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Membuat ERD Perpustakaan beserta Database-nya

DATA DEFINITION LANGUAGE

```
MariaDB [perpustakaan]> create table anggota(id_anggota varchar(9) primary key not null, nama_agt varchar(25), fakultas_
agt varchar(15), prodi_agt char(15));
Query OK, 0 rows affected (0.232 sec)
```

```
MariaDB [perpustakaan]> create table mahasiswa(npm int(9) primary key not null, id_anggota varchar(9), nama_mhs varchar(
25), fakultas_mhs varchar(15), prodi_mhs char(15), foreign key(id_anggota) references anggota(id_anggota)) engine=innodb
;
Query OK, 0 rows affected (0.361 sec)

MariaDB [perpustakaan]> create table dosen(nidn int(9) primary key not null, id_anggota varchar(9), nama_dosen varchar(2
5), fakultas_dosen varchar(15), prodi_dosen char(15), foreign key(id_anggota) references anggota(id_anggota)) engine=inn
odb;
Query OK, 0 rows affected (0.149 sec)
```

```
MariaDB [perpustakaan]> create table petugas(id_petugas varchar(9) primary key not null, nama_petugas varchar(25), alama
t varchar(25), no_hp varchar(15));
Query OK, 0 rows affected (0.237 sec)
MariaDB [perpustakaan]> create table buku(kode_buku varchar(9) primary key not null, judul_buku varchar(25), pengarang_b
uku varchar(25), id_anggota_peminjam varchar(9), foreign key(id_anggota_peminjam) references anggota(id_anggota));
Query OK, 0 rows affected (0.351 sec)
```

```
MariaDB [perpustakaan]> create table pelayanan(id_anggota varchar(9), id_petugas varchar(9), jadwal_pinjam date,jadwal_k
embali date, jumlah_buku int(2), foreign key(id_anggota) references anggota(id_anggota), foreign key(id_petugas) referen
ces petugas(id_petugas)) engine=innodb;
Query OK, 0 rows affected (1.029 sec)
```

```
MariaDB [perpustakaan]> create table keloladata(id_petugas varchar(9),kode_buku varchar(9),tahun_terbit int(4), foreign
key(id_petugas) references petugas(id_petugas), foreign key(kode_buku) references buku(kode_buku)) engine=innodb;
Query OK, 0 rows affected (0.373 sec)
```

```
MariaDB [perpustakaan]> create table kategori(kode_kategori varchar(9),nama_kategori varchar(15),kode_buku varchar(9), f
oreign key(kode_buku) references buku(kode_buku)) engine=innodb;
Query OK, 0 rows affected (0.245 sec)
```

```
MariaDB [perpustakaan]> show tables;
+-----------------------+
| Tables_in_perpustakaan |
+-----------------------+
| anggota               |
| buku                  |
| dosen                 |
| kategori              |
| keloladata            |
| mahasiswa             |
| pelayanan             |
| petugas               |
+-----------------------+
8 rows in set (0.042 sec)
```

```
MariaDB [perpustakaan]> desc anggota;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| id_anggota   | varchar(9)  | NO   | PRI | NULL    |       |
| nama_agt     | varchar(25) | YES  |     | NULL    |       |
| fakultas_agt | varchar(15) | YES  |     | NULL    |       |
| prodi_agt    | char(15)    | YES  |     | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
4 rows in set (0.082 sec)

MariaDB [perpustakaan]> desc mahasiswa;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| npm          | int(9)      | NO   | PRI | NULL    |       |
| id_anggota   | varchar(9)  | YES  | MUL | NULL    |       |
| nama_mhs     | varchar(25) | YES  |     | NULL    |       |
| fakultas_mhs | varchar(15) | YES  |     | NULL    |       |
| prodi_mhs    | char(15)    | YES  |     | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
5 rows in set (0.024 sec)

MariaDB [perpustakaan]> desc dosen;
+----------------+-------------+------+-----+---------+-------+
| Field          | Type        | Null | Key | Default | Extra |
+----------------+-------------+------+-----+---------+-------+
| nidn           | int(9)      | NO   | PRI | NULL    |       |
| id_anggota     | varchar(9)  | YES  | MUL | NULL    |       |
| nama_dosen     | varchar(25) | YES  |     | NULL    |       |
| fakultas_dosen | varchar(15) | YES  |     | NULL    |       |
| prodi_dosen    | char(15)    | YES  |     | NULL    |       |
+----------------+-------------+------+-----+---------+-------+
5 rows in set (0.118 sec)
```

```
MariaDB [perpustakaan]> desc petugas;
+-------------+-------------+------+-----+---------+-------+
| Field       | Type        | Null | Key | Default | Extra |
+-------------+-------------+------+-----+---------+-------+
| id_petugas  | varchar(9)  | NO   | PRI | NULL    |       |
| nama_petugas| varchar(25) | YES  |     | NULL    |       |
| alamat      | varchar(25) | YES  |     | NULL    |       |
| no_hp       | varchar(15) | YES  |     | NULL    |       |
+-------------+-------------+------+-----+---------+-------+
4 rows in set (0.023 sec)

MariaDB [perpustakaan]> desc buku;
+--------------------+-------------+------+-----+---------+-------+
| Field              | Type        | Null | Key | Default | Extra |
+--------------------+-------------+------+-----+---------+-------+
| kode_buku          | varchar(9)  | NO   | PRI | NULL    |       |
| judul_buku         | varchar(25) | YES  |     | NULL    |       |
| pengarang_buku     | varchar(25) | YES  |     | NULL    |       |
| id_anggota_peminjam| varchar(9)  | YES  | MUL | NULL    |       |
+--------------------+-------------+------+-----+---------+-------+
4 rows in set (0.129 sec)
```

```
MariaDB [perpustakaan]> desc kategori;
+---------------+-------------+------+-----+---------+-------+
| Field         | Type        | Null | Key | Default | Extra |
+---------------+-------------+------+-----+---------+-------+
| kode_kategori | varchar(9)  | YES  |     | NULL    |       |
| nama_kategori | varchar(15) | YES  |     | NULL    |       |
| kode_buku     | varchar(9)  | YES  | MUL | NULL    |       |
+---------------+-------------+------+-----+---------+-------+
3 rows in set (0.022 sec)
```

```
MariaDB [perpustakaan]> desc pelayanan;
+---------------+------------+------+-----+---------+-------+
| Field         | Type       | Null | Key | Default | Extra |
+---------------+------------+------+-----+---------+-------+
| id_anggota    | varchar(9) | YES  | MUL | NULL    |       |
| id_petugas    | varchar(9) | YES  | MUL | NULL    |       |
| jadwal_pinjam | date       | YES  |     | NULL    |       |
| jadwal_kembali| date       | YES  |     | NULL    |       |
| jumlah_buku   | int(2)     | YES  |     | NULL    |       |
+---------------+------------+------+-----+---------+-------+
5 rows in set (0.025 sec)

MariaDB [perpustakaan]> desc keloladata;
+--------------+------------+------+-----+---------+-------+
| Field        | Type       | Null | Key | Default | Extra |
+--------------+------------+------+-----+---------+-------+
| id_petugas   | varchar(9) | YES  | MUL | NULL    |       |
| kode_buku    | varchar(9) | YES  | MUL | NULL    |       |
| tahun_terbit | int(4)     | YES  |     | NULL    |       |
+--------------+------------+------+-----+---------+-------+
3 rows in set (0.025 sec)
```

DATA MANIPULATION LANGUAGE

```
MariaDB [perpustakaan]> insert into anggota values('M001','Ele','Pertanian','Agroteknologi'),
    -> ('M002','Ale','Teknik','Kimia'),
    -> ('D001','Pakde','Teknik','Sipil'),
    -> ('D002','Fatimah','FKIP','Matematika');
Query OK, 4 rows affected (0.420 sec)
Records: 4  Duplicates: 0  Warnings: 0

MariaDB [perpustakaan]> select*from anggota;
+------------+----------+-------------+---------------+
| id_anggota | nama_agt | fakultas_agt | prodi_agt     |
+------------+----------+-------------+---------------+
| D001       | Pakde    | Teknik      | Sipil         |
| D002       | Fatimah  | FKIP        | Matematika    |
| M001       | Ele      | Pertanian   | Agroteknologi |
| M002       | Ale      | Teknik      | Kimia         |
+------------+----------+-------------+---------------+
4 rows in set (0.004 sec)
```

```
MariaDB [perpustakaan]> insert into mahasiswa values('152210222','M001','Ele','Pertanian','Agroteknologi'),
    -> (183710333,'M002','Ale','Teknik','Kimia');
Query OK, 2 rows affected (0.129 sec)
Records: 2  Duplicates: 0  Warnings: 0

MariaDB [perpustakaan]> select*from mahasiswa;
+-----------+-----------+----------+-------------+---------------+
| npm       | id_anggota | nama_mhs | fakultas_mhs | prodi_mhs    |
+-----------+-----------+----------+-------------+---------------+
| 152210222 | M001      | Ele      | Pertanian   | Agroteknologi |
| 183710333 | M002      | Ale      | Teknik      | Kimia         |
+-----------+-----------+----------+-------------+---------------+
2 rows in set (0.000 sec)
```

```
MariaDB [perpustakaan]> insert into dosen values('102938475','D001','Pakde','Teknik','Sipil'),
    -> (102938476,'D002','Fatimah','FKIP','Matematika');
Query OK, 2 rows affected (0.115 sec)
Records: 2  Duplicates: 0  Warnings: 0

MariaDB [perpustakaan]> select*from dosen;
+-----------+-----------+-------------+---------------+------------+
| nidn      | id_anggota | nama_dosen  | fakultas_dosen | prodi_dosen |
+-----------+-----------+-------------+---------------+------------+
| 102938475 | D001      | Pakde       | Teknik        | Sipil      |
| 102938476 | D002      | Fatimah     | FKIP          | Matematika |
+-----------+-----------+-------------+---------------+------------+
2 rows in set (0.000 sec)
```

```
MariaDB [perpustakaan]> insert into buku values('A010','Ibadah dan Syariah','Erina','D001'),
    -> ('B010','Aljabar dan Matriks','Rindo','D002'),
    -> ('A030','Strategi Panen','Putri','M001'),
    -> ('A020','Lets Learn English','Eni','M002');
Query OK, 4 rows affected (0.148 sec)
Records: 4  Duplicates: 0  Warnings: 0

MariaDB [perpustakaan]> select*from buku;
+-----------+---------------------+---------------+-------------------+
| kode_buku | judul_buku          | pengarang_buku | id_anggota_peminjam |
+-----------+---------------------+---------------+-------------------+
| A010      | Ibadah dan Syariah  | Erina         | D001              |
| A020      | Lets Learn English  | Eni           | M002              |
| A030      | Strategi Panen      | Putri         | M001              |
| B010      | Aljabar dan Matriks | Rindo         | D002              |
+-----------+---------------------+---------------+-------------------+
4 rows in set (0.000 sec)
```

```
MariaDB [perpustakaan]> insert into petugas values('N90909','Lala','Jl. Mangga','081290837482'),
    -> ('N90901','Lili','Jl. Apel','081290183766'),
    -> ('M90956','Akbar','Jl. Semangka','081230122209'),
    -> ('M90933','Avan','Jl. Jeruk','085299887462');
Query OK, 4 rows affected (0.159 sec)
Records: 4  Duplicates: 0  Warnings: 0

MariaDB [perpustakaan]> select*from petugas;
+-----------+--------------+--------------+--------------+
| id_petugas | nama_petugas | alamat       | no_hp        |
+-----------+--------------+--------------+--------------+
| M90933    | Avan         | Jl. Jeruk    | 085299887462 |
| M90956    | Akbar        | Jl. Semangka | 081230122209 |
| N90901    | Lili         | Jl. Apel     | 081290183766 |
| N90909    | Lala         | Jl. Mangga   | 081290837482 |
+-----------+--------------+--------------+--------------+
4 rows in set (0.000 sec)
```

```
MariaDB [perpustakaan]> insert into kategori values('A1','Umum','A030'),
    -> ('A2','Pendidikan','A010'),
    -> ('A2','Pendidikan','A020'),
    -> ('A2','Pendidikan','B010');
Query OK, 4 rows affected (0.160 sec)
Records: 4  Duplicates: 0  Warnings: 0

MariaDB [perpustakaan]> select*from KATEGORI;
+---------------+---------------+-----------+
| kode_kategori | nama_kategori | kode_buku |
+---------------+---------------+-----------+
| A1            | Umum          | A030      |
| A2            | Pendidikan    | A010      |
| A2            | Pendidikan    | A020      |
| A2            | Pendidikan    | B010      |
+---------------+---------------+-----------+
4 rows in set (0.000 sec)
```

```
MariaDB [perpustakaan]> insert into pelayanan values('M001','N90901','2020-01-03','2020-01-05',1);
Query OK, 1 row affected (0.128 sec)

MariaDB [perpustakaan]> insert into pelayanan values('D001','M90956','2020-01-02','2020-01-07',1),
    -> ('D002','N90909','2020-01-11','2020-01-13',1),
    -> ('M002','M90933','2020-01-10','2020-01-12',1);
Query OK, 3 rows affected (0.108 sec)
Records: 3  Duplicates: 0  Warnings: 0

MariaDB [perpustakaan]> SELECT*FROM pelayanan;
+-----------+------------+--------------+---------------+-------------+
| id_anggota | id_petugas | jadwal_pinjam | jadwal_kembali | jumlah_buku |
+-----------+------------+--------------+---------------+-------------+
| M001      | N90901     | 2020-01-03   | 2020-01-05    |           1 |
| D001      | M90956     | 2020-01-02   | 2020-01-07    |           1 |
| D002      | N90909     | 2020-01-11   | 2020-01-13    |           1 |
| M002      | M90933     | 2020-01-10   | 2020-01-12    |           1 |
+-----------+------------+--------------+---------------+-------------+
4 rows in set (0.000 sec)
```

```
MariaDB [perpustakaan]> INSERT into keloladata values('M90956','A010','2010'),
    -> ('M90933','A020','2017'),
    -> ('N90901','A030','2019'),
    -> ('N90909','B010','2009');
Query OK, 4 rows affected (0.111 sec)
Records: 4  Duplicates: 0  Warnings: 0

MariaDB [perpustakaan]> SELECT*from keloladata;
+------------+-----------+--------------+
| id_petugas | kode_buku | tahun_terbit |
+------------+-----------+--------------+
| M90956     | A010      |         2010 |
| M90933     | A020      |         2017 |
| N90901     | A030      |         2019 |
| N90909     | B010      |         2009 |
+------------+-----------+--------------+
4 rows in set (0.000 sec)
```

QUERY

```
MariaDB [perpustakaan]> SELECT nama_mhs from mahasiswa;
+----------+
| nama_mhs |
+----------+
| Ele      |
| Ale      |
+----------+
2 rows in set (0.000 sec)
```

```
MariaDB [perpustakaan]> SELECT nama_mhs from mahasiswa WHERE prodi_mhs='Kimia';
+----------+
| nama_mhs |
+----------+
| Ale      |
+----------+
1 row in set (0.173 sec)
```

```
MariaDB [perpustakaan]> SELECT nama_agt from anggota,buku where anggota.id_anggota=buku.id_anggota_peminjam;
+----------+
| nama_agt |
+----------+
| Pakde    |
| Fatimah  |
| Ele      |
| Ale      |
+----------+
4 rows in set (0.009 sec)
```

```
MariaDB [perpustakaan]> select nama_dosen,fakultas_dosen,prodi_dosen from anggota,dosen,pelayanan where dosen.id_anggota
=anggota.id_anggota and pelayanan.id_anggota=anggota.id_anggota;
+------------+----------------+-------------+
| nama_dosen | fakultas_dosen | prodi_dosen |
+------------+----------------+-------------+
| Pakde      | Teknik         | Sipil       |
| Fatimah    | FKIP           | Matematika  |
+------------+----------------+-------------+
2 rows in set (0.086 sec)
```