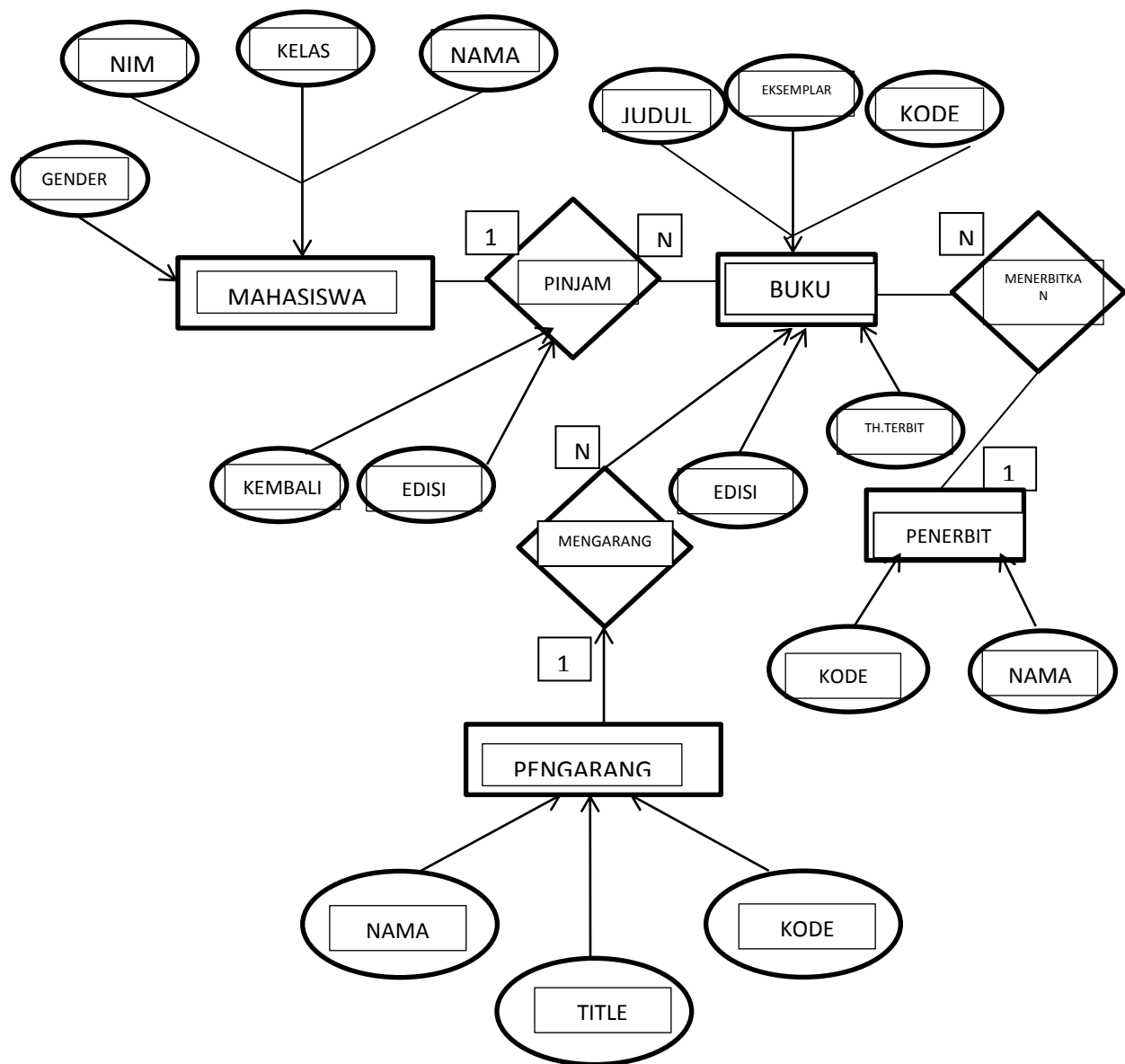


NAMA : DANANG AJI NUGROHO  
NIM : L200180015  
KELAS : A  
PENGAMPU : HERU SETYA NUGRAHA

## E-UTS SBD 2020

### A. ERD SIRKULASI PERPUSTAKAAN



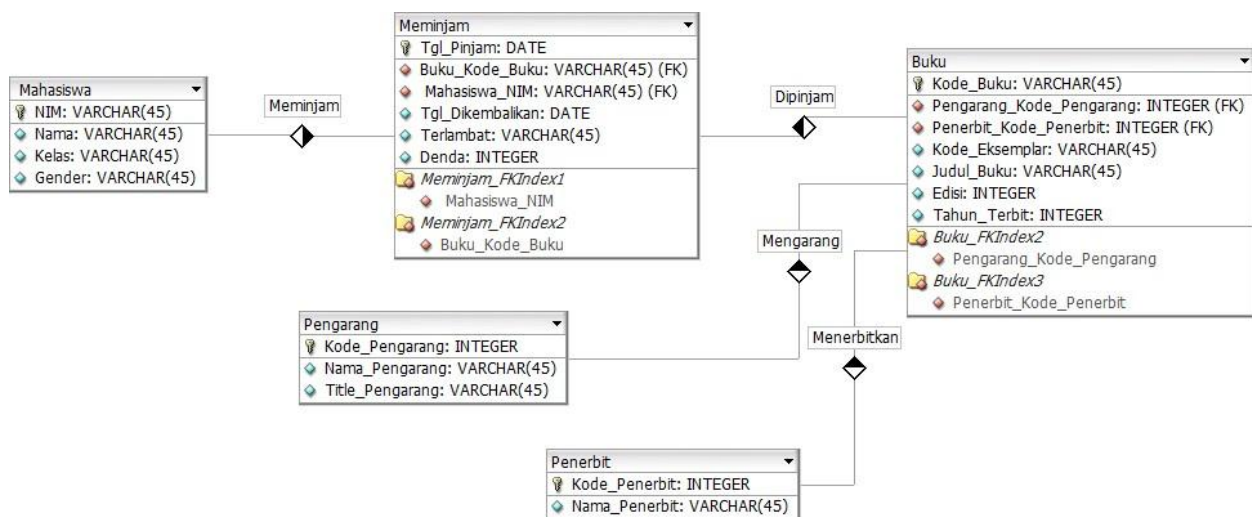
## B. CARDINALITY

-MAHASISWA MEMINJAM BUKU = 1:N ONE TO MANY

-PENGARANG MENGARANG BUKU = 1:N ONE TO MANY

-PENERBIT MENERBITKAN BUKU = 1:N ONE TO MANY

## C. DB\_DESIGNER



## D. IMPLEMENTASI QUERY SQL

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

MariaDB [(none)]> show databases;
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| perbankan |
| performance_schema |
| perkuliahan |
| perpustakaan |
| phpmyadmin |
| rumah_sakit |
| test |
+-----+
9 rows in set (0.09 sec)

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

## -TABEL MHS

```
MariaDB [perpustakaan]> CREATE TABLE Mahasiswa (  
  -> NIM VARCHAR(45) NOT NULL,  
  -> Nama VARCHAR(45) NOT NULL,  
  -> Kelas VARCHAR(45) NOT NULL,  
  -> Gender VARCHAR(45) NOT NULL,  
  -> PRIMARY KEY(NIM)  
  -> );  
Query OK, 0 rows affected (0.34 sec)  
  
MariaDB [perpustakaan]> desc Mahasiswa;  
+-----+-----+-----+-----+-----+-----+  
| Field | Type          | Null | Key | Default | Extra |  
+-----+-----+-----+-----+-----+-----+  
| NIM   | varchar(45)   | NO   | PRI | NULL    |       |  
| Nama  | varchar(45)   | NO   |     | NULL    |       |  
| Kelas | varchar(45)   | NO   |     | NULL    |       |  
| Gender | varchar(45)   | NO   |     | NULL    |       |  
+-----+-----+-----+-----+-----+-----+  
4 rows in set (0.11 sec)
```

## -TABEL PENGARANG

```
MariaDB [perpustakaan]> CREATE TABLE Pengarang (  
  -> Kode_Pengarang INTEGER NOT NULL AUTO_INCREMENT,  
  -> Nama_Pengarang VARCHAR(45) NOT NULL,  
  -> Title_Pengarang VARCHAR(45) NOT NULL,  
  -> PRIMARY KEY(Kode_Pengarang)  
  -> );  
Query OK, 0 rows affected (0.27 sec)  
  
MariaDB [perpustakaan]> desc Pengarang;  
+-----+-----+-----+-----+-----+-----+  
| Field          | Type          | Null | Key | Default | Extra |  
+-----+-----+-----+-----+-----+-----+  
| Kode_Pengarang | int(11)       | NO   | PRI | NULL    | auto_increment |  
| Nama_Pengarang | varchar(45)   | NO   |     | NULL    |               |  
| Title_Pengarang | varchar(45)   | NO   |     | NULL    |               |  
+-----+-----+-----+-----+-----+-----+  
3 rows in set (0.02 sec)
```

## -TABEL PENERBIT

```
MariaDB [perpustakaan]> CREATE TABLE Penerbit (  
  -> Kode_Penerbit INTEGER NOT NULL,  
  -> Nama_Penerbit VARCHAR(45) NOT NULL,  
  -> PRIMARY KEY(Kode_Penerbit)  
  -> );  
Query OK, 0 rows affected (0.29 sec)  
  
MariaDB [perpustakaan]> desc Penerbit;  
+-----+-----+-----+-----+-----+-----+  
| Field          | Type          | Null | Key | Default | Extra |  
+-----+-----+-----+-----+-----+-----+  
| Kode_Penerbit | int(11)       | NO   | PRI | NULL    |       |  
| Nama_Penerbit | varchar(45)   | NO   |     | NULL    |       |  
+-----+-----+-----+-----+-----+-----+  
2 rows in set (0.11 sec)
```

## -TABEL BUKU

```
MariaDB [perpustakaan]> CREATE TABLE Buku (  
  -> Kode_Buku VARCHAR(45) NOT NULL,  
  -> Pengarang_Kode_Pengarang INTEGER NOT NULL,  
  -> Penerbit_Kode_Penerbit INTEGER NOT NULL,  
  -> Kode_Eksemplar VARCHAR(45) NOT NULL,  
  -> Judul_Buku VARCHAR(45) NOT NULL,  
  -> Edisi INTEGER NOT NULL,  
  -> Tahun_Terbit INTEGER NOT NULL,  
  -> PRIMARY KEY(Kode_Buku),  
  -> FOREIGN KEY(Pengarang_Kode_Pengarang) REFERENCES Pengarang(Kode_Pengarang) ON DELETE CASCADE ON UPDATE CASCADE,  
  -> FOREIGN KEY(Penerbit_Kode_Penerbit) REFERENCES Penerbit(Kode_Penerbit) ON DELETE CASCADE ON UPDATE CASCADE  
  -> );  
Query OK, 0 rows affected (0.27 sec)  
  
MariaDB [perpustakaan]> desc Buku;  
+-----+-----+-----+-----+-----+-----+  
| Field | Type | Null | Key | Default | Extra |  
+-----+-----+-----+-----+-----+-----+  
| Kode_Buku | varchar(45) | NO | PRI | NULL | |  
| Pengarang_Kode_Pengarang | int(11) | NO | MUL | NULL | |  
| Penerbit_Kode_Penerbit | int(11) | NO | MUL | NULL | |  
| Kode_Eksemplar | varchar(45) | NO | | NULL | |  
| Judul_Buku | varchar(45) | NO | | NULL | |  
| Edisi | int(11) | NO | | NULL | |  
| Tahun_Terbit | int(11) | NO | | NULL | |  
+-----+-----+-----+-----+-----+-----+  
7 rows in set (0.12 sec)
```

## E. RECORD/DATA PADA TIAP TABLE DENGAN INSERT RECORD DI TABLE

### MAHASISWA

```

MariaDB [perpustakaan]> show tables;
+-----+
| Tables_in_perpustakaan |
+-----+
| mahasiswa               |
| penerbit                 |
| pengarang                |
+-----+
3 rows in set (0.077 sec)

MariaDB [perpustakaan]> INSERT INTO mahasiswa(NIM, nama, kelas, gender) values
-> (01, "haha", "informatika A", "cowo"),
-> (02, "hihi", "informatika A", "cewe"),
-> (03, "hehe", "informatika A", "cowo"),
-> (04, "hiha", "informatika B", "cewe"),
-> (05, "hoho", "informatika B", "cowo"),
-> (06, "soso", "mesin A", "cowo"),
-> (07, "siti", "mesin A", "cewe"),
-> (08, "sota", "mesin B", "cowo"),
-> (09, "sese", "mesin B", "cowo"),
-> (010, "seto", "mesin B", "cowo");
Query OK, 10 rows affected (0.257 sec)
Records: 10 Duplicates: 0 Warnings: 0

MariaDB [perpustakaan]> select * from mahasiswa;
+-----+-----+-----+-----+
| NIM | NAMA | KELAS | GENDER |
+-----+-----+-----+-----+
| 1 | haha | informatika A | cowo |
| 2 | hihi | informatika A | cewe |
| 3 | hehe | informatika A | cowo |
| 4 | hiha | informatika B | cewe |
| 5 | hoho | informatika B | cowo |
| 6 | soso | mesin A | cowo |
| 7 | siti | mesin A | cewe |
| 8 | sota | mesin B | cowo |
| 9 | sese | mesin B | cowo |
| 10 | seto | mesin B | cowo |
+-----+-----+-----+-----+
10 rows in set (0.279 sec)

```

## RECORD TABEL PENGARANG

```

MariaDB [perpustakaan]> INSERT INTO pengarangg(kode_pengarang, nama_pengarang, title_pengarang) values
-> (01, "Radit", "M.pd S.pd"),
-> (02, "Jarjit", "M.pd S.pd"),
-> (03, "Rum", "Amd Keb"),
-> (04, "Rumi", "S.Ked"),
-> (05, "Rumi", "S."),
-> (06, "Rusi", "S.T"),
-> (07, "Rusli", "S.E"),
-> (08, "Sli", "S.Com"),
-> (09, "Sriyu", "S.T"),
-> (010, "Firdaus", "S.Math");
Query OK, 10 rows affected (0.134 sec)
Records: 10 Duplicates: 0 Warnings: 0

MariaDB [perpustakaan]> select * from pengarangg;
+-----+-----+-----+
| kode_pengarang | NAMA_PENGARANG | TITLE_PENGARANG |
+-----+-----+-----+
| 1 | Radit | M.pd S.pd |
| 2 | Jarjit | M.pd S.pd |
| 3 | Rum | Amd Keb |
| 4 | Rumi | S.Ked |
| 5 | Rumi | S. |
| 6 | Rusi | S.T |
| 7 | Rusli | S.E |
| 8 | Sli | S.Com |
| 9 | Sriyu | S.T |
| 10 | Firdaus | S.Math |
+-----+-----+-----+
10 rows in set (0.000 sec)

MariaDB [perpustakaan]>

```

## RECORD TABEL PENERBIT

```
MariaDB [perpustakaan]> INSERT INTO penerbit(kode_penerbit, nama_penerbit, tahun_terbit, edisi) values
-> (01, "gramedia", "2001", "pertama"),
-> (02, "gramedia", "2002", "kedua"),
-> (03, "gramedia", "2003", "ketiga"),
-> (04, "gramedia", "2004", "keempat"),
-> (05, "gramedia", "2004", "kelima"),
-> (06, "gramedia", "2004", "keenam"),
-> (07, "gramedia", "2004", "ketujuh"),
-> (08, "gramedia", "2005", "kedelapan"),
-> (09, "gramedia", "2005", "kesembilan"),
-> (010, "gramedia", "2005", "kesepuluh");
```

Query OK, 10 rows affected (0.064 sec)

Records: 10 Duplicates: 0 Warnings: 0

```
MariaDB [perpustakaan]> select * from penerbit;
```

kode_penerbit	NAMA_PENERBIT	TAHUN_TERBIT	EDISI
1	gramedia	2001	pertama
2	gramedia	2002	kedua
3	gramedia	2003	ketiga
4	gramedia	2004	keempat
5	gramedia	2004	kelima
6	gramedia	2004	keenam
7	gramedia	2004	ketujuh
8	gramedia	2005	kedelapan
9	gramedia	2005	kesembilan
10	gramedia	2005	kesepuluh

10 rows in set (0.001 sec)

```
MariaDB [perpustakaan]>
```