

Laporan Responsi

Konsep Basis Data



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Buat database responsi_2215016135

```
MariaDB [(none)]> create database responsi_2215016135;  
Query OK, 1 row affected (0.001 sec)
```

Gunakan database yang baru saja dibuat

```
MariaDB [(none)]> use responsi_2215016135;  
Database changed  
MariaDB [responsi_2215016135]> |
```

Buat tabel tb_fak

```
MariaDB [responsi_2215016135]> create table tb_fak (kode_fak  
  CHAR(3) PRIMARY KEY, nama_fak VARCHAR(30), Lokasi VARCHAR(2  
  0));  
Query OK, 0 rows affected (0.011 sec)  
  
MariaDB [responsi_2215016135]> |
```

Buat tabel tb_prodi

```
MariaDB [responsi_2215016135]> create table tb_prodi (kode_p  
rodi CHAR(3) PRIMARY KEY, nama_prodi VARCHAR(30), kode_fak C  
HAR(3), FOREIGN KEY (kode_fak) REFERENCES tb_fak(kode_fak));  
  
Query OK, 0 rows affected (0.018 sec)  
  
MariaDB [responsi_2215016135]> |
```

Buat tabel tb_mahasiswa

```
MariaDB [responsi_2215016135]> CREATE TABLE tb_mahasiswa (ni  
m CHAR(10) PRIMARY KEY, Nama VARCHAR(30), kode_prodi CHAR(3)  
, FOREIGN KEY (kode_prodi) REFERENCES tb_prodi(kode_prodi));  
  
Query OK, 0 rows affected (0.014 sec)  
  
MariaDB [responsi_2215016135]> |
```

Buat tabel tb_buku

```
MariaDB [responsi_2215016135]> CREATE TABLE tb_buku (kode_bu  
ku CHAR(3) PRIMARY KEY, Judul VARCHAR(50), penulis VARCHAR(3  
0), penerbit VARCHAR(30), jumlah char(10));  
Query OK, 0 rows affected (0.005 sec)  
  
MariaDB [responsi_2215016135]> |
```

Buat tabel tb_pinjam

```
MariaDB [responsi_2215016135]> CREATE TABLE tb_pinjam (nim CHAR(10), kode_buku CHAR(3), tgl_pjm DATE, tgl_hrs_kbl DATE, tgl_kbl DATE, kembali BOOL, FOREIGN KEY (nim) REFERENCES tb_mahasiswa(nim), FOREIGN KEY (kode_buku) REFERENCES tb_buku(kode_buku));
Query OK, 0 rows affected (0.025 sec)

MariaDB [responsi_2215016135]> |
```

Memasukkan data ke tabel tb_fak

```
MariaDB [responsi_2215016135]> insert into tb_fak values ('F01', 'FAK. MIPA', 'Kampus IV'), ('F02', 'FAK. Teknologi Industri', 'Kampus IV'), ('F03', 'FAK. Psikologi', 'Kampus I'), ('F04', 'FAK. Kesehatan Masyarakat', 'Kampus III'), ('F05', 'FAK. Agama Islam', 'Kampus IV');
Query OK, 5 rows affected (0.001 sec)
Records: 5 Duplicates: 0 Warnings: 0
```

```
MariaDB [responsi_2215016135]> select * from tb_fak;
```

kode_fak	nama_fak	Lokasi
F01	FAK. MIPA	Kampus IV
F02	FAK. Teknologi Industri	Kampus IV
F03	FAK. Psikologi	Kampus I
F04	FAK. Kesehatan Masyarakat	Kampus III
F05	FAK. Agama Islam	Kampus IV

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

```
MariaDB [responsi_2215016135]>
```

Memasukkan data ke tabel tb_prodi

```
MariaDB [responsi_2215016135]> insert into tb_prodi values (
'P01', 'Sistem Informasi', 'F01'), ('P02', 'Farmasi', 'F04')
, ('P03', 'Teknik Industri', 'F02'), ('P04', 'Perbankan Syariah', 'F05'), ('P05', 'Psikologi', 'F03');
```

Query OK, 5 rows affected (0.007 sec)

Records: 5 Duplicates: 0 Warnings: 0

```
MariaDB [responsi_2215016135]> select * from tb_prodi;
```

kode_prodi	nama_prodi	kode_fak
P01	Sistem Informasi	F01
P02	Farmasi	F04
P03	Teknik Industri	F02
P04	Perbankan Syariah	F05
P05	Psikologi	F03

5 rows in set (0.000 sec)

```
MariaDB [responsi_2215016135]> |
```

Memasukkan data ke tabel tb_mahasiswa

```
MariaDB [responsi_2215016135]> insert into tb_mahasiswa values ('2400016071', 'Nur Minji', 'P01'), ('240021058', 'Karina Azizah', 'P03'), ('2400010003', 'Danielle Annisa', 'P04'), ('240020042', 'Wonu Ramadhan', 'P02'), ('2400017049', 'Aditya Agust', 'P05');
```

Query OK, 5 rows affected (0.008 sec)

Records: 5 Duplicates: 0 Warnings: 0

```
MariaDB [responsi_2215016135]> select * from tb_mahasiswa;
```

nim	Nama	kode_prodi
2400010003	Danielle Annisa	P04
2400016071	Nur Minji	P01
2400017049	Aditya Agust	P05
240020042	Wonu Ramadhan	P02
240021058	Karina Azizah	P03

5 rows in set (0.000 sec)

```
MariaDB [responsi_2215016135]> |
```

disini ada typo di kolom nim, lakukan update untuk membenarkan kolom

```
MariaDB [responsi_2215016135]> update tb_mahasiswa set nim =  
  2400020042 where nim = 240020042;  
Query OK, 1 row affected (0.009 sec)  
Rows matched: 1  Changed: 1  Warnings: 0
```

```
MariaDB [responsi_2215016135]> update tb_mahasiswa set nim =  
  2400021058 where nim = 240021058;  
Query OK, 1 row affected (0.007 sec)  
Rows matched: 1  Changed: 1  Warnings: 0
```

```
MariaDB [responsi_2215016135]> |
```

Memasukkan data ke tabel tb_buku

```
MariaDB [responsi_2215016135]> insert into tb_buku values ('  
B01', 'Struktur Data', 'Suprihatin, S.Kom', 'Andi Offset', '  
100'), ('B02', 'Clean Architecture', 'Robert C. Martin', 'Ga  
va Media', 240), ('B03', 'Organisasi Komputer', 'Imam Riadi,  
SPd, M.Kom', 'Andi Offset', '100'), ('B04', 'Mikrobiologi',  
'Hadi Sasongko, M.Si', 'Elex Media', '130'), ('B05', 'Matem  
atika', 'Sugiarto, M.Si', 'Gava Media', '25');  
Query OK, 5 rows affected (0.003 sec)  
Records: 5  Duplicates: 0  Warnings: 0
```

```
MariaDB [responsi_2215016135]> select * from tb_buku;  
+-----+-----+-----+  
| kode_buku | Judul | penulis |  
penerbit | jumlah |  
+-----+-----+-----+  
| B01 | Struktur Data | Suprihatin, S.Kom |  
Andi Offset | 100 |  
| B02 | Clean Architecture | Robert C. Martin |  
Gava Media | 240 |  
| B03 | Organisasi Komputer | Imam Riadi, SPd, M.Kom |  
Andi Offset | 100 |  
| B04 | Mikrobiologi | Hadi Sasongko, M.Si |  
Elex Media | 130 |  
| B05 | Matematika | Sugiarto, M.Si |  
Gava Media | 25 |  
+-----+-----+-----+
```

Memasukkan data ke tabel tb_pinjam

```
MariaDB [responsi_2215016135]> insert into tb_pinjam values
('2400016071', 'B01', '2023-12-12', '2024-01-05', '2024-01-01', '1'),
('2400021058', 'B02', '2024-01-05', '2024-01-25', NULL, '0'),
('2400010003', 'B03', '2023-11-23', '2023-12-14', NULL, '1'),
('2400020042', 'B04', '2024-01-03', '2024-02-12', '2024-01-11', '1'),
('2400017049', 'B05', '2023-11-18', '2023-11-25', '2023-11-23', '1');
Query OK, 5 rows affected (0.007 sec)
Records: 5  Duplicates: 0  Warnings: 0
```

```
MariaDB [responsi_2215016135]> select * from tb_pinjam;
+-----+-----+-----+-----+-----+
| nim      | kode_buku | tgl_pjm   | tgl_hrs_kbl | tgl_kbl   | kembali |
+-----+-----+-----+-----+-----+
| 2400016071 | B01      | 2023-12-12 | 2024-01-05 | 2024-01-01 | 1       |
| 2400021058 | B02      | 2024-01-05 | 2024-01-25 | NULL       | 0       |
| 2400010003 | B03      | 2023-11-23 | 2023-12-14 | NULL       | 1       |
| 2400020042 | B04      | 2024-01-03 | 2024-02-12 | 2024-01-11 | 1       |
| 2400017049 | B05      | 2023-11-18 | 2023-11-25 | 2023-11-23 | 1       |
+-----+-----+-----+-----+-----+
5 rows in set (0.000 sec)
```

Terdapat perbedaan data punya saya dan data yang ada pada responsi(pada kode_buku B03 seharusnya kembalinya 0), oleh karena itu lakukan update

```
MariaDB [responsi_2215016135]> select * from tb_pinjam;
+-----+-----+-----+-----+-----+-----+
| nim      | kode_buku | tgl_pjm   | tgl_hrs_kbl | tgl_kbl   | kembali |
+-----+-----+-----+-----+-----+-----+
| 2400016071 | B01      | 2023-12-12 | 2024-01-05 | 2024-01-01 | 1       |
| 2400021058 | B02      | 2024-01-05 | 2024-01-25 | NULL       | 0       |
| 2400010003 | B03      | 2023-11-23 | 2023-12-14 | NULL       | 1       |
| 2400020042 | B04      | 2024-01-03 | 2024-02-12 | 2024-01-11 | 1       |
| 2400017049 | B05      | 2023-11-18 | 2023-11-25 | 2023-11-23 | 1       |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.000 sec)

MariaDB [responsi_2215016135]> update tb_pinjam set kembali = 0 where kode_buku = 'B03';
Query OK, 1 row affected (0.007 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

Membuat procedure addMahasiswa untuk memasukkan data ke dalam tabel

```
MariaDB [responsi_2215016135]> delimiter //
MariaDB [responsi_2215016135]> create procedure addMahasiswa
()
    → begin
    → insert into tb_mahasiswa values('2400016069', 'Muhamm
ad Sumbul', 'P05');
    → end//
Query OK, 0 rows affected (0.003 sec)

MariaDB [responsi_2215016135]> delimiter;
```

Data pada tabel sebelum procedure dipanggil

```
MariaDB [responsi_2215016135]> select * from tb_mahasiswa;
+-----+-----+-----+
| nim      | Nama          | kode_prodi |
+-----+-----+-----+
| 2400010003 | Danielle Annisa | P04        |
| 2400016071 | Nur Minji      | P01        |
| 2400017049 | Aditya Agust   | P05        |
| 2400020042 | Wonu Ramadhan  | P02        |
| 2400021058 | Karina Azizah  | P03        |
+-----+-----+-----+
5 rows in set (0.000 sec)
```

Data pada tabel setelah procedure dipanggil

```
MariaDB [responsi_2215016135]> call addMahasiswa();
Query OK, 1 row affected (0.007 sec)

MariaDB [responsi_2215016135]> select * from tb_mahasiswa;
+-----+-----+-----+
| nim      | Nama          | kode_prodi |
+-----+-----+-----+
| 2400010003 | Danielle Annisa | P04        |
| 2400016069 | Muhammad Sumbul | P05        |
| 2400016071 | Nur Minji      | P01        |
| 2400017049 | Aditya Agust   | P05        |
| 2400020042 | Wonu Ramadhan  | P02        |
| 2400021058 | Karina Azizah  | P03        |
+-----+-----+-----+
6 rows in set (0.000 sec)

MariaDB [responsi_2215016135]> |
```


Buat procedure cariProdi untuk mencari prodi dari mahasiswa yang memiliki nama dengan huruf awal d

```
MariaDB [responsi_2215016135]> delimiter //
MariaDB [responsi_2215016135]> create procedure cariProdi()
    → begin
    → select nama_prodi from tb_prodi join tb_mahasiswa on
tb_prodi.kode_prodi = tb_mahasiswa.kode_prodi where tb_mahas
iswa.nama like 'd%';
    → end //
Query OK, 0 rows affected (0.009 sec)

MariaDB [responsi_2215016135]> delimiter;
```

Panggil procedure cariProdi untuk menampilkan nama prodi dengan mahasiswa yang memiliki huruf D di huruf awal nama mereka

```
MariaDB [responsi_2215016135]> delimiter //
MariaDB [responsi_2215016135]> create procedure cariProdi()
    → begin
    → select nama_prodi from tb_prodi join tb_mahasiswa on
tb_prodi.kode_prodi = tb_mahasiswa.kode_prodi where tb_mahas
iswa.nama like 'd%';
    → end //
Query OK, 0 rows affected (0.009 sec)

MariaDB [responsi_2215016135]> delimiter;
```

Berikut adalah data mahasiswa beserta prodinya :

```
MariaDB [responsi_2215016135]> select nama, tb_prodi.nama_pr
odi from tb_mahasiswa join tb_prodi on tb_mahasiswa.kode_pro
di = tb_prodi.kode_prodi;
+-----+-----+
| nama          | nama_prodi      |
+-----+-----+
| Danielle Annisa | Perbankan Syariah |
| Muhammad Sumbul | Psikologi        |
| Nur Minji       | Sistem Informasi |
| Aditya Agust    | Psikologi        |
| Wonu Ramadhan   | Farmasi          |
| Karina Azizah   | Teknik Industri  |
+-----+-----+
6 rows in set (0.001 sec)

MariaDB [responsi_2215016135]> |
```


Membuat procedure untuk melihat data judul buku yang tidak dipinjam

```
MariaDB [responsi_2215016135]> delimiter //
MariaDB [responsi_2215016135]> create procedure bukuTidakDipinjam()
    → begin
    → select judul from tb_buku join tb_pinjam on tb_buku.kode_buku = tb_pinjam.kode_buku where tb_pinjam.kembali = 0;
    → end //
Query OK, 0 rows affected (0.003 sec)

MariaDB [responsi_2215016135]> delimiter;
```

Panggil procedure tersebut :

```
MariaDB [responsi_2215016135]> call bukuTidakDipinjam();
+-----+
| judul |
+-----+
| Clean Architecture |
| Organisasi Komputer |
+-----+
2 rows in set (0.001 sec)

Query OK, 0 rows affected (0.004 sec)

MariaDB [responsi_2215016135]> |
```

Data tersebut sesuai dengan data pada tabel pinjam

```
MariaDB [responsi_2215016135]> select * from tb_pinjam;
+-----+-----+-----+-----+-----+-----+
| nim    | kode_buku | tgl_pjm | tgl_hrs_kbl | tgl_kbl | kembali |
+-----+-----+-----+-----+-----+-----+
| 2400016071 | B01      | 2023-12-12 | 2024-01-05 | 2024-01-01 | 1 |
| 2400021058 | B02      | 2024-01-05 | 2024-01-25 | NULL      | 0 |
| 2400010003 | B03      | 2023-11-23 | 2023-12-14 | NULL      | 0 |
| 2400020042 | B04      | 2024-01-03 | 2024-02-12 | 2024-01-11 | 1 |
| 2400017049 | B05      | 2023-11-18 | 2023-11-25 | 2023-11-23 | 1 |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.000 sec)
```

Buat procedure untuk mencari nama mahasiswa peminjam buku dengan judul Organisasi Komputer

```
MariaDB [responsi_2215016135]> delimiter //
MariaDB [responsi_2215016135]> create procedure cekNamaPeminjam()
    → begin
    → select Nama from tb_mahasiswa join tb_pinjam on tb_mahasiswa.nim = tb_pinjam.nim join tb_buku on tb_pinjam.kode_buku = tb_buku.kode_buku where tb_buku.Judul = 'Organisasi Komputer';
    → end //
Query OK, 0 rows affected (0.008 sec)

MariaDB [responsi_2215016135]> delimiter;
```

Panggil procedure tersebut :

```
MariaDB [(none)]> use responsi_2215016135;
Database changed
MariaDB [responsi_2215016135]> call cekNamaPeminjam();
+-----+
| Nama          |
+-----+
| Danielle Annisa |
+-----+
1 row in set (0.001 sec)

Query OK, 0 rows affected (0.002 sec)

MariaDB [responsi_2215016135]> |
```

Cek data peminjam buku

```
MariaDB [responsi_2215016135]> select Nama, tb_buku.Judul from tb_mahasiswa join tb_pinjam on tb_mahasiswa.nim = tb_pinjam.nim join tb_buku on tb_pinjam.kode_buku = tb_buku.kode_buku;
```

Nama	Judul
Nur Minji	Struktur Data
Karina Azizah	Clean Architecture
Danielle Annisa	Organisasi Komputer
Wonu Ramadhan	Mikrobiologi
Aditya Agust	Matematika

5 rows in set (0.000 sec)

```
MariaDB [responsi_2215016135]> |
```

Buat procedure untuk mencari mahasiswa dengan parameter kata_kunci

```
MariaDB [responsi_2215016135]> delimiter //
MariaDB [responsi_2215016135]> create procedure cariMahasiswa(kata_kunci varchar(255))
    → begin
    → select * from tb_mahasiswa where tb_mahasiswa.Nama Like CONCAT('%', kata_kunci, '%');
    → end //
Query OK, 0 rows affected (0.003 sec)
```

```
MariaDB [responsi_2215016135]> delimiter;
```

Cari data mahasiswa yang bernama Minji dengan memanggil procedure tersebut dengan parameter 'Minji'

```
MariaDB [responsi_2215016135]> call cariMahasiswa('Minji');
+-----+-----+-----+
| nim    | Nama    | kode_prodi |
+-----+-----+-----+
| 2400016071 | Nur Minji | P01        |
+-----+-----+-----+
1 row in set (0.001 sec)

Query OK, 0 rows affected (0.003 sec)
```

```
MariaDB [responsi_2215016135]> |
```

Berikut isi dari tabel tb_mahasiswa

```
MariaDB [responsi_2215016135]> select * from tb_mahasiswa;
```

nim	Nama	kode_prodi
2400010003	Danielle Annisa	P04
2400016069	Muhammad Sumbul	P05
2400016071	Nur Minji	P01
2400017049	Aditya Agust	P05
2400020042	Wonu Ramadhan	P02
2400021058	Karina Azizah	P03

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

```
MariaDB [responsi_2215016135]> |
```