

JOBSHEET BASIS DATA

“Disusun dalam rangka memenuhi salah satu tugas individu pada mata kuliah Basis Data”



Disusun oleh:

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JURUSAN TEKNOLOGI INFORMASI

PRODI D-IV TEKNIK INFORMATIKA

POLITEKNIK NEGERI MALANG

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Percobaan Praktikum 1

No	Keterangan						
1	<p>Buka prompt jalankan perintah berikut ini :</p> <p><code>C:\>Program Files\xampp\mysql\bin>mysql -u root -p</code> (enter)</p> <pre> VICTUS@LAPTOP-V6CM8SFG d:\Xampp # mysql -u root -p Enter password: Welcome to the MariaDB monitor. Commands end with ; or \g. Your MariaDB connection id is 11 Server version: 10.4.32-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)]> </pre>						
2	<p>Buatlah sebuah database dengan nama <code>db_polinema</code></p> <pre> MariaDB [(none)]> create database db_polinema -> </pre>						
	<p>Sebelum melanjutkan langkah No. 3, jalankan perintah “use db polinema”</p> <pre> MariaDB [(none)]> use db_polinema Database changed MariaDB [db_polinema]> </pre>						
3	<p>a. Tabel <code>prodi</code></p> <table border="1"> <thead> <tr> <th>Field</th><th>Type Data</th></tr> </thead> <tbody> <tr> <td>kode_prodi</td><td>VARCHAR (6) PRIMARY KEY</td></tr> <tr> <td>nama_prodi</td><td>VARCHAR (30)</td></tr> </tbody> </table> <pre> MariaDB [db_polinema]> create table prodi (kode_prodi varchar(6) primary key,nama_prodi varchar(30)); Query OK, 0 rows affected (0.004 sec) </pre>	Field	Type Data	kode_prodi	VARCHAR (6) PRIMARY KEY	nama_prodi	VARCHAR (30)
Field	Type Data						
kode_prodi	VARCHAR (6) PRIMARY KEY						
nama_prodi	VARCHAR (30)						

4	Buatlah beberapa tabel dalam database tersebut sesuai dengan kriteria berikut : b. Tabel <i>mahasiswa</i>	
	<i>Fiel d</i>	<i>Type Data</i>
	nim	INT (8) PRIMARY KEY
	nama_mhs	VARCHAR (50)
	jenis_kelamin	ENUM ('L','P') DEFAULT 'L'
	alamat	VARCHAR (50)
	kota	VARCHAR (20) DEFAULT 'MALANG'
	asal_sma	VARCHAR (30)
	no_hp	VARCHAR (12)
	umur	INT
	kode_prodi	VARCHAR (6) FOREIGN KEY fk0 (kode_prodi) REFERENCING prodi(kode_prodi)
<p>Untuk DBMS MySQL</p> <pre>mysql> create table mahasiswa (nim int(8) primary key, nama_mhs char(50), jenis_kelamin enum('L','P') default 'L', alamat varchar(50), kota varchar(20) default 'malang', asal_sma char(30), no_hp varchar(12), umur integer, kode_prodi char(6), foreign key fk0 (kode_prodi) references prodi(kode_prodi));</pre> <p>Query OK, 0 rows affected (0.01 sec)</p> <p>Untuk DBMS MariaDB</p> <pre>MariaDB [db_polinema]> create table mahasiswa (nim int (8) primary key, nama_mhs varchar(50), jenis_kelamin enum ('L','P') default 'L', alamat varchar (50), kota varchar(20) default 'Malang', asal_sma varchar(30), no_hp varchar(12), umur integer, kode_prodi varchar(6), foreign key(kode_prodi) references prodi(kode_prodi));</pre> <p>Query OK, 0 rows affected (0.030 sec)</p>		
5	c. Tabel <i>mata_kuliah</i>	
	<i>Fiel d</i>	<i>Type Data</i>
	mk_id	VARCHAR (10) PRIMARY KEY
	nama_mk	VARCHAR (50)
	jumlah_jam	FLOAT (4,2)
	sks	INTEGER
	<pre>MariaDB [db_polinema]> create table mata_kuliah (mk_id char(10) primary key, nama_mk varchar(50), jumlah_jam float(4,2), sks int);</pre> <p>Query OK, 0 rows affected (0.012 sec)</p>	

6	d. Tabel ruang	
	Field	Type Data
	ruang_id	VARCHAR (3) PRIMARY KEY
	nama_ruang	VARCHAR (20)
	Kapasitas	INTEGER
	<pre>MariaDB [db_polinema]> create table ruang (ruang_id char(3) primary key,nama_ruang char(20), kapasitas int); Query OK, 0 rows affected (0.006 sec)</pre>	
7	e. Tabel dosen	
	Fiel d	Type Data
	nidn	INTEGER (20) PRIMARY KEY
	nama_dosen	VARCHAR (50)
	status	ENUM ('PNS','KONTRAK') DEFAULT 'PNS'
	jenis_kelamin	ENUM ('L','P') DEFAULT 'L'
	no_hp	VARCHAR (15)
	<pre>MariaDB [db_polinema]> create table dosen (nidn int (20) primary key,nama_dosen varchar(50),status enum ('PNS','KONTRAK') default 'PNS',jenis_kelamin enum 'L','P') default 'L',no_hp varchar(15)); Query OK, 0 rows affected (0.016 sec)</pre>	
8	<p><Soal> Tambahkan sebuah kolom agama (varchar(10)) pada tabel mahasiswa sebagai kolom terakhir Catat : Buat Screenshot dari perintah yang anda ketikkan</p> <pre>MariaDB [db_polinema]> alter table mahasiswa add agama varchar(10); Query OK, 0 rows affected (0.008 sec) Records: 0 Duplicates: 0 Warnings: 0</pre>	
9	<p><Soal> Tambahkan kolom alamat(varchar(50)) pada tabel dosen sebagai kolom terakhir Catat : Buat Screenshot dari perintah yang anda ketikkan</p> <pre>MariaDB [db_polinema]> alter table dosen add alamat varchar(50); Query OK, 0 rows affected (0.006 sec) Records: 0 Duplicates: 0 Warnings: 0</pre>	

10	<p><Soal> Lakukan insert data ke dalam tabel-tabel yang ada pada database <i>db_polinema</i> sesuai dengan <i>field</i>, tipe data dan panjang datanya</p> <ul style="list-style-type: none"> • Dosen <pre>MariaDB [db_polinema]> insert dosen (nidn, nama_dosen, status, jenis_kelamin, no_hp, alamat) values (12345, 'Yan Watequl isSyaifudin', 'PNS', 'L', '0821555666', 'Malang'); Query OK, 1 row affected (0.003 sec)</pre> <ul style="list-style-type: none"> • Prodi <pre>MariaDB [db_polinema]> insert prodi (kode_prodi, nama_prodi) values ('123654', 'Teknik Informatika'); Query OK, 1 row affected (0.010 sec)</pre> <ul style="list-style-type: none"> • Mahasiswa <pre>MariaDB [db_polinema]> insert mahasiswa (nim, nama_mhs, jenis_kelamin, alamat, kota, asal_sma, no_hp, umur, kode_prodi, agama) values (23417, 'Muhammad Ammar Hafizh', 'L', 'Pabuaran Mekar', 'Bogor', 'Tunas Bangsa', '08211159', 20, '123654', 'Islam'); Query OK, 1 row affected (0.002 sec)</pre> <ul style="list-style-type: none"> • Mata Kuliah <pre>MariaDB [db_polinema]> insert mata_kuliah (mk_id, nama_mk, jumlah_jam, sks) values ('24', 'Basis Data', 4.0, 2) -> ; Query OK, 1 row affected (0.010 sec)</pre> <ul style="list-style-type: none"> • Ruang <pre>MariaDB [db_polinema]> insert ruang (ruang_id, nama_ruang, kapasitas) values ('103', 'Lab Informatika', 35); Query OK, 1 row affected (0.003 sec)</pre>
11	<p><Soal> Tampilkan semua tabel yang ada didalam database <i>db_polinema</i></p> <p>Catat : Buat Screenshot dari perintah yang anda ketikkan</p> <pre>MariaDB [db_polinema]> show tables -> ;</pre> <pre>+-----+ Tables_in_db_polinema +-----+ dosen mahasiswa mata_kuliah prodi ruang +-----+ 5 rows in set (0.001 sec)</pre>

- 12 <Soal>
Tampilkan semua isi tabel yang ada didalam tabel mahasiswa
Catat : Buat Screenshot dari perintah yang anda ketikkan

- Dosen

```
MariaDB [db_polinema]> select * from dosen  
-> ;  
+-----+-----+-----+-----+-----+-----+  
| nidn | nama_dosen | status | jenis_kelamin | no_hp | alamat |  
+-----+-----+-----+-----+-----+-----+  
| 12345 | Yan WatequlisSyaifudin | PNS | L | 0821555666 | Malang |  
+-----+-----+-----+-----+-----+-----+  
1 row in set (0.001 sec)
```

- Prodi

```
MariaDB [db_polinema]> select * from prodi;  
+-----+-----+  
| kode_prodi | nama_prodi |  
+-----+-----+  
| 123654 | Teknik Informatika |  
+-----+-----+  
1 row in set (0.000 sec)
```

- Mahasiswa

```
MariaDB [db_polinema]> select * from mahasiswa;  
+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
| nim | nama_mhs | jenis_kelamin | alamat | kota | asal_sma | no_hp | umur | kode_prodi | agama |  
+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
| 23417 | Muhammad Ammar Hafizh | L | Pabuaran Mekar | Bogor | Tunas Bangsa | 08211159 | 20 | 123654 | Islam |  
+-----+-----+-----+-----+-----+-----+-----+-----+-----+  
1 row in set (0.001 sec)
```

- Mata Kuliah

```
MariaDB [db_polinema]> select * from mata_kuliah;  
+-----+-----+-----+-----+  
| mk_id | nama_mk | jumlah_jam | sks |  
+-----+-----+-----+-----+  
| 24 | Basis Data | 4.00 | 2 |  
+-----+-----+-----+-----+  
1 row in set (0.000 sec)
```

- Ruang

```
MariaDB [db_polinema]> select * from ruang;  
+-----+-----+-----+  
| ruang_id | nama_ruang | kapasitas |  
+-----+-----+-----+  
| 103 | Lab Informatika | 35 |  
+-----+-----+-----+  
1 row in set (0.001 sec)
```

- 13 <Soal>
Tampilkan struktur(metadata) tabel mahasiswa Catat : Buat Screenshot dari perintah yang anda ketikkan

	<pre> 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 (0.030 sec) </pre>	
14	<p><Soal></p> <p>hilangkan kolom asal_sma yang terdapat didalam tabel mahasiswa Catat : Buat Screenshot dari perintah yang anda ketikkan</p> <pre> MariaDB [db_polinema]> alter table mahasiswa drop column asal_sma -> ; Query OK, 0 rows affected (0.016 sec) Records: 0 Duplicates: 0 Warnings: 0 </pre>	

1. Buatlah basis data Akademik dengan data sebagai berikut :

No_Mhs	Nama_mhs	Jurusan	Kd_M K	Nama_mk	Kd_Dose n	Nm_Dosen	nilai
1921001	Aminah	MI	MI350	Basis Data	B104	Ati	85
1921001	Budiman	MI	MI465	Pemrograman	B105	Dita	87
1921002	Carina	MI	MI465	Pemrograman	B105	Dita	85
1921003	Della	TI	TI201	Mobile	C102	Leo	78
1921004	Firda	TI	TI201	Mobile	C102	Leo	80

a. deskripsikan struktur data dari table-table berikut serta isikan datanya:

- **Tabel Mahasiswa**

{No_Mhs, Nama_mhs}

```
MariaDB [db_akademik]> create table Mahasiswa (No_Mahasiswa char(7) primary key, Nama_Mahasiswa char(50));
Query OK, 0 rows affected (0.020 sec)

MariaDB [db_akademik]> insert Mahasiswa (No_Mahasiswa, Nama_Mahasiswa) values ('1921001', 'Aminah');
Query OK, 1 row affected (0.013 sec)

MariaDB [db_akademik]> desc Mahasiswa
+----+
-> ;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| No_Mahasiswa | char(7) | NO | PRI | NULL | |
| Nama_Mahasiswa | char(50) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.031 sec)

MariaDB [db_akademik]> select * from Mahasiswa;
+-----+-----+
| No_Mahasiswa | Nama_Mahasiswa |
+-----+-----+
| 1921001 | Aminah |
+-----+-----+
1 row in set (0.000 sec)
```

- **Tabel Mata_Kuliah**

{Kd_MK, Nama_MK}

```
MariaDB [db_akademik]> create table Mata_Kuliah (Kode_MK char(5) primary key, Nama_MK varchar(20));
Query OK, 0 rows affected (0.010 sec)

MariaDB [db_akademik]> desc Mata_Kuliah;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Kode_MK | char(5) | NO | PRI | NULL | |
| Nama_MK | varchar(20) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.022 sec)

MariaDB [db_akademik]> insert Mata_Kuliah (Kode_MK, Nama_MK) values ('MI350', 'Basis Data');
Query OK, 1 row affected (0.004 sec)

MariaDB [db_akademik]> select * from Mata_Kuliah;
+-----+-----+
| Kode_MK | Nama_MK |
+-----+-----+
| MI350 | Basis Data |
+-----+-----+
1 row in set (0.001 sec)
```


- **Tabel nilai**
{No_Mhs,Kode_MK}

```
MariaDB [db_akademik]> create table Nilai (No_Mahasiswa char(7),foreign key(No_Mahasiswa) references Mahasiswa(No_Mahasiswa), Kode_MK char(5),foreign key(Kode_MK) references Mata_Kuliah(Kode_MK));
Query OK, 0 rows affected (0.028 sec)

MariaDB [db_akademik]> desc Nilai;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| No_Mahasiswa | char(7) | YES | MUL | NULL | |
| Kode_MK | char(5) | YES | MUL | NULL | |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.016 sec)

MariaDB [db_akademik]> insert Nilai (No_Mahasiswa, Kode_MK) values ('1921001', 'MI350');
Query OK, 1 row affected (0.005 sec)

MariaDB [db_akademik]> select * from Nilai
-> ;
+-----+-----+
| No_Mahasiswa | Kode_MK |
+-----+-----+
| 1921001 | MI350 |
+-----+-----+
1 row in set (0.001 sec)
```

- **tambahkan kolom Jurusan pada tabel Mahasiswa di kolom terakhir**

```
MariaDB [db_akademik]> alter table Mahasiswa add column Jurusan Char(2) after Nama_Mahasiswa;
Query OK, 0 rows affected (0.006 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [db_akademik]> desc Mahasiswa;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| No_Mahasiswa | char(7) | NO | PRI | NULL | |
| Nama_Mahasiswa | char(50) | YES | | NULL | |
| Jurusan | char(2) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.026 sec)
```

- b. tambahkan kolom Kode Dosen pada tabel Mata_Kuliah

```
MariaDB [db_akademik]> alter table Mata_Kuliah add column Kode_Dosen varchar(50) after Nama_MK;
Query OK, 0 rows affected (0.013 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [db_akademik]> desc Mata_Kuliah;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Kode_MK | char(5) | NO | PRI | NULL | |
| Nama_MK | varchar(20) | YES | | NULL | |
| Kode_Dosen | varchar(50) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
```

- c. tambahkan kolom nilai pada tabel nilai serta berikanlah kunci *foreign key*

```
MariaDB [db_akademik]> alter table nilai add Nilai Int;
Query OK, 0 rows affected (0.014 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [db_akademik]> desc nilai;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| No_Mahasiswa | char(7) | YES | MUL | NULL | |
| Kode_MK | char(5) | YES | MUL | NULL | |
| Nilai | int(11) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.031 sec)
```

- d. tambahkan Tabel Dosen dengan atributnya Kd_Dosen dan Nama Dosen

```
MariaDB [db_akademik]> create table Dosen (Kode_Dosen char(4), Nama_Dosen varchar(50));
Query OK, 0 rows affected (0.017 sec)

MariaDB [db_akademik]> desc Dosen
-> ;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Kode_Dosen | char(4) | YES | | NULL | |
| Nama_Dosen | varchar(50) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.028 sec)
```

e.tampilkan semua data yang ada pada tiap tabel

- Dosen

```
MariaDB [db_akademik]> select * from dosen;
+-----+-----+
| Kode_Dosen | Nama_Dosen |
+-----+-----+
| B104       | Ati        |
| B105       | Dita       |
| C102       | Leo        |
+-----+-----+
3 rows in set (0.000 sec)
```

- Mahasiswa

```
MariaDB [db_akademik]> select * from mahasiswa;
+-----+-----+-----+
| No_Mahasiswa | Nama_Mahasiswa | Jurusan |
+-----+-----+-----+
| 1921001      | Aminah         | MI      |
| 1921002      | Budiman        | MI      |
| 1921003      | Carina         | MI      |
| 1921004      | Della          | TI      |
| 1921005      | Firda          | TI      |
+-----+-----+-----+
5 rows in set (0.001 sec)
```

- Mata Kuliah

```
MariaDB [db_akademik]> select * from mata_kuliah;
+-----+-----+-----+
| Kode_MK | Nama_MK | Kode_Dosen |
+-----+-----+-----+
| MI350   | Basis Data | B104       |
| MI465   | Pemrograman | B105       |
| TI201   | Mobile    | C102       |
+-----+-----+-----+
3 rows in set (0.000 sec)
```

- Nilai

```
MariaDB [db_akademik]> select * from nilai;
+-----+-----+-----+
| No_Mahasiswa | Kode_MK | Nilai |
+-----+-----+-----+
| 1921001      | MI350   | NULL  |
| 1921001      | MI350   | 85     |
| 1921002      | MI465   | 87     |
| 1921003      | MI465   | 85     |
| 1921004      | TI201   | 78     |
| 1921005      | TI201   | 80     |
+-----+-----+-----+
6 rows in set (0.000 sec)
```

1. Buatlah basis data Pegawai dengan data sebagai berikut :

Noprojek	NamaProyek	Nopegawai	NamaPegawai	Golongan	BesarGaji
NP001	BRR	Peg01	Anton	A	1.000.000
NP001	BRR	Peg02	Paula	B	900.000
NP001	BRR	Peg06	Koko	C	750.000
NP002	PEMDA	Peg01	Anton	A	1.000.000
NP002	PEMDA	Peg12	Sita	B	900.000
NP002	PEMDA	Peg14	Yusni	B	900.000
NP003	CBR	Peg02	Paula	B	900.000
NP003	CBR	Peg03	Daniar	C	750.000
NP003	CBR	Peg04	Lubis	C	750.000
NP004	ASK	Peg07	Keni	B	900.000
NP004	ASK	Peg08	Sofi	B	900.000
NP004	ASK	Peg06	Yuni	C	750.000
NP005	OB	Peg15	Udin	D	500.000
NP005	OB	Peg16	Didit	D	500.000
NP005	OB	Peg17	Dani	D	500.000

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

- **Table Pegawai**

{Nopegawai, NamaPegawai}

```
MariaDB [db_pegawai]> create table pegawai (Nopegawai char(5) Primary key, NamaPegawai varchar(50));
Query OK, 0 rows affected (0.018 sec)

MariaDB [db_pegawai]> desc pegawai;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Nopegawai | char(5) | NO | PRI | NULL | |
| NamaPegawai | varchar(50) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.027 sec)
```

- **Tabel Golongan**

{Golongan}

```
MariaDB [db_pegawai]> create table golongan (golongan char(1));
Query OK, 0 rows affected (0.004 sec)

MariaDB [db_pegawai]> desc golongan;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| golongan | char(1) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.018 sec)
```

- **Tabel Proyek**

{Noprojek}

```
MariaDB [db_pegawai]> create table proyek (Noprojek char(5));
Query OK, 0 rows affected (0.009 sec)

MariaDB [db_pegawai]> desc proyek;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Noprojek | char(5) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.026 sec)
```

- **Tabel Proyekpegawai**

{Noprojek}

```
MariaDB [db_pegawai]> create table Proyekpegawai (Noprojek char(5));
Query OK, 0 rows affected (0.018 sec)

MariaDB [db_pegawai]> desc Proyekpegawai
-> ;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Noprojek | char(5) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.015 sec)
```

b. Tambahkan kolom Golongan pada tabel Pegawai di kolom terakhir

```
MariaDB [db_pegawai]> alter table pegawai add column golongan char(1);
Query OK, 0 rows affected (0.012 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [db_pegawai]> desc pegawai;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Nopegawai | char(5) | NO | PRI | NULL | |
| NamaPegawai | varchar(50) | YES | | NULL | |
| golongan | char(1) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.031 sec)
```

c. Tambahkan kolom BesarGaji pada tabel Golongan di kolom terakhir

```
MariaDB [db_pegawai]> alter table golongan add column BesarGaji int;
Query OK, 0 rows affected (0.013 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [db_pegawai]> desc golongan;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| golongan | char(1) | YES | | NULL | |
| BesarGaji | int(11) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.025 sec)
```

d. Tambahkan kolom NamaProyek pada table Proyek

```
MariaDB [db_pegawai]> alter table proyek add column NamaProyek varchar(15);
Query OK, 0 rows affected (0.011 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [db_pegawai]> desc proyek;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Noprojek | char(5) | YES | | NULL | |
| NamaProyek | varchar(15) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.022 sec)
```

- e. Tambahkan kolom NoPegawai pada table Proyekpegawai serta berikanlah kunci *foreign key*

```
MariaDB [db_pegawai]> alter table proyekpegawai add column Nopegawai char(5);
Query OK, 0 rows affected (0.015 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [db_pegawai]> desc proyekpegawai;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Noprojek | char(5) | YES | | NULL | |
| Nopegawai | char(5) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.026 sec)

MariaDB [db_pegawai]> alter table proyekpegawai add foreign key (Nopegawai) references pegawai(Nopegawai);
Query OK, 0 rows affected (0.063 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [db_pegawai]> desc proyekpegawai;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Noprojek | char(5) | YES | | NULL | |
| Nopegawai | char(5) | YES | MUL | NULL | |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.027 sec)
```

- f. Tampilkan semua data yang ada pada tiap tabel

- Golongan

```
MariaDB [db_pegawai]> select * from golongan;
+-----+-----+
| golongan | BesarGaji |
+-----+-----+
| A        | 1000000   |
| B        | 900000    |
| C        | 750000    |
+-----+-----+
3 rows in set (0.000 sec)
```

- Pegawai

```
MariaDB [db_pegawai]> select * from pegawai;
+-----+-----+-----+
| Nopegawai | NamaPegawai | golongan |
+-----+-----+-----+
| Peg01     | Anton       | A        |
| Peg02     | Paula       | B        |
| Peg03     | Daniar      | C        |
| Peg04     | Lubis       | C        |
| Peg05     | Yuni        | 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        |
+-----+-----+-----+
13 rows in set (0.000 sec)
```

- **Proyek**

```
MariaDB [db_pegawai]> select * from proyek;
```

Noprojek	NamaProyek
NP001	BRR
NP002	PEMDA
NP003	CBR
NP004	ASK
NP005	OB

```
5 rows in set (0.010 sec)
```

- **Proyek Pegawai**

```
MariaDB [db_pegawai]> select * from proyekpegawai;
```

Noprojek	Nopegawai
NP001	Peg01
NP001	Peg02
NP003	Peg03
NP003	Peg04
NP004	Peg05
NP001	Peg06
NP004	Peg07
NP004	Peg08
NP002	Peg12
NP002	Peg14
NP005	Peg15
NP005	Peg16
NP005	Peg17

```
13 rows in set (0.001 sec)
```