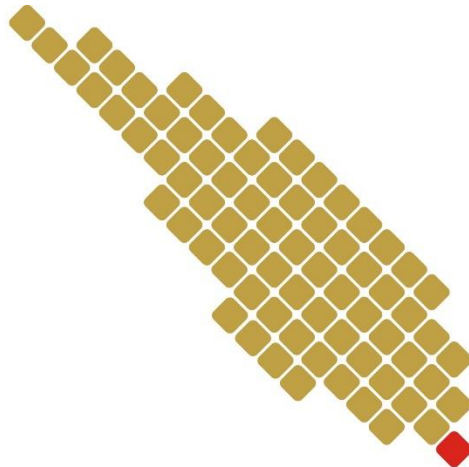


**LAPORAN PRAKTIKUM BASIS DATA
MODUL 3 DATA MANIPULATION LANGUAGE**



ITERA

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**PROGRAM STUDI SAINS DATA
INSTITUT TEKNOLOGI SUMATERA
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1. Masuk kedalam MariaDB melalui command prompt

Disini saya tidak menggunakan xampp oleh karena itu tidak ada MariaDB, saya sudah terlanjur menginstall mysql versi full sehingga cukup menggunakan mysql shell walaupun demikian fungsinya tetap sama seperti yang terlihat pada gambar dibawah.

```
MySQL Shell 8.0.32

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Type '\help' or '? for help; '\quit' to exit.
MySQL JS > \sql
Switching to SQL mode... Commands end with ;
MySQL SQL > \connect root@localhost
Creating a session to 'root@localhost'
Please provide the password for 'root@localhost': *****
Save password for 'root@localhost'? [Y]es/[N]o/[e]ver (default No): no
Fetching global names for auto-completion... Press ^C to stop.
Your MySQL connection id is 8 (X protocol)
Server version: 8.0.32 MySQL Community Server - GPL
No default schema selected; type \use <schema> to set one.
MySQL localhost:33060+ ssl SQL >
```

2. Buat sebuah database bernama latihan2

Query : create database latihan2;

```
No default schema selected; type \use <schema> to set one.
MySQL localhost:33060+ ssl SQL > create database latihan2;
Query OK, 1 row affected (0.0146 sec)
MySQL localhost:33060+ ssl SQL > show databases;
+-----+
| Database |
+-----+
| db_latihan1 |
| information_schema |
| komik_coba1 |
| latihan2 |
| mysql |
| performance_schema |
| prak1basdat |
| praksi1 |
| sakila |
| sys |
| tgsprakbasdat |
| world |
+-----+
12 rows in set (0.0117 sec)
```

3. Aktifkan database latihan2

Query : use latihan2;

```
MySQL localhost:33060+ ssl latihan2 SQL > use latihan2;
Default schema set to 'latihan2'.
Fetching global names, object names from 'latihan2' for auto-completion... Press ^C to stop.
MySQL localhost:33060+ ssl latihan2 SQL >
```

4. Buat tabel Bernama “member”, dengan ketentuan sebagai berikut

Tabel 4. Struktur Tabel Member

Field Name	Type	Size	Keterangan
Id member	Char	5	Primary key
Nama member	Varchar	40	
Alamat	Varchar	75	
Semester	Char	2	
Usia	Char	2	

Jawab:

Query : create table member(Id_member char (5) primary key, Nama_member varchar (40), Alamat varchar (75), Semester char (2), Usia char (2);

```
MySQL localhost:33060+ ssl latihan2 SQL > create table member( Id_member char (5) primary key, Nama_member varchar (
40), Alamat varchar (75), Semester char (2), Usia char (2));
Query OK, 0 rows affected (0.0202 sec)
MySQL localhost:33060+ ssl latihan2 SQL > show tables;
+-----+
| Tables_in_latihan2 |
+-----+
| member              |
+-----+
1 row in set (0.0115 sec)
MySQL localhost:33060+ ssl latihan2 SQL >
```

5. Lihat struktur tabel member

Query : desc member;

```
1 row in set (0.0115 sec)
MySQL localhost:33060+ ssl latihan2 SQL > desc member;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Id_member  | char(5)       | NO   | PRI | NULL    |       |
| Nama_member | varchar(40)   | YES  |     | NULL    |       |
| Alamat     | varchar(75)   | YES  |     | NULL    |       |
| Semester  | char(2)       | YES  |     | NULL    |       |
| Usia       | char(2)       | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.0128 sec)
MySQL localhost:33060+ ssl latihan2 SQL >
```

6. Isikan data untuk tabel member, dengan data sebagai berikut :

Tabel 5. *Isi Record Tabel Member*

Id_member	Nama_member	Alamat	Semester	Usia
01001	Tio Ferdinand	Jl. Serpong Raya No.11	4	21
01002	Amad Sanches	Jl. Cilenggang No.20	3	20
01003	Riki Bahagia	Jl. Utama Karya No.03	4	20
01004	Rere Kurnia	Jl. Smapal Serpong 167	2	19
01005	Erni Susanti	Jl. Nusa Loka 11-BSD	1	18
01006	Loki Nurdin	Jl. BSD Raya No.20	1	18

Query untuk mengisi data tabel:

insert into member values('01001', 'Tio Ferdinand', 'Jl. Serpong Raya No.11', '4', '21');

insert into member values('01002', 'Amad Sanches', 'Jl. Cilenggang No.20', '3', '20');

insert into member values('01003', 'Riki Bahagia', 'Jl. Utama Karya No.03', '4', '20');

insert into member values('01004', 'Rere Kurnia', 'Jl. Smapal Serpong 167', '2', '19');

insert into member values('01005', 'Erni Susanti', 'Jl. Nusa Loka 11 -BSD', '1', '18');

insert into member values('01006', 'Loki Nurdin', 'Jl. BSD Raya No.20', '1', '18');

```
5 rows in set (0.0031 sec)
MySQL localhost:33060+ ssl latihan2 SQL > insert into member values('01001', 'Tio Ferdinand', 'Jl. Serpong Raya No.11', '4', '21');
Query OK, 1 row affected (0.0454 sec)
MySQL localhost:33060+ ssl latihan2 SQL > insert into member values('01002', 'Amad Sanches', 'Jl. Cilenggang No.20', '3', '20');
Query OK, 1 row affected (0.0397 sec)
MySQL localhost:33060+ ssl latihan2 SQL > insert into member values('01003', 'Riki Bahagia', 'Jl. Utama Karya No.03', '4', '20');
Query OK, 1 row affected (0.0400 sec)
MySQL localhost:33060+ ssl latihan2 SQL > insert into member values('01004', 'Rere Kurnia', 'Jl. Smapal Serpong 167', '2', '19');
Query OK, 1 row affected (0.0404 sec)
MySQL localhost:33060+ ssl latihan2 SQL > insert into member values('01005', 'Erni Susanti', 'Jl. Nusa Loka 11 -BSD', '1', '18');
Query OK, 1 row affected (0.0407 sec)
MySQL localhost:33060+ ssl latihan2 SQL > insert into member values('01006', 'Loki Nurdin', 'Jl. BSD Raya No.20', '1', '18');
Query OK, 1 row affected (0.0405 sec)
MySQL localhost:33060+ ssl latihan2 SQL >
```

7. Tampilkan isi seluruh record pada tabel member

Query : yang digunakan select * from member;

```
Query OK, 1 row affected (0.0007 sec)
MySQL localhost:33060+ ssl latihan2 SQL > select * from member;
```

Id_member	Nama_member	Alamat	Semester	Usia
01001	Tio Ferdinand	Jl. Serpong Raya No.11	4	21
01002	Amad Sanches	Jl. Cilenggang No.20	3	20
01003	Riki Bahagia	Jl. Utama Karya No.03	4	20
01004	Rere Kurnia	Jl. Smapal Serpong 167	2	19
01005	Erni Susanti	Jl. Nusa Loka 11 -BSD	1	18
01006	Loki Nurdin	Jl. BSD Raya No.20	1	18

```
6 rows in set (0.0006 sec)
```

8. Ubah struktur tabel member dengan menambahkan kolom “no_hp” setelah kolom usia.

Query : alter table member add no_hp varchar (20) default 0;

```
6 rows in set (0.0006 sec)
MySQL localhost:33060+ ssl latihan2 SQL > alter table member add no_hp varchar (20) default 0;
Query OK, 0 rows affected (0.0094 sec)

Records: 0 Duplicates: 0 Warnings: 0
```

9. Tampilkan Kembali seluruh record pada tabel member

Query : select * from member;

```
6 rows in set (0.0006 sec)
MySQL localhost:33060+ ssl latihan2 SQL > alter table member add no_hp varchar (20) default 0;
Query OK, 0 rows affected (0.0094 sec)

Records: 0 Duplicates: 0 Warnings: 0
MySQL localhost:33060+ ssl latihan2 SQL > select * from member;
```

Id_member	Nama_member	Alamat	Semester	Usia	no_hp
01001	Tio Ferdinand	Jl. Serpong Raya No.11	4	21	0
01002	Amad Sanches	Jl. Cilenggang No.20	3	20	0
01003	Riki Bahagia	Jl. Utama Karya No.03	4	20	0
01004	Rere Kurnia	Jl. Smapal Serpong 167	2	19	0
01005	Erni Susanti	Jl. Nusa Loka 11 -BSD	1	18	0
01006	Loki Nurdin	Jl. BSD Raya No.20	1	18	0

```
6 rows in set (0.0005 sec)
```

10. Tampilkan isi record dengan nama member Bernama = “Erni Susanti”

Query : select * from member where Nama_member="Erni Susanti";

```
6 rows in set (0.0005 sec)
MySQL localhost:33060+ ssl latihan2 SQL > select * from member where Nama_member="Erni Susanti";
+-----+-----+-----+-----+-----+-----+
| Id_member | Nama_member | Alamat | Semester | Usia | no_hp |
+-----+-----+-----+-----+-----+-----+
| 01005 | Erni Susanti | Jl. Nusa Loka 11 -BSD | 1 | 18 | 0 |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.0006 sec)
MySQL localhost:33060+ ssl latihan2 SQL >
```

11. Tampilkan isi record dengan usia = “dibawah 21 tahun”

Query : select * from member where Usia<"21";

```
1 row in set (0.0006 sec)
MySQL localhost:33060+ ssl latihan2 SQL > select * from member where Usia<"21";
+-----+-----+-----+-----+-----+-----+
| Id_member | Nama_member | Alamat | Semester | Usia | no_hp |
+-----+-----+-----+-----+-----+-----+
| 01002 | Amad Sanches | Jl. Cilenggang No.20 | 3 | 20 | 0 |
| 01003 | Riki Bahagia | Jl. Hutama Karya No.03 | 4 | 20 | 0 |
| 01004 | Rere Kurnia | Jl. Smapal Serpong 167 | 2 | 19 | 0 |
| 01005 | Erni Susanti | Jl. Nusa Loka 11 -BSD | 1 | 18 | 0 |
| 01006 | Loki Nurdin | Jl. BSD Raya No.20 | 1 | 18 | 0 |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.0005 sec)
```

12. Ubahlah data pada kolom semester dengan nama_member = “Riki Bahagia” menjadi semester 5

Query : update member Set Semester="5" where Nama_member="Riki Bahagia";

```
5 rows in set (0.0005 sec)
MySQL localhost:33060+ ssl latihan2 SQL > update member Set Semester="5" where Nama_member="Riki Bahagia";
Query OK, 1 row affected (0.0029 sec)

Rows matched: 1 Changed: 1 Warnings: 0
MySQL localhost:33060+ ssl latihan2 SQL > select * from member;
+-----+-----+-----+-----+-----+-----+
| Id_member | Nama_member | Alamat | Semester | Usia | no_hp |
+-----+-----+-----+-----+-----+-----+
| 01001 | Tio Ferdinand | Jl. Serpong Raya No.11 | 4 | 21 | 0 |
| 01002 | Amad Sanches | Jl. Cilenggang No.20 | 3 | 20 | 0 |
| 01003 | Riki Bahagia | Jl. Hutama Karya No.03 | 5 | 20 | 0 |
| 01004 | Rere Kurnia | Jl. Smapal Serpong 167 | 2 | 19 | 0 |
| 01005 | Erni Susanti | Jl. Nusa Loka 11 -BSD | 1 | 18 | 0 |
| 01006 | Loki Nurdin | Jl. BSD Raya No.20 | 1 | 18 | 0 |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.0005 sec)
MySQL localhost:33060+ ssl latihan2 SQL >
```

13. Hapuslah data member Loki Nurdin

Query : delete from member where Nama_member="Loki Nurdin";

```
6 rows in set (0.0005 sec)
MySQL localhost:33060+ ssl latihan2 SQL > delete from member where Nama_member="Loki Nurdin";
Query OK, 1 row affected (0.0127 sec)
```

14. Tampilkan Kembali isi record pada tabel member

Query : select * from member;

```
6 rows in set (0.0005 sec)
MySQL localhost:33060+ ssl latihan2 SQL > delete from member where Nama_member="Loki Nurdin";
Query OK, 1 row affected (0.0127 sec)
MySQL localhost:33060+ ssl latihan2 SQL > select * from member;
+-----+-----+-----+-----+-----+-----+
| Id_member | Nama_member | Alamat | Semester | Usia | no_hp |
+-----+-----+-----+-----+-----+-----+
| 01001 | Tio Ferdinand | Jl. Serpong Raya No.11 | 4 | 21 | 0 |
| 01002 | Amad Sanches | Jl. Cilenggang No.20 | 3 | 20 | 0 |
| 01003 | Riki Bahagia | Jl. Utama Karya No.03 | 5 | 20 | 0 |
| 01004 | Rere Kurnia | Jl. Smapal Serpong 167 | 2 | 19 | 0 |
| 01005 | Erni Susanti | Jl. Nusa Loka 11 -BSD | 1 | 18 | 0 |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.0005 sec)
MySQL localhost:33060+ ssl latihan2 SQL >
```

15. Tampilkan isi record dengan usia = "diatas 18 tahun" atau smester = "diatas semester 2"

Query : select * from member where usia > "18" or semester > "2";

```
5 rows in set (0.0005 sec)
MySQL localhost:33060+ ssl latihan2 SQL > select * from member where usia > "18" or semester > "2";
+-----+-----+-----+-----+-----+-----+
| Id_member | Nama_member | Alamat | Semester | Usia | no_hp |
+-----+-----+-----+-----+-----+-----+
| 01001 | Tio Ferdinand | Jl. Serpong Raya No.11 | 4 | 21 | 0 |
| 01002 | Amad Sanches | Jl. Cilenggang No.20 | 3 | 20 | 0 |
| 01003 | Riki Bahagia | Jl. Utama Karya No.03 | 5 | 20 | 0 |
| 01004 | Rere Kurnia | Jl. Smapal Serpong 167 | 2 | 19 | 0 |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.0107 sec)
MySQL localhost:33060+ ssl latihan2 SQL >
```

16. Tampilkan isi record hanya field "nama_member", "alamat", dimana member Bernama depan huruf = "R", kemudian urutkan data berdasarkan nama_member

Query : select Nama_member, Alamat from member where Nama_member like 'R%' order by Nama_member;

```
4 rows in set (0.0107 sec)
MySQL localhost:33060+ ssl latihan2 SQL > select Nama_member, Alamat from member where Nama_member
like 'R%' order by Nama_member;
+-----+-----+
| Nama_member | Alamat |
+-----+-----+
| Rere Kurnia | Jl. Smapal Serpong 167 |
| Riki Bahagia | Jl. Utama Karya No.03 |
+-----+-----+
2 rows in set (0.0113 sec)
MySQL localhost:33060+ ssl latihan2 SQL >
```

17. Tampilkan 5 isi record teratas dari tabel member, kemudian urutkan secara descending berdasarkan “semester”

Query : select * from member order by Semester desc limit 5;

```
2 rows in set (0.0113 sec)
MySQL localhost:33060+ ssl latihan2 SQL > select * from member order by Semester desc limit 5;
+-----+-----+-----+-----+-----+-----+
| Id_member | Nama_member | Alamat | Semester | Usia | no_hp |
+-----+-----+-----+-----+-----+-----+
| 01003 | Riki Bahagia | Jl. Utama Karya No.03 | 5 | 20 | 0 |
| 01001 | Tio Ferdinand | Jl. Serpong Raya No.11 | 4 | 21 | 0 |
| 01002 | Amad Sanches | Jl. Cilenggang No.20 | 3 | 20 | 0 |
| 01004 | Rere Kurnia | Jl. Smapal Serpong 167 | 2 | 19 | 0 |
| 01005 | Erni Susanti | Jl. Nusa Loka 11 -BSD | 1 | 18 | 0 |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.0111 sec)
```

18. Tampilkan isi record, hanya dari record ke-2 hingga ke-4, (perhitungan record dimulai dari record 0, maka dirumuskan record ke-2 adalah LIMIT 1, sebanyak 3 record ke bawah)

Query : select * from member limit 1,3;

```
5 rows in set (0.0111 sec)
MySQL localhost:33060+ ssl latihan2 SQL > select * from member limit 1,3;
+-----+-----+-----+-----+-----+-----+
| Id_member | Nama_member | Alamat | Semester | Usia | no_hp |
+-----+-----+-----+-----+-----+-----+
| 01002 | Amad Sanches | Jl. Cilenggang No.20 | 3 | 20 | 0 |
| 01003 | Riki Bahagia | Jl. Utama Karya No.03 | 5 | 20 | 0 |
| 01004 | Rere Kurnia | Jl. Smapal Serpong 167 | 2 | 19 | 0 |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.0005 sec)
```