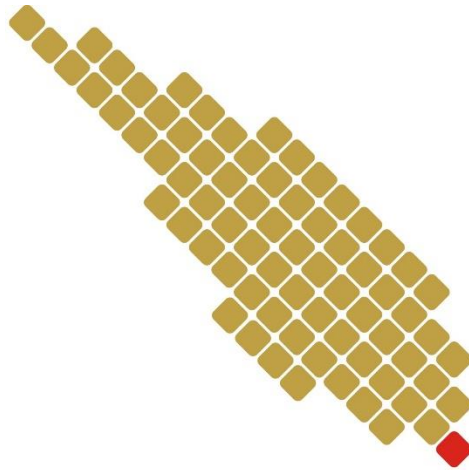


**LAPORAN PRAKTIKUM BASIS DATA  
MODUL 5**



**ITERA**

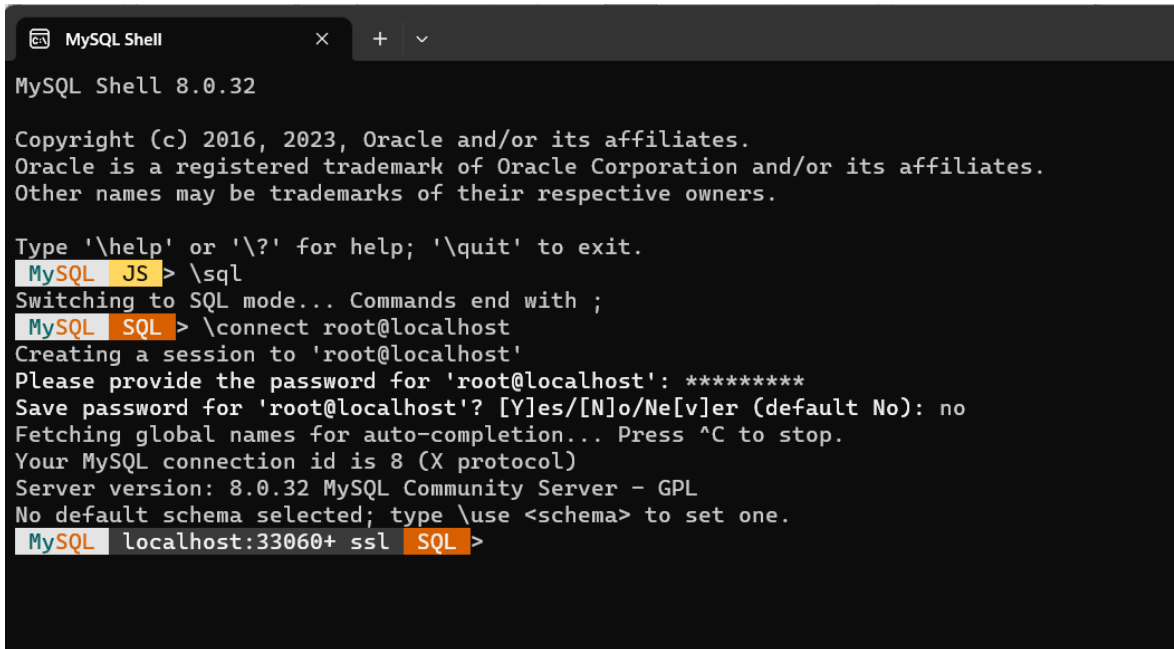
Disusun Oleh :  
Nama: Rafi Fadhlillah  
NIM : 121450143

**PROGRAM STUDI SAINS DATA  
INSTITUT TEKNOLOGI SUMATERA  
2023**

### 3.1. Tugas Individu I

#### 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.



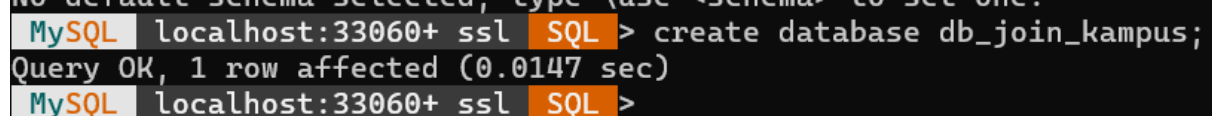
```
MySQL Shell 8.0.32

Copyright (c) 2016, 2023, Oracle and/or its affiliates.
Oracle is a registered trademark of Oracle Corporation and/or its affiliates.
Other names may be trademarks of their respective owners.

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 dengan nama “db\_join\_kampus”, kemudian tampilkan seluruh daftar tabel yang ada.

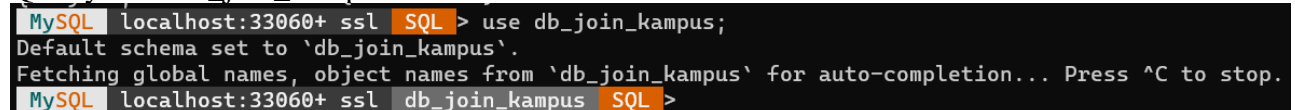
Query : create database db\_join\_kampus



```
MySQL localhost:33060+ ssl SQL > create database db_join_kampus;
Query OK, 1 row affected (0.0147 sec)
MySQL localhost:33060+ ssl SQL >
```

#### 3. Aktifkan database db\_join\_kampus.

Query : use db\_join\_kampus



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

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

Query :

```
create table dosen(  
    -> Nip char(5) Primary Key,  
    -> Nm_dosen varchar(35),  
    -> Thn_masuk Year,  
    -> Alamat varchar(50));
```

```
Fetching global names, object names from 'db_join_kampus' for auto-completion... Press ^C to stop.  
MySQL localhost:33060+ ssl db_join_kampus SQL > create table dosen(  
    -> Nip char(5) Primary Key,  
    -> Nm_dosen varchar(35),  
    -> Thn_masuk Year,  
    -> Alamat varchar(50));  
  
Query OK, 0 rows affected (0.0231 sec)  
MySQL localhost:33060+ ssl db_join_kampus SQL >  
MySQL localhost:33060+ ssl db_join_kampus SQL > desc dosen;  
+-----+-----+-----+-----+-----+-----+  
| Field      | Type          | Null | Key | Default | Extra |  
+-----+-----+-----+-----+-----+-----+  
| Nip        | char(5)       | NO   | PRI | NULL    |       |  
| Nm_dosen   | varchar(35)   | YES  |     | NULL    |       |  
| Thn_masuk  | year         | YES  |     | NULL    |       |  
| Alamat     | varchar(50)   | YES  |     | NULL    |       |  
+-----+-----+-----+-----+-----+-----+  
4 rows in set (0.0136 sec)
```

#### 5. Buat tabel Bernama “mata\_kuliah”, dengan ketentuan sebagai berikut :

Query :

```
create table mata_kuliah(  
    -> Kd_matkul char(3) Primary Key,  
    -> Nm_matkul varchar(30),  
    -> Sks int(2));
```

```
Query OK, 0 rows affected (0.0231 sec)  
MySQL localhost:33060+ ssl db_join_kampus SQL > create table mata_kuliah(  
    -> Kd_matkul char(3) Primary Key,  
    -> Nm_matkul varchar(30),  
    -> Sks int(2));  
  
Query OK, 0 rows affected, 1 warning (0.0195 sec)  
MySQL localhost:33060+ ssl db_join_kampus SQL > desc mata_kuliah;  
+-----+-----+-----+-----+-----+-----+  
| Field      | Type          | Null | Key | Default | Extra |  
+-----+-----+-----+-----+-----+-----+  
| Kd_matkul  | char(3)       | NO   | PRI | NULL    |       |  
| Nm_matkul  | varchar(30)   | YES  |     | NULL    |       |  
| Sks        | int           | YES  |     | NULL    |       |  
+-----+-----+-----+-----+-----+-----+
```

#### 6. Buat Tabel Bernama “mengajar”, dengan ketentuan sebagai berikut :

Query :

```
create table mengajar(  
    -> id int(3) Primary Key Auto_Increment,  
    -> Nip char(5),  
    -> Kd_matkul char(3),  
    -> FOREIGN KEY (Nip) REFERENCES dosen(Nip),  
    -> FOREIGN KEY (Kd_matkul) REFERENCES mata_kuliah(Kd_matkul));
```

```
MySQL localhost:33060+ ssl db_join_kampus SQL > create table mengajar(
-> id int(3) Primary Key Auto_Increment,
-> Nip char(5),
-> Kd_matkul char(3),
-> FOREIGN KEY (Nip) REFERENCES dosen(Nip),
-> FOREIGN KEY (Kd_matkul) REFERENCES mata_kuliah(Kd_matkul));
Query OK, 0 rows affected, 1 warning (0.0238 sec)
Warning (code 1681): Integer display width is deprecated and will be removed in a future release.
MySQL localhost:33060+ ssl db_join_kampus SQL > desc mengajar;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| id    | int  | NO   | PRI | NULL    | auto_increment |
| Nip   | char(5) | YES | MUL | NULL    |               |
| Kd_matkul | char(3) | YES | MUL | NULL    |               |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.0016 sec)
```

## 7. Tampilkan struktur tabel dari masing – masing tabel yang telah dibuat.

```
Warning (code 1681): Integer display width is deprecated and will be removed in a future release.
MySQL localhost:33060+ ssl db_join_kampus SQL > desc mengajar;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| id    | int  | NO   | PRI | NULL    | auto_increment |
| Nip   | char(5) | YES | MUL | NULL    |               |
| Kd_matkul | char(3) | YES | MUL | NULL    |               |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.0016 sec)
MySQL localhost:33060+ ssl db_join_kampus SQL > desc dosen;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Nip   | char(5) | NO   | PRI | NULL    |               |
| Nm_dosen | varchar(35) | YES |     | NULL    |               |
| Thn_masuk | year | YES |     | NULL    |               |
| Alamat | varchar(50) | YES |     | NULL    |               |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.0017 sec)
MySQL localhost:33060+ ssl db_join_kampus SQL > desc mata_kuliah;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Kd_matkul | char(3) | NO   | PRI | NULL    |               |
| Nm_matkul | varchar(30) | YES |     | NULL    |               |
| Sks      | int    | YES |     | NULL    |               |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.0014 sec)
MySQL localhost:33060+ ssl db_join_kampus SQL >
```

## 8. Isikan data untuk tabel dosen, dengan data sebagai berikut :

Query :

insert into dosen values (01011, 'Tirta Setiawan','2018','Bengkulu');

insert into dosen values(01012, 'Febri Dwi Irawati', '2019', 'Jombang');

insert into dosen values(01013, 'Mika Sitinjak', '2020', 'Padang');

insert into dosen values(01014, 'Tamaro Nadeak', '2021','Bandarlampung');

insert into dosen values(01015, 'Luluk Mutakharoh','2022','Lampung Timur');

```
3 rows in set (0.0016 sec)
MySQL localhost:33060+ ssl db_join_kampus SQL > insert into dosen values (01011, 'Tirta Setiawan','2018','Bengkulu');
Query OK, 1 row affected (0.0161 sec)
MySQL localhost:33060+ ssl db_join_kampus SQL > insert into dosen values(01012, 'Febri Dwi Irawati', '2019', 'Jombang');
Query OK, 1 row affected (0.0393 sec)
MySQL localhost:33060+ ssl db_join_kampus SQL > insert into dosen values(01013, 'Mika Sitinjak', '2020', 'Padang');
ERROR: 1064: 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 ''Mika Si
tinjak'. '2020', 'Padang')' at line 1
MySQL localhost:33060+ ssl db_join_kampus SQL > insert into dosen values(01013, 'Mika Sitinjak', '2020', 'Padang');
Query OK, 1 row affected (0.0015 sec)
MySQL localhost:33060+ ssl db_join_kampus SQL > insert into dosen values(01014, 'Tamaro Nadeak', '2021','Bandarlampung');
Query OK, 1 row affected (0.0118 sec)
MySQL localhost:33060+ ssl db_join_kampus SQL > insert into dosen values(01015, 'Luluk Mutakharoh','2022','Lampung Timur');
Query OK, 1 row affected (0.0016 sec)
MySQL localhost:33060+ ssl db_join_kampus SQL >
```

## 9. Isikan data untuk tabel mata\_kuliah, dengan data sebagai berikut:

Query :

```
insert into mata_kuliah values('101','Algoritma','3');
insert into mata_kuliah values('202','Basis Data','4');
insert into mata_kuliah values('303','Pembelajaran mesin','4');
insert into mata_kuliah values('404','Big Data','3');
insert into mata_kuliah values('505','Statistika','3');
```

```
MySQL localhost:33060+ ssl db_join_kampus SQL > insert into mata_kuliah values('101','Algoritma','3');
Query OK, 1 row affected (0.0122 sec)
MySQL localhost:33060+ ssl db_join_kampus SQL > insert into mata_kuliah values('202','Basis Data','4');
ERROR: 1064: 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 'Basis Data' '4')' at line 1
MySQL localhost:33060+ ssl db_join_kampus SQL > insert into mata_kuliah values('202','Basis Data','4');
Query OK, 1 row affected (0.0116 sec)
MySQL localhost:33060+ ssl db_join_kampus SQL > insert into mata_kuliah values('303','Pembelajaran mesin','4');
Query OK, 1 row affected (0.0117 sec)
MySQL localhost:33060+ ssl db_join_kampus SQL > insert into mata_kuliah values('404','Big Data','3');
Query OK, 1 row affected (0.0122 sec)
MySQL localhost:33060+ ssl db_join_kampus SQL > insert into mata_kuliah values('505','Statistika','3');
Query OK, 1 row affected (0.0117 sec)
MySQL localhost:33060+ ssl db_join_kampus SQL >
```

## 10. Isikan data untuk tabel mengajar, dengan data sebagai berikut :

Query :

```
insert into mengajar(Nip, Kd_matkul) values('1011','101');
insert into mengajar(Nip, Kd_matkul) values('1011','303');
insert into mengajar(Nip, Kd_matkul) values('1012','202');
insert into mengajar(Nip, Kd_matkul) values('1012','404');
insert into mengajar(Nip, Kd_matkul) values('1012','303');
insert into mengajar(Nip, Kd_matkul) values('1013','505');
insert into mengajar(Nip, Kd_matkul) values('1013','101');
insert into mengajar(Nip, Kd_matkul) values('1014','404');
insert into mengajar(Nip, Kd_matkul) values('1015','202');
insert into mengajar(Nip, Kd_matkul) values('1015','303');
```

```
MySQL localhost:33060+ ssl db_join_kampus SQL > insert into mengajar(Nip, Kd_matkul) values('1011','101');
Query OK, 1 row affected (0.0049 sec)
MySQL localhost:33060+ ssl db_join_kampus SQL > insert into mengajar(Nip, Kd_matkul) values('1011','303');
Query OK, 1 row affected (0.0111 sec)
MySQL localhost:33060+ ssl db_join_kampus SQL > insert into mengajar(Nip, Kd_matkul) values('1012','202');
Query OK, 1 row affected (0.0118 sec)
MySQL localhost:33060+ ssl db_join_kampus SQL > insert into mengajar(Nip, Kd_matkul) values('1012','404');
Query OK, 1 row affected (0.0115 sec)
MySQL localhost:33060+ ssl db_join_kampus SQL > insert into mengajar(Nip, Kd_matkul) values('1012','303');
Query OK, 1 row affected (0.0019 sec)
MySQL localhost:33060+ ssl db_join_kampus SQL > insert into mengajar(Nip, Kd_matkul) values('1013','505');
Query OK, 1 row affected (0.0012 sec)
MySQL localhost:33060+ ssl db_join_kampus SQL > insert into mengajar(Nip, Kd_matkul) values('1013','101');
Query OK, 1 row affected (0.0392 sec)
MySQL localhost:33060+ ssl db_join_kampus SQL > insert into mengajar(Nip, Kd_matkul) values('1014','404');
Query OK, 1 row affected (0.0113 sec)
MySQL localhost:33060+ ssl db_join_kampus SQL > insert into mengajar(Nip, Kd_matkul) values('1015','202');
Query OK, 1 row affected (0.0110 sec)
MySQL localhost:33060+ ssl db_join_kampus SQL > insert into mengajar(Nip, Kd_matkul) values('1015','303');
Query OK, 1 row affected (0.0115 sec)
MySQL localhost:33060+ ssl db_join_kampus SQL >
```

## 11. Tampilkan isi record dari ketiga tabel yang telah dibuat

```
Query OK, 1 row affected (0.0115 sec)
MySQL localhost:33060+ ssl db_join_kampus SQL > select * from dosen;
+-----+-----+-----+-----+
| Nip   | Nm_dosen      | Thn_masuk | Alamat      |
+-----+-----+-----+-----+
| 1011  | Tirta Setiawan | 2018      | Bengkulu    |
| 1012  | Febri Dwi Irawati | 2019      | Jombang     |
| 1013  | Mika Sitinjak  | 2020      | Padang      |
| 1014  | Tamaro Nadeak  | 2021      | Bandarlampung |
| 1015  | Luluk Mutakharoh | 2022      | Lampung Timur |
+-----+-----+-----+-----+
5 rows in set (0.0005 sec)
MySQL localhost:33060+ ssl db_join_kampus SQL > select * from mata_kuliah;
+-----+-----+-----+
| Kd_matkul | Nm_matkul      | Sks |
+-----+-----+-----+
| 101       | Algoritma      | 3   |
| 202       | Basis Data     | 4   |
| 303       | Pembelajaran mesin | 4   |
| 404       | Big Data       | 3   |
| 505       | Statistika     | 3   |
+-----+-----+-----+
5 rows in set (0.0005 sec)
MySQL localhost:33060+ ssl db_join_kampus SQL > select * from mengajar;
+-----+-----+-----+
| id | Nip   | Kd_matkul |
+-----+-----+-----+
| 1  | 1011  | 101       |
| 2  | 1011  | 303       |
| 3  | 1012  | 202       |
| 4  | 1012  | 404       |
| 5  | 1012  | 303       |
| 6  | 1013  | 505       |
| 7  | 1013  | 101       |
| 8  | 1014  | 404       |
| 9  | 1015  | 202       |
| 10 | 1015  | 303       |
+-----+-----+-----+
10 rows in set (0.0005 sec)
MySQL localhost:33060+ ssl db_join_kampus SQL >
```

## 12. Tampilkan daftar dosen yang mengajar mata kuliah =”pembelajaran mesin” menggunakan inner join

Query :

```
select d.Nm_dosen, m.Nm_matkul, d.Thn_masuk from dosen d
```

-> inner join mengajar mg on d.Nip = mg.Nip

-> inner join mata\_kuliah m on mg.Kd\_matkul = m.Kd\_matkul

-> where m.Nm\_matkul = 'Pembelajaran mesin';

```
MySQL localhost:33060+ ssl db_join_kampus SQL > select d.Nm_dosen, m.Nm_matkul, d.Thn_masuk from dosen d
-> inner join mengajar mg on d.Nip = mg.Nip
-> inner join mata_kuliah m on mg.Kd_matkul = m.Kd_matkul
-> where m.Nm_matkul = 'Pembelajaran mesin';
```

Nm_dosen	Nm_matkul	Thn_masuk
Tirta Setiawan	Pembelajaran mesin	2018
Febri Dwi Irawati	Pembelajaran mesin	2019
Luluk Mutakharoh	Pembelajaran mesin	2022

3 rows in set (0.0025 sec)

13. Tampilkan hanya field “nm\_dosen”, “nm\_matkul”, “thn\_masuk” yang mengajar mata kuliah = “Big Data”, kemudian urutkan secara descending berdasarkan “thn\_masuk”

Query :

```
select d.Nm_dosen, mk.Nm_matkul, d.Thn_masuk from dosen d
-> inner join mengajar m on d.Nip = m.Nip
-> inner join mata_kuliah mk on m.Kd_matkul = mk.Kd_matkul
-> where mk.Nm_matkul = 'Big Data'
-> order by d.Thn_masuk Desc;
```

```
MySQL localhost:33060+ ssl db_join_kampus SQL > select d.Nm_dosen, mk.Nm_matkul, d.Thn_masuk from dosen d
-> inner join mengajar m on d.Nip = m.Nip
-> inner join mata_kuliah mk on m.Kd_matkul = mk.Kd_matkul
-> where mk.Nm_matkul = 'Big Data'
-> order by d.Thn_masuk Desc;
```

Nm_dosen	Nm_matkul	Thn_masuk
Tamaro Nadeak	Big Data	2021
Febri Dwi Irawati	Big Data	2019

14. Buat alias dengan nama “ nama dosen” untuk field “nm\_dosen” dan alias “mengajar” untuk field “nm\_matkul”. Tampilkan hanya field NIP, alias nama dosen, alias mengajar, kemudian urutkan berdasarkan “nm\_matkul”.

```
MySQL localhost:33060+ ssl db_join_kampus SQL > select dosen.Nip, dosen.Nm_dosen as 'Nama Dosen', mata_kuliah.Nm_matkul as 'Mengajar' from mengajar
-> inner join dosen on dosen.Nip = mengajar.Nip
-> inner join mata_kuliah on mata_kuliah.Kd_matkul = mengajar.Kd_matkul
-> order by mata_kuliah.Nm_matkul;
```

Nip	Nama Dosen	Mengajar
1011	Tirta Setiawan	Algoritma
1013	Mika Sitinjak	Algoritma
1012	Febri Dwi Irawati	Basis Data
1015	Luluk Mutakharoh	Basis Data
1012	Febri Dwi Irawati	Big Data
1014	Tamaro Nadeak	Big Data
1011	Tirta Setiawan	Pembelajaran mesin
1012	Febri Dwi Irawati	Pembelajaran mesin
1015	Luluk Mutakharoh	Pembelajaran mesin
1013	Mika Sitinjak	Statistika

10 rows in set (0.0017 sec)

```
MySQL localhost:33060+ ssl db_join_kampus SQL >
```

## 3.2. Tugas Individu II

1. Buat sebuah database dengan nama “db\_join\_buku”, kemudian tampilkan daftar tabel yang ada

```
MySQL localhost:33060+ ssl SQL > CREATE DATABASE db_join_buku;
Query OK, 1 row affected (0.0031 sec)
MySQL localhost:33060+ ssl SQL >
```

2. Aktifkan database db\_join\_buku.

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

3. Buat tabel Bernama “buku”, dengan ketentuan sebagai berikut :

```
MySQL localhost:33060+ ssl db_join_buku SQL > CREATE TABLE buku (
    --> Id_buku INT(3) PRIMARY KEY AUTO_INCREMENT,
    --> Judul VARCHAR(40),
    --> Thn_terbit YEAR,
    --> Id_kategori INT(3));
Query OK, 0 rows affected, 2 warnings (0.0248 sec)
Warning (code 1681): Integer display width is deprecated and will be removed in a future release.
Warning (code 1681): Integer display width is deprecated and will be removed in a future release.
MySQL localhost:33060+ ssl db_join_buku SQL > DESC buku;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Id_buku | int | NO | PRI | NULL | auto_increment |
| Judul | varchar(40) | YES | | NULL | |
| Thn_terbit | year | YES | | NULL | |
| Id_kategori | int | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.0018 sec)
MySQL localhost:33060+ ssl db_join_buku SQL >
```

4. Buat tabel Bernama “ kategori\_buku”, dengan ketentuan sebagai berikut :

```
MySQL localhost:33060+ ssl db_join_buku SQL > CREATE TABLE kategori_buku (
    --> Id_kategori INT(3) PRIMARY KEY AUTO_INCREMENT,
    --> Nm_kategori VARCHAR(30));
Query OK, 0 rows affected, 1 warning (0.0190 sec)
Warning (code 1681): Integer display width is deprecated and will be removed in a future release.
MySQL localhost:33060+ ssl db_join_buku SQL > DESC kategori_buku;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Id_kategori | int | NO | PRI | NULL | auto_increment |
| Nm_kategori | varchar(30) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.0018 sec)
MySQL localhost:33060+ ssl db_join_buku SQL >
```



## 5. Isi record masing – masing tabel sebagai berikut :

```
2 rows in set (0.0016 sec)
MySQL localhost:33060+ ssl db_join_buku SQL> INSERT INTO buku (Judul, Thn_terbit, Id_kategori) VALUES
-> ('PTIK', 2017, 1),
-> ('SIM', 2015, 2),
-> ('APSI', 2014, 2),
-> ('RPL', 2016, 4),
-> ('LINUX', 2014, 5),
-> ('SO', 2013, 6);

Query OK, 6 rows affected (0.0032 sec)

Records: 6 Duplicates: 0 Warnings: 0
MySQL localhost:33060+ ssl db_join_buku SQL> INSERT INTO kategori_buku (Nm_kategori) VALUES
-> ('Manajemen Informatika'),
-> ('Sistem Informasi'),
-> ('Ilmu Komputer'),
-> ('Teknik Komputer'),
-> ('Jaringan Komputer');

Query OK, 5 rows affected (0.0024 sec)

Records: 5 Duplicates: 0 Warnings: 0
MySQL localhost:33060+ ssl db_join_buku SQL>
```

## 6. Tampilkan isi record masing – masing tabel.

```
MySQL localhost:33060+ ssl db_join_buku SQL> SELECT * FROM buku;
+-----+-----+-----+-----+
| Id_buku | Judul | Thn_terbit | Id_kategori |
+-----+-----+-----+-----+
| 1 | PTIK | 2017 | 1 |
| 2 | SIM | 2015 | 2 |
| 3 | APSI | 2014 | 2 |
| 4 | RPL | 2016 | 4 |
| 5 | LINUX | 2014 | 5 |
| 6 | SO | 2013 | 6 |
+-----+-----+-----+-----+
6 rows in set (0.0005 sec)
MySQL localhost:33060+ ssl db_join_buku SQL> SELECT * FROM kategori_buku;
+-----+-----+
| Id_Kategori | Nm_kategori |
+-----+-----+
| 1 | Manajemen Informatika |
| 2 | Sistem Informasi |
| 3 | Ilmu Komputer |
| 4 | Teknik Komputer |
| 5 | Jaringan Komputer |
+-----+-----+
5 rows in set (0.0005 sec)
MySQL localhost:33060+ ssl db_join_buku SQL>
```

## 7. Tampilkan isi record dengan perintah left outer join.

```
MySQL localhost:33060+ ssl db_join_buku SQL> SELECT * FROM buku LEFT OUTER JOIN kategori_buku ON buku.Id_kategori = kategori_buku.Id_kategori;
+-----+-----+-----+-----+-----+-----+
| Id_buku | Judul | Thn_terbit | Id_kategori | Id_kategori | Nm_kategori |
+-----+-----+-----+-----+-----+-----+
| 1 | PTIK | 2017 | 1 | 1 | Manajemen Informatika |
| 2 | SIM | 2015 | 2 | 2 | Sistem Informasi |
| 3 | APSI | 2014 | 2 | 2 | Sistem Informasi |
| 4 | RPL | 2016 | 4 | 4 | Teknik Komputer |
| 5 | LINUX | 2014 | 5 | 5 | Jaringan Komputer |
| 6 | SO | 2013 | 6 | NULL | NULL |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.0006 sec)
MySQL localhost:33060+ ssl db_join_buku SQL>
```

## 8. Tampilkan isi record dengan perintah right outer join

```
MySQL localhost:33060+ ssl db_join_buku SQL> SELECT * FROM buku RIGHT OUTER JOIN kategori_buku ON buku.Id_kategori = kategori_buku.Id_kategori;
```

Id_buku	Judul	Thn_terbit	Id_kategori	Id_kategori	Nm_kategori
1	PTIK	2017	1	1	Manajemen Informatika
3	APSI	2014	2	2	Sistem Informasi
2	SIM	2015	2	2	Sistem Informasi
NULL	NULL	NULL	NULL	3	Ilmu Komputer
4	RPL	2016	4	4	Teknik Komputer
5	LINUX	2014	5	5	Jaringan Komputer

```
6 rows in set (0.0007 sec)
```

```
MySQL localhost:33060+ ssl db_join_buku SQL>
```