

Nama : Muhammad Khalif Rizaldi Wibowo

Kelas : H

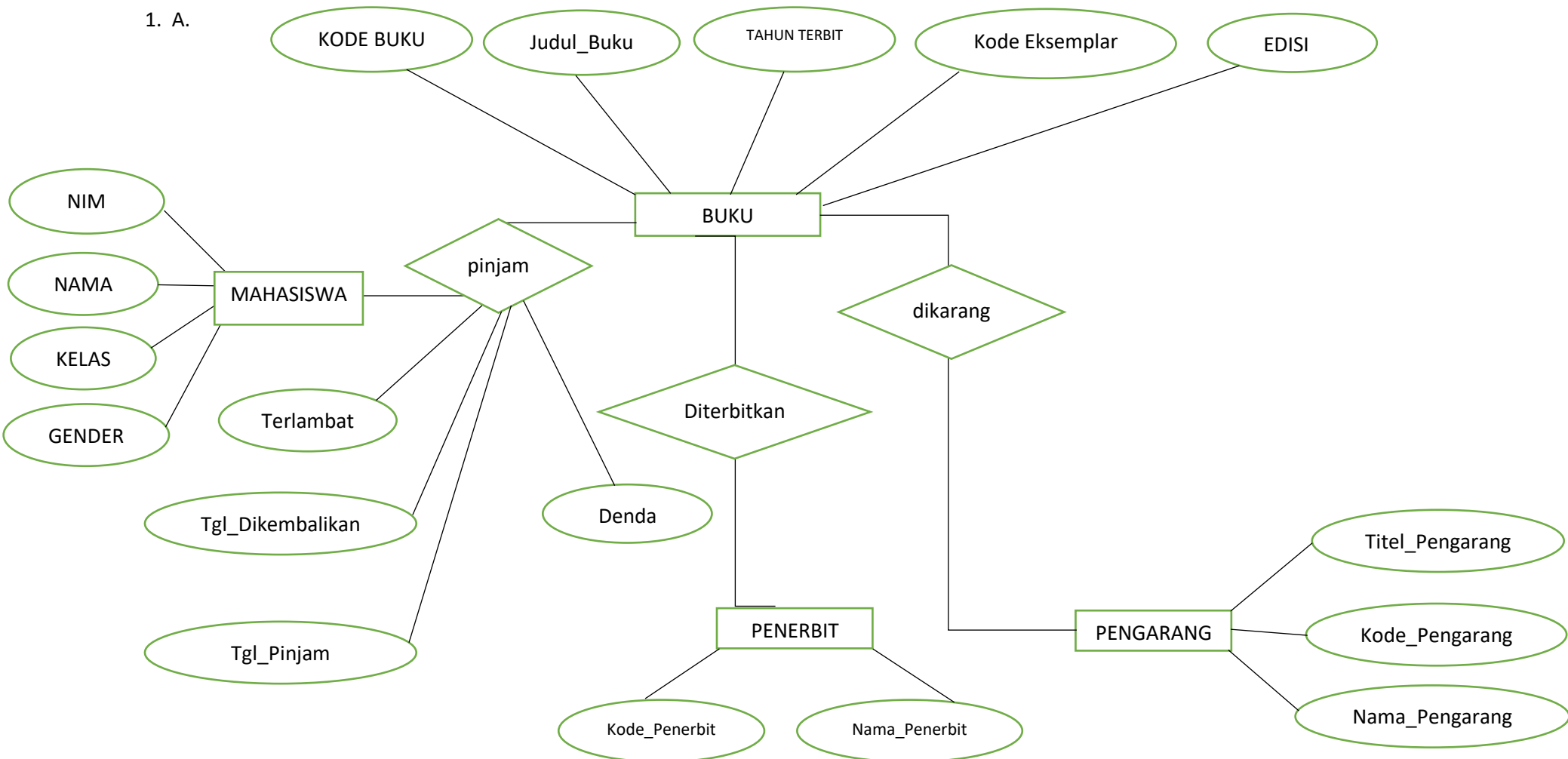
NIM : L200180217

Mata Kuliah : Praktikum Sistem Basis Data

UTS

Praktikum Database System

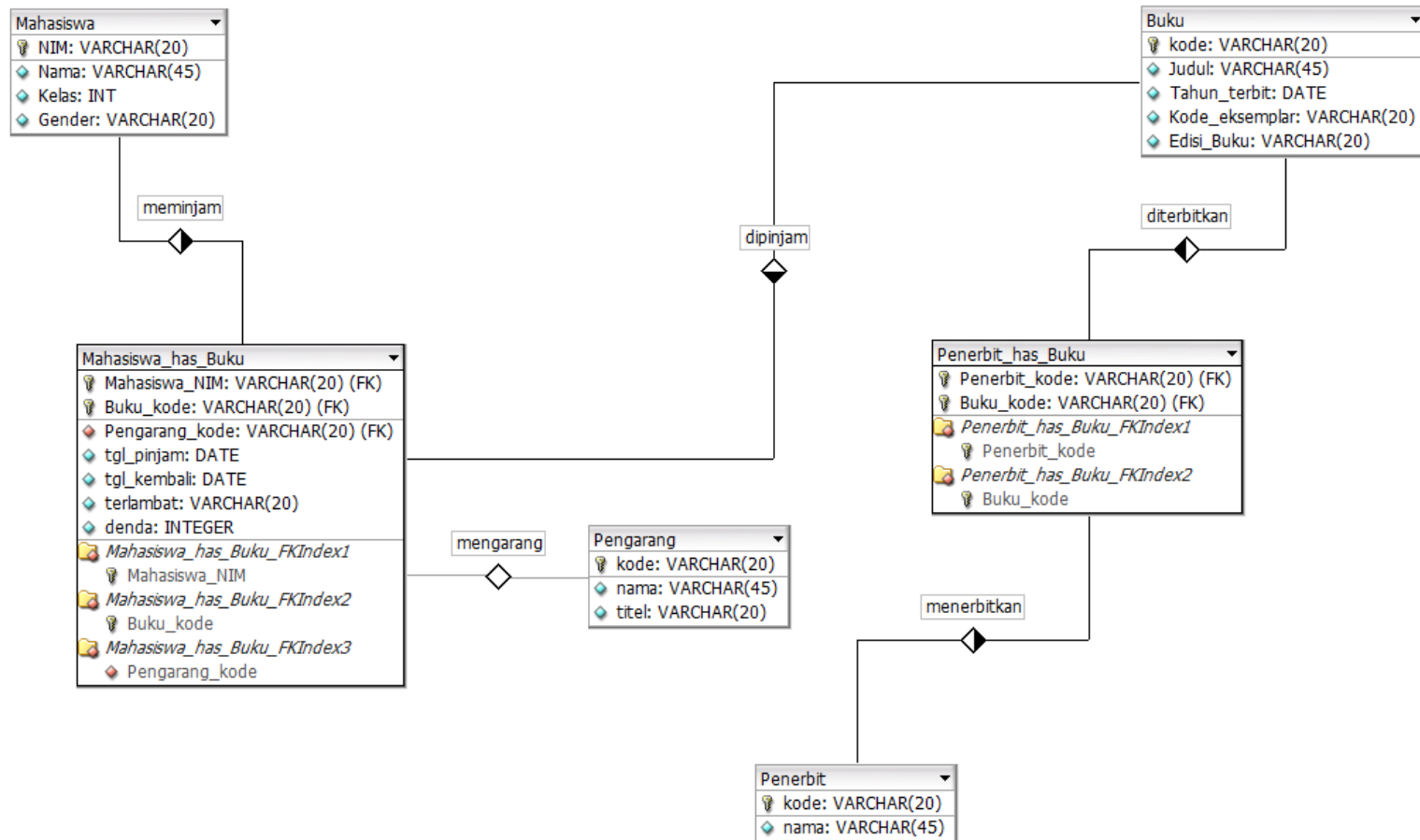
1. A.



B.

- Mahasiswa meminjam buku :
Tabel Utama : mahasiswa, buku
Tabel Kedua : mahasiswa_has_buku
Relationship : many-to-many (m:n)
Attribute penghubung : nim, kode_buku, tgl_pinjam, tgl_kembali, terlambat, denda (FK NIM, kode_buku, tgl_pinjam, tgl_kembali, terlambat, denda di mahasiswa_has_buku)
- Buku dikarang pengarang :
Tabel Utama : buku, pengarang
Tabel Kedua : buku_has_pengarang
Relationship : many to one (m:1)
Attribute penghubung : kode_buku, kode_pengarang (FK kode_buku, kode_pengarang di buku_has_pengarang)
- Buku diterbitkan penerbit :
Tabel Utama : buku, penerbit
Tabel Kedua : buku_has_penerbit
Relationship : many to many (m:n)
Attribute penghubung : kode_buku, kode_penerbit (FK kode_buku, kode_penerbit di buku has penerbit)

C.



D.

```
MariaDB [(none)]> CREATE DATABASE perpustakaan;  
Query OK, 1 row affected (0.072 sec)
```

```
MariaDB [(none)]> CREATE TABLE mahasiswa (  
  -> NIM Varchar(20) PRIMARY KEY UNIQUE;  
ERROR 1046 (3D000): No database selected
```

```
MariaDB [(none)]> CREATE TABLE mahasiswa (  
  -> NIM Varchar(20) PRIMARY KEY UNIQUE,  
  -> nama VARCHAR(45) NOT NULL,  
  -> kelas INTEGER NOT NULL,  
  -> gender VARCHAR(20) NOT NULL);  
ERROR 1046 (3D000): No database selected
```

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

```
MariaDB [perpustakaan]> CREATE TABLE mahasiswa (  
  -> NIM Varchar(20) PRIMARY KEY UNIQUE,  
  -> nama VARCHAR(45) NOT NULL,  
  -> kelas INTEGER NOT NULL,  
  -> gender VARCHAR(20) NOT NULL);  
Query OK, 0 rows affected (0.473 sec)
```

```
MariaDB [perpustakaan]> CREATE TABLE pengarang (  
  -> kode VARCHAR(20) PRIMARY KEY UNIQUE,  
  -> nama VARCHAR(45) NOT NULL,  
  -> judul VARCHAR(45) NOT NULL);  
Query OK, 0 rows affected (0.709 sec)
```

```
MariaDB [perpustakaan]> CREATE TABLE penerbit(  
  -> kode VARCHAR(20) PRIMARY KEY UNIQUE,  
  -> nama VARCHAR(45) NOT NULL);  
Query OK, 0 rows affected (0.298 sec)
```

```
MariaDB [perpustakaan]> CREATE TABLE buku(  
  -> kode_buku VARCHAR(20) PRIMARY KEY,  
  -> kode_eksemplar VARCHAR(20) NOT NULL,  
  -> judul_buku VARCHAR(45) NOT NULL,  
  -> edisi VARCHAR(20) NOT NULL,
```

```
9
MariaDB [perpustakaan]> CREATE TABLE buku(
  -> kode_buku VARCHAR(20) PRIMARY KEY,
  -> kode_eksemplar VARCHAR(20) NOT NULL,
  -> judul_buku VARCHAR(45) NOT NULL,
  -> tahun_terbit DATE NOT NULL,
  -> edisi_buku VARCHAR(20) NOT NULL);
```

Query OK, 0 rows affected (0.290 sec)

```
MariaDB [perpustakaan]> CREATE TABLE mahasiswa_has_buku(
  -> NIMFK VARCHAR(20) REFERENCES mahasiswa(NIM)
  -> ON DELETE CASCADE ON UPDATE CASCADE,
  -> kode_bukuFK VARCHAR(20) REFERENCES buku(kode_buku)
  -> ON DELETE CASCADE ON UPDATE CASCADE,
  -> PRIMARY KEY(NIMFK,kode_bukuFK));
```

Query OK, 0 rows affected (0.334 sec)

```
MariaDB [perpustakaan]> CREATE TABLE buku_has_penerbit(
  -> kode_bukuFK INTEGER REFERENCES buku(kode_buku)
  -> ON DELETE CASCADE ON UPDATE CASCADE,
  -> kodeFK VARCHAR(20) REFERENCES penerbit(kode)
  -> ON DELETE CASCADE ON UPDATE CASCADE,
  -> PRIMARY KEY(kode_bukuFK, kodeFK));
```

Query OK, 0 rows affected (0.350 sec)

```
MariaDB [perpustakaan]> alter table mahasiswa_has_buku
  -> add column if not exists
  -> tgl_pinjam date;
```

Query OK, 0 rows affected (0.448 sec)

Records: 0 Duplicates: 0 Warnings: 0

```
MariaDB [perpustakaan]> alter table mahasiswa_has_buku
  -> add column if not exists
  -> tgl_kembali date;
```

Query OK, 0 rows affected (0.080 sec)

Records: 0 Duplicates: 0 Warnings: 0

```
MariaDB [perpustakaan]> alter table mahasiswa_has_buku
  -> add column if not exists
  -> terlambat VARCHAR(20);
```

Query OK, 0 rows affected (0.199 sec)

Records: 0 Duplicates: 0 Warnings: 0

```
MariaDB [perpustakaan]> alter table mahasiswa_has_buku
  -> add column if not exists
  -> denda INTEGER;
```

Query OK, 0 rows affected (0.109 sec)

Records: 0 Duplicates: 0 Warnings: 0

```
MariaDB [perpustakaan]> describe mahasiswa_has_buku;
```

Field	Type	Null	Key	Default	Extra
NIMFK	varchar(20)	NO	PRI	NULL	
kode_bukuFK	varchar(20)	NO	PRI	NULL	
tgl_pinjam	date	YES		NULL	
tgl_kembali	date	YES		NULL	
terlambat	varchar(20)	YES		NULL	
denda	int(11)	YES		NULL	

6 rows in set (0.133 sec)

```
MariaDB [perpustakaan]> show tables;
```

Tables_in_perpustakaan
buku
buku_has_penerbit
mahasiswa
mahasiswa_has_buku
penerbit
pengarang

```
6 rows in set (0.024 sec)
```

```
MariaDB [perpustakaan]> describe buku;
```

Field	Type	Null	Key	Default	Extra
kode_buku	varchar(20)	NO	PRI	NULL	
kode_eksemplar	varchar(20)	NO		NULL	
judul_buku	varchar(45)	NO		NULL	
tahun_terbit	date	NO		NULL	
edisi_buku	varchar(20)	NO		NULL	

```
5 rows in set (0.167 sec)
```

```
MariaDB [perpustakaan]> describe buku_has_penerbit;
```

Field	Type	Null	Key	Default	Extra
kode_bukuFK	int(11)	NO	PRI	NULL	
kodeFK	varchar(20)	NO	PRI	NULL	

```
2 rows in set (0.024 sec)
```

```
MariaDB [perpustakaan]> describe mahasiswa;
```

Field	Type	Null	Key	Default	Extra
NIM	varchar(20)	NO	PRI	NULL	
nama	varchar(45)	NO		NULL	
kelas	int(11)	NO		NULL	

```
MariaDB [perpustakaan]> describe mahasiswa;
```

Field	Type	Null	Key	Default	Extra
NIM	varchar(20)	NO	PRI	NULL	
nama	varchar(45)	NO		NULL	
kelas	int(11)	NO		NULL	
gender	varchar(20)	NO		NULL	

```
4 rows in set (0.040 sec)
```

```
MariaDB [perpustakaan]> describe mahasiswa_has_buku;
```

Field	Type	Null	Key	Default	Extra
NIMFK	varchar(20)	NO	PRI	NULL	
kode_bukuFK	varchar(20)	NO	PRI	NULL	
tgl_pinjam	date	YES		NULL	
tgl_kembali	date	YES		NULL	
terlambat	varchar(20)	YES		NULL	
denda	int(11)	YES		NULL	

```
6 rows in set (0.020 sec)
```

```
MariaDB [perpustakaan]> describe penerbit;
```

Field	Type	Null	Key	Default	Extra
kode	varchar(20)	NO	PRI	NULL	
nama	varchar(45)	NO		NULL	

```
2 rows in set (0.033 sec)
```

```
MariaDB [perpustakaan]> describe pengarang;
```

Field	Type	Null	Key	Default	Extra
kode	varchar(20)	NO	PRI	NULL	
nama	varchar(45)	NO		NULL	
titel	varchar(45)	NO		NULL	

```
3 rows in set (0.165 sec)
```


E.

```
MariaDB [perpustakaan]> insert into mahasiswa(NIM,nama,kelas,gender) VALUES
-> ('K11','Kolev','12','Pria'),
-> ('K12','Wibowo','11','Pria'),
-> ('K13','Celsy','11','Wanita'),
-> ('K14','Riani','12','Wanita'),
-> ('K15','Pevita','12','Wanita'),
-> ('K16','Anisa','11','Wanita'),
-> ('K17','Sherina','11','Wanita'),
-> ('K18','Shobri','12','Pria'),
-> ('K19','Maryam','12','Wanita'),
-> ('K20','Imran','10','Pria');
Query OK, 10 rows affected (0.147 sec)
Records: 10 Duplicates: 0 Warnings: 0

MariaDB [perpustakaan]> desc penerbit;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| kode  | varchar(20)   | NO   | PRI | NULL    |       |
| nama  | varchar(45)   | NO   |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.091 sec)
```

```

MariaDB [perpustakaan]> insert into penerbit(kode,nama) VALUES
  -> ("JM10","Republik Lawak"),
  -> ("JM09","Asah Otak"),
  -> ("JM08","Litbang HW"),
  -> ("JM07","Merdeka Negeri"),
  -> ("JM06","Sinodoro Agung"),
  -> ("JM05","Angkasa Jaya"),
  -> ("JM04","Gramedia"),
  -> ("JM03","Cahaya Timur"),
  -> ("JM02","Merbabu"),
  -> ("JM01","Ramayana")
  -> ;

```

Query OK, 10 rows affected (0.159 sec)
Records: 10 Duplicates: 0 Warnings: 0

```

MariaDB [perpustakaan]> desc penerbit;

```

Field	Type	Null	Key	Default	Extra
kode	varchar(20)	NO	PRI	NULL	
nama	varchar(45)	NO		NULL	
titel	varchar(45)	NO		NULL	

3 rows in set (0.158 sec)

```

MariaDB [perpustakaan]> insert into pengarang (kode,nama,titel) VALUES
  -> ('OMG01','Khalif Rizaldi','S.Kom'),
  -> ('OMG02','Sujalwo','S.Kom'),
  -> ('OMG03','Ahmad Suparno','S.T'),
  -> ('OMG04','Jimmy Kent','M.Eng'),
  -> ('OMG05','Jimmy Kent','M.Eng'),
  -> ('OMG06','Kento Mamota','B.Eng'),
  -> ('OMG07','Thomas Cook','S.Si'),
  -> ('OMG08','Abdul Ghani','S.Pdi'),
  -> ('OMG09','Ander Son','S.E'),
  -> ('OMG10','Aa guus','M.E');

```

Query OK, 10 rows affected (0.104 sec)
Records: 10 Duplicates: 0 Warnings: 0

```

MariaDB [perpustakaan]> insert into buku(kode_buku,kode_eksemplar,judul_buku,tahun_terbit,edisi_buku) VALUES
-> ('GH01','001.01/ws/001','Ahli Komputer','2017-08-12','ke-1'),
-> ('GH02','001.01/ws/002','Hacking Nasa dengan HTML','2017-10-12','ke-4'),
-> ('GH03','001.01/ws/003','Bumi Kita','2015-03-12','ke-5'),
-> ('GH04','001.01/ws/004','Bucin Is Death','2011-03-10','ke-10'),
-> ('GH05','001.01/ws/005','Tanah Air Ku','2011-05-30','ke-1'),
-> ('GH06','001.01/ws/006','Insyaf Si Bucin','2014-06-23','ke-2'),
-> ('GH07','001.01/ws/007','revolusi harga mati','2016-08-21','ke-4'),
-> ('GH08','001.01/ws/008','Tuntunan Sholat','2012-03-27','ke-5'),
-> ('GH09','001.01/ws/009','bisnis online dengan SEO','2020-04-27','ke-7'),
-> ('GH10','001.01/ws/010','World Economy','2019-04-21','ke-3');
Query OK, 10 rows affected (0.047 sec)
Records: 10  Duplicates: 0  Warnings: 0

```

```

MariaDB [perpustakaan]> select*from mahasiswa;

```

NIM	nama	kelas	gender
K11	Kolev	12	Pria
K12	Wibowo	11	Pria
K13	Celsy	11	Wanita
K14	Riani	12	Wanita
K15	Pevita	12	Wanita
K16	Anisa	11	Wanita
K17	Sherina	11	Wanita
K18	Shobri	12	Pria
K19	Maryam	12	Wanita
K20	Imran	10	Pria

```

10 rows in set (0.000 sec)

```

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

kode	nama
JM01	Ramayana
JM02	Merbabu
JM03	Cahaya Timur
JM04	Gramedia
JM05	Angkasa Jaya
JM06	Sinodoro Agung
JM07	Merdeka Negeri
JM08	Litbang HW
JM09	Asah Otak
JM10	Republik Lawak

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

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

kode	nama	titel
OMG01	Khalif Rizaldi	S.Kom
OMG02	Sujalwo	S.Kom
OMG03	Ahmad Suparno	S.T
OMG04	Jimmy Kent	M.Eng
OMG05	Jimmy Kent	M.Eng
OMG06	Kento Mamota	B.Eng
OMG07	Thomas Cook	S.Si
OMG08	Abdul Ghani	S.Pdi
OMG09	Ander Son	S.E
OMG10	Aa guus	M.E

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

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

kode_buku	kode_eksemplar	judul_buku	tahun_terbit	edisi_buku
GH01	001.01/ws/001	Ahli Komputer	2017-08-12	ke-1
GH02	001.01/ws/002	Hacking Nasa dengan HTML	2017-10-12	ke-4
GH03	001.01/ws/003	Bumi Kita	2015-03-12	ke-5
GH04	001.01/ws/004	Bucin Is Death	2011-03-10	ke-10
GH05	001.01/ws/005	Tanah Air Ku	2011-05-30	ke-1
GH06	001.01/ws/006	Insyaf Si Bucin	2014-06-23	ke-2
GH07	001.01/ws/007	revolusi harga mati	2016-08-21	ke-4
GH08	001.01/ws/008	Tuntunan Sholat	2012-03-27	ke-5
GH09	001.01/ws/009	bisnis online dengan SEO	2020-04-27	ke-7
GH10	001.01/ws/010	World Economy	2019-04-21	ke-3

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