Nama : Irfananda Irsyad A
NIM : L200180096
Kelas : D

Praktikum Basis Data Modul 5

Latihan

Nasabah

Cabang Bank

Rekening

```
MariaDB [perbankan]> insert into rekening(no_rekening, kode_cabangFK, pin, saldo) values (101, 'BRUS', '1111', 500000), (102, 'BRUS', '2222', 350000),
    -> (103, 'BRUS', '3333', 750000), (104, 'BRUM', '4444', 900000), (105, 'BRUM', '5555', 2000000), (106, 'BRUS', '6666', 3000000),
    -> (107, 'BRUS', '7777', 1000000), (108, 'BRUB', '0000', 5000000), (109, 'BRUB', '9999', 0), (110, 'BRUY', '1234', 550000),
    -> (111, 'BRUK', '4321', 150000), (112, 'BRUK', '0123', 300000), (113, 'BRUY', '8888', 255000);
ERROR 1062 (23000): Duplicate entry '101' for key 'PRIMARY'
MariaDB [perbankan]> select * from rekening;
+-------------+---------------+------+---------+
| no_rekening | kode_cabangFK | pin  | saldo   |
+-------------+---------------+------+---------+
|         101 | BRUS          | 1111 |  500000 |
|         102 | BRUS          | 2222 |  350000 |
|         103 | BRUS          | 3333 |  750000 |
|         104 | BRUM          | 4444 |  900000 |
|         105 | BRUW          | 5555 |  200000 |
|         106 | BRUS          | 6666 |  300000 |
|         107 | BRUS          | 7777 |  100000 |
|         108 | BRUB          | 0000 |  500000 |
|         109 | BRUS          | 9999 |       0 |
|         110 | BRUY          | 1234 |  550000 |
|         111 | BRUK          | 4321 |  150000 |
|         112 | BRUK          | 0123 |  300000 |
|         113 | BRUY          | 8888 |  255000 |
+-------------+---------------+------+---------+
13 rows in set (0.001 sec)

MariaDB [perbankan]>
```

Nasabah has Rekening

```
MariaDB [perbankan]> insert into nasabah_has_rekening(id_nasabahFK, no_rekeningFK) values (1, 104), (2, 103), (3, 105), (3, 106),
    -> (4, 101), (4, 107), (5, 102), (5, 107), (6, 109), (7, 109), (8, 111), (9, 110), (10, 113), (8, 112), (10, 108);
ERROR 1062 (23000): Duplicate entry '1-104' for key 'PRIMARY'
MariaDB [perbankan]> select * from nasabah_has_rekening;
+--------------+---------------+
| id_nasabahFK | no_rekeningFK |
+--------------+---------------+
|            1 |           104 |
|            2 |           103 |
|            3 |           105 |
|            3 |           106 |
|            4 |           101 |
|            4 |           107 |
|            5 |           102 |
|            5 |           107 |
|            6 |           109 |
|            7 |           111 |
|            8 |           112 |
|            9 |           110 |
|           10 |           108 |
|           10 |           113 |
+--------------+---------------+
14 rows in set (0.000 sec)

MariaDB [perbankan]>
```

Transaksi

```
MariaDB [perbankan]> insert into transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) values
    -> (NULL, 105, 3, 'debit', DEFAULT, 50000), (NULL, 103, 2, 'debit', DEFAULT, 40000), (NULL, 101, 4, 'kredit', DEFAULT, 20000),
    -> (NULL, 106, 3, 'debit', DEFAULT, 50000), (NULL, 107, 5, 'kredit', DEFAULT, 30000), (NULL, 101, 1, 'kredit', DEFAULT, 20000),
    -> (NULL, 110, 9, 'kredit', DEFAULT, 150000), (NULL, 102, 5, 'debit', DEFAULT, 20000), (NULL, 105, 3, 'kredit', DEFAULT, 50000),(NULL, 107, 4, 'debit', DEFAULT, 100
000), (NULL, 103, 2, 'debit', DEFAULT, 100000), (NULL, 104, 1, 'debit', DEFAULT, 50000),
    -> (NULL, 107, 4, 'kredit', DEFAULT, 200000), (NULL, 105, 3, 'debit', DEFAULT, 40000), (NULL, 104, 1, 'kredit', DEFAULT, 100000),
    -> (NULL, 101, 4, 'kredit', DEFAULT, 20000), (NULL, 103, 2, 'debit', DEFAULT, 50000), (NULL, 102, 5, 'debit', DEFAULT, 50000),
    -> (NULL, 108, 10, 'debit', DEFAULT, 100000), (NULL, 106, 3, 'kredit', DEFAULT, 50000), (NULL, 103, 2, 'kredit', DEFAULT, 200000),
    -> (NULL, 105, 3, 'kredit', DEFAULT, 100000), (NULL, 102, 5, 'debit', DEFAULT, 20000), (NULL, 104, 1, 'debit', DEFAULT, 50000),
    -> (NULL, 103, 2, 'debit', DEFAULT, 40000), (NULL, 101, 4, 'debit', DEFAULT, 50000), (NULL, 103, 2, 'kredit', DEFAULT, 100000),
    -> (NULL, 102, 5, 'kredit', DEFAULT, 200000), (NULL, 109, 7, 'debit', DEFAULT, 100000), (NULL, 110, 9, 'debit', DEFAULT, 20000);
Query OK, 30 rows affected (1.243 sec)
Records: 30  Duplicates: 0  Warnings: 0

MariaDB [perbankan]> select * from transaksi;
+--------------+--------------+--------------+-----------------+---------------------+---------+
| no_transaksi | id_nasabahFK | no_rekeningFK | jenis_transaksi | tanggal             | jumlah  |
+--------------+--------------+--------------+-----------------+---------------------+---------+
|           32 |            3 |          105 | debit           | 2009-11-10 00:00:00 |   50000 |
|           33 |            2 |          103 | debit           | 2009-11-10 00:00:00 |   40000 |
|           34 |            4 |          101 | kredit          | 2009-11-12 00:00:00 |   20000 |
|           35 |            3 |          106 | debit           | 2009-11-13 00:00:00 |   50000 |
|           36 |            5 |          107 | kredit          | 2009-11-13 00:00:00 |   30000 |
|           37 |            1 |          104 | kredit          | 2009-11-15 00:00:00 |  200000 |
|           38 |            9 |          110 | kredit          | 2009-11-15 00:00:00 |  150000 |
|           39 |            5 |          102 | debit           | 2009-11-16 00:00:00 |   20000 |
|           40 |            3 |          105 | kredit          | 2009-11-18 00:00:00 |   50000 |
|           41 |            4 |          107 | debit           | 2009-11-19 00:00:00 |  100000 |
|           42 |            2 |          103 | debit           | 2009-11-19 00:00:00 |  100000 |
|           43 |            1 |          104 | debit           | 2009-11-19 00:00:00 |   50000 |
|           44 |            4 |          107 | kredit          | 2009-11-20 00:00:00 |  200000 |
|           45 |            3 |          105 | debit           | 2009-11-21 00:00:00 |   40000 |
|           46 |            1 |          104 | kredit          | 2009-11-22 00:00:00 |  100000 |
|           47 |            4 |          101 | kredit          | 2009-11-22 00:00:00 |   20000 |
|           48 |            2 |          103 | debit           | 2009-11-22 00:00:00 |   50000 |
|           49 |            5 |          102 | debit           | 2009-11-25 00:00:00 |   50000 |
|           50 |           10 |          108 | debit           | 2009-11-26 00:00:00 |  100000 |
|           51 |            3 |          106 | kredit          | 2009-11-27 00:00:00 |   50000 |
|           52 |            2 |          103 | kredit          | 2009-11-28 00:00:00 |  200000 |
|           53 |            3 |          105 | kredit          | 2009-11-28 00:00:00 |  100000 |
|           54 |            5 |          102 | debit           | 2009-11-30 00:00:00 |   20000 |
|           55 |            1 |          104 | debit           | 2009-12-01 00:00:00 |   50000 |
|           56 |            2 |          103 | debit           | 2009-12-02 00:00:00 |   40000 |
|           57 |            4 |          101 | debit           | 2009-12-04 00:00:00 |   50000 |
|           58 |            2 |          103 | kredit          | 2009-12-05 00:00:00 |  100000 |
|           59 |            5 |          102 | kredit          | 2009-12-05 00:00:00 |  200000 |
|           60 |            7 |          109 | debit           | 2009-12-05 00:00:00 |  100000 |
|           61 |            9 |          110 | debit           | 2009-12-06 00:00:00 |   20000 |
|           62 |           19 |          110 | kredit          | 2017-05-24 00:00:00 |   50000 |
|           68 |           10 |          111 | kredit          | 2017-05-24 00:00:00 |  250000 |
|           69 |            6 |          106 | debit           | 2017-05-24 00:00:00 |  125000 |
|           70 |            7 |          103 | kredit          | 2017-05-24 00:00:00 |  130000 |
|           72 |            8 |          101 | kredit          | 2017-05-24 00:00:00 |  357000 |
|           73 |            2 |          110 | debit           | 2017-05-24 00:00:00 |  547000 |
|           76 |            5 |          110 | debit           | 2017-05-24 00:00:00 |   26000 |
|           77 |           19 |          110 | kredit          | 2017-05-24 00:00:00 |   50000 |
|           78 |           19 |          110 | kredit          | 2017-05-24 00:00:00 |   50000 |
|           79 |           12 |          101 | debit           | 2017-05-26 00:00:00 | 9700000 |
|           80 |           12 |          101 | debit           | 2017-05-26 00:00:00 | 8500000 |
|           81 |            1 |          111 | kredit          | 2017-05-26 00:00:00 |  520000 |
|           85 |           13 |          109 | debit           | 2017-05-26 00:00:00 |  700000 |
|           86 |           19 |          110 | kredit          | 2017-05-30 00:00:00 |   50000 |
|           87 |           19 |          110 | kredit          | 2017-06-06 00:00:00 |   50000 |
|           88 |           19 |          110 | kredit          | 2017-06-06 00:00:00 |   50000 |
|           89 |           13 |          109 | debit           | 2017-06-08 00:00:00 |  700000 |
|           90 |           13 |          109 | debit           | 2017-06-08 00:00:00 |  700000 |
|           91 |           13 |          109 | debit           | 2017-06-08 00:00:00 |  700000 |
|           92 |            5 |          103 | debit           | 2017-06-14 00:00:00 |  263000 |
|           93 |            3 |          105 | debit           | 2020-03-24 12:34:20 |   50000 |
|           94 |            2 |          103 | debit           | 2020-03-24 12:34:20 |   40000 |
|           95 |            4 |          101 | kredit          | 2020-03-24 12:34:20 |   20000 |
|           96 |            3 |          106 | debit           | 2020-03-24 12:34:20 |   50000 |
|           97 |            5 |          107 | kredit          | 2020-03-24 12:34:20 |   30000 |
|           98 |            1 |          101 | kredit          | 2020-03-24 12:34:20 |   20000 |
|           99 |            9 |          110 | kredit          | 2020-03-24 12:34:20 |  150000 |
|          100 |            5 |          102 | debit           | 2020-03-24 12:34:20 |   20000 |
|          101 |            3 |          105 | kredit          | 2020-03-24 12:34:20 |   50000 |
|          102 |            4 |          107 | debit           | 2020-03-24 12:34:20 |  100000 |
|          103 |            2 |          103 | debit           | 2020-03-24 12:34:20 |  100000 |
|          104 |            1 |          104 | debit           | 2020-03-24 12:34:20 |   50000 |
|          105 |            4 |          107 | kredit          | 2020-03-24 12:34:20 |  200000 |
|          106 |            3 |          105 | debit           | 2020-03-24 12:34:20 |   40000 |
|          107 |            1 |          104 | kredit          | 2020-03-24 12:34:20 |  100000 |
|          108 |            4 |          101 | kredit          | 2020-03-24 12:34:20 |   20000 |
|          109 |            2 |          103 | debit           | 2020-03-24 12:34:20 |   50000 |
|          110 |            5 |          102 | debit           | 2020-03-24 12:34:20 |   50000 |
|          111 |           10 |          108 | debit           | 2020-03-24 12:34:20 |  100000 |
|          112 |            3 |          106 | kredit          | 2020-03-24 12:34:20 |   50000 |
|          113 |            2 |          103 | kredit          | 2020-03-24 12:34:20 |  200000 |
|          114 |            3 |          105 | kredit          | 2020-03-24 12:34:20 |  100000 |
|          115 |            5 |          102 | debit           | 2020-03-24 12:34:20 |   20000 |
|          116 |            1 |          104 | debit           | 2020-03-24 12:34:20 |   50000 |
|          117 |            2 |          103 | debit           | 2020-03-24 12:34:20 |   40000 |
|          118 |            4 |          101 | debit           | 2020-03-24 12:34:20 |   50000 |
|          119 |            2 |          103 | kredit          | 2020-03-24 12:34:20 |  100000 |
|          120 |            5 |          102 | kredit          | 2020-03-24 12:34:20 |  200000 |
|          121 |            7 |          109 | debit           | 2020-03-24 12:34:20 |  100000 |
|          122 |            9 |          110 | debit           | 2020-03-24 12:34:20 |   20000 |
+--------------+--------------+--------------+-----------------+---------------------+---------+
80 rows in set (0.405 sec)
```

Update

a. Nasabah dengan nama "Indri Hapsari" pindah alamat ke "Jl Slamet Riyadi 34"

```
MariaDB [perbankan]> select * from nasabah;
+-----------+------------------+------------------------+
| id_nasabah | nama_nasabah    | alamat_nasabah         |
+-----------+------------------+------------------------+
|         1 | Sutopo          | Jl.Jendral Sudirman 12 |
|         2 | Maryati         | Jl.MT.Haryono 31       |
|         3 | Suparman        | Jl.Hsanusin B1         |
|         4 | Kartika Padmasari | Jl.Manggis 15         |
|         5 | Budi Eko Prayogo | Jl.Kantil 30          |
|         6 | Satria Eka Jaya | Jl.Slamet Riyadi 45    |
|         7 | Indri Hapsari   | Jl.Stoyo 5             |
|         8 | Sari Nurti      | Jl.Pangandaran 11      |
|         9 | Canka Lokananta | Jl. Tidar 86           |
|        10 | Budi Martono    | Jl.Merak 22            |
+-----------+------------------+------------------------+
10 rows in set (0.093 sec)

MariaDB [perbankan]> update nasabah set alamat_nasabah = 'Jl. Slamet Riyadi 34'
    -> where nama_nasabah = 'Indri Hapsari';
Query OK, 1 row affected (0.580 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [perbankan]> select * from nasabah;
+-----------+------------------+------------------------+
| id_nasabah | nama_nasabah    | alamat_nasabah         |
+-----------+------------------+------------------------+
|         1 | Sutopo          | Jl.Jendral Sudirman 12 |
|         2 | Maryati         | Jl.MT.Haryono 31       |
|         3 | Suparman        | Jl.Hsanusin B1         |
|         4 | Kartika Padmasari | Jl.Manggis 15         |
|         5 | Budi Eko Prayogo | Jl.Kantil 30          |
|         6 | Satria Eka Jaya | Jl.Slamet Riyadi 45    |
|         7 | Indri Hapsari   | Jl. Slamet Riyadi 34   |
|         8 | Sari Nurti      | Jl.Pangandaran 11      |
|         9 | Canka Lokananta | Jl. Tidar 86           |
|        10 | Budi Martono    | Jl.Merak 22            |
+-----------+------------------+------------------------+
10 rows in set (0.000 sec)
```

b. Cabang dengan kode "BRUW" pindah ke alamat "Jl.A.Yani 23"

```
MariaDB [perbankan]> select * from cabang_bank;
+-------------+------------------------+----------------------+
| kode_cabang | nama_cabang            | alamat_cabang        |
+-------------+------------------------+----------------------+
| BRUB        | Bank Rut Unit Boyolali | jl. Ahmad yani 45    |
| BRUK        | Bank Rut Unit Klaten   | jl. Suparman 23      |
| BRUM        | Bank Rut Unit Magelang | jl. P.Tendean 63     |
| BRUS        | Bank Rut Unit Surakarta | jl. Slamet Riyadi 18 |
| BRUW        | Bank Rut Unit Wonogiri | jl. Untung Sutropati 12 |
| BRUY        | Bank Rut Unit Yogyakarta | jl. Anggrek 21      |
+-------------+------------------------+----------------------+
6 rows in set (0.262 sec)

MariaDB [perbankan]> update cabang_bank set alamat_cabang = 'Jl.A. Yani 23'
    -> where kode_cabang = 'BRUW';
Query OK, 1 row affected (0.242 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [perbankan]> select * from cabang_bank;
+-------------+------------------------+----------------------+
| kode_cabang | nama_cabang            | alamat_cabang        |
+-------------+------------------------+----------------------+
| BRUB        | Bank Rut Unit Boyolali | jl. Ahmad yani 45    |
| BRUK        | Bank Rut Unit Klaten   | jl. Suparman 23      |
| BRUM        | Bank Rut Unit Magelang | jl. P.Tendean 63     |
| BRUS        | Bank Rut Unit Surakarta | jl. Slamet Riyadi 18 |
| BRUW        | Bank Rut Unit Wonogiri | Jl.A. Yani 23        |
| BRUY        | Bank Rut Unit Yogyakarta | jl. Anggrek 21      |
+-------------+------------------------+----------------------+
6 rows in set (0.000 sec)
```

Penghapusan

a. Nasabah dengan id ''7" menutup rekening

```
MariaDB [perbankan]> select * from nasabah;
+-----------+------------------+------------------------+
| id_nasabah | nama_nasabah     | alamat_nasabah         |
+-----------+------------------+------------------------+
|         1 | Sutopo           | Jl.Jendral Sudirman 12 |
|         2 | Maryati          | Jl.MT.Haryono 31       |
|         3 | Suparman         | Jl.Hsanusin B1         |
|         4 | Kartika Padmasari | Jl.Manggis 15         |
|         5 | Budi Eko Prayogo | Jl.Kantil 30           |
|         6 | Satria Eka Jaya  | Jl.Slamet Riyadi 45    |
|         7 | Indri Hapsari    | Jl. Slamet Riyadi 34   |
|         8 | Sari Nurti       | Jl.Pangandaran 11      |
|         9 | Canka Lokananta  | Jl. Tidar 86           |
|        10 | Budi Martono     | Jl.Merak 22            |
+-----------+------------------+------------------------+
10 rows in set (0.001 sec)

MariaDB [perbankan]> delete from nasabah
    -> where id_nasabah = 7;
Query OK, 1 row affected (0.107 sec)

MariaDB [perbankan]> select * from nasabah;
+-----------+------------------+------------------------+
| id_nasabah | nama_nasabah     | alamat_nasabah         |
+-----------+------------------+------------------------+
|         1 | Sutopo           | Jl.Jendral Sudirman 12 |
|         2 | Maryati          | Jl.MT.Haryono 31       |
|         3 | Suparman         | Jl.Hsanusin B1         |
|         4 | Kartika Padmasari | Jl.Manggis 15         |
|         5 | Budi Eko Prayogo | Jl.Kantil 30           |
|         6 | Satria Eka Jaya  | Jl.Slamet Riyadi 45    |
|         8 | Sari Nurti       | Jl.Pangandaran 11      |
|         9 | Canka Lokananta  | Jl. Tidar 86           |
|        10 | Budi Martono     | Jl.Merak 22            |
+-----------+------------------+------------------------+
9 rows in set (0.000 sec)
```

b. Cabang dengan nama_cabang "Bank Rut Unit Magelang" menutup kantornya

```
MariaDB [perbankan]> delete from cabang_bank
    -> where nama_cabang = 'Bank Rut Unit Magelang';
Query OK, 1 row affected (0.176 sec)

MariaDB [perbankan]> select * from cabang_bank;
+-------------+------------------------+----------------------+
| kode_cabang | nama_cabang            | alamat_cabang        |
+-------------+------------------------+----------------------+
| BRUB        | Bank Rut Unit Boyolali | jl. Ahmad yani 45    |
| BRUK        | Bank Rut Unit Klaten   | jl. Suparman 23      |
| BRUS        | Bank Rut Unit Surakarta | jl. Slamet Riyadi 18 |
| BRUW        | Bank Rut Unit Wonogiri | Jl.A. Yani 23        |
| BRUY        | Bank Rut Unit Yogyakarta | jl. Anggrek 21     |
+-------------+------------------------+----------------------+
5 rows in set (0.000 sec)

MariaDB [perbankan]>
```

Tugas

Tabel Nasabah

```
MariaDB [(none)]> use perbankan;
Database changed
MariaDB [perbankan]> insert into nasabah(id_nasabah, nama_nasabah, alamat_nasabah) values
    -> (11, 'Irfananda', 'Jl. A 69'),
    -> (12, 'Irsyad', 'Jl. B 69'),
    -> (13, 'Ainun', 'Jl. C 69'),
    -> (14, 'Nauval', 'Jl. D 69'),
    -> (15, 'Nopal', 'Jl. E 69'),
    -> (16, 'Nopal Ganteng', 'Jl. F 96'),
    -> (17, 'Paryo', 'Jl. G 96'),
    -> (18, 'Maman', 'Jl. H 96'),
    -> (19, 'Moden', 'Jl. I 96'),
    -> (20, 'Agos', 'Jl. J 96');
Query OK, 10 rows affected (0.799 sec)
Records: 10  Duplicates: 0  Warnings: 0

MariaDB [perbankan]> select * from nasabah;
+-----------+------------------+------------------------+
| id_nasabah | nama_nasabah    | alamat_nasabah         |
+-----------+------------------+------------------------+
|         1 | Sutopo           | Jl.Jendral Sudirman 12 |
|         2 | Maryati          | Jl.MT.Haryono 31       |
|         3 | Suparman         | Jl.Hsanusin B1         |
|         4 | Kartika Padmasari| Jl.Manggis 15          |
|         5 | Budi Eko Prayogo | Jl.Kantil 30           |
|         6 | Satria Eka Jaya  | Jl.Slamet Riyadi 45    |
|         8 | Sari Nurti       | Jl.Pangandaran 11      |
|         9 | Canka Lokananta  | Jl. Tidar 86           |
|        10 | Budi Martono     | Jl.Merak 22            |
|        11 | Irfananda        | Jl. A 69               |
|        12 | Irsyad           | Jl. B 69               |
|        13 | Ainun            | Jl. C 69               |
|        14 | Nauval           | Jl. D 69               |
|        15 | Nopal            | Jl. E 69               |
|        16 | Nopal Ganteng    | Jl. F 96               |
|        17 | Paryo            | Jl. G 96               |
|        18 | Maman            | Jl. H 96               |
|        19 | Moden            | Jl. I 96               |
|        20 | Agos             | Jl. J 96               |
+-----------+------------------+------------------------+
19 rows in set (0.584 sec)
```

Tabel Cabang_bank

```
MariaDB [perbankan]> insert into cabang_bank(kode_cabang, nama_cabang, alamat_cabang) values
    -> ('BRUP', 'Bank Rut Unit Purwokerto', 'Jl. Sendiri 1' ),
    -> ('BRUT', 'Bank Rut Unit Tegal', 'Jl. Ahhhh 12' ),
    -> ('BRUG', 'Bank Rut Unit Gombong', 'Jl. Asek 32' ),
    -> ('BRUA', 'Bank Rut Unit Angkasa', 'Jl. Pluto 32' ),
    -> ('BRUC', 'Bank Rut Unit Curug', 'Jl. Uhhhh 42' ),
    -> ('BRUX', 'Bank Rut Unit Xixixi', 'Jl. wkwkwk 62' ),
    -> ('BRUZ', 'Bank Rut Unit Zimbabwe', 'Jl. xxxxxxx 72' ),
    -> ('BRUQ', 'Bank Rut Unit Qiqiqi', 'Jl. Crot 92' ),
    -> ('BRUI', 'Bank Rut Unit Indonesia', 'Jl. in aja dulu 02' ),
    -> ('BRUR', 'Bank Rut Unit RajaAmpat', 'Jl. Jalan 01' );
Query OK, 10 rows affected (0.433 sec)
Records: 10  Duplicates: 0  Warnings: 0

MariaDB [perbankan]> select * from cabang_bank;
+-------------+--------------------------+---------------------+
| kode_cabang | nama_cabang              | alamat_cabang       |
+-------------+--------------------------+---------------------+
| BRUA        | Bank Rut Unit Angkasa    | Jl. Pluto 32        |
| BRUB        | Bank Rut Unit Boyolali   | jl. Ahmad yani 45   |
| BRUC        | Bank Rut Unit Curug      | Jl. Uhhhh 42        |
| BRUG        | Bank Rut Unit Gombong    | Jl. Asek 32         |
| BRUI        | Bank Rut Unit Indonesia  | Jl. in aja dulu 02  |
| BRUK        | Bank Rut Unit Klaten     | jl. Suparman 23     |
| BRUP        | Bank Rut Unit Purwokerto | Jl. Sendiri 1       |
| BRUQ        | Bank Rut Unit Qiqiqi     | Jl. Crot 92         |
| BRUR        | Bank Rut Unit RajaAmpat  | Jl. Jalan 01        |
| BRUS        | Bank Rut Unit Surakarta  | jl. Slamet Riyadi 18|
| BRUT        | Bank Rut Unit Tegal      | Jl. Ahhhh 12        |
| BRUW        | Bank Rut Unit Wonogiri   | Jl.A. Yani 23       |
| BRUX        | Bank Rut Unit Xixixi     | Jl. wkwkwk 62       |
| BRUY        | Bank Rut Unit Yogyakarta | jl. Anggrek 21      |
| BRUZ        | Bank Rut Unit Zimbabwe   | Jl. xxxxxxx 72      |
+-------------+--------------------------+---------------------+
15 rows in set (0.155 sec)
```

Tabel Rekening

```
MariaDB [perbankan]> insert into rekening(no_rekening, kode_cabangFK, pin, saldo) values
    -> (114, 'BRUZ', '1919', 200000),
    -> (115, 'BRUX', '1819', 500000),
    -> (116, 'BRUR', '1719', 100000),
    -> (117, 'BRUQ', '1619', 300000),
    -> (118, 'BRUP', '1519', 900000),
    -> (119, 'BRUT', '1419', 800000),
    -> (120, 'BRUA', '1319', 700000),
    -> (121, 'BRUC', '1219', 600000),
    -> (122, 'BRUG', '1119', 400000),
    -> (123, 'BRUI', '1019', 100000);
Query OK, 10 rows affected (0.466 sec)
Records: 10  Duplicates: 0  Warnings: 0

MariaDB [perbankan]> select * from rekening;
+------------+--------------+------+--------+
| no_rekening | kode_cabangFK | pin  | saldo  |
+------------+--------------+------+--------+
|        101 | BRUS         | 1111 | 500000 |
|        102 | BRUS         | 2222 | 350000 |
|        103 | BRUS         | 3333 | 750000 |
|        104 | BRUM         | 4444 | 900000 |
|        105 | BRUW         | 5555 | 200000 |
|        106 | BRUS         | 6666 | 300000 |
|        107 | BRUS         | 7777 | 100000 |
|        108 | BRUB         | 0000 | 500000 |
|        109 | BRUS         | 9999 |      0 |
|        110 | BRUY         | 1234 | 550000 |
|        111 | BRUK         | 4321 | 150000 |
|        112 | BRUK         | 0123 | 300000 |
|        113 | BRUY         | 8888 | 255000 |
|        114 | BRUZ         | 1919 | 200000 |
|        115 | BRUX         | 1819 | 500000 |
|        116 | BRUR         | 1719 | 100000 |
|        117 | BRUQ         | 1619 | 300000 |
|        118 | BRUP         | 1519 | 900000 |
|        119 | BRUT         | 1419 | 800000 |
|        120 | BRUA         | 1319 | 700000 |
|        121 | BRUC         | 1219 | 600000 |
|        122 | BRUG         | 1119 | 400000 |
|        123 | BRUI         | 1019 | 100000 |
+------------+--------------+------+--------+
23 rows in set (0.028 sec)
```

Tabel nasabah_has_rekening

```
MariaDB [perbankan]> insert into nasabah_has_rekening(id_nasabahFK, no_rekeningFK) values
    -> (11, 104),(12, 103),
    -> (12, 105),(13, 106),
    -> (14, 101),(14, 107),
    -> (15, 102),(15, 107),
    -> (16, 109),(17, 109);
Query OK, 10 rows affected (0.203 sec)
Records: 10  Duplicates: 0  Warnings: 0

MariaDB [perbankan]> select * from nasabah_has_rekening;
+--------------+---------------+
| id_nasabahFK | no_rekeningFK |
+--------------+---------------+
|            1 |           104 |
|            2 |           103 |
|            3 |           105 |
|            3 |           106 |
|            4 |           101 |
|            4 |           107 |
|            5 |           102 |
|            5 |           107 |
|            6 |           109 |
|            7 |           111 |
|            8 |           112 |
|            9 |           110 |
|           10 |           108 |
|           10 |           113 |
|           11 |           104 |
|           12 |           103 |
|           12 |           105 |
|           13 |           106 |
|           14 |           101 |
|           14 |           107 |
|           15 |           102 |
|           15 |           107 |
|           16 |           109 |
|           17 |           109 |
+--------------+---------------+
24 rows in set (0.000 sec)
```

Tabel Transaksi

```
MariaDB [perbankan]> insert into transaksi(no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) values
    -> (NULL, 105, 11, 'debit', DEFAULT, 40000),
    -> (NULL, 104, 11, 'kredit', DEFAULT, 100000),
    -> (NULL, 101, 14, 'kredit', DEFAULT, 20000),
    -> (NULL, 103, 12, 'debit', DEFAULT, 50000),
    -> (NULL, 102, 15, 'debit', DEFAULT, 50000),
    -> (NULL, 108, 20, 'debit', DEFAULT, 100000),
    -> (NULL, 106, 23, 'kredit', DEFAULT, 50000),
    -> (NULL, 103, 12, 'kredit', DEFAULT, 200000),
    -> (NULL, 105, 13, 'kredit', DEFAULT, 100000),
    -> (NULL, 102, 15, 'debit', DEFAULT, 20000),
    -> (NULL, 104, 11, 'debit', DEFAULT, 50000),
    -> (NULL, 103, 12, 'debit', DEFAULT, 40000),
    -> (NULL, 101, 14, 'kredit', DEFAULT, 50000),
    -> (NULL, 103, 12, 'kredit', DEFAULT, 100000),
    -> (NULL, 102, 15, 'kredit', DEFAULT, 200000),
    -> (NULL, 104, 11, 'debit', DEFAULT, 50000),
    -> (NULL, 103, 12, 'debit', DEFAULT, 40000),
    -> (NULL, 101, 14, 'debit', DEFAULT, 50000),
    -> (NULL, 109, 17, 'debit', DEFAULT, 100000),
    -> (NULL, 110, 19, 'debit', DEFAULT, 20000);
Query OK, 20 rows affected (0.580 sec)
Records: 20  Duplicates: 0  Warnings: 0

MariaDB [perbankan]> select * from transaksi;
+--------------+--------------+--------------+-----------------+---------------------+---------+
| no_transaksi | id_nasabahFK | no_rekeningFK | jenis_transaksi | tanggal             | jumlah  |
+--------------+--------------+--------------+-----------------+---------------------+---------+
|           32 |            3 |          105 | debit           | 2009-11-10 00:00:00 |   50000 |
|           33 |            2 |          103 | debit           | 2009-11-10 00:00:00 |   40000 |
|           34 |            4 |          101 | kredit          | 2009-11-12 00:00:00 |   20000 |
|           35 |            3 |          106 | debit           | 2009-11-13 00:00:00 |   50000 |
|           36 |            5 |          107 | kredit          | 2009-11-13 00:00:00 |   30000 |
|           37 |            1 |          104 | kredit          | 2009-11-15 00:00:00 |  200000 |
|           38 |            9 |          110 | kredit          | 2009-11-15 00:00:00 |  150000 |
|           39 |            5 |          102 | debit           | 2009-11-16 00:00:00 |   20000 |
|           40 |            3 |          105 | kredit          | 2009-11-18 00:00:00 |   50000 |
|           41 |            4 |          107 | debit           | 2009-11-19 00:00:00 |  100000 |
|           42 |            2 |          103 | debit           | 2009-11-19 00:00:00 |  100000 |
|           43 |            1 |          104 | debit           | 2009-11-19 00:00:00 |   50000 |
|           44 |            4 |          107 | kredit          | 2009-11-20 00:00:00 |  200000 |
|           45 |            3 |          105 | debit           | 2009-11-21 00:00:00 |   40000 |
|           46 |            1 |          104 | kredit          | 2009-11-22 00:00:00 |  100000 |

|           46 |            1 |          104 | kredit          | 2009-11-22 00:00:00 |  100000 |
|           47 |            4 |          101 | kredit          | 2009-11-22 00:00:00 |   20000 |
|           48 |            2 |          103 | debit           | 2009-11-22 00:00:00 |   50000 |
|           49 |            5 |          102 | debit           | 2009-11-25 00:00:00 |   50000 |
|           50 |           10 |          108 | debit           | 2009-11-26 00:00:00 |  100000 |
|           51 |            3 |          106 | kredit          | 2009-11-27 00:00:00 |   50000 |
|           52 |            2 |          103 | kredit          | 2009-11-28 00:00:00 |  200000 |
|           53 |            3 |          105 | kredit          | 2009-11-28 00:00:00 |  100000 |
|           54 |            5 |          102 | debit           | 2009-11-30 00:00:00 |   20000 |
|           55 |            1 |          104 | debit           | 2009-12-01 00:00:00 |   50000 |
|           56 |            2 |          103 | debit           | 2009-12-02 00:00:00 |   40000 |
|           57 |            4 |          101 | debit           | 2009-12-04 00:00:00 |   50000 |
|           58 |            2 |          103 | kredit          | 2009-12-05 00:00:00 |  100000 |
|           59 |            5 |          102 | kredit          | 2009-12-05 00:00:00 |  200000 |
|           60 |            7 |          109 | debit           | 2009-12-05 00:00:00 |  100000 |
|           61 |            9 |          110 | debit           | 2009-12-06 00:00:00 |   20000 |
|           62 |           19 |          110 | kredit          | 2017-05-24 00:00:00 |   50000 |
|           68 |           10 |          111 | kredit          | 2017-05-24 00:00:00 |  250000 |
|           69 |            6 |          106 | debit           | 2017-05-24 00:00:00 |  125000 |
|           70 |            7 |          103 | kredit          | 2017-05-24 00:00:00 |  130000 |
|           72 |            8 |          101 | kredit          | 2017-05-24 00:00:00 |  357000 |
|           73 |            2 |          110 | debit           | 2017-05-24 00:00:00 |  547000 |
|           76 |            5 |          110 | debit           | 2017-05-24 00:00:00 |   26000 |
|           77 |           19 |          110 | kredit          | 2017-05-24 00:00:00 |   50000 |
|           78 |           19 |          110 | kredit          | 2017-05-24 00:00:00 |   50000 |
|           79 |           12 |          101 | debit           | 2017-05-26 00:00:00 | 9700000 |
|           80 |           12 |          101 | debit           | 2017-05-26 00:00:00 | 8500000 |
|           81 |            1 |          111 | kredit          | 2017-05-26 00:00:00 |  520000 |
|           85 |           13 |          109 | debit           | 2017-05-26 00:00:00 |  700000 |
|           86 |           19 |          110 | kredit          | 2017-05-30 00:00:00 |   50000 |
|           87 |           19 |          110 | kredit          | 2017-06-06 00:00:00 |   50000 |
|           88 |           19 |          110 | kredit          | 2017-06-06 00:00:00 |   50000 |
|           89 |           13 |          109 | debit           | 2017-06-08 00:00:00 |  700000 |
|           90 |           13 |          109 | debit           | 2017-06-08 00:00:00 |  700000 |
|           91 |           13 |          109 | debit           | 2017-06-08 00:00:00 |  700000 |
|           92 |            5 |          103 | debit           | 2017-06-14 00:00:00 |  263000 |
|           93 |            3 |          105 | debit           | 2020-03-24 12:34:20 |   50000 |
|           94 |            2 |          103 | debit           | 2020-03-24 12:34:20 |   40000 |
|           95 |            4 |          101 | kredit          | 2020-03-24 12:34:20 |   20000 |
|           96 |            3 |          106 | debit           | 2020-03-24 12:34:20 |   50000 |
|           97 |            5 |          107 | kredit          | 2020-03-24 12:34:20 |   30000 |
|           98 |            1 |          101 | kredit          | 2020-03-24 12:34:20 |   20000 |
|           99 |            9 |          110 | kredit          | 2020-03-24 12:34:20 |  150000 |
|          100 |            5 |          102 | debit           | 2020-03-24 12:34:20 |   20000 |
```

```
| 100 |   5 | 102 | debit  | 2020-03-24 12:34:20 |  20000 |
| 101 |   3 | 105 | kredit | 2020-03-24 12:34:20 |  50000 |
| 102 |   4 | 107 | debit  | 2020-03-24 12:34:20 | 100000 |
| 103 |   2 | 103 | debit  | 2020-03-24 12:34:20 | 100000 |
| 104 |   1 | 104 | debit  | 2020-03-24 12:34:20 |  50000 |
| 105 |   4 | 107 | kredit | 2020-03-24 12:34:20 | 200000 |
| 106 |   3 | 105 | debit  | 2020-03-24 12:34:20 |  40000 |
| 107 |   1 | 104 | kredit | 2020-03-24 12:34:20 | 100000 |
| 108 |   4 | 101 | kredit | 2020-03-24 12:34:20 |  20000 |
| 109 |   2 | 103 | debit  | 2020-03-24 12:34:20 |  50000 |
| 110 |   5 | 102 | debit  | 2020-03-24 12:34:20 |  50000 |
| 111 |  10 | 108 | debit  | 2020-03-24 12:34:20 | 100000 |
| 112 |   3 | 106 | kredit | 2020-03-24 12:34:20 |  50000 |
| 113 |   2 | 103 | kredit | 2020-03-24 12:34:20 | 200000 |
| 114 |   3 | 105 | kredit | 2020-03-24 12:34:20 | 100000 |
| 115 |   5 | 102 | debit  | 2020-03-24 12:34:20 |  20000 |
| 116 |   1 | 104 | debit  | 2020-03-24 12:34:20 |  50000 |
| 117 |   2 | 103 | debit  | 2020-03-24 12:34:20 |  40000 |
| 118 |   4 | 101 | debit  | 2020-03-24 12:34:20 |  50000 |
| 119 |   2 | 103 | kredit | 2020-03-24 12:34:20 | 100000 |
| 120 |   5 | 102 | kredit | 2020-03-24 12:34:20 | 200000 |
| 121 |   7 | 109 | debit  | 2020-03-24 12:34:20 | 100000 |
| 122 |   9 | 110 | debit  | 2020-03-24 12:34:20 |  20000 |
| 123 |  11 | 105 | debit  | 2020-03-24 14:37:35 |  40000 |
| 124 |  11 | 104 | kredit | 2020-03-24 14:37:35 | 100000 |
| 125 |  14 | 101 | kredit | 2020-03-24 14:37:35 |  20000 |
| 126 |  12 | 103 | debit  | 2020-03-24 14:37:35 |  50000 |
| 127 |  15 | 102 | debit  | 2020-03-24 14:37:35 |  50000 |
| 128 |  20 | 108 | debit  | 2020-03-24 14:37:35 | 100000 |
| 129 |  23 | 106 | kredit | 2020-03-24 14:37:35 |  50000 |
| 130 |  12 | 103 | kredit | 2020-03-24 14:37:35 | 200000 |
| 131 |  13 | 105 | kredit | 2020-03-24 14:37:35 | 100000 |
| 132 |  15 | 102 | debit  | 2020-03-24 14:37:35 |  20000 |
| 133 |  11 | 104 | debit  | 2020-03-24 14:37:35 |  50000 |
| 134 |  12 | 103 | debit  | 2020-03-24 14:37:35 |  40000 |
| 135 |  14 | 101 | kredit | 2020-03-24 14:37:35 |  50000 |
| 136 |  12 | 103 | kredit | 2020-03-24 14:37:35 | 100000 |
| 137 |  15 | 102 | kredit | 2020-03-24 14:37:35 | 200000 |
| 138 |  11 | 104 | debit  | 2020-03-24 14:37:35 |  50000 |
| 139 |  12 | 103 | debit  | 2020-03-24 14:37:35 |  40000 |
| 140 |  14 | 101 | debit  | 2020-03-24 14:37:35 |  50000 |
| 141 |  17 | 109 | debit  | 2020-03-24 14:37:35 | 100000 |
| 142 |  19 | 110 | debit  | 2020-03-24 14:37:35 |  20000 |
```