

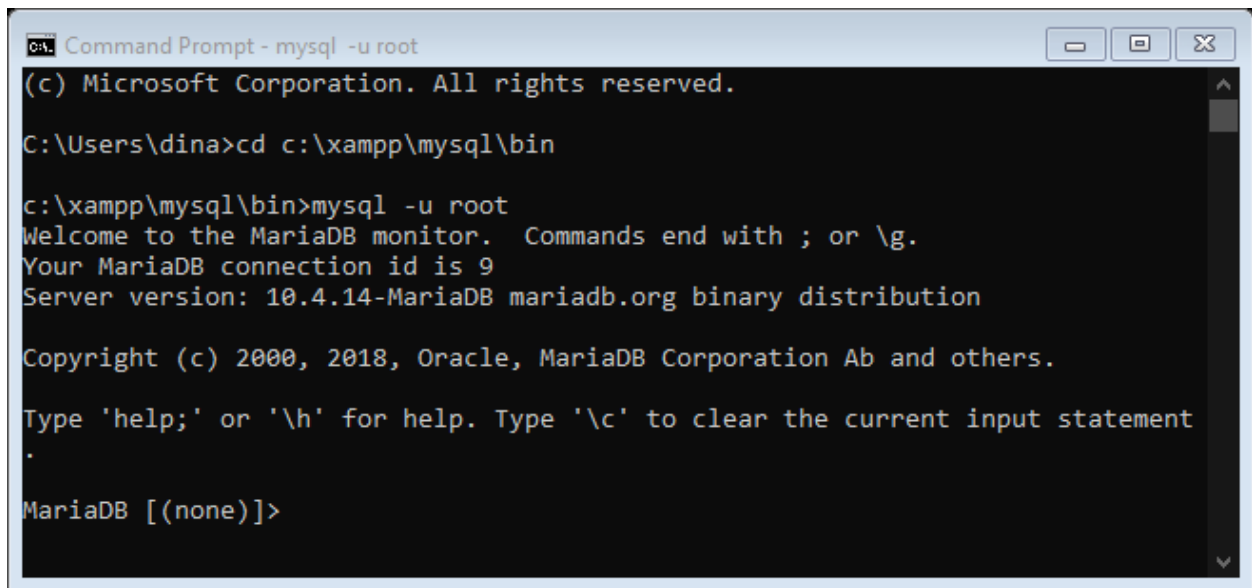
NAMA : RAHMADINA

NIM : 2011522012

TUGAS 2 - OR VII LDKOM

1. Buat sebuah database dengan nama akademik

- Akses xampp hingga database



```
Command Prompt - mysql -u root
(c) Microsoft Corporation. All rights reserved.

C:\Users\dina>cd c:\xampp\mysql\bin

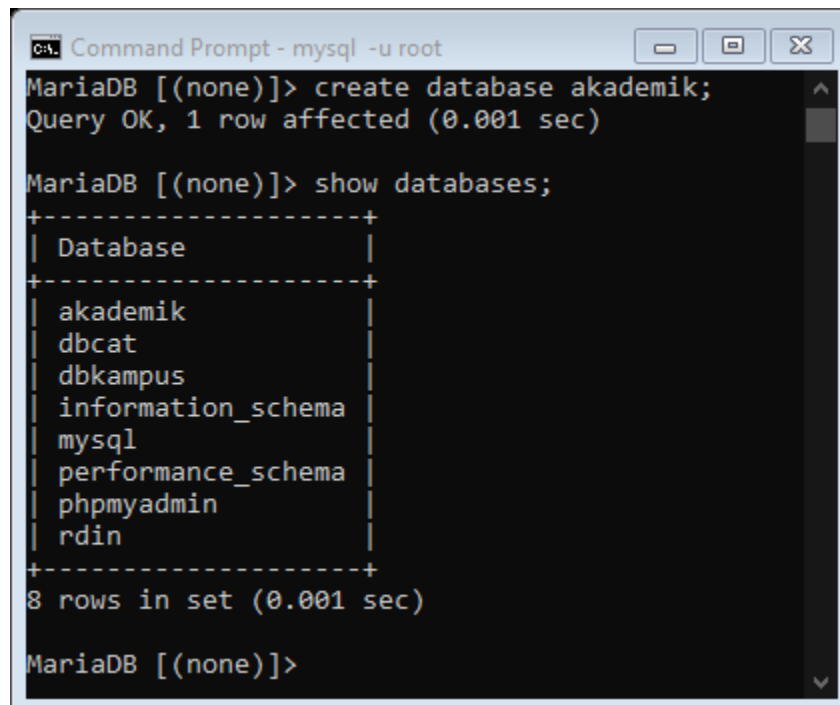
c:\xampp\mysql\bin>mysql -u root
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 9
Server version: 10.4.14-MariaDB mariadb.org binary distribution

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)]>
```

- Tambah database akademik



```
Command Prompt - mysql -u root

MariaDB [(none)]> create database akademik;
Query OK, 1 row affected (0.001 sec)

MariaDB [(none)]> show databases;
+-----+
| Database |
+-----+
| akademik |
| dbcat    |
| dbkampus |
| information_schema |
| mysql    |
| performance_schema |
| phpmyadmin |
| rdin     |
+-----+
8 rows in set (0.001 sec)

MariaDB [(none)]>
```

2. Tambahkan table sesuai dengan table relasi, dan tampilkan deskripsinya

- Gunakan database akademik

```
Command Prompt - mysql -u root

MariaDB [(none)]> show databases;
+-----+
| Database |
+-----+
| akademik |
| dbcat    |
| dbkampus |
| information_schema |
| mysql    |
| performance_schema |
| phpmyadmin |
| rdin     |
+-----+
8 rows in set (0.001 sec)

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

- Buat tabel matkul dan deskripsinya

```
Command Prompt - mysql -u root

MariaDB [akademik]> create table matkul(kode_matkul varchar(10) not null
primary key, nama_matkul varchar(30), sks int);
Query OK, 0 rows affected (0.025 sec)

MariaDB [akademik]> desc matkul;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| kode_matkul | varchar(10)   | NO   | PRI | NULL    |       |
| nama_matkul | varchar(30)   | YES  |     | NULL    |       |
| sks         | int(11)       | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.023 sec)

MariaDB [akademik]>
```

- Tambah table mahasiswa dan deskripsinya

```
CA: Command Prompt - mysql -u root
MariaDB [akademik]> create table mahasiswa(nim int not null primary key,
nama varchar(25), alamat varchar(50), tempat_lahir varchar(50), tgl_lahir
date);
Query OK, 0 rows affected (0.028 sec)

MariaDB [akademik]> desc mahasiswa;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| nim        | int(11)       | NO   | PRI | NULL    |       |
| nama       | varchar(25)   | YES  |     | NULL    |       |
| alamat     | varchar(50)   | YES  |     | NULL    |       |
| tempat_lahir | varchar(50)   | YES  |     | NULL    |       |
| tgl_lahir  | date          | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.032 sec)

MariaDB [akademik]>
```

- Tambah tabel kelas dan deskripsinya

```
CA: Command Prompt - mysql -u root
MariaDB [akademik]> create table kelas(kode_kelas varchar(10) not null primary key,
kode_matkul varchar(10), ruangan varchar(10), foreign key(kode_matkul) references
matkul(kode_matkul));
Query OK, 0 rows affected (0.021 sec)

MariaDB [akademik]> desc kelas;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| kode_kelas | varchar(10)   | NO   | PRI | NULL    |       |
| kode_matkul | varchar(10)   | YES  | MUL | NULL    |       |
| ruangan    | varchar(10)   | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.027 sec)

MariaDB [akademik]>
```

- Tambah tabel kelas_mahasiswa

```

C:\> Command Prompt - mysql -u root

MariaDB [akademik]> create table kelas_mahasiswa(kode_kelas varchar(10) not null,
nim int not null, primary key(kode_kelas, nim), foreign key(kode_kelas) references
kelas(kode_kelas), foreign key(nim) references mahasiswa(nim));
Query OK, 0 rows affected (0.236 sec)

MariaDB [akademik]> desc kelas_mahasiswa;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| kode_kelas | varchar(10) | NO   | PRI | NULL    |       |
| nim        | int(11)    | NO   | PRI | NULL    |       |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.024 sec)

MariaDB [akademik]>

```

3. Gunakan query alter table untuk mengubah tipe data kolom nim menjadi int(10)

- Tabel mahasiswa

```

C:\> Command Prompt - mysql -u root

MariaDB [akademik]> desc mahasiswa;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| nim        | int(11)    | NO   | PRI | NULL    |       |
| nama       | varchar(25) | YES  |     | NULL    |       |
| alamat     | varchar(50) | YES  |     | NULL    |       |
| tempat_lahir | varchar(50) | YES  |     | NULL    |       |
| tgl_lahir  | date       | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.025 sec)

MariaDB [akademik]> alter table mahasiswa modify nim int(10);
Query OK, 0 rows affected (0.085 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [akademik]> desc mahasiswa;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| nim        | int(10)    | NO   | PRI | NULL    |       |
| nama       | varchar(25) | YES  |     | NULL    |       |
| alamat     | varchar(50) | YES  |     | NULL    |       |
| tempat_lahir | varchar(50) | YES  |     | NULL    |       |
| tgl_lahir  | date       | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.034 sec)

MariaDB [akademik]>

```

- Table kelas_mahasiswa

```

C:\ Command Prompt - mysql -u root
MariaDB [akademik]> desc kelas_mahasiswa;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| kode_kelas | varchar(10) | NO   | PRI | NULL    |      |
| nim        | int(11)    | NO   | PRI | NULL    |      |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.025 sec)

MariaDB [akademik]> alter table kelas_mahasiswa modify nim int(10);
Query OK, 0 rows affected (0.065 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [akademik]> desc kelas_mahasiswa;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| kode_kelas | varchar(10) | NO   | PRI | NULL    |      |
| nim        | int(10)    | NO   | PRI | NULL    |      |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.025 sec)

MariaDB [akademik]>

```

4. Tambahkan data mahasiswa dengan seluruh data peserta OR VII LDKOM

```

C:\ Command Prompt - mysql -u root
MariaDB [akademik]> insert into mahasiswa(nim,nama,alamat,tempat_lahir,tgl_lahir) values
-> (1911521001,'Nadya Gusdita','Desa Balai Naras, Pariaman, Sumatera Barat','Pariaman','2001-08-15'),
-> (1911521002,'Ginda Teguh Imani','Jl. Baru Simpang 8, Padang Panjang, Sumatera Barat','Padang Panjang','2000-11-10'),
-> (1911521023,'Tasya Ade Karmila','Jl. Lintas Riau-Sumut, Bagan Batu, Riau','Padang Sidempuan','2001-05-13'),
-> (1911522002,'Untung Jamari','Padang Sikabu, Payakumbuh, Sumatera Barat','50 Kota','2000-01-29'),
-> (1911523011,'Fadillah Syafitri NST','Desa Padang Bulan, Mandailing Natal, Sumatera Utara','Padang Bulan','2001-07-27'),
-> (2011521006,'Reysya Irsyalina','Kubang Raya Perumahan Astam House, Pekanbaru, Riau','Pekanbaru','2002-01-28'),
-> (2011521009,'Riska Shifa Salsabila','Jl. Mandiangin, Bukittinggi, Sumatera Barat','Payakumbuh','2001-07-23'),
-> (2011521020,'Pawal Atakosi','Jl. Kebun Jati, Sawahlunto, Sumatera Barat','Sawahlunto','2002-03-12'),
-> (2011522012,'Rahmadina','Jl. Siteba, Padang, Sumatera Barat','Padang','2002-05-01'),
-> (2011522017,'Vallen Adithya Rekhsana','Padang','Padang','2002-01-01'),
-> (2011527002,'Riski Juni Darmawan','Jl. Syiah Kuala, Aceh Barat, Aceh','Bukittinggi','2002-06-29');
Query OK, 11 rows affected, 1 warning (0.010 sec)
Records: 11 Duplicates: 0 Warnings: 1

MariaDB [akademik]> select *from mahasiswa;
+-----+-----+-----+-----+-----+
| nim      | nama      | alamat      | tempat_lahir | tgl_lahir |
+-----+-----+-----+-----+-----+
| 1911521001 | Nadya Gusdita | Desa Balai Naras, Pariaman, Sumatera Barat | Pariaman | 2001-08-15 |
| 1911521002 | Ginda Teguh Imani | Jl. Baru Simpang 8, Padang Panjang, Sumatera Barat | Padang Panjang | 2000-11-10 |
| 1911521023 | Tasya Ade Karmila | Jl. Lintas Riau-Sumut, Bagan Batu, Riau | Padang Sidempuan | 2001-05-13 |
| 1911522002 | Untung Jamari | Padang Sikabu, Payakumbuh, Sumatera Barat | 50 Kota | 2000-01-29 |
| 1911523011 | Fadillah Syafitri NST | Desa Padang Bulan, Mandailing Natal, Sumatera Utar | Padang Bulan | 2001-07-27 |
| 2011521006 | Reysya Irsyalina | Kubang Raya Perumahan Astam House, Pekanbaru, Riau | Pekanbaru | 2002-01-28 |
| 2011521009 | Riska Shifa Salsabila | Jl. Mandiangin, Bukittinggi, Sumatera Barat | Payakumbuh | 2001-07-23 |
| 2011521020 | Pawal Atakosi | Jl. Kebun Jati, Sawahlunto, Sumatera Barat | Sawahlunto | 2002-03-12 |
| 2011522012 | Rahmadina | Jl. Siteba, Padang, Sumatera Barat | Padang | 2002-05-01 |
| 2011522017 | Vallen Adithya Rekhsana | Padang | Padang | 2002-01-01 |
| 2011527002 | Riski Juni Darmawan | Jl. Syiah Kuala, Aceh Barat, Aceh | Bukittinggi | 2002-06-29 |
+-----+-----+-----+-----+-----+
11 rows in set (0.001 sec)

MariaDB [akademik]>

```

5. Tambahkan data matkul dengan 6 mata kuliah yang ada di Sistem Informasi

- Sebelum ditambahkan dan query menambahkan datanya

```
Command Prompt - mysql -u root
MariaDB [akademik]> desc matkul;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| kode_matkul | varchar(10) | NO   | PRI | NULL    |       |
| nama_matkul  | varchar(30) | YES  |     | NULL    |       |
| sks          | int(11)    | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.032 sec)

MariaDB [akademik]> insert into matkul(kode_matkul, nama_matkul, sks)
-> values
-> ('TSI 103', 'Dasar-Dasar Pemograman', 3),
-> ('TSI 207', 'Arsitektur dan Organisasi Komputer', 3),
-> ('TSI 106', 'Sistem Informasi Manajemen', 4),
-> ('TSI 108', 'Praktikum SDA',1),
-> ('TSI 303', 'Data Mining', 2),
-> ('TSI 415', 'Pemograman Database', 3);
Query OK, 6 rows affected, 1 warning (0.038 sec)
Records: 6  Duplicates: 0  Warnings: 1

MariaDB [akademik]>
```

- Setelah ditambahkan

```
Command Prompt - mysql -u root
MariaDB [akademik]> select *from matkul;
+-----+-----+-----+
| kode_matkul | nama_matkul                | sks |
+-----+-----+-----+
| TSI 103     | Dasar-Dasar Pemograman    | 3   |
| TSI 106     | Sistem Informasi Manajemen | 4   |
| TSI 108     | Praktikum SDA            | 1   |
| TSI 207     | Arsitektur dan Organisasi Komp | 3   |
| TSI 303     | Data Mining               | 2   |
| TSI 415     | Pemograman Database       | 3   |
+-----+-----+-----+
6 rows in set (0.001 sec)

MariaDB [akademik]>
```

6. Tambahkan data kelas min. 5 kelas, dan data kelas_mahasiswa dimana setiap mahasiswa mengambil min. 1 kelas, atau 2 kelas dengan mata kuliah berbeda.

- Tabel Kelas

```
Command Prompt - mysql -u root
MariaDB [akademik]> select*from kelas;
Empty set (0.000 sec)

MariaDB [akademik]> insert into kelas(kode_kelas,kode_matkul,ruangan) values
-> ('TSI103/02','TSI 103','H1.1'),
-> ('TSI106/02','TSI 106','H2.4'),
-> ('TSI108/02','TSI 108','Labdas JSI'),
-> ('TSI207/01','TSI 207','H2.1'),
-> ('TSI303/02','TSI 303','H5.2'),
-> ('TSI415/01','TSI 415','H6.1');
Query OK, 6 rows affected (0.005 sec)
Records: 6 Duplicates: 0 Warnings: 0

MariaDB [akademik]> select*from kelas;
+-----+-----+-----+
| kode_kelas | kode_matkul | ruangan |
+-----+-----+-----+
| TSI103/02  | TSI 103     | H1.1    |
| TSI106/02  | TSI 106     | H2.4    |
| TSI108/02  | TSI 108     | Labdas JSI |
| TSI207/01  | TSI 207     | H2.1    |
| TSI303/02  | TSI 303     | H5.2    |
| TSI415/01  | TSI 415     | H6.1    |
+-----+-----+-----+
6 rows in set (0.000 sec)

MariaDB [akademik]>
```

- Tabel Kelas_Mahasiswa

```
Command Prompt - mysql -u root
MariaDB [akademik]> select *from kelas_mahasiswa;
Empty set (0.000 sec)

MariaDB [akademik]> insert into kelas_mahasiswa(kode_kelas,nim) values
-> ('TSI415/01',1911521023),('TSI207/01',1911521023),
-> ('TSI303/02',1911521002),('TSI108/02',1911521002),
-> ('TSI108/02',2011521009),('TSI207/01',2011521009),
-> ('TSI103/02',2011527002),
-> ('TSI106/02',2011521006),('TSI303/02',2011521006),
-> ('TSI303/02',2011522012),('TSI108/02',2011522012),
-> ('TSI415/01',1911523011),('TSI207/01',1911523011),
-> ('TSI415/01',1911521001),
-> ('TSI103/02',2011522017),
-> ('TSI303/02',1911522002),('TSI106/02',1911522002),
-> ('TSI103/02',2011521020);
Query OK, 18 rows affected (0.009 sec)
Records: 18 Duplicates: 0 Warnings: 0
```

```
Command Prompt - mysql -u root
MariaDB [akademik]> select *from kelas_mahasiswa;
+-----+-----+
| kode_kelas | nim      |
+-----+-----+
| TSI103/02  | 2011521020 |
| TSI103/02  | 2011522017 |
| TSI103/02  | 2011527002 |
| TSI106/02  | 1911522002 |
| TSI106/02  | 2011521006 |
| TSI108/02  | 1911521002 |
| TSI108/02  | 2011521009 |
| TSI108/02  | 2011522012 |
| TSI207/01  | 1911521023 |
| TSI207/01  | 1911523011 |
| TSI207/01  | 2011521009 |
| TSI303/02  | 1911521002 |
| TSI303/02  | 1911522002 |
| TSI303/02  | 2011521006 |
| TSI303/02  | 2011522012 |
| TSI415/01  | 1911521001 |
| TSI415/01  | 1911521023 |
| TSI415/01  | 1911523011 |
+-----+-----+
18 rows in set (0.001 sec)

MariaDB [akademik]>
```

7. Gunakan query select (function, where) min. 4 query, ditambah dengan:

- select join untuk menampilkan data mata kuliah apa saja yang anda ambil
- select join untuk mengambil data mahasiswa yang mengambil salah satu mata kuliah

Select (Function, where) :

- Select fungsi average

```
Command Prompt - mysql -u root
MariaDB [akademik]> select AVG(sks) as averageSks from matkul;
+-----+
| averageSks |
+-----+
|      2.6667 |
+-----+
1 row in set (0.076 sec)
```


- Select fungsi average + where

```
Command Prompt - mysql -u root
MariaDB [akademik]> select *from matkul where sks > (select avg(sks) from matkul);
+-----+-----+-----+
| kode_matkul | nama_matkul | sks |
+-----+-----+-----+
| TSI 103     | Dasar-Dasar Pemograman | 3 |
| TSI 106     | Sistem Informasi Manajemen | 4 |
| TSI 207     | AOK | 3 |
| TSI 415     | Pemograman Database | 3 |
+-----+-----+-----+
4 rows in set (0.010 sec)

MariaDB [akademik]>
```

- Select fungsi count

```
Command Prompt - mysql -u root
MariaDB [akademik]> select count(nim) as mhsDataMining
from kelas_mahasiswa where kode_kelas='TSI303/02';
+-----+
| mhsDataMining |
+-----+
| 4 |
+-----+
1 row in set (0.001 sec)

MariaDB [akademik]>
```

```
Command Prompt - mysql -u root
MariaDB [akademik]> select mahasiswa.nim, mahasiswa.nama from kelas_mahasiswa
-> inner join mahasiswa
-> on mahasiswa.nim=kelas_mahasiswa.nim
-> where kelas_mahasiswa.kode_kelas='TSI303/02';
+-----+-----+
| nim | nama |
+-----+-----+
| 1911521002 | Ginda Teguh Imani |
| 1911522002 | Untung Jamari |
| 2011521006 | Reysha Irsyalina |
| 2011522012 | Rahmadina |
+-----+-----+
4 rows in set (0.001 sec)

MariaDB [akademik]>
```

- Select fungsi min

```
Command Prompt - mysql -u root
MariaDB [akademik]> select min(nim) as smallestNIM from mahasiswa;
+-----+
| smallestNIM |
+-----+
| 1911521001 |
+-----+
1 row in set (0.001 sec)

MariaDB [akademik]>
```

- Select fungsi min + where

```
Command Prompt - mysql -u root
MariaDB [akademik]> select *from mahasiswa where nim = (select min(nim) from mahasiswa);
+-----+-----+-----+-----+-----+
| nim      | nama      | alamat                                     | tempat_lahir | tgl_lahir |
+-----+-----+-----+-----+-----+
| 1911521001 | Nadya Gusdita | Desa Balai Naras, Pariaman, Sumatera Barat | Pariaman     | 2001-08-15 |
+-----+-----+-----+-----+-----+
1 row in set (0.005 sec)

MariaDB [akademik]>
```

- Select fungsi max

```
Command Prompt - mysql -u root
MariaDB [akademik]> select max(nim) as biggestNIM from mahasiswa;
+-----+
| biggestNIM |
+-----+
| 2011527002 |
+-----+
1 row in set (0.001 sec)
```

- Select fungsi max + where

```
Command Prompt - mysql -u root
MariaDB [akademik]> select *from mahasiswa where nim=(select max(nim) from mahasiswa);
+-----+-----+-----+-----+-----+
| nim      | nama      | alamat                                     | tempat_lahir | tgl_lahir |
+-----+-----+-----+-----+-----+
| 2011527002 | Riski Juni Darmawan | Jl. Syiah Kuala, Aceh Barat, Aceh | Bukittinggi  | 2002-06-29 |
+-----+-----+-----+-----+-----+
1 row in set (0.000 sec)

MariaDB [akademik]>
```

- a. select join untuk menampilkan data mata kuliah apa saja yang anda ambil

```
Command Prompt - mysql -u root
MariaDB [akademik]> select matkul.kode_matkul, matkul.nama_matkul,
matkul.sks, kelas.kode_kelas, kelas.ruangan from kelas
-> inner join kelas_mahasiswa
-> on kelas_mahasiswa.kode_kelas=kelas.kode_kelas
-> inner join matkul
-> on kelas.kode_matkul=matkul.kode_matkul
-> where kelas_mahasiswa.nim=2011522012;
+-----+-----+-----+-----+-----+
| kode_matkul | nama_matkul | sks | kode_kelas | ruangan |
+-----+-----+-----+-----+-----+
| TSI 108     | Praktikum SDA | 1   | TSI108/02   | LD. JSI |
| TSI 303     | Data Mining  | 2   | TSI303/02   | H5.2    |
+-----+-----+-----+-----+-----+
2 rows in set (0.112 sec)

MariaDB [akademik]>
```

- b. select join untuk mengambil data mahasiswa yang mengambil salah satu mata kuliah

```
Command Prompt - mysql -u root
MariaDB [akademik]> select mahasiswa.nim, mahasiswa.nama from kelas_mahasiswa
-> inner join mahasiswa
-> on mahasiswa.nim=kelas_mahasiswa.nim
-> where kelas_mahasiswa.kode_kelas='TSI303/02';
+-----+-----+
| nim      | nama      |
+-----+-----+
| 1911521002 | Ginda Teguh Imani |
| 1911522002 | Untung Jamari      |
| 2011521006 | Reysha Irsyalina   |
| 2011522012 | Rahmadina          |
+-----+-----+
4 rows in set (0.001 sec)

MariaDB [akademik]>
```

8. Gunakan query update untuk mengupdate data, min. 1 baris data per tabelnya.

- Tabel Mahasiswa

Sebelum :

```

C:\> Command Prompt - mysql -u root

MariaDB [akademik]> select *from mahasiswa;
+-----+-----+-----+-----+-----+
| nim      | nama      | alamat      | tempat_lahir | tgl_lahir |
+-----+-----+-----+-----+-----+
| 1911521001 | Nadya Gusdita | Desa Balai Naras, Pariaman, Sumatera Barat | Pariaman | 2001-08-15 |
| 1911521002 | Ginda Teguh Imani | Jl. Baru Simpang 8, Padang Panjang, Sumatera Barat | Padang Panjang | 2000-11-10 |
| 1911521023 | Tasya Ade Karmila | Jl. Lintas Riau-Sumut, Bagan Batu, Riau | Padang Sidempuan | 2001-05-13 |
| 1911522002 | Untung Jamari | Padang Sikabu, Payakumbuh, Sumatera Barat | 50 Kota | 2000-01-29 |
| 1911523011 | Fadillah Syafitri NST | Desa Padang Bulan, Mandailing Natal, Sumatera Utara | Padang Bulan | 2001-07-27 |
| 2011521006 | Reysha Irsyalina | Kubang Raya Perumahan Astam House, Pekanbaru, Riau | Pekanbaru | 2002-01-28 |
| 2011521009 | Riska Shifa Salsabila | Jl. Mandiangin, Bukittinggi, Sumatera Barat | Payakumbuh | 2001-07-23 |
| 2011521020 | Pawal Atakosi | Jl. Kebun Jati, Sawahlunto, Sumatera Barat | Sawahlunto | 2002-03-12 |
| 2011522012 | Rahmadina | Jl. Siteba, Padang, Sumatera Barat | Padang | 2002-05-01 |
| 2011522017 | Vallen Adithya Rekhsana | Padang | Padang | 2002-01-01 |
| 2011527002 | Riski Juni Darmawan | Jl. Syiah Kuala, Aceh Barat, Aceh | Bukittinggi | 2002-06-29 |
+-----+-----+-----+-----+-----+
11 rows in set (0.001 sec)

```

Sesudah :

```

C:\> Command Prompt - mysql -u root

MariaDB [akademik]> update mahasiswa set alamat = 'Ds. Padang Bulan, Mandailing Natal, Sumatera Utara' WHERE tempat_lahir = 'Padang Bulan';
Query OK, 1 row affected (0.011 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [akademik]> select *from mahasiswa;
+-----+-----+-----+-----+-----+
| nim      | nama      | alamat      | tempat_lahir | tgl_lahir |
+-----+-----+-----+-----+-----+
| 1911521001 | Nadya Gusdita | Desa Balai Naras, Pariaman, Sumatera Barat | Pariaman | 2001-08-15 |
| 1911521002 | Ginda Teguh Imani | Jl. Baru Simpang 8, Padang Panjang, Sumatera Barat | Padang Panjang | 2000-11-10 |
| 1911521023 | Tasya Ade Karmila | Jl. Lintas Riau-Sumut, Bagan Batu, Riau | Padang Sidempuan | 2001-05-13 |
| 1911522002 | Untung Jamari | Padang Sikabu, Payakumbuh, Sumatera Barat | 50 Kota | 2000-01-29 |
| 1911523011 | Fadillah Syafitri NST | Ds. Padang Bulan, Mandailing Natal, Sumatera Utara | Padang Bulan | 2001-07-27 |
| 2011521006 | Reysha Irsyalina | Kubang Raya Perumahan Astam House, Pekanbaru, Riau | Pekanbaru | 2002-01-28 |
| 2011521009 | Riska Shifa Salsabila | Jl. Mandiangin, Bukittinggi, Sumatera Barat | Payakumbuh | 2001-07-23 |
| 2011521020 | Pawal Atakosi | Jl. Kebun Jati, Sawahlunto, Sumatera Barat | Sawahlunto | 2002-03-12 |
| 2011522012 | Rahmadina | Jl. Siteba, Padang, Sumatera Barat | Padang | 2002-05-01 |
| 2011522017 | Vallen Adithya Rekhsana | Padang | Padang | 2002-01-01 |
| 2011527002 | Riski Juni Darmawan | Jl. Syiah Kuala, Aceh Barat, Aceh | Bukittinggi | 2002-06-29 |
+-----+-----+-----+-----+-----+
11 rows in set (0.001 sec)

MariaDB [akademik]>

```

- Tabel Matkul

Sebelum :

```

C:\> Command Prompt - mysql -u root

MariaDB [akademik]> select *from matkul;
+-----+-----+-----+
| kode_matkul | nama_matkul | sks |
+-----+-----+-----+
| TSI 103      | Dasar-Dasar Pemograman | 3 |
| TSI 106      | Sistem Informasi Manajemen | 4 |
| TSI 108      | Praktikum SDA | 1 |
| TSI 207      | Arsitektur dan Organisasi Komp | 3 |
| TSI 303      | Data Mining | 2 |
| TSI 415      | Pemograman Database | 3 |
+-----+-----+-----+
6 rows in set (0.000 sec)

MariaDB [akademik]>

```

Sesudah :

```
Command Prompt - mysql -u root
MariaDB [akademik]> update matkul set nama_matkul = 'AOK'
where kode_matkul = 'TSI 207';
Query OK, 1 row affected (0.006 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [akademik]> select *from matkul;
+-----+-----+-----+
| kode_matkul | nama_matkul | sks |
+-----+-----+-----+
| TSI 103     | Dasar-Dasar Pemograman | 3 |
| TSI 106     | Sistem Informasi Manajemen | 4 |
| TSI 108     | Praktikum SDA | 1 |
| TSI 207     | AOK | 3 |
| TSI 303     | Data Mining | 2 |
| TSI 415     | Pemograman Database | 3 |
+-----+-----+-----+
6 rows in set (0.000 sec)

MariaDB [akademik]>
```

- Tabel kelas

Sebelum :

```
Command Prompt - mysql -u root
MariaDB [akademik]> select *from kelas;
+-----+-----+-----+
| kode_kelas | kode_matkul | ruangan |
+-----+-----+-----+
| TSI103/02  | TSI 103     | H1.1    |
| TSI106/02  | TSI 106     | H2.4    |
| TSI108/02  | TSI 108     | Labdas JSI |
| TSI207/01  | TSI 207     | H2.1    |
| TSI303/02  | TSI 303     | H5.2    |
| TSI415/01  | TSI 415     | H6.1    |
+-----+-----+-----+
6 rows in set (0.001 sec)
```

Sesudah :

```
Command Prompt - mysql -u root
MariaDB [akademik]> update kelas set ruangan='LD. JSI'
where kode_matkul='TSI 108';
Query OK, 1 row affected (0.027 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [akademik]> select *from kelas;
+-----+-----+-----+
| kode_kelas | kode_matkul | ruangan |
+-----+-----+-----+
| TSI103/02  | TSI 103     | H1.1    |
| TSI106/02  | TSI 106     | H2.4    |
| TSI108/02  | TSI 108     | LD. JSI |
| TSI207/01  | TSI 207     | H2.1    |
| TSI303/02  | TSI 303     | H5.2    |
| TSI415/01  | TSI 415     | H6.1    |
+-----+-----+-----+
6 rows in set (0.000 sec)
```

- Tabel kelas mahasiswa

Sebelum :

```
Command Prompt - mysql -u root
MariaDB [akademik]> select *from kelas_mahasiswa;
+-----+-----+
| kode_kelas | nim      |
+-----+-----+
| TSI103/02   | 2011521020 |
| TSI103/02   | 2011522017 |
| TSI103/02   | 2011527002 |
| TSI106/02   | 1911522002 |
| TSI106/02   | 2011521006 |
| TSI108/02   | 1911521002 |
| TSI108/02   | 2011521009 |
| TSI108/02   | 2011522012 |
| TSI207/01   | 1911521023 |
| TSI207/01   | 1911523011 |
| TSI207/01   | 2011521009 |
| TSI303/02   | 1911521002 |
| TSI303/02   | 1911522002 |
| TSI303/02   | 2011521006 |
| TSI303/02   | 2011522012 |
| TSI415/01   | 1911521001 |
| TSI415/01   | 1911521023 |
| TSI415/01   | 1911523011 |
+-----+-----+
18 rows in set (0.001 sec)
```

Sesudah :

```
Command Prompt - mysql -u root
MariaDB [akademik]> update kelas_mahasiswa set kode_kelas = 'TSI106/02'
where nim = 2011522017;
Query OK, 1 row affected (0.006 sec)
Rows matched: 1  Changed: 1  Warnings: 0

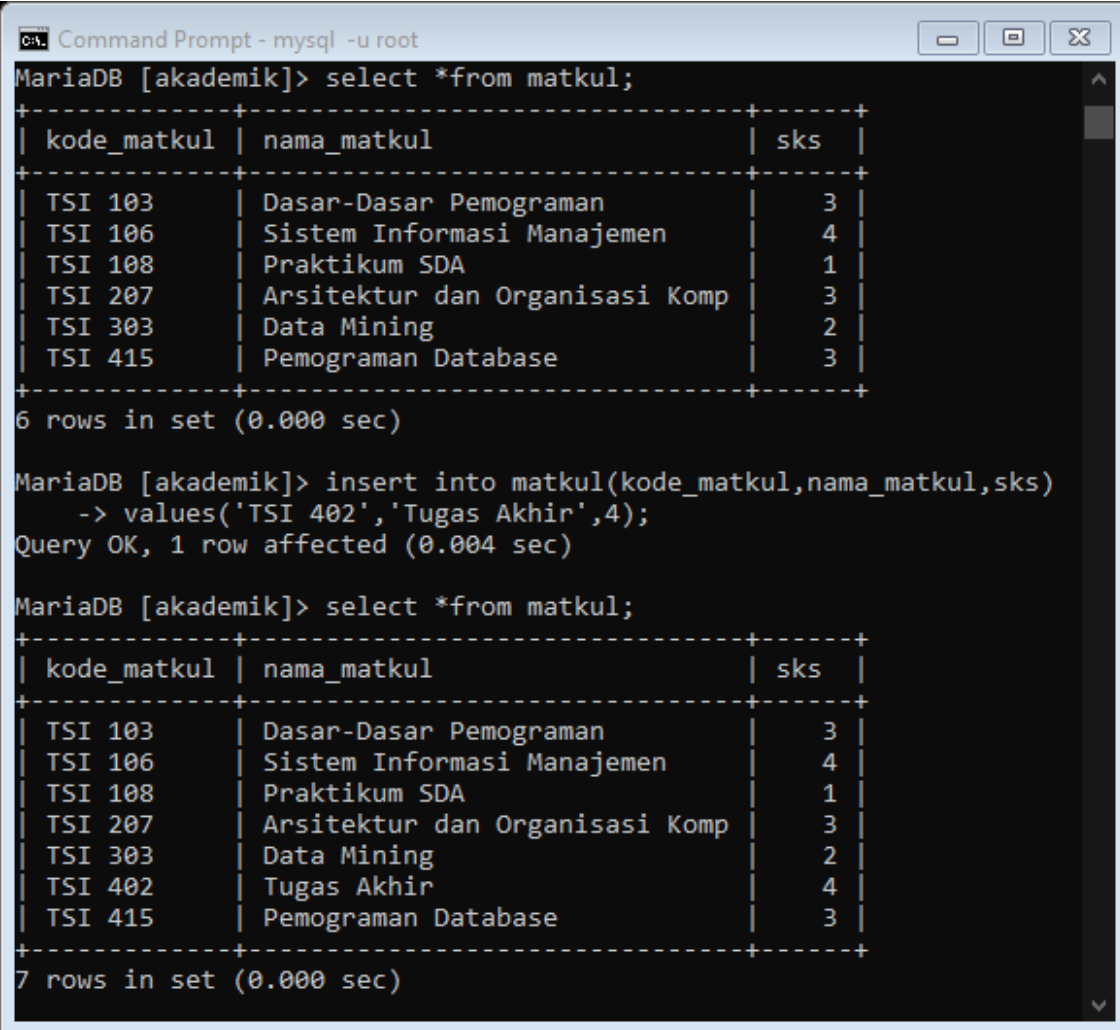
MariaDB [akademik]> select *from kelas_mahasiswa;
+-----+-----+
| kode_kelas | nim      |
+-----+-----+
| TSI103/02   | 2011521020 |
| TSI103/02   | 2011527002 |
| TSI106/02   | 1911522002 |
| TSI106/02   | 2011521006 |
| TSI106/02   | 2011522017 |
| TSI108/02   | 1911521002 |
| TSI108/02   | 2011521009 |
| TSI108/02   | 2011522012 |
| TSI207/01   | 1911521023 |
| TSI207/01   | 1911523011 |
| TSI207/01   | 2011521009 |
| TSI303/02   | 1911521002 |
| TSI303/02   | 1911522002 |
| TSI303/02   | 2011521006 |
| TSI303/02   | 2011522012 |
| TSI415/01   | 1911521001 |
| TSI415/01   | 1911521023 |
| TSI415/01   | 1911523011 |
+-----+-----+
18 rows in set (0.000 sec)

MariaDB [akademik]>
```

9. Gunakan query delete untuk menghapus satu data pada salah satu table.

- Tabel matkul

tambah sembarang data :

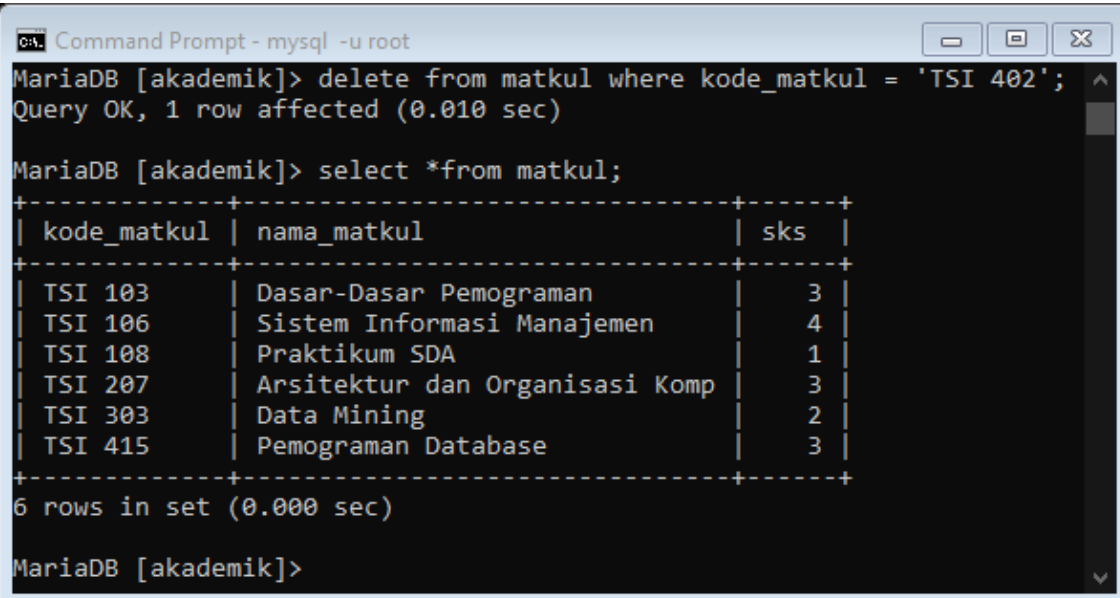


```
Command Prompt - mysql -u root
MariaDB [akademik]> select *from matkul;
+-----+-----+-----+
| kode_matkul | nama_matkul | sks |
+-----+-----+-----+
| TSI 103     | Dasar-Dasar Pemograman | 3 |
| TSI 106     | Sistem Informasi Manajemen | 4 |
| TSI 108     | Praktikum SDA | 1 |
| TSI 207     | Arsitektur dan Organisasi Komp | 3 |
| TSI 303     | Data Mining | 2 |
| TSI 415     | Pemograman Database | 3 |
+-----+-----+-----+
6 rows in set (0.000 sec)

MariaDB [akademik]> insert into matkul(kode_matkul,nama_matkul,sks)
-> values('TSI 402','Tugas Akhir',4);
Query OK, 1 row affected (0.004 sec)

MariaDB [akademik]> select *from matkul;
+-----+-----+-----+
| kode_matkul | nama_matkul | sks |
+-----+-----+-----+
| TSI 103     | Dasar-Dasar Pemograman | 3 |
| TSI 106     | Sistem Informasi Manajemen | 4 |
| TSI 108     | Praktikum SDA | 1 |
| TSI 207     | Arsitektur dan Organisasi Komp | 3 |
| TSI 303     | Data Mining | 2 |
| TSI 402     | Tugas Akhir | 4 |
| TSI 415     | Pemograman Database | 3 |
+-----+-----+-----+
7 rows in set (0.000 sec)
```

hapus data yang tadi ditambah



```
Command Prompt - mysql -u root
MariaDB [akademik]> delete from matkul where kode_matkul = 'TSI 402';
Query OK, 1 row affected (0.010 sec)

MariaDB [akademik]> select *from matkul;
+-----+-----+-----+
| kode_matkul | nama_matkul | sks |
+-----+-----+-----+
| TSI 103     | Dasar-Dasar Pemograman | 3 |
| TSI 106     | Sistem Informasi Manajemen | 4 |
| TSI 108     | Praktikum SDA | 1 |
| TSI 207     | Arsitektur dan Organisasi Komp | 3 |
| TSI 303     | Data Mining | 2 |
| TSI 415     | Pemograman Database | 3 |
+-----+-----+-----+
6 rows in set (0.000 sec)

MariaDB [akademik]>
```

10. Screenshot setiap langkah dan satukan dalam sebuah file .pdf