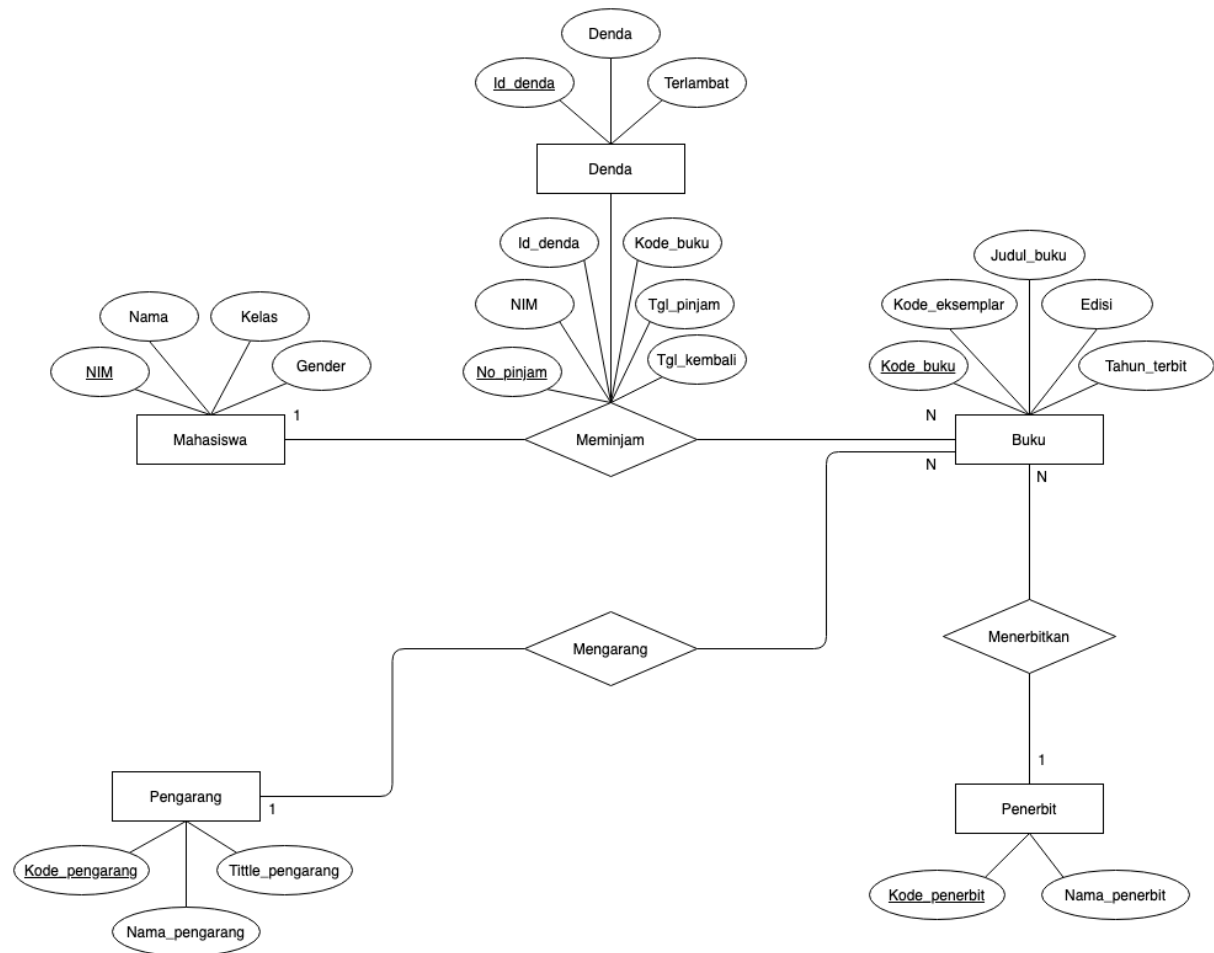Nama : Sang Aji Indutoro
NIM : L200180003
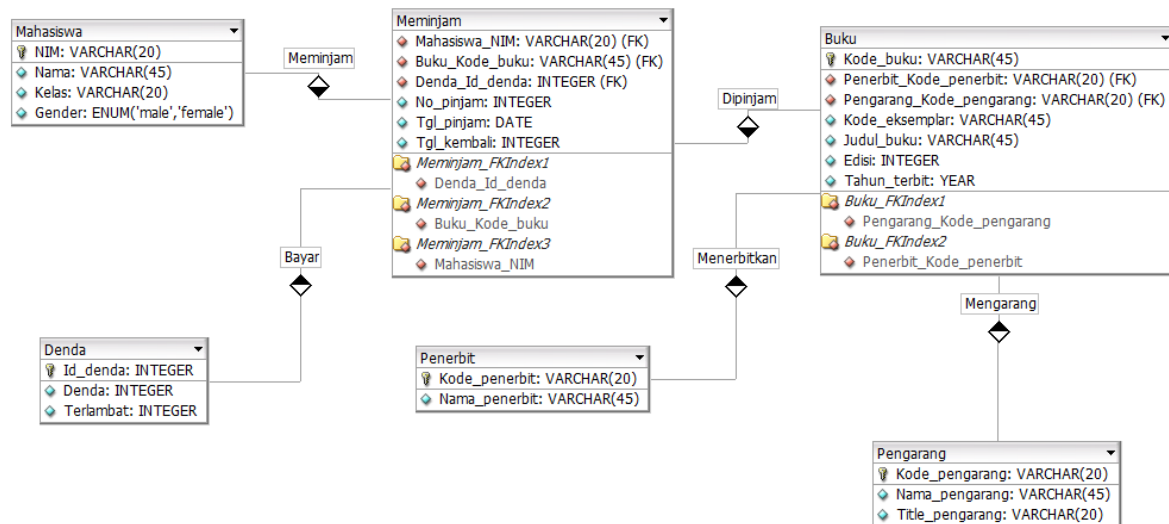
**Soal a**

## Soal b

a. Mahasiswa meminjam buku : one-to-many
b. Pengarang mengarang buku : one-to-many
c. Penerbit menerbitkan buku : one-to-many

## Soal c



## Soal d

```
MariaDB [(none)]> create database perpustakaan;
Query OK, 1 row affected (0.08 sec)

MariaDB [(none)]> use perpustakaan
Database changed

MariaDB [perpustakaan]> create table mahasiswa(
    -> NIM VARCHAR(20) PRIMARY KEY,
    -> Nama VARCHAR(45) NOT NULL,
    -> Kelas VARCHAR(20) NOT NULL,
    -> Gender ENUM('male','female'));
Query OK, 0 rows affected (0.27 sec)

MariaDB [perpustakaan]> create table pengarang(
    -> Kode_pengarang VARCHAR(20) PRIMARY KEY,
    -> Nama_pengarang VARCHAR(45) NOT NULL,
    -> Title_pengarang VARCHAR(20) NOT NULL);
Query OK, 0 rows affected (0.24 sec)

MariaDB [perpustakaan]> create table penerbit(
    -> Kode_penerbit INTEGER PRIMARY KEY,
    -> Nama_penerbit VARCHAR(45) NOT NULL)
    -> ;
Query OK, 0 rows affected (0.29 sec)

MariaDB [perpustakaan]> create table denda(
    -> Id_denda INTEGER PRIMARY KEY,
    -> Denda INTEGER,
    -> Terlambat INTEGER);
Query OK, 0 rows affected (0.30 sec)

MariaDB [perpustakaan]>
```

```
MariaDB [perpustakaan]> create table buku(
    -> Kode_buku INTEGER,
    -> Kode_eksemplar INTEGER,
    -> Judul_buku VARCHAR(45),
    -> Edisi INTEGER,
    -> Tahun_terbit YEAR,
    -> Kode_pengarangFK VARCHAR(20) REFERENCES pengarang(Kode_pengarang)
    -> ON DELETE CASCADE ON UPDATE CASCADE,
    -> Kode_penerbitFK INTEGER REFERENCES penerbit(Kode_penerbit)
    -> ON DELETE CASCADE ON UPDATE CASCADE);
Query OK, 0 rows affected (0.42 sec)
```

```
MariaDB [perpustakaan]> create table meminjam(
    -> No_pinjam INTEGER PRIMARY KEY,
    -> Tgl_pinjam DATE,
    -> Tgl_kembali DATE,
    -> id_dendaFK INTEGER REFERENCES denda(Id_denda)
    -> ON DELETE CASCADE ON UPDATE CASCADE,
    -> nimFK INTEGER REFERENCES mahasiswa(NIM)
    -> ON DELETE CASCADE ON UPDATE CASCADE,
    -> Kode_buku INTEGER REFERENCES buku(kode_buku)
    -> ON DELETE CASCADE ON UPDATE CASCADE);
Query OK, 0 rows affected (0.31 sec)
```

## Soal e

```
MariaDB [perpustakaan]> insert into mahasiswa(NIM,Nama,Kelas,Gender) values
    -> ("L200181234","Karina","A","female"),
    -> ("L200184321","Arina","A","female"),
    -> ("L200187667","Monic","A","female"),
    -> ("L200188237","Roro","A","female"),
    -> ("L200181732","Ajeng","A","female"),
    -> ("L200182387","Budi","B","male"),
    -> ("L200182983","Yudi","B","male"),
    -> ("L200181922","Haris","B","male"),
    -> ("L200181823","Angga","B","male"),
    -> ("L200181123","Amin","B","male");
Query OK, 10 rows affected (0.13 sec)
Records: 10  Duplicates: 0  Warnings: 0

MariaDB [perpustakaan]> insert into pengarang(Kode_pengarang,Nama_pengarang,Title_pengarang) values
    -> ("P01","Bambank","S. kom"),
    -> ("P02","Ujank","S. kom"),
    -> ("P03","Mamank","S. kom"),
    -> ("P04","Garox","S. kom"),
    -> ("P05","Jerink","S. kom"),
    -> ("P06","Sugenk","S. kom, M. kom"),
    -> ("P07","Gepenk","S. kom, M. kom"),
    -> ("P08","Dadank","S. kom"),
    -> ("P09","Tatank","S. kom, M. kom"),
    -> ("P10","Galank","S. kom");
Query OK, 10 rows affected (0.08 sec)
Records: 10  Duplicates: 0  Warnings: 0
```

```
MariaDB [perpustakaan]> insert into penerbit(Kode_penerbit,Nama_penerbit) values
    -> (1,"Mamank production"),
    -> (2,"GG production"),
    -> (3,"Nap production"),
    -> (4,"Amink production"),
    -> (5,"Senja pagi"),
    -> (6,"Kons media"),
    -> (7,"Sans production"),
    -> (8,"Jeje media"),
    -> (9,"Semprul production"),
    -> (10,"Sekut media");
Query OK, 10 rows affected (0.08 sec)
Records: 10  Duplicates: 0  Warnings: 0
```

```
MariaDB [perpustakaan]> insert into buku(Kode_buku,Kode_eksemplar,Judul_buku,Edisi,Tahun_terbit,Kode_pengarangFK,Kode_pe
nerbitFK) values
    -> ("001.01/gg","001.01/gg/001","Senja diawang-awang",3,"2019","P03",1),
    -> ("001.01/gg","001.01/gg/002","Senja diawang-awang",3,"2019","P03",1),
    -> ("001.01/gg","001.01/gg/003","Senja diawang-awang",3,"2019","P03",1),
    -> ("001.01/pp","001.01/pp/001","Cinta telor gulung",1,"2016","P01",4),
    -> ("001.01/pp","001.01/pp/002","Cinta telor gulung",1,"2016","P01",4),
    -> ("001.01/pp","001.01/pp/003","Cinta telor gulung",1,"2016","P01",4),
    -> ("001.01/pp","001.01/pp/004","Cinta telor gulung",1,"2016","P01",4),
    -> ("001.01/pp","001.01/pp/005","Cinta telor gulung",1,"2016","P01",4),
    -> ("001.01/pp","001.01/pp/006","Cinta telor gulung",1,"2016","P01",4),
    -> ("001.01/pp","001.01/pp/007","Cinta telor gulung",1,"2016","P01",4);
Query OK, 10 rows affected, 20 warnings (0.14 sec)
Records: 10  Duplicates: 0  Warnings: 20

MariaDB [perpustakaan]> insert into denda(Id_denda,Denda,Terlambat) values
    -> (1,10000,1),
    -> (2,20000,2),
    -> (3,30000,3),
    -> (4,40000,4),
    -> (5,50000,5),
    -> (6,60000,6),
    -> (7,70000,7),
    -> (8,80000,8),
    -> (9,90000,9),
    -> (10,90000,10);
Query OK, 10 rows affected (0.09 sec)
Records: 10  Duplicates: 0  Warnings: 0

MariaDB [perpustakaan]> insert into meminjam(No_pinjam,Tgl_pinjam,Tgl_kembali,Id_dendaFK,nimFK,Kode_bukuFK) values
    -> (1,"2019-10-10","2019-10-11",0,"L200181234","001.01/gg"),
    -> (2,"2019-10-20","2019-10-21",0,"L200181123","001.01/gg"),
    -> (3,"2019-10-20","2019-10-15",2,"L200181823","001.01/gg"),
    -> (4,"2019-10-25","2019-10-19",1,"L200181922","001.01/gg"),
    -> (5,"2019-10-25","2019-10-19",1,"L200182983","001.01/gg"),
    -> (6,"2019-10-29","2019-10-22",3,"L200182387","001.01/pp"),
    -> (7,"2019-10-29","2019-10-22",3,"L200181732","001.01/pp"),
    -> (8,"2019-10-21","2019-10-25",2,"L200188237","001.01/pp"),
    -> (9,"2019-10-22","2019-10-27",2,"L200187667","001.01/pp"),
    -> (10,"2019-10-26","2019-10-27",0,"L200184321","001.01/pp");
Query OK, 10 rows affected (0.09 sec)
Records: 10  Duplicates: 0  Warnings: 0
```