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### Praktikum

Soal 8 Tambahkan sebuah kolom agama (varchar(10)) pada tabel mahasiswa sebagai kolom terakhir

```
MariaDB [db_polinema]> alter table mahasiswa add column agama VARCHAR(10) after kode_prodi;
Query OK, 0 rows affected (0.009 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

Soal 9 Tambahkan kolom alamat(varchar(50)) pada tabel dosen sebagai kolom terakhir

```
MariaDB [db_polinema]> alter table dosen add column alamat VARCHAR(50) after no_hp;
Query OK, 0 rows affected (0.008 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

Soal 10 Lakukan insert data ke dalam tabel-tabel yang ada pada database db\_polinema sesuai dengan field, tipe data dan panjang datanya

```
MariaDB [db_polinema]> INSERT INTO dosen (nidn, nama_dosen, status, jenis_kelamin, no_hp, alamat) VALUES (1234567890, 'Siswanto', 'PNS', 'L', '081234567890', 'Jl. Indah No. 123'), (2345678901, 'Endang', 'PNS', 'P', '082345678901', 'Jl. Raya No. 456');
Query OK, 2 rows affected, 1 warning (0.004 sec)
Records: 2 Duplicates: 0 Warnings: 1

MariaDB [db_polinema]> INSERT INTO mahasiswa (nim, nama_mhs, jenis_kelamin, alamat, kota, asal_sma, no_hp, umur, kode_prodi, agama) VALUES (12345678, 'Ilham Gegana', 'L', 'Jl. Harum No. 123', 'MALANG', 'SMA Negeri 1', '081234567890', 20, 'KP001', 'Islam'), (23456789, 'Maulana', 'L', 'Jl. Wangi No. 456', 'MALANG', 'SMA Negeri 1', '082345678901', 20, 'KP002', 'Islam');
Query OK, 2 rows affected (0.004 sec)
Records: 2 Duplicates: 0 Warnings: 0

MariaDB [db_polinema]> INSERT INTO mata_kuliah (mk_id, nama_mk, jumlah_jam, sks) VALUES ('MK001', 'Pancasila', 4.5, 3), ('MK002', 'Desain Web', 5.75, 4), ('MK003', 'Pemrograman', 6.25, 4), ('MK004', 'Basis Data', 4.0, 3);
Query OK, 4 rows affected (0.009 sec)
Records: 4 Duplicates: 0 Warnings: 0

MariaDB [db_polinema]> INSERT INTO prodi (kode_prodi, nama_prodi) VALUES ('KP001', 'Teknik Informatika'), ('KP002', 'Sistem Informasi'), ('KP003', 'Manajemen'), ('KP004', 'Akuntansi');
Query OK, 4 rows affected (0.009 sec)
Records: 4 Duplicates: 0 Warnings: 0

MariaDB [db_polinema]> INSERT INTO ruang (ruang_id, nama_ruang, kapasitas) VALUES ('R01', 'Ruang A', 30), ('R02', 'Ruang B', 30), ('R03', 'Ruang C', 40), ('R04', 'Ruang D', 35);
Query OK, 4 rows affected (0.004 sec)
Records: 4 Duplicates: 0 Warnings: 0
```

Soal 11 Tampilkan semua tabel yang ada didalam database db\_polinema

```
MariaDB [db_polinema]> show tables;
+-----+
| Tables_in_db_polinema |
+-----+
| dosen                  |
| mahasiswa              |
| mata_kuliah            |
| prodi                  |
| ruang                  |
+-----+
5 rows in set (0.001 sec)
```

Soal 12 Tampilkan semua isi tabel yang ada didalam tabel mahasiswa

```
MariaDB [db_polinema]> SELECT * FROM mahasiswa;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| nim      | nama_mhs      | jenis_kelamin | alamat      | kota      | asal_sma      | no_hp      | umur | kode_prodi | agama |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 12345678 | Ilham Gegana  | L             | Jl. Harum No. 123 | MALANG    | SMA Negeri 1  | 081234567890 | 20   | KP001      | Islam |
| 23456789 | Maulana       | L             | Jl. Wangi No. 456 | MALANG    | SMA Negeri 1  | 082345678901 | 20   | KP002      | Islam |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
2 rows in set (0.000 sec)
```

Soal 13 Tampilkan struktur(metadata) tabel mahasiswa

```
MariaDB [db_polinema]> desc mahasiswa;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| nim        | int(8)    | NO   | PRI | NULL    |       |
| nama_mhs   | varchar(50) | YES  |     | NULL    |       |
| jenis_kelamin | enum('L','P') | YES  |     | L        |       |
| alamat     | varchar(50) | YES  |     | NULL    |       |
| kota       | varchar(20) | YES  |     | Malang   |       |
| asal_sma   | varchar(30) | YES  |     | NULL    |       |
| no_hp      | varchar(12) | YES  |     | NULL    |       |
| umur       | int(11)   | YES  |     | NULL    |       |
| kode_prodi | varchar(6) | YES  | MUL | NULL    |       |
| agama      | varchar(10) | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
10 rows in set (0.004 sec)
```

#### Soal 14 hilangkan kolom asal\_sma yang terdapat didalam tabel mahasiswa

```
MariaDB [db_polinema]> ALTER TABLE mahasiswa DROP COLUMN asal_sma;
```

```
Query OK, 0 rows affected (0.007 sec)
```

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

```
MariaDB [db_polinema]> SELECT * FROM mahasiswa;
```

nim	nama_mhs	jenis_kelamin	alamat	kota	no_hp	umur	kode_prodi	agama
12345678	Ilham Gegana	L	Jl. Harum No. 123	MALANG	081234567890	20	KP001	Islam
23456789	Maulana	L	Jl. Wangi No. 456	MALANG	082345678901	20	KP002	Islam

2 rows in set (0.000 sec)

## TUGAS!!

- deskripsikan struktur data dari table-table berikut serta isikan datanya: Tabel Mahasiswa {No\_Mhs, Nama\_mhs} Tabel Mata\_Kuliah {Kd\_MK, Nama\_MK} Tabel nilai {No\_Mhs, Kode\_MK} tambahkan kolom Jurusan pada tabel Mahasiswa di kolom terakhir
- tambahkan kolom Kode Dosen pada tabel Mata\_Kuliah
- tambahkan kolom nilai pada tabel nilai serta berikanlah kunci foreign key
- tambahkan Tabel Dosen dengan atributnya Kd\_Dosen dan Nama Dosen
- tampilkan semua data yang ada pada tiap tabel

```
MariaDB [db.polinema]> create database jobsheet10Tugas1;
Query OK, 1 row affected (0.001 sec)

MariaDB [db.polinema]> use jobsheet10Tugas1;
Database changed
MariaDB [jobsheet10Tugas1]> CREATE TABLE Mahasiswa (No_Mhs INT PRIMARY KEY, Nama_mhs VARCHAR(50), Jurusan VARCHAR(50));
Query OK, 0 rows affected (0.018 sec)

MariaDB [jobsheet10Tugas1]> INSERT INTO Mahasiswa (No_Mhs, Nama_mhs, Jurusan) VALUES
-> (1921001, 'Aminah', 'MI'),
-> (1921002, 'Budiman', 'MI'),
-> (1921003, 'Carina', 'MI'),
-> (1921004, 'Della', 'TI'),
-> (1921005, 'Firda', 'TI');
Query OK, 5 rows affected (0.004 sec)
Records: 5 Duplicates: 0 Warnings: 0

MariaDB [jobsheet10Tugas1]> CREATE TABLE Mata_Kuliah (Kd_MK VARCHAR(10) PRIMARY KEY, Nama_MK VARCHAR(50), Kode_Dosen VARCHAR(10));
Query OK, 0 rows affected (0.012 sec)

MariaDB [jobsheet10Tugas1]> INSERT INTO Mata_Kuliah (Kd_MK, Nama_MK, Kode_Dosen) VALUES
-> ('MI350', 'Basis Data', 'B104'),
-> ('MI465', 'Pemrograman', 'B105'),
-> ('TI201', 'Mobile', 'C102');
Query OK, 3 rows affected (0.004 sec)
Records: 3 Duplicates: 0 Warnings: 0

MariaDB [jobsheet10Tugas1]> CREATE TABLE nilai (No_Mhs INT, Kd_MK VARCHAR(10), nilai INT, PRIMARY KEY (No_Mhs, Kd_MK), FOREIGN KEY (No_Mhs) REFERENCES Mahasiswa(No_Mhs), FOREIGN KEY (Kd_MK) REFERENCES Mata_Kuliah(Kd_MK));
Query OK, 0 rows affected (0.015 sec)
```

```
MariaDB [jobsheet10Tugas1]> CREATE TABLE nilai (No_Mhs INT, Kd_MK VARCHAR(10), nilai INT, PRIMARY KEY (No_Mhs, Kd_MK), FOREIGN KEY (No_Mhs) REFERENCES Mahasiswa(No_Mhs), FOREIGN KEY (Kd_MK) REFERENCES Mata_Kuliah(Kd_MK));
Query OK, 0 rows affected (0.015 sec)

MariaDB [jobsheet10Tugas1]> INSERT INTO nilai (No_Mhs, Kd_MK, nilai) VALUES
-> (1921001, 'MI350', 85),
-> (1921001, 'MI465', 87),
-> (1921002, 'MI465', 85),
-> (1921003, 'TI201', 78),
-> (1921004, 'TI201', 80);
Query OK, 5 rows affected (0.003 sec)
Records: 5 Duplicates: 0 Warnings: 0

MariaDB [jobsheet10Tugas1]> CREATE TABLE Dosen (
-> Kd_Dosen VARCHAR(10) PRIMARY KEY,
-> Nama_Dosen VARCHAR(50)
-> );
Query OK, 0 rows affected (0.012 sec)
```

```
MariaDB [jobsheet10Tugas1]> SELECT * FROM Mahasiswa;
+-----+-----+-----+
| No_Mhs | Nama_mhs | Jurusan |
+-----+-----+-----+
| 1921001 | Aminah   | MI       |
| 1921002 | Budiman  | MI       |
| 1921003 | Carina   | MI       |
| 1921004 | Della    | TI       |
| 1921005 | Firda    | TI       |
+-----+-----+-----+
5 rows in set (0.000 sec)

MariaDB [jobsheet10Tugas1]> SELECT * FROM Mata_Kuliah;
+-----+-----+-----+
| Kd_MK | Nama_MK | Kode_Dosen |
+-----+-----+-----+
| MI350 | Basis Data | B104       |
| MI465 | Pemrograman | B105       |
| TI201 | Mobile    | C102       |
+-----+-----+-----+
3 rows in set (0.000 sec)

MariaDB [jobsheet10Tugas1]> SELECT * FROM nilai;
+-----+-----+-----+
| No_Mhs | Kd_MK | nilai |
+-----+-----+-----+
| 1921001 | MI350 | 85     |
| 1921001 | MI465 | 87     |
| 1921002 | MI465 | 85     |
| 1921003 | TI201 | 78     |
| 1921004 | TI201 | 80     |
+-----+-----+-----+
5 rows in set (0.000 sec)

MariaDB [jobsheet10Tugas1]> SELECT * FROM Dosen;
Empty set (0.001 sec)

MariaDB [jobsheet10Tugas1]>
```

2. - Deskripsikan struktur data dari table-table berikut serta isikan datanya:

Table Pegawai {Nopegawai, NamaPegawai}

Tabel Golongan {Golongan}

Tabel Proyek {Noprojek}

Tabel Proyekpegawai {Noprojek}

- Tambahkan kolom Golongan pada tabel Pegawai di kolom terakhir
- Tambahkan kolom BesarGaji pada tabel Golongan di kolom terakhir
- Tambahkan kolom NamaProyek pada table Proyek
- Tambahkan kolom NoPegawai pada table Proyekpegawai serta berikanlah kunci foreign key
- Tampilkan semua data yang ada pada tiap tabel

```
MariaDB [jobsheet10Tugas1]> use jobsheet10Tugas2;  
Database changed
```

```
MariaDB [jobsheet10Tugas2]> CREATE TABLE Pegawai (  
-> Nopegawai VARCHAR(10) PRIMARY KEY,  
-> NamaPegawai VARCHAR(50)  
-> );  
Query OK, 0 rows affected (0.012 sec)
```

```
MariaDB [jobsheet10Tugas2]> CREATE TABLE Golongan (  
-> Golongan VARCHAR(10) PRIMARY KEY,  
-> BesarGaji DECIMAL(10,2)  
-> );  
Query OK, 0 rows affected (0.012 sec)
```

```
MariaDB [jobsheet10Tugas2]> CREATE TABLE Proyek (  
-> Noprojek VARCHAR(10) PRIMARY KEY,  
-> NamaProyek VARCHAR(50)  
-> );  
Query OK, 0 rows affected (0.012 sec)
```

```
MariaDB [jobsheet10Tugas2]> CREATE TABLE Proyekpegawai (  
-> Noprojek VARCHAR(10),  
-> Nopegawai VARCHAR(10),  
-> PRIMARY KEY (Noprojek, Nopegawai),  
-> FOREIGN KEY (Noprojek) REFERENCES Proyek(Noprojek),  
-> FOREIGN KEY (Nopegawai) REFERENCES Pegawai(Nopegawai)  
-> );  
Query OK, 0 rows affected (0.019 sec)
```

```
MariaDB [jobsheet10Tugas2]> ALTER TABLE Pegawai ADD COLUMN Golongan VARCHAR(10);  
Query OK, 0 rows affected (0.007 sec)  
Records: 0 Duplicates: 0 Warnings: 0
```

```
MariaDB [jobsheet10Tugas2]> ALTER TABLE Pegawai ADD FOREIGN KEY (Golongan) REFERENCES Golongan(Golongan);  
Query OK, 0 rows affected (0.042 sec)  
Records: 0 Duplicates: 0 Warnings: 0
```

```
MariaDB [jobsheet10Tugas2]> INSERT INTO Golongan (Golongan, BesarGaji) VALUES  
-> ('A', 1000000),  
-> ('B', 900000),  
-> ('C', 750000),  
-> ('D', 500000);  
Query OK, 4 rows affected (0.003 sec)  
Records: 4 Duplicates: 0 Warnings: 0
```

```
MariaDB [jobsheet10Tugas2]> INSERT INTO Pegawai (Nopegawai, NamaPegawai, Golongan) VALUES
-> ('Peg01', 'Anton', 'A'),
-> ('Peg02', 'Paula', 'B'),
-> ('Peg03', 'Daniar', 'C'),
-> ('Peg04', 'Lubis', 'C'),
-> ('Peg06', 'Koko', 'C'),
-> ('Peg07', 'Keni', 'B'),
-> ('Peg08', 'Sofi', 'B'),
-> ('Peg12', 'Sita', 'B'),
-> ('Peg14', 'Yusni', 'B'),
-> ('Peg15', 'Udin', 'D'),
-> ('Peg16', 'Didit', 'D'),
-> ('Peg17', 'Dani', 'D');
Query OK, 12 rows affected (0.008 sec)
Records: 12 Duplicates: 0 Warnings: 0
```

```
MariaDB [jobsheet10Tugas2]> INSERT INTO Proyek (Noprojek, NamaProyek) VALUES
-> ('NP001', 'BRR'),
-> ('NP002', 'PEMDA'),
-> ('NP003', 'CBR'),
-> ('NP004', 'ASK'),
-> ('NP005', 'OB');
```

```
MariaDB [jobsheet10Tugas2]> INSERT INTO Proyekpegawai (Noprojek, Nopegawai) VALUES
-> ('NP001', 'Peg01'),
-> ('NP001', 'Peg02'),
-> ('NP001', 'Peg06'),
-> ('NP002', 'Peg01'),
-> ('NP002', 'Peg12'),
-> ('NP002', 'Peg14'),
-> ('NP003', 'Peg02'),
-> ('NP003', 'Peg03'),
-> ('NP003', 'Peg04'),
-> ('NP004', 'Peg07'),
-> ('NP004', 'Peg08'),
-> ('NP004', 'Peg06'),
-> ('NP005', 'Peg15'),
-> ('NP005', 'Peg16'),
-> ('NP005', 'Peg17');
Query OK, 15 rows affected (0.008 sec)
Records: 15 Duplicates: 0 Warnings: 0
```

```
MariaDB [jobsheet10Tugas2]> SELECT * FROM Pegawai;
```

```
+-----+-----+-----+
| Nopegawai | NamaPegawai | Golongan |
+-----+-----+-----+
| Peg01     | Anton      | A        |
| Peg02     | Paula      | B        |
| Peg03     | Daniar     | C        |
| Peg04     | Lubis      | C        |
| Peg06     | Koko        | C        |
| Peg07     | Keni       | B        |
| Peg08     | Sofi       | B        |
| Peg12     | Sita       | B        |
| Peg14     | Yusni      | B        |
| Peg15     | Udin       | D        |
| Peg16     | Didit      | D        |
| Peg17     | Dani       | D        |
+-----+-----+-----+
```

12 rows in set (0.001 sec)

```
MariaDB [jobsheet10Tugas2]> SELECT * FROM Golongan;
```

```
+-----+-----+
| Golongan | BesarGaji |
+-----+-----+
| A        | 1000000.00 |
| B        | 900000.00  |
| C        | 750000.00  |
| D        | 500000.00  |
+-----+-----+
```

4 rows in set (0.000 sec)

```
MariaDB [jobsheet10Tugas2]> SELECT * FROM Proyek;
```

+-----+	
Noprojek	NamaProjek
+-----+	
NP001	BRR
NP002	PEMDA
NP003	CBR
NP004	ASK
NP005	OB

```
5 rows in set (0.000 sec)
```

```
MariaDB [jobsheet10Tugas2]> SELECT * FROM Proyekpegawai;
```

+-----+	
Noprojek	Nopegawai
+-----+	
NP001	Peg01
NP001	Peg02
NP001	Peg06
NP002	Peg01
NP002	Peg12
NP002	Peg14
NP003	Peg02
NP003	Peg03
NP003	Peg04
NP004	Peg06
NP004	Peg07
NP004	Peg08
NP005	Peg15
NP005	Peg16
NP005	Peg17

```
15 rows in set (0.000 sec)
```