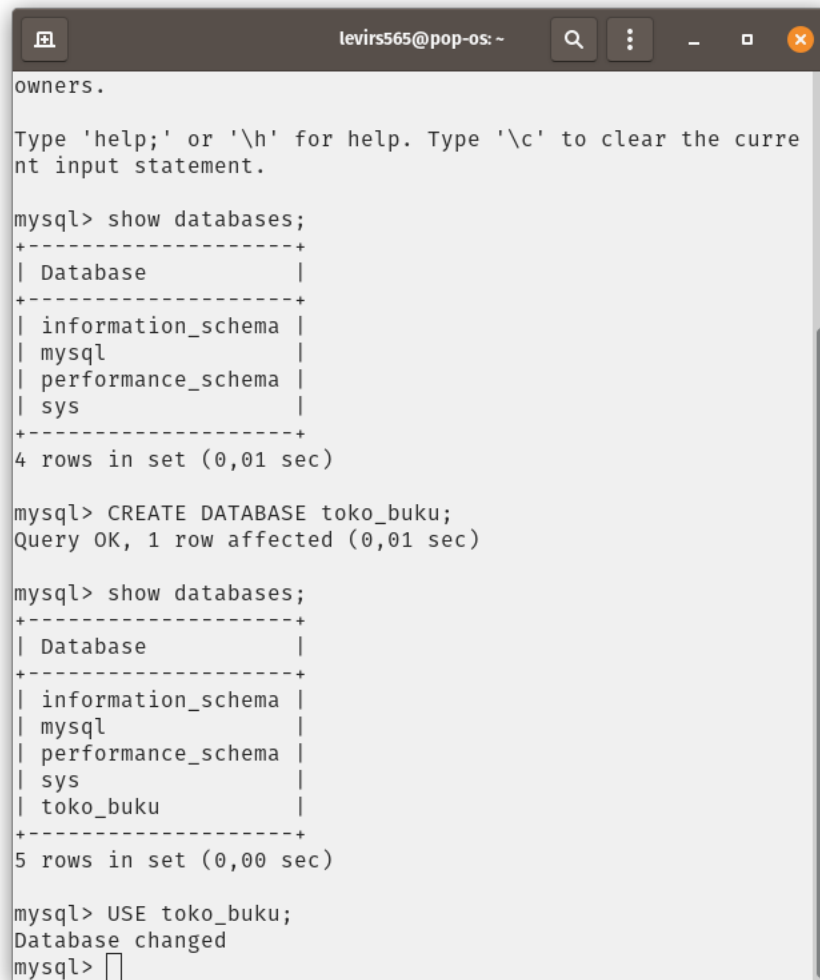


Nama : Levi Rizki Saputra  
NIM : 123230127  
Kelas : D

Create Database:



```
levirs565@pop-os: ~  
mysql> show databases;  
+-----+  
| Database |  
+-----+  
| information_schema |  
| mysql |  
| performance_schema |  
| sys |  
+-----+  
4 rows in set (0,01 sec)  
  
mysql> CREATE DATABASE toko_buku;  
Query OK, 1 row affected (0,01 sec)  
  
mysql> show databases;  
+-----+  
| Database |  
+-----+  
| information_schema |  
| mysql |  
| performance_schema |  
| sys |  
| toko_buku |  
+-----+  
5 rows in set (0,00 sec)  
  
mysql> USE toko_buku;  
Database changed  
mysql>
```

Query:

```
1 CREATE TABLE Buku(  
2 Kode_buku CHAR(4) NOT NULL PRIMARY KEY,  
3 Judul CHAR(20) NOT NULL,  
4 Pengarang CHAR(15) NOT NULL,  
5 Jml_buku INT NOT NULL,  
6 Kode_penerbit CHAR(2) NOT NULL,  
7 Harga_Sebulan INT NOT NULL  
8 );
```

Hasil:

```
1 Query OK, 0 rows affected (0,02 sec)
```

Query:

```
1 DESC Buku;
```

Hasil:

```

1 +-----+-----+-----+-----+-----+
2 | Field      | Type      | Null | Key | Default | Extra |
3 +-----+-----+-----+-----+-----+
4 | Kode_buku   | char(4)   | NO   | PRI | NULL    |      |
5 | Judul       | char(20)  | NO   |     | NULL    |      |
6 | Pengarang   | char(15)  | NO   |     | NULL    |      |
7 | Jml_buku    | int       | NO   |     | NULL    |      |
8 | Kode_penerbit | char(2)   | NO   |     | NULL    |      |
9 | Harga_Sebulan | int       | NO   |     | NULL    |      |
10 +-----+-----+-----+-----+-----+
11 6 rows in set (0,00 sec)

```

```

levirs565@pop-os: ~/Tugas
mysql> CREATE TABLE Buku(
  -> Kode_buku CHAR(4) NOT NULL PRIMARY KEY,
  -> Judul CHAR(20) NOT NULL,
  -> Pengarang CHAR(15) NOT NULL,
  -> Jml_buku INT NOT NULL,
  -> Kode_penerbit CHAR(2) NOT NULL,
  -> Harga_Sebulan INT NOT NULL
  -> );
Query OK, 0 rows affected (0,02 sec)

mysql> DESC Buku;
+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| Kode_buku   | char(4)   | NO   | PRI | NULL    |      |
| Judul       | char(20)  | NO   |     | NULL    |      |
| Pengarang   | char(15)  | NO   |     | NULL    |      |
| Jml_buku    | int       | NO   |     | NULL    |      |
| Kode_penerbit | char(2)   | NO   |     | NULL    |      |
| Harga_Sebulan | int       | NO   |     | NULL    |      |
+-----+-----+-----+-----+-----+
6 rows in set (0,00 sec)

mysql> 

```

Query:

```

1 CREATE TABLE Penerbit(
2 Kode_penerbit CHAR(2) NOT NULL PRIMARY KEY,
3 Nm_penerbit CHAR(15) NOT NULL
4 );

```

Hasil:

```

1 Query OK, 0 rows affected (0,04 sec)

```

Query:

```

1 DESC Penerbit;

```

Hasil:

```

1 +-----+-----+-----+-----+-----+
2 | Field      | Type      | Null | Key | Default | Extra |
3 +-----+-----+-----+-----+-----+
4 | Kode_penerbit | char(2)   | NO   | PRI | NULL    |      |

```

```

5 | Nm_penerbit | char(15) | NO | | NULL | |
6 +-----+-----+-----+-----+-----+-----+
7 2 rows in set (0,00 sec)

```

```

mysql> CREATE TABLE Penerbit(
    -> Kode_penerbit CHAR(2) NOT NULL PRIMARY KEY,
    -> Nm_penerbit CHAR(15) NOT NULL
    -> );
Query OK, 0 rows affected (0,04 sec)

mysql> DESC Penerbit;
+-----+-----+-----+-----+-----+-----+
| Field          | Type   | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Kode_penerbit  | char(2) | NO   | PRI | NULL    |       |
| Nm_penerbit    | char(15) | NO   |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0,00 sec)

mysql> 

```

Query:

```

1 CREATE TABLE Pinjam(
2 ID_Peminjaman INT NOT NULL PRIMARY KEY AUTO_INCREMENT,
3 Tgl_Pinjam DATETIME NOT NULL,
4 Mhs_no_induk CHAR(9) NOT NULL,
5 Buku_kode_buku CHAR(4) NOT NULL,
6 Tlg_hrs_kembali DATETIME NOT NULL,
7 Tgl_kembali DATETIME
8 );

```

Hasil:

```

1 Query OK, 0 rows affected (0,03 sec)

```

Query:

```

1 ALTER TABLE Pinjam RENAME COLUMN Tlg_hrs_kembali TO Tgl_hrs_kembali;

```

Hasil:

```

1 Query OK, 0 rows affected (0,04 sec)
2 Records: 0 Duplicates: 0 Warnings: 0

```

Query:

```

1 DESC Pinjam;

```

Hasil:

```

1 +-----+-----+-----+-----+-----+-----+
2 | Field          | Type   | Null | Key | Default | Extra |
3 +-----+-----+-----+-----+-----+-----+
4 | ID_Peminjaman  | int     | NO   | PRI | NULL    | auto_increment |
5 | Tgl_Pinjam      | datetime | NO   |     | NULL    |               |
6 | Mhs_no_induk    | char(9) | NO   |     | NULL    |               |

```

```

7 | Buku_kode_buku | char(4) | NO | | NULL |
8 | Tgl_hrs_kembali | datetime | NO | | NULL |
9 | Tgl_kembali | datetime | YES | | NULL |
10 +-----+-----+-----+-----+-----+
11 6 rows in set (0,00 sec)

```

```

mysql> CREATE TABLE Pinjam(
  -> ID_Peminjaman INT NOT NULL PRIMARY KEY AUTO_INCREMENT
T,
  -> Tgl_Pinjam DATETIME NOT NULL,
  -> Mhs_no_induk CHAR(9) NOT NULL,
  -> Buku_kode_buku CHAR(4) NOT NULL,
  -> Tgl_hrs_kembali DATETIME NOT NULL,
  -> Tgl_kembali DATETIME
  -> );
Query OK, 0 rows affected (0,03 sec)

mysql> ALTER TABLE Pinjam RENAME COLUMN Tgl_hrs_kembali TO Tgl_hrs_kembali;
Query OK, 0 rows affected (0,04 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> DESC Pinjam;
+-----+-----+-----+-----+-----+-----+
| Field          | Type      | Null | Key | Default | Extra           |
+-----+-----+-----+-----+-----+-----+
| ID_Peminjaman | int       | NO   | PRI | NULL    | auto_increment |
| Tgl_Pinjam     | datetime  | NO   |     | NULL    |                 |
| Mhs_no_induk   | char(9)   | NO   |     | NULL    |                 |
| Buku_kode_buku | char(4)   | NO   |     | NULL    |                 |
| Tgl_hrs_kembali | datetime  | NO   |     | NULL    |                 |
| Tgl_kembali    | datetime  | YES  |     | NULL    |                 |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0,00 sec)

mysql>

```

Query:

```

1 INSERT INTO Penerbit(Kode_penerbit, Nm_penerbit) VALUES
2 ("01", "Informatika"),
3 ("02", "Andi"),
4 ("03", "Gava Media"),
5 ("04", "Erlangga"),
6 ("05", "ITB"),
7 ("06", "Mizan");

```

Hasil:

```

1 Query OK, 6 rows affected (0,01 sec)
2 Records: 6 Duplicates: 0 Warnings: 0

```

Query:

```

1 UPDATE Penerbit SET Nm_penerbit = "Erlangga" WHERE Kode_penerbit = "04";

```

Hasil:

```

1 Query OK, 1 row affected (0,00 sec)
2 Rows matched: 1 Changed: 1 Warnings: 0


```

Query:

```
1 SELECT * FROM Penerbit;
```

Hasil:

```
1 +-----+-----+
2 | Kode_penerbit | Nm_penerbit |
3 +-----+-----+
4 | 01            | Informatika |
5 | 02            | Andi        |
6 | 03            | Gava Media  |
7 | 04            | Erlangga    |
8 | 05            | ITB         |
9 | 06            | Mizan       |
10 +-----+-----+
11 6 rows in set (0,00 sec)
```



The screenshot shows a MySQL terminal window with the following commands and output:

```
mysql> INSERT INTO Penerbit(Kode_penerbit, Nm_penerbit) VALUES
-> ("01", "Informatika"),
-> ("02", "Andi"),
-> ("03", "Gava Media"),
-> ("04", "Erlangga"),
-> ("05", "ITB"),
-> ("06", "Mizan");
Query OK, 6 rows affected (0,01 sec)
Records: 6  Duplicates: 0  Warnings: 0

mysql> UPDATE Penerbit SET Nm_penerbit = "Erlangga" WHERE Kode_penerbit = "04";
Query OK, 1 row affected (0,00 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> SELECT * FROM Penerbit;
+-----+-----+
| Kode_penerbit | Nm_penerbit |
+-----+-----+
| 01            | Informatika |
| 02            | Andi        |
| 03            | Gava Media  |
| 04            | Erlangga    |
| 05            | ITB         |
| 06            | Mizan       |
+-----+-----+
6 rows in set (0,00 sec)

mysql>
```

Query:

```
1 INSERT INTO Buku(Kode_buku, Judul, Pengarang, Jml_buku, Kode_penerbit, Harga_Sebulan) VALUES
2 ("0001", "Kalkulus E. 9 J. 1", "Purcell", 3, "04", 35000),
3 ("0002", "Matematika Diskrit", "Rinaldi Munir", 7, "02", 12500),
4 ("0003", "Teori Aplikasi C++", "R.H. Sianipar", 2, "01", 17500),
5 ("0004", "Delphi Accounting", "G.H. Away", 6, "01", 16000),
6 ("0005", "Delphi Firebird", "G.H. Away", 3, "01", 15000),
```

```

7 ("0006", "Perpustakaan PHP", "B. Nugroho", 5, "03", 11000),
8 ("0007", "Konsep Teknologi", "Purwasasmita", 10, "05", 4500),
9 ("0008", "Meditation", "M. Aurelius", 20, "06", 9000);

```

Hasil:

```

1 Query OK, 8 rows affected (0,01 sec)
2 Records: 8 Duplicates: 0 Warnings: 0

```

Query:

```

1 SELECT * FROM Buku;

```

Hasil:

```

1 | Kode_buku | Judul                | Pengarang    | Jml_buku | Kode_penerbit | Harga_Sebulan |
2 +-----+-----+-----+-----+-----+-----+-----+
3 | 0001      | Kalkulus E. 9 J. 1  | Purcell      | 3         | 04        |              | 35000 |
4 | 0002      | Matematika Diskrit  | Rinaldi Munir | 7         | 02        |              | 12500 |
5 | 0003      | Teori Aplikasi C++  | R.H. Sianipar | 2         | 01        |              | 17500 |
6 | 0004      | Delphi Accounting   | G.H. Away    | 6         | 01        |              | 16000 |
7 | 0005      | Delphi Firebird     | G.H. Away    | 3         | 01        |              | 15000 |
8 | 0006      | Perpustakaan PHP    | B. Nugroho   | 5         | 03        |              | 11000 |
9 | 0007      | Konsep Teknologi    | Purwasasmita | 10        | 05        |              | 4500  |
10 | 0008      | Meditation          | M. Aurelius  | 20        | 06        |              | 9000  |
11 +-----+-----+-----+-----+-----+-----+-----+
12 8 rows in set (0,00 sec)

```

```

mysql> INSERT INTO Buku(Kode_buku, Judul, Pengarang, Jml_buku, Kode_penerbit, Harga_Sebulan) V
ALUES
-> ("0001", "Kalkulus E. 9 J. 1", "Purcell", 3, "04", 35000),
-> ("0002", "Matematika Diskrit", "Rinaldi Munir", 7, "02", 12500),
-> ("0003", "Teori Aplikasi C++", "R.H. Sianipar", 2, "01", 17500),
-> ("0004", "Delphi Accounting", "G.H. Away", 6, "01", 16000),
-> ("0005", "Delphi Firebird", "G.H. Away", 3, "01", 15000),
-> ("0006", "Perpustakaan PHP", "B. Nugroho", 5, "03", 11000),
-> ("0007", "Konsep Teknologi", "Purwasasmita", 10, "05", 4500),
-> ("0008", "Meditation", "M. Aurelius", 20, "06", 9000);
Query OK, 8 rows affected (0,01 sec)
Records: 8 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM Buku;
+-----+-----+-----+-----+-----+-----+-----+
| Kode_buku | Judul                | Pengarang    | Jml_buku | Kode_penerbit | Harga_Sebulan |
+-----+-----+-----+-----+-----+-----+-----+
| 0001      | Kalkulus E. 9 J. 1  | Purcell      | 3         | 04        |              | 35000 |
| 0002      | Matematika Diskrit  | Rinaldi Munir | 7         | 02        |              | 12500 |
| 0003      | Teori Aplikasi C++  | R.H. Sianipar | 2         | 01        |              | 17500 |
| 0004      | Delphi Accounting   | G.H. Away    | 6         | 01        |              | 16000 |
| 0005      | Delphi Firebird     | G.H. Away    | 3         | 01        |              | 15000 |
| 0006      | Perpustakaan PHP    | B. Nugroho   | 5         | 03        |              | 11000 |
| 0007      | Konsep Teknologi    | Purwasasmita | 10        | 05        |              | 4500  |
| 0008      | Meditation          | M. Aurelius  | 20        | 06        |              | 9000  |
+-----+-----+-----+-----+-----+-----+-----+
8 rows in set (0,00 sec)

mysql> 

```

Query:

```
1 INSERT INTO Pinjam(Tgl_Pinjam, Mhs_no_induk, Buku_kode_buku, Tgl_hrs_kembali, Tgl_kembali)
  ↪ VALUES
2 ("2023-06-03", "123230158", "0008", "2023-07-03", "2023-07-01"),
3 ("2023-06-17", "123230121", "0004", "2023-07-17", "2023-07-15"),
4 ("2023-06-24", "123230127", "0001", "2023-07-24", "2023-07-23"),
5 ("2023-07-14", "123230214", "0006", "2023-08-13", "2023-08-10"),
6 ("2023-07-23", "123230134", "0002", "2023-08-22", "2023-08-20"),
7 ("2023-07-24", "123230128", "0007", "2023-08-23", "2023-08-21"),
8 ("2023-08-01", "123230001", "0005", "2023-08-31", "2023-08-30"),
9 ("2023-08-10", "123230067", "0003", "2023-09-09", "2023-09-08"),
10 ("2023-09-01", "123230147", "0007", "2023-10-01", "2023-09-24");
```

Hasil:

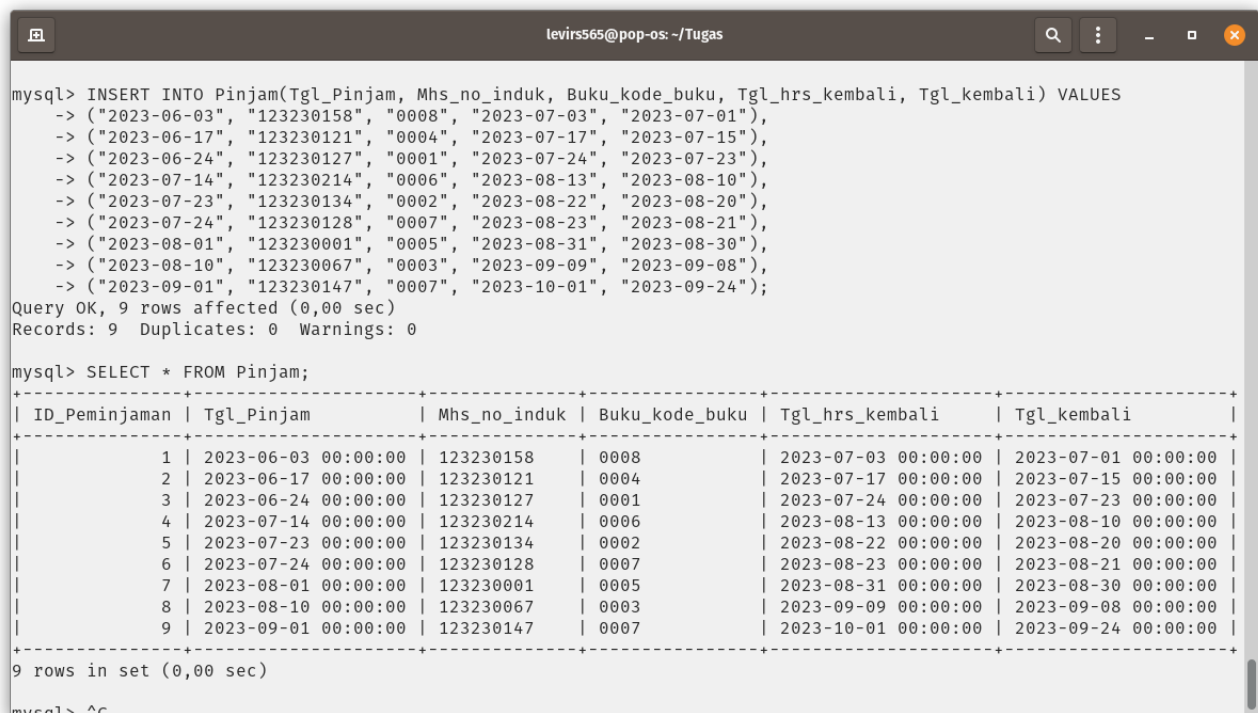
```
1 Query OK, 9 rows affected (0,00 sec)
2 Records: 9 Duplicates: 0 Warnings: 0
```

Query:

```
1 SELECT * FROM Pinjam;
```

Hasil:

```
1 +-----+-----+-----+-----+-----+-----+
2 | ID_Peminjaman | Tgl_Pinjam | Mhs_no_induk | Buku_kode_buku | Tgl_hrs_kembali | Tgl_kembali |
3 +-----+-----+-----+-----+-----+-----+
4 | 1 | 2023-06-03 00:00:00 | 123230158 | 0008 | 2023-07-03 00:00:00 | 2023-07-01 00:00:00 |
5 | 2 | 2023-06-17 00:00:00 | 123230121 | 0004 | 2023-07-17 00:00:00 | 2023-07-15 00:00:00 |
6 | 3 | 2023-06-24 00:00:00 | 123230127 | 0001 | 2023-07-24 00:00:00 | 2023-07-23 00:00:00 |
7 | 4 | 2023-07-14 00:00:00 | 123230214 | 0006 | 2023-08-13 00:00:00 | 2023-08-10 00:00:00 |
8 | 5 | 2023-07-23 00:00:00 | 123230134 | 0002 | 2023-08-22 00:00:00 | 2023-08-20 00:00:00 |
9 | 6 | 2023-07-24 00:00:00 | 123230128 | 0007 | 2023-08-23 00:00:00 | 2023-08-21 00:00:00 |
10 | 7 | 2023-08-01 00:00:00 | 123230001 | 0005 | 2023-08-31 00:00:00 | 2023-08-30 00:00:00 |
11 | 8 | 2023-08-10 00:00:00 | 123230067 | 0003 | 2023-09-09 00:00:00 | 2023-09-08 00:00:00 |
12 | 9 | 2023-09-01 00:00:00 | 123230147 | 0007 | 2023-10-01 00:00:00 | 2023-09-24 00:00:00 |
13 +-----+-----+-----+-----+-----+-----+
14 9 rows in set (0,00 sec)
```



The screenshot shows a MySQL terminal window with the following content:

```
levirs565@pop-os: ~/Tugas

mysql> INSERT INTO Pinjam(Tgl_Pinjam, Mhs_no_induk, Buku_kode_buku, Tgl_hrs_kembali, Tgl_kembali) VALUES
-> ("2023-06-03", "123230158", "0008", "2023-07-03", "2023-07-01"),
-> ("2023-06-17", "123230121", "0004", "2023-07-17", "2023-07-15"),
-> ("2023-06-24", "123230127", "0001", "2023-07-24", "2023-07-23"),
-> ("2023-07-14", "123230214", "0006", "2023-08-13", "2023-08-10"),
-> ("2023-07-23", "123230134", "0002", "2023-08-22", "2023-08-20"),
-> ("2023-07-24", "123230128", "0007", "2023-08-23", "2023-08-21"),
-> ("2023-08-01", "123230001", "0005", "2023-08-31", "2023-08-30"),
-> ("2023-08-10", "123230067", "0003", "2023-09-09", "2023-09-08"),
-> ("2023-09-01", "123230147", "0007", "2023-10-01", "2023-09-24");
Query OK, 9 rows affected (0,00 sec)
Records: 9 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM Pinjam;
+-----+-----+-----+-----+-----+-----+
| ID_Peminjaman | Tgl_Pinjam | Mhs_no_induk | Buku_kode_buku | Tgl_hrs_kembali | Tgl_kembali |
+-----+-----+-----+-----+-----+-----+
| 1 | 2023-06-03 00:00:00 | 123230158 | 0008 | 2023-07-03 00:00:00 | 2023-07-01 00:00:00 |
| 2 | 2023-06-17 00:00:00 | 123230121 | 0004 | 2023-07-17 00:00:00 | 2023-07-15 00:00:00 |
| 3 | 2023-06-24 00:00:00 | 123230127 | 0001 | 2023-07-24 00:00:00 | 2023-07-23 00:00:00 |
| 4 | 2023-07-14 00:00:00 | 123230214 | 0006 | 2023-08-13 00:00:00 | 2023-08-10 00:00:00 |
| 5 | 2023-07-23 00:00:00 | 123230134 | 0002 | 2023-08-22 00:00:00 | 2023-08-20 00:00:00 |
| 6 | 2023-07-24 00:00:00 | 123230128 | 0007 | 2023-08-23 00:00:00 | 2023-08-21 00:00:00 |
| 7 | 2023-08-01 00:00:00 | 123230001 | 0005 | 2023-08-31 00:00:00 | 2023-08-30 00:00:00 |
| 8 | 2023-08-10 00:00:00 | 123230067 | 0003 | 2023-09-09 00:00:00 | 2023-09-08 00:00:00 |
| 9 | 2023-09-01 00:00:00 | 123230147 | 0007 | 2023-10-01 00:00:00 | 2023-09-24 00:00:00 |
+-----+-----+-----+-----+-----+-----+
9 rows in set (0,00 sec)

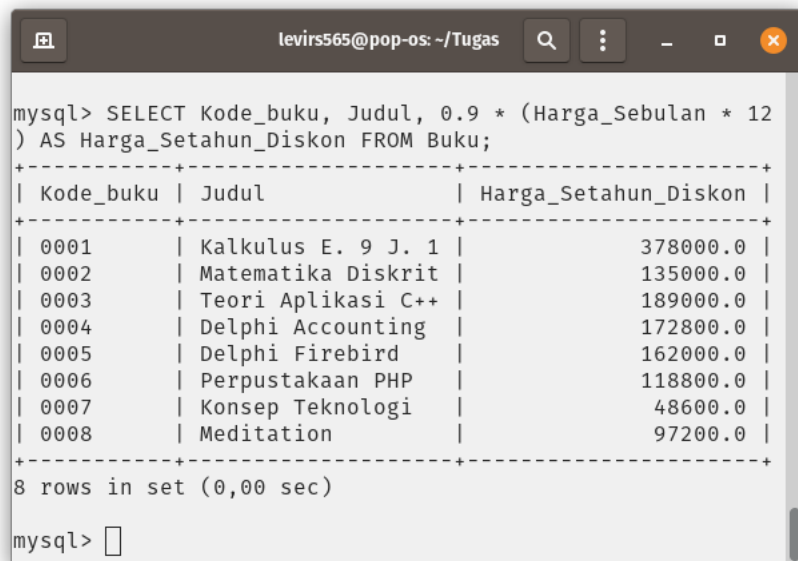
mysql> ^C
```

Query:

```
1 SELECT Kode_buku, Judul, 0.9 * (Harga_Sebulan * 12) AS Harga_Setahun_Diskon FROM Buku;
```

Hasil:

```
1 +-----+-----+-----+
2 | Kode_buku | Judul          | Harga_Setahun_Diskon |
3 +-----+-----+-----+
4 | 0001      | Kalkulus E. 9 J. 1 | 378000.0 |
5 | 0002      | Matematika Diskrit | 135000.0 |
6 | 0003      | Teori Aplikasi C++ | 189000.0 |
7 | 0004      | Delphi Accounting  | 172800.0 |
8 | 0005      | Delphi Firebird    | 162000.0 |
9 | 0006      | Perpustakaan PHP   | 118800.0 |
10 | 0007      | Konsep Teknologi   | 48600.0 |
11 | 0008      | Meditation         | 97200.0 |
12 +-----+-----+-----+
13 8 rows in set (0,00 sec)
```



The screenshot shows a terminal window titled "levirs565@pop-os: ~/Tugas". The terminal displays the following SQL query and its output:

```
mysql> SELECT Kode_buku, Judul, 0.9 * (Harga_Sebulan * 12)
AS Harga_Setahun_Diskon FROM Buku;
```

Kode_buku	Judul	Harga_Setahun_Diskon
0001	Kalkulus E. 9 J. 1	378000.0
0002	Matematika Diskrit	135000.0
0003	Teori Aplikasi C++	189000.0
0004	Delphi Accounting	172800.0
0005	Delphi Firebird	162000.0
0006	Perpustakaan PHP	118800.0
0007	Konsep Teknologi	48600.0
0008	Meditation	97200.0

8 rows in set (0,00 sec)

```
mysql>
```