

Nama : Aprinta Sewelastami

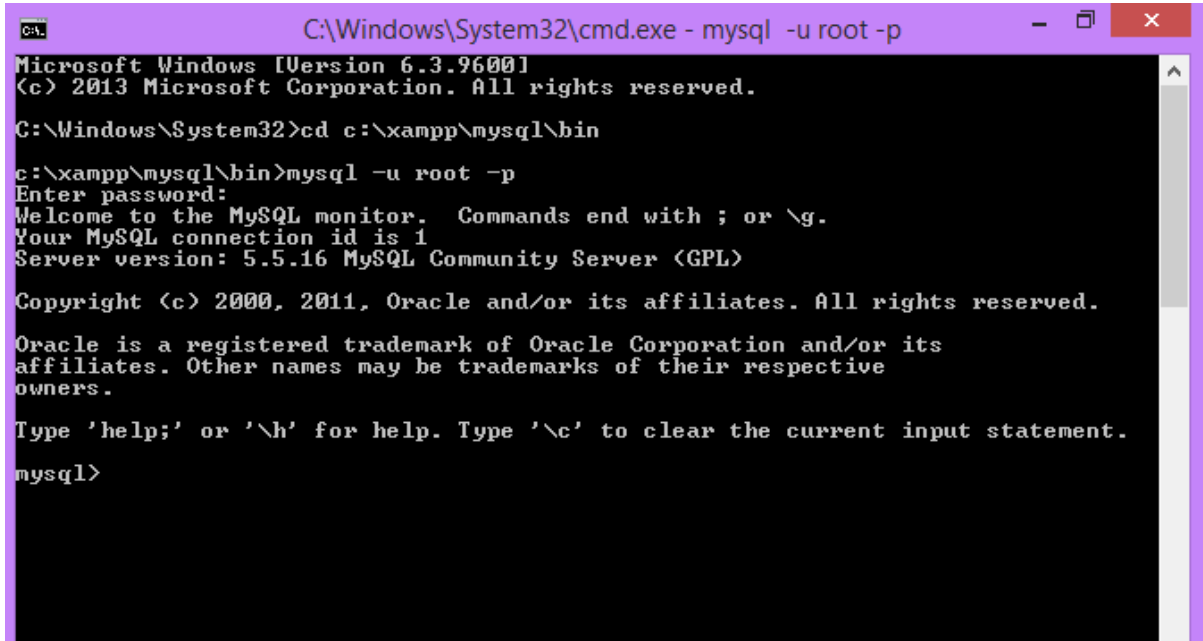
NIM : L200180088

MODUL 4

Data Definition Language (DDL)

Latihan

1. Login sebagai root ke MySQL



```
C:\Windows\System32\cmd.exe - mysql -u root -p
Microsoft Windows [Version 6.3.9600]
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C:\Windows\System32>cd c:\xampp\mysql\bin

c:\xampp\mysql\bin>mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 1
Server version: 5.5.16 MySQL Community Server (GPL)

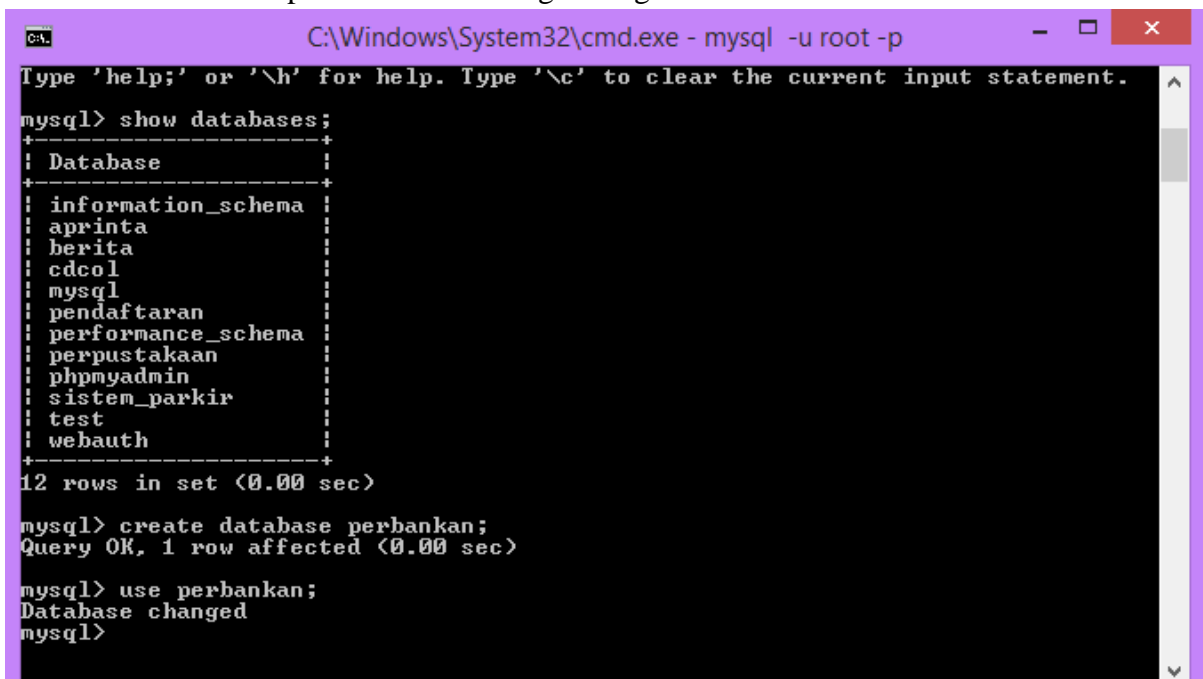
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affiliates. Other names may be trademarks of their respective
owners.

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

mysql>
```

2. Buat database perbankan dan menghubungkan database



```
C:\Windows\System32\cmd.exe - mysql -u root -p
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| aprinta   |
| berita    |
| cdcol     |
| mysql     |
| pendaftaran |
| performance_schema |
| perpustakaan |
| phpmyadmin |
| sistem_parkir |
| test      |
| webauth   |
+-----+
12 rows in set (0.00 sec)

mysql> create database perbankan;
Query OK, 1 row affected (0.00 sec)

mysql> use perbankan;
Database changed

mysql>
```

3. Membuat table nasabah, cabang_bank, rekening, transaksi dan nasabah_has_rekening

```
mysql> create table nasabah(
-> id_nasabah INTEGER PRIMARY KEY,
-> nama_nasabah VARCHAR(30) NOT NULL,
-> alamat_nasabah VARCHAR(100) NOT NULL);
Query OK, 0 rows affected (0.22 sec)

mysql> create table cabang_bank(
-> kode_cabang VARCHAR(10) PRIMARY KEY,
-> nama_cabang VARCHAR(40) UNIQUE NOT NULL,
-> alamat_cabang VARCHAR(225) NOT NULL);
Query OK, 0 rows affected (0.16 sec)

mysql> create table rekening(
-> no_rekening INTEGER PRIMARY KEY,
-> kode_cabangFK VARCHAR(20) REFERENCES cabang_bank(kode_cabang)
-> ON DELETE CASCADE ON UPDATE CASCADE,
-> pin VARCHAR(20) DEFAULT '1234' NOT NULL,
-> saldo INTEGER DEFAULT 0 NOT NULL);
Query OK, 0 rows affected (0.16 sec)

mysql> create table transaksi(
-> no_transaksi SERIAL PRIMARY KEY,
-> id_nasabahFK INTEGER REFERENCES nasabah(id_nasabah)
-> ON DELETE SET NULL ON UPDATE CASCADE,
-> no_rekeningFK INTEGER REFERENCES rekening(no_rekening)
-> ON DELETE SET NULL ON UPDATE CASCADE,
-> jenis_transaksi VARCHAR(20) DEFAULT 'debit' NOT NULL,
-> tanggal DATETIME NOT NULL,
-> jumlah INTEGER NOT NULL CHECK(jumlah>=20000)
-> );
Query OK, 0 rows affected (0.19 sec)

mysql> create table nasabah_has_rekening(
-> id_nasabahFK INTEGER REFERENCES nasabah(id_nasabah)
-> ON DELETE CASCADE ON UPDATE CASCADE,
-> no_rekeningFK INTEGER REFERENCES rekening(no_rekening)
-> ON DELETE CASCADE ON UPDATE CASCADE,
-> PRIMARY KEY(id_nasabahFK,no_rekeningFK)
-> );
Query OK, 0 rows affected (0.19 sec)
```

4. Melihat table yang selesai dibuat

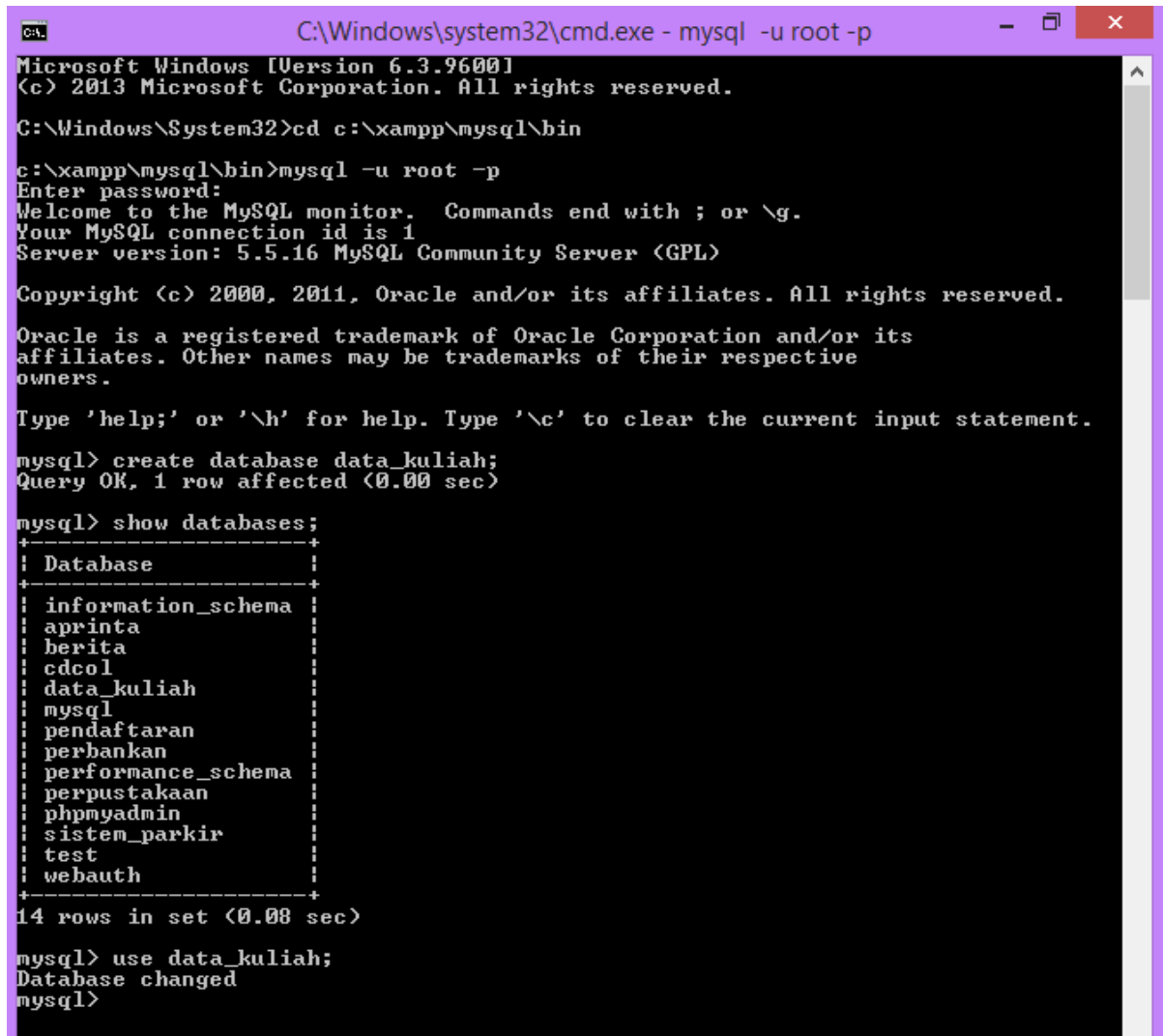
```
mysql> show tables;
+-----+
| Tables_in_perbankan |
+-----+
| cabang_bank          |
| nasabah              |
| nasabah_has_rekening |
| rekening             |
| transaksi            |
+-----+
5 rows in set (0.00 sec)
```

5. Melihat struktur tiap table dengan perintah describe

```
mysql> describe nasabah;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| id_nasabah | int(11)   | NO   | PRI | NULL    |       |
| nama_nasabah | varchar(30) | NO   |     | NULL    |       |
| alamat_nasabah | varchar(100) | NO   |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.08 sec)
```

Tugas

1. Login sebagai root ke MySQL, lalu membuat database data_kuliah dan menghubungkan database dengan perintah 'use nama_database'



```
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affiliates. Other names may be trademarks of their respective
owners.

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

mysql> create database data_kuliah;
Query OK, 1 row affected (0.00 sec)

mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| aprinta |
| herita |
| cdcol |
| data_kuliah |
| mysql |
| pendaftaran |
| perbankan |
| performance_schema |
| perpustakaan |
| phpmyadmin |
| sistem_parkir |
| test |
| webauth |
+-----+
14 rows in set (0.08 sec)

mysql> use data_kuliah;
Database changed
mysql>
```

2. Membuat table mahasiswa, dosen, mata_kuliah dan ruang_kelas

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

mysql> use data_kuliah;
Database changed
mysql> create table mahasiswa(
-> NIM VARCHAR(10) PRIMARY KEY,
-> nama_mhs VARCHAR(45) NOT NULL,
-> jurusan VARCHAR(30) NOT NULL,
-> alamat_mhs VARCHAR(255) NOT NULL
-> );
Query OK, 0 rows affected (0.14 sec)

mysql> create table dosen(
-> NIDN integer primary key,
-> nama_dosen varchar(45) not null,
-> alamat_dosen varchar(255) not null
-> );
Query OK, 0 rows affected (0.13 sec)

mysql> create table mata_kuliah(
-> kode_matkul varchar(6) primary key,
-> nama_matkul varchar(30) not null,
-> jml_sks integer not null
-> );
Query OK, 0 rows affected (0.13 sec)

mysql> create table(
-> );
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that
corresponds to your MySQL server version for the right syntax to use near '<
>' at line 1
mysql> create table ruang_kelas(
-> id_kelas varchar(6) primary key,
-> kapasitas integer not null
-> );
Query OK, 0 rows affected (0.13 sec)

mysql>
```

3. Melihat table yang selesai dibuat dan melihat struktur tiap tabel

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

mysql> show tables;
+-----+
| Tables_in_data_kuliah |
+-----+
| dosen                  |
| mahasiswa              |
| mata_kuliah            |
| ruang_kelas            |
+-----+
4 rows in set (0.00 sec)

mysql> describe mahasiswa;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| NIM        | varchar(10)   | NO   | PRI | NULL    |       |
| nama_mhs   | varchar(45)   | NO   |     | NULL    |       |
| jurusan    | varchar(30)   | NO   |     | NULL    |       |
| alamat_mhs | varchar(255)  | NO   |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.09 sec)

mysql> describe dosen;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| NIDN       | int(11)       | NO   | PRI | NULL    |       |
| nama_dosen | varchar(45)   | NO   |     | NULL    |       |
| alamat_dosen | varchar(255) | NO   |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.01 sec)

mysql> describe mata_kuliah;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| kode_matkul | varchar(6)     | NO   | PRI | NULL    |       |
| nama_matkul | varchar(30)    | NO   |     | NULL    |       |
| jml_sks     | int(11)       | NO   |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.01 sec)

mysql> describe ruang_kelas;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| id_kelas   | varchar(6)     | NO   | PRI | NULL    |       |
| kapasitas  | int(11)       | NO   |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.08 sec)

mysql>
```