan.nasabah to RizaFrisnanda@localhost;
Query OK, 0 rows affected (0.00 sec)

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

MariaDB [mysql]> grant update on perbankan.nasabah to RizaFrisnanda@localhost;
Query OK, 0 rows affected (0.00 sec)

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

MariaDB [mysql]> grant delete on perbankan.nasabah to RizaFrisnanda@localhost;
Query OK, 0 rows affected (0.00 sec)

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

The screenshot shows a Windows desktop environment. In the foreground, a Command Prompt window titled 'Command Prompt - mysql - RizaFrisnanda - p' is open. It displays MySQL commands and their execution results related to creating a database and table, and inserting data. In the background, a Microsoft Word window titled 'ctrl - Word' is visible, showing a document with placeholder text and some styling options like font and size.

```
mysql [mysqld] grant select on perbankan.nasabah to RizaFrisnanda@localhost;
Query OK, 0 rows affected (0.00 sec)
mysql [mysqld] flush privileges;
Query OK, 0 rows affected (0.00 sec)
mysql [mysqld] exit;
Bye

C:\xampp\mysql\bin>mysql -u RizaFrisnanda -p
Welcome to the MariaDB monitor. Commands end with ; or \g.
Your MariaDB connection id is 8
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 | Jl. Jendral Sudirman 12 |
| 2 | Maryati | Jl. MT. Haryono 31 |
| 3 | Suparno | Jl. Hasanudin 81 |
| 4 | Andi Padmasari | Jl. Ahmad Yani 45 |
| 5 | Budi Eko Prayogo | Jl. Kantil 36 |
| 6 | Astria Eka Jaya | Jl. Sielan Riyadi 45 |
| 7 | Iwan Setiawan | Jl. Pangandaran 11 |
| 8 | Sari Murti | Jl. Tidar 22 |
| 9 | Budi Martopanata | Jl. Braga 22 |
| 10 | Budi Martopanata | Jl. Beringin Jadian Kagak |
| 11 | Joko Ndo Kondo | Jl. Bareng Besar 12 |
| 12 | Andi Setiyo | Jl. Solo 100 |
| 13 | Sugigit | palu |
| 14 | udin | Jl. LORONG MATARAM |
| 999 | SutopoVVVVVVV | Jl. Jendral Sudirman |
| 1000 | Sutopo | Jl. MT Haryono 31 |
+-----+-----+-----+
17 rows in set (0.00 sec)

MariaDB [perbankan]> insert into nasabah(id_nasabah, nama_nasabah, alamat_nasaba
b values ('001', 'Riza Frisnanda', 'Medan');
ERROR 1062 (23000): Duplicate entry '001' for key 'PRIMAR
MariaDB [perbankan]> insert into nasabah(id_nasabah, nama_nasabah, alamat_nasaba
b values ('001', 'Riza Frisnanda', 'Medan');
ERROR 1062 (23000): Duplicate entry '001' for key 'PRIMAR
MariaDB [perbankan]> insert into nasabah(id_nasabah, nama_nasabah, alamat_nasaba
b values ('001', 'Riza Frisnanda', 'Medan');
ERROR 1062 (23000): Duplicate entry '001' for key 'PRIMAR
MariaDB [perbankan]> insert into nasabah(id_nasabah, nama_nasabah, alamat_nasaba
b values ('1', 'Riza Frisnanda', 'Medan');
```

```
Command Prompt - mysql -u RizaFrisnanda -p
Database changed
MariaDB [perbankan]> select *from nasabah;
+-----+-----+-----+
| id_nasabah | nama_nasabah | alamat_nasabah |
+-----+-----+-----+
| 1 | Sutopo | Jl. Jendral Sudirman 12 |
| 2 | Maryati | Jl. MT. Haryono 31 |
| 3 | Kartika | Jl. Pahlawan 81 |
| 4 | Kartika Padmasari | Jl. Manggis 15 |
| 5 | Budi Eko Prayogo | Jl. Kantil 38 |
| 6 | Andi | Jl. Jendral Sudirman 45 |
| 7 | Indri Hapsari | Jl. Sutomo |
| 8 | Sari Murti | Jl. Pangandaran 11 |
| 9 | Dwi Sugihana | Jl. Merak 22 |
| 10 | Budi Murtono | Jl. Merak 22 |
| 11 | Joko Ndo Kondo | Jl. Bareng Jadian kakak |
| 12 | Iman | Jl. Bawen Besar 12 |
| 13 | Anggit | Solo |
| 14 | | |
| 999 | ULCKVVVVVVV | SELOGON MOTARM |
| 1000 | Sutopo | Jl. Jendral Sudirman |
| 2000 | Maryati | Jl. MT. Haryono 31 |
+-----+-----+-----+
17 rows in set (0.00 sec)

MariaDB [perbankan]> insert into nasabah(id_nasabah, nama_nasabah, alamat_nasabah)
    values ('001', 'Riza Frisnanda', 'Madin');
Query OK, 1 row affected, 1 warning (0.27 sec)
MariaDB [perbankan]> insert into nasabah(id_nasabah, nama_nasabah, alamat_nasabah)
    values ('1001', 'Riza Frisnanda', 'Madin');
Query OK, 1 row affected, 1 warning (0.27 sec)
MariaDB [perbankan]> insert into nasabah(id_nasabah, nama_nasabah, alamat_nasabah)
    values ('1002', 'Riza Frisnanda', 'Madin');
Query OK, 1 row affected, 1 warning (0.27 sec)
MariaDB [perbankan]> insert into nasabah(id_nasabah, nama_nasabah, alamat_nasabah)
    values ('1003', 'Riza Frisnanda', 'Madin');
Query OK, 1 row affected, 1 warning (0.27 sec)
MariaDB [perbankan]> insert into nasabah(id_nasabah, nama_nasabah, alamat_nasabah)
    values ('1004', 'Riza Frisnanda', 'Madin');
Query OK, 1 row affected, 1 warning (0.27 sec)
MariaDB [perbankan]> insert into cabang_bank values ('BRI', 'Bank Rakyat Indonesia')
Query OK, 1 row affected (0.27 sec)
ERROR 1142 (<42000>): INSERT command denied to user 'RizaFrisnanda'@'localhost' for table 'cabang_bank'
MariaDB [perbankan]> grant insert on perbankan.cabang_bank to RizaFrisnanda@localhost;
Host: localhost
Query OK, 1 row affected, 1 warning (0.27 sec)
MariaDB [perbankan]>
```

# LAPORAN PRAKTIKUM SISTEM BASIS DATA

## MODUL 10 ( SubQuery )

NAMA : RIZA FRISNANDA  
NIM : L200170001  
KELAS : A  
NAMA ASSISTANT LAB : ONY  
TANGGAL PRAKTIKUM : 27/05/2019

```
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 81 |
| 4 | Kartika Padmasari | Jl. Manggis 15 |
| 5 | Budi Eko Prayogo | Jl. Kantil 30 |
| 9 | Canka Lokananta | Jl. Tidar 86 |
| 10 | Budi Martono | Jl. Merak 22 |
| 11 | Danindya | Jl. Aki Balak 22 |
| 12 | Puput | Jl. AMD 18 |
| 14 | Putri | Jl. Diponegoro 19 |
| 17 | Pandan Wangi | Jl. Imam Bonjol 20 |
+-----+-----+-----+
11 rows in set (0.10 sec)
```

```
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 |
| 8 | Sari Murti | Jl. Pangandaran 11 |
| 18 | Andara | Jl. Pertama 26 |
| 19 | Rangga | Jl. Kedua 80 |
| 20 | Cinta | Jl. Ketiga 24 |
| 38 | Alfiansyahran | Bekonang city |
+-----+-----+-----+
6 rows in set (0.00 sec)
```

```
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 | 2500000.0000 |
+-----+-----+-----+
1 row in set (0.11 sec)
```

```
MariaDB [perbankan]> SELECT * FROM transaksi WHERE jumlah > (SELECT AVG(jumlah) FROM transaksi);
+-----+-----+-----+-----+-----+-----+
| no_transaksi | id_nasabahFK | no_rekeningFK | jenis_transaksi | tanggal | jumlah |
+-----+-----+-----+-----+-----+-----+
|       6 |         1 |        104 | kredit          | 2009-11-15 00:00:00 | 200000 |
|       7 |         9 |        110 | kredit          | 2009-11-15 00:00:00 | 150000 |
|      10 |         4 |        107 | debit           | 2009-11-19 00:00:00 | 100000 |
|      11 |         2 |        103 | debit           | 2009-11-19 00:00:00 | 100000 |
|      13 |         4 |        107 | kredit          | 2009-11-20 00:00:00 | 200000 |
|      15 |         1 |        104 | kredit          | 2009-11-22 00:00:00 | 100000 |
|      19 |        10 |        108 | debit           | 2009-11-26 00:00:00 | 100000 |
|     21 |         2 |        103 | kredit          | 2009-11-28 00:00:00 | 200000 |
|     22 |         3 |        105 | kredit          | 2009-11-28 00:00:00 | 100000 |
|     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 |
|     34 |        15 |        116 | debit           | 2009-12-08 00:00:00 | 100000 |
|     35 |        11 |        123 | debit           | 2009-12-08 00:00:00 | 200000 |
|     37 |        16 |        118 | debit           | 2009-12-11 00:00:00 | 100000 |
|     40 |        16 |        118 | debit           | 2009-12-13 00:00:00 | 150000 |
|     41 |        10 |        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 |
|     46 |        14 |        120 | kredit          | 2009-12-16 00:00:00 | 175000 |
|     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 |
+-----+-----+-----+-----+-----+-----+
24 rows in set (0.00 sec)
```

## TUGAS

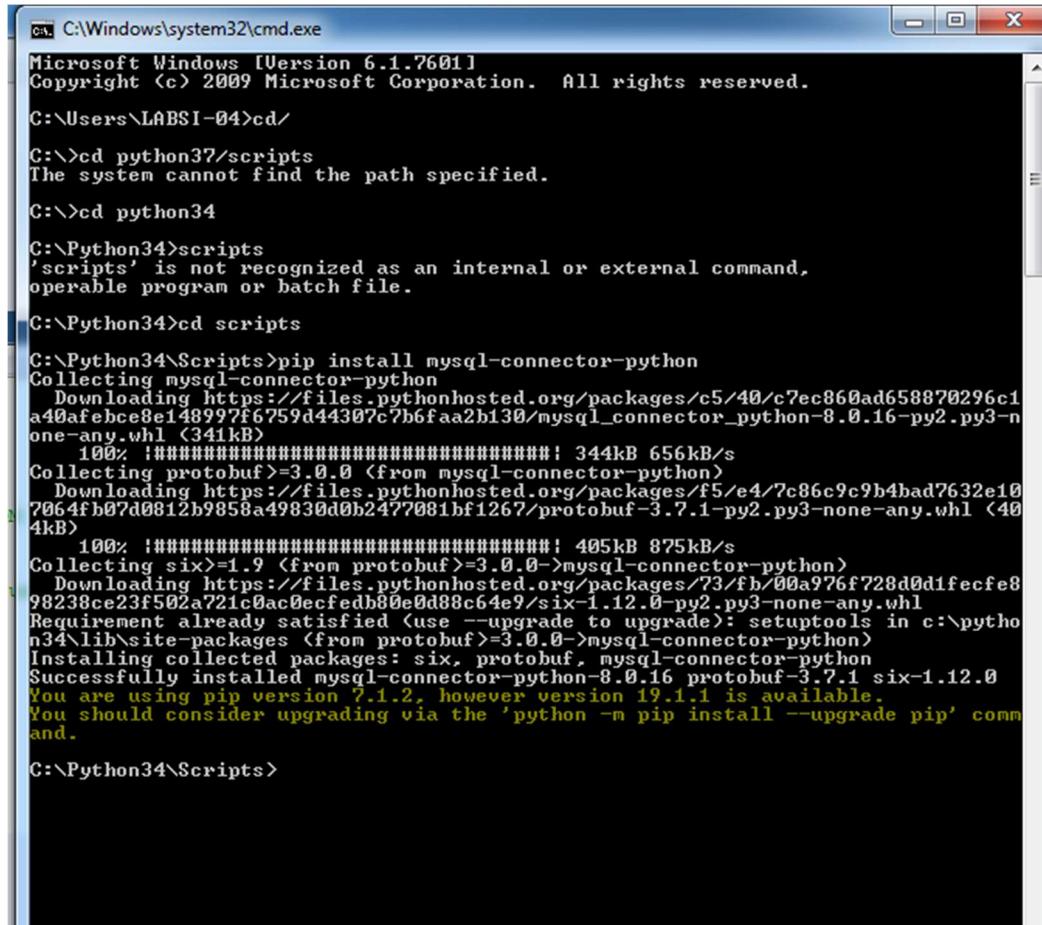
```
MariaDB [perkuliahannya.sql]> \SELECT DISTINCT mahasiswa.nim
  -> from mahasiswa,matkul,link_mahasiswa_matkul
  -> WHERE mahasiswa.nim=link_mahasiswa_matkul.nim and matkul.kode_matkul=link_mahasiswa_matkul.kode_matkul and
  -> mahasiswa.nim NOT IN(select link_mahasiswa_matkul.nim FROM link_mahasiswa_matkul WHERE kode_matkul='TIF001');
+-----+
| nim   |
+-----+
| L200150125 |
+-----+
1 row in set (0.00 sec)
```

# LAPORAN PRAKTIKUM SISTEM BASIS DATA

---

## MODUL 11 ( MySQL dan Python )

NAMA : RIZA FRISNANDA  
NIM : L200170001  
KELAS : A  
NAMA ASSISTANT LAB : ONY  
TANGGAL PRAKTIKUM : 29/05/2019



```
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.1.7601]
Copyright <c> 2009 Microsoft Corporation. All rights reserved.

C:\Users\LABSI-04>cd\

C:\>cd python37\scripts
The system cannot find the path specified.

C:\>cd python34

C:\Python34>scripts
'scripts' is not recognized as an internal or external command,
operable program or batch file.

C:\Python34>cd 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 656kB/s
Collecting protobuf>=3.0.0 (from mysql-connector-python)
  Downloading https://files.pythonhosted.org/packages/f5/e4/7c86c9c9b4bad7632e107064fb07d0812b9858a49830d0b2477081bf1267/protobuf-3.7.1-py2.py3-none-any.whl (404kB)
    100% #####: 405kB 875kB/s
Collecting six>=1.9 (from protobuf>=3.0.0->mysql-connector-python)
  Downloading https://files.pythonhosted.org/packages/73/fb/00a976f728d0d1fecfe898238ce23f502a721c0ac0ecfedb80e0d88c64e9/six-1.12.0-py2.py3-none-any.whl
Requirement already satisfied (use --upgrade to upgrade): setuptools in c:\python34\lib\site-packages (from protobuf>=3.0.0->mysql-connector-python)
Installing collected packages: six, protobuf, mysql-connector-python
Successfully installed mysql-connector-python-8.0.16 protobuf-3.7.1 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.

C:\Python34\Scripts>
```

The screenshot shows a Windows desktop environment. In the foreground, there is a Python 3.4.4 Shell window titled "Python 3.4.4 Shell". It displays the command line interface with some help text and a prompt. Below it is a Notepad window titled "alfianpy - J:\alfianpy (3.44)". The Notepad contains Python code for inserting data into a MySQL database named "perbankan". The code includes imports for datetime, mysql.connector, and time, and uses a cursor to execute an INSERT query.

```

alfianpy - J:\alfianpy (3.44)
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()

```

The screenshot shows a web browser displaying the phpMyAdmin interface. The URL is "localhost:127.0.0.1/perbankan". On the left, the database structure is shown with the "transaksi" table selected. The main area shows the results of a SELECT query on the "transaksi" table, returning one row: id\_transaksi=56, id\_nasabahFK=9, no\_rekeningFK=110, jenis\_transaksi=kredit, tanggal=2019-05-23 00:00:00, jumlah=50000. Below the results, there are buttons for operations like Edit, Copy, Delete, and Export.

The screenshot shows a Windows desktop environment. In the foreground, there is a Python 3.4.4 Shell window titled "Python 3.4.4 Shell". It displays the command line interface with some help text and a prompt. Below it is a Notepad window titled "alfianno5.py - J:\MODUL 11\alfianno5.py (3.44)". The Notepad contains Python code for querying a MySQL database named "perbankan" to find transactions from the year 2009. The code uses a cursor to execute a query and then prints the results to the console.

```

alfianno5.py - J:\MODUL 11\alfianno5.py (3.44)
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 YEAR(tanggal)='2009'")
cursor.execute(query)
for (id_nasabahFK,jenis_transaksi,tanggal,jumlah) in cursor:
    print("nasabah dengan ID {} melakukan transaksi {} pada {}".format(id_nasabahFK,jenis_transaksi,tanggal,jumlah))

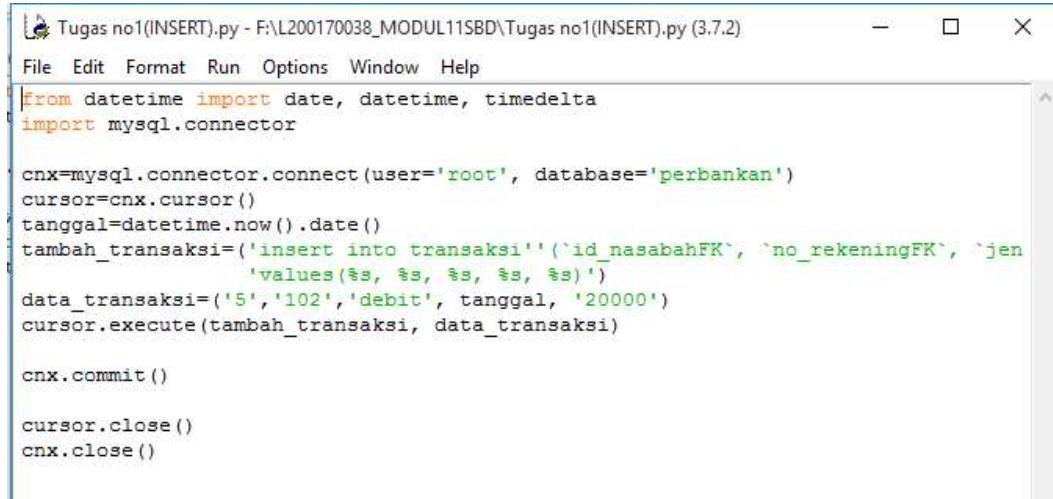
cursor.close()
cnx.close()

```

The Python 3.4.4 Shell window below shows the output of the script, listing multiple transactions from 2009 for various customers, such as debit and credit entries for different dates and amounts.

# TUGAS

## 1.

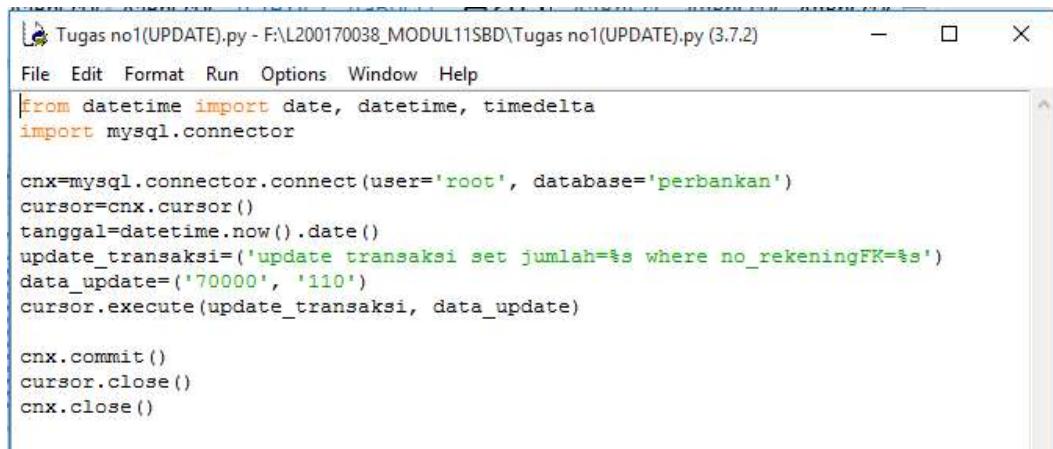


```
from datetime import date, datetime, timedelta
import mysql.connector

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`, `jumlah`, `tanggald`, `debit`, `tanggal`, `20000')
data_transaksi=('5','102','debit', tanggal, '20000')
cursor.execute(tambah_transaksi, data_transaksi)

cnx.commit()

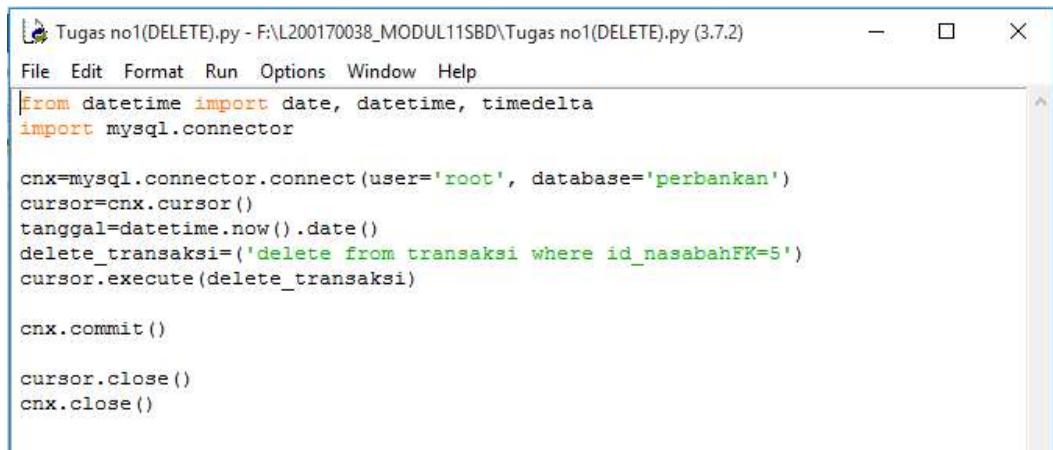
cursor.close()
cnx.close()
```



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

cnx=mysql.connector.connect(user='root', database='perbankan')
cursor=cnx.cursor()
tanggal=datetime.now().date()
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()
```



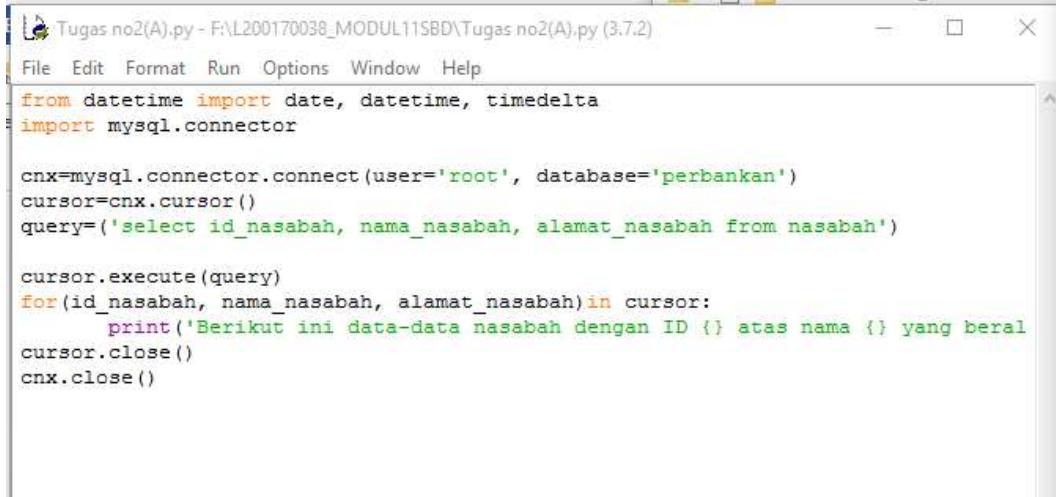
```
from datetime import date, datetime, timedelta
import mysql.connector

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()
```

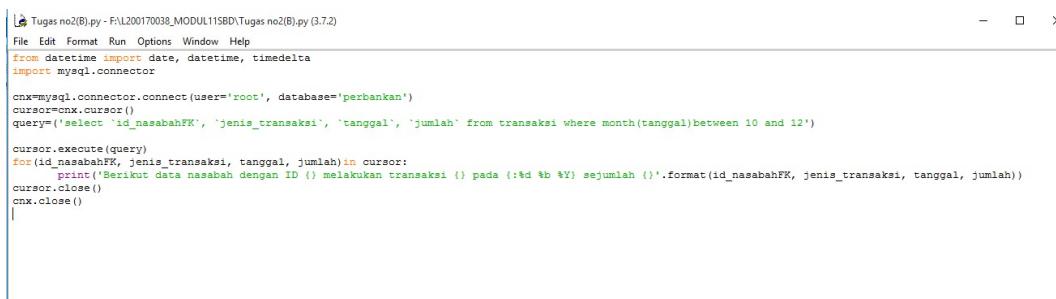
## 2.



```
Tugas no2(A).py - F:\L200170038_MODUL11SBD\Tugas no2(A).py (3.7.2)
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 beral
cursor.close()
cnx.close()
```



```
Tugas no2(B).py - F:\L200170038_MODUL11SBD\Tugas no2(B).py (3.7.2)
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 tb %Y} sejumlah {}'.format(id_nasabahFK, jenis_transaksi, tanggal, jumlah))
cursor.close()
cnx.close()
```