## Membuat database

```
SOL Shell (psgl)
Server [localhost]:
Database [postgres]:
Port [5432]:
Username [postgres]:
Password for user postgres:
psql (10.23)
.
WARNING: Console code page (437) differs from Windows code page (1252)
8-bit characters might not work correctly. See psql reference page "Notes for Windows users" for details.

Type "help" for help.
postgres=# CREATE DATABASE "Basic-Banking-System";
CREATE DATABASE
postgres=# \l
                                                                   List of databases
                                            | Encoding |
            Name
                                 Owner
                                                                       Collate
                                                                                                          Ctype
                                                                                                                                    Access privileges
 Basic-Banking-System
                                                              English_Indonesia.1252
                                                                                                English_Indonesia.1252
                                               UTF8
 blog
latihan CRUD
                                                              English_Indonesia.1252
English_Indonesia.1252
                                                                                               English_Indonesia.1252
English_Indonesia.1252
                                postgres
                                               UTF8
                                               UTF8
                                postgres
                                                              English_Indonesia.1252
English_Indonesia.1252
English_Indonesia.1252
                                                                                               English_Indonesia.1252
English_Indonesia.1252
English_Indonesia.1252
 postgres
social_media
                                postgres
                                               UTF8
                                postgres
                                               UTF8
 template0
                                               UTF8
                                postgres
                                                                                                                                  =c/postgres
                                                                                                                                  postgres=CTc/postgres
 template1
                                               UTF8
                                                              English_Indonesia.1252
                                                                                                English_Indonesia.1252
                                postgres
                                                                                                                                  =c/postgres
                                                                                                                                  postgres=CTc/postgres
(7 rows)
```

## Membuat table Nasabah, Akun dan Transaksi

```
postgres=# \c Basic-Banking-System
You are now connected to database "Basic-Banking-System" as user "postgres".
Basic-Banking-System=# -- Tabel Nasabah
Basic-Banking-System=# CREATE TABLE Nasabah (
Basic-Banking-System(#
                            ID_Nasabah INT PRIMARY KEY,
Basic-Banking-System(#
                           Nama_Nasabah VARCHAR(255),
Basic-Banking-System(#
                            Alamat_Nasabah VARCHAR(255),
Basic-Banking-System(#
                           Nomor_Telepon VARCHAR(15)
Basic-Banking-System(# );
CREATE TABLE
Basic-Banking-System=#
Basic-Banking-System=# -- Tabel Akun
Basic-Banking-System=# CREATE TABLE Akun (
Basic-Banking-System(#
                           ID_Akun INT PRIMARY KEY,
Basic-Banking-System(#
                            Jenis_Akun VARCHAR(50),
Basic-Banking-System(#
                            Saldo_Akun DECIMAL(10, 2),
Basic-Banking-System(#
                            Tanggal_Dibuka DATE,
Basic-Banking-System(#
                            ID_Nasabah INT,
Basic-Banking-System(#
                            FOREIGN KEY (ID_Nasabah) REFERENCES Nasabah(ID_Nasabah)
Basic-Banking-System(# );
CREATE TABLE
Basic-Banking-System=#
Basic-Banking-System=# -- Tabel Transaksi
Basic-Banking-System=# CREATE TABLE Transaksi (
Basic-Banking-System(#
                            ID_Transaksi INT PRIMARY KEY,
Basic-Banking-System(#
                            Jenis_Transaksi VARCHAR(50),
Basic-Banking-System(#
                            Jumlah_Transaksi DECIMAL(10, 2),
Basic-Banking-System(#
                            Tanggal_Transaksi DATE,
Basic-Banking-System(#
                            ID_Akun INT,
Basic-Banking-System(#
                            FOREIGN KEY (ID_Akun) REFERENCES Akun(ID_Akun)
Basic-Banking-System(# );
CREATE TABLE
Basic-Banking-System=#
```

```
Basic-Banking-System-# VALUES
                                                              JES
(1, 'John Doe', 'Medan', '123-456-7890'),
(2, 'Jane Smith', 'Jakarta', '456-789-0123'),
(3, 'Alice Johnson', 'Surabaya', '789-012-3456'),
(4, 'Bob Brown', 'Padang', '987-654-3210'),
(5, 'Eve Wilson', 'Medan', '234-567-8901'),
(6, 'Charlie Davis', 'Jakarta', '432-109-8765'),
(7, 'Grace Miller', 'Surabaya', '876-543-2109'),
(8, 'Frank Moore', 'Padang', '543-210-9876'),
(9, 'Sophia Lee', 'Medan', '654-321-0987'),
(10, 'Oliver Anderson', 'Jakarta', '765-432-1098');
 Basic-Banking-System-#
 INSERT 0 10
 Basic-Banking-System=# -- Memeriksa data dalam tabel Nasabah
 Basic-Banking-System=# SELECT * FROM Nasabah;
   id_nasabah |
                                 nama_nasabah
                                                                      | alamat_nasabah | nomor_telepon
                                 John Doe
                                                                          Medan
                                                                                                                 123-456-7890
                        2
                                 Jane Smith
                                                                                                                 456-789-0123
                                                                          Jakarta
                                                                                                                  789-012-3456
                                 Alice Johnson
                                                                           Surabaya
                        4
                                 Bob Brown
                                                                          Padang
                                                                                                                  987-654-3210
                                 Eve Wilson
                                                                          Medan
                                                                                                                  234-567-8901
                                 Charlie Davis
Grace Miller
                        6
                                                                           Jakarta
                                                                                                                  432-109-8765
                                                                                                                  876-543-2109
                                                                           Surabaya
                                                                          Padang
                       8
                                 Frank Moore
                                                                                                                  543-210-9876
                                                                                                                  654-321-0987
                        9
                                 Sophia Lee
                                                                          Medan
                      10 I
                                Oliver Anderson | Jakarta
                                                                                                                  765-432-1098
(10 rows)
Basic-Banking-System=# -- Insert data ke dalam tabel Akun dengan dua jenis akun yang berbeda dan tanggal pembukaan yang berbeda Basic-Banking-System=# INSERT INTO Akun (ID_Akun, Jenis_Akun, Saldo_Akun, Tanggal_Dibuka, ID_Nasabah)
Basic-Banking-System=# VALUES
Basic-Banking-System=# (1, 'Tabungan', 1000.00, '2023-10-17', 1),
Basic-Banking-System=# (2, 'Deposito', 5000.00, '2023-10-18', 2),
Basic-Banking-System=# (4, 'Deposito', 7000.00, '2023-10-19', 3),
Basic-Banking-System=# (5, 'Tabungan', 2000.00, '2023-10-20', 4),
Basic-Banking-System=# (5, 'Deposito', 6000.00, '2023-10-21', 5),
Basic-Banking-System=# (7, 'Tabungan', 4000.00, '2023-10-22', 6),
Basic-Banking-System=# (8, 'Deposito', 8000.00, '2023-10-22', 7),
Basic-Banking-System=# (8, 'Deposito', 8000.00, '2023-10-24', 8),
Basic-Banking-System=# (9, 'Tabungan', 5000.00, '2023-10-25', 9),
Basic-Banking-System=# (10, 'Deposito', 9000.00, '2023-10-25', 10);
INSERT 0 10
 INSERT 0 10
 Basic-Banking-System=# SELECT * FROM akun
Basic-Banking-System-# SELECT * FROM akun;
ERROR: syntax error at or near "SELECT"
LINE 2: SELECT * FROM akun;
 Basic-Banking-System=# SELECT * FROM Akun;
   id_akun | jenis_akun | saldo_akun | tanggal_dibuka | id_nasabah
                                                 1000.00 |
5000.00 |
3000.00 |
                                                                    2023-10-17
2023-10-18
                    Tabungan
Deposito
                    Tabungan
Deposito
                                                  2000.00
                                                                    2023-10-19
                                                                     2023-10-20
                    Tabungan
Deposito
                                                  3000.00
6000.00
                                                                    2023-10-21
2023-10-22
                                                                                                                     6
7
8
                    Tabungan
Deposito
                                                  4000.00
8000.00
                                                                   2023-10-23
2023-10-24
                    Tabungan
Deposito
                                                  5000.00 | 2023-10-25
9000.00 | 2023-10-26
                                                                                                                  9
10
            10
 (10 rows)
```

Basic-Banking-System=# -- Insert data ke dalam tabel Nasabah dengan alamat yang berbeda

Basic-Banking-System=# INSERT INTO Nasabah (ID\_Nasabah, Nama\_Nasabah, Alamat\_Nasabah, Nomor\_Telepon)

```
Basic-Banking-System=# -- Insert data ke dalam tabel Transaksi dengan ID akun yang sama
Basic-Banking-System=# INSERT INTO Transaksi (ID_Transaksi, Jenis_Transaksi, Jumlah_Transaksi, Tanggal_Transaksi, ID_Akun)
                                              SERT INTO Transaksi (ID_Transaksi, Jenis_II

LUES

(1, 'Debit', 500.00, '2023-10-17', 1),

(2, 'Kredit', 200.00, '2023-10-18', 1),

(3, 'Debit', 1000.00, '2023-10-20', 2),

(4, 'Kredit', 300.00, '2023-10-21', 2),

(6, 'Kredit', 400.00, '2023-10-22', 2),

(7, 'Debit', 1500.00, '2023-10-22', 2),

(8, 'Kredit', 800.00, '2023-10-24', 3),

(9, 'Debit', 300.00, '2023-10-25', 3),

(10, 'Kredit', 200.00, '2023-10-26', 4),

(11, 'Debit', 600.00, '2023-10-27', 4),

(12, 'Kredit', 300.00, '2023-10-28', 4),

(13, 'Debit', 300.00, '2023-10-29', 5),

(14, 'Kredit', 700.00, '2023-10-30', 5),

(15, 'Debit', 400.00, '2023-10-31', 5),

(16, 'Kredit', 500.00, '2023-11-01', 6),

(17, 'Debit', 900.00, '2023-11-01', 6),

(17, 'Debit', 900.00, '2023-11-01', 6),

(19, 'Debit', 1500.00, '2023-11-01', 6),

(19, 'Debit', 1500.00, '2023-11-01', 7),

(20, 'Kredit', 800.00, '2023-11-01', 7),
Basic-Banking-System-# VALUES
Basic-Banking-System-#
INSERT 0 20
Basic-Banking-System=# SELECT * FROM Transaksi;
id_transaksi | jenis_transaksi | jumlah_transaksi | tanggal_transaksi | id_akun
                     1
                             Debit
                                                                               500.00 | 2023-10-17
                             Kredit
                                                                               200.00
                                                                                               2023-10-18
                                                                                                2023-10-19
                                                                              1000.00
                             Debit
                             Kredit
                                                                               300.00
                                                                                                2023-10-20
                             Debit
                                                                               700.00
                                                                                               2023-10-21
                                                                                                                                               2
                             Kredit
                                                                                400.00
                                                                                                2023-10-22
                             Debit
                                                                              1500.00
                                                                                                2023-10-23
                     8
                             Kredit
                                                                               800.00
                                                                                               2023-10-24
                     9
                             Debit
                                                                               300.00
                                                                                               2023-10-25
                                                                               200.00
                    10
                             Kredit
                             Debit
                                                                               600.00
                                                                                                2023-10-27
                                                                                                                                               4
                    12
                             Kredit
                                                                               300.00 l
                                                                                               2023-10-28
                                                                                                                                               4
                    13
                             Debit
                                                                              1000.00
                                                                                                2023-10-29
                             Kredit
                                                                                700.00
                                                                                                2023-10-30
                    15
                             Debit
                                                                               400.00 |
600.00 |
                                                                                               2023-10-31
                                                                                                                                               5
                    16
                             Kredit
                                                                                               2023-11-01
                                                                                                                                               6
                                                                               900.00 |
                    17
                             Debit
                                                                                               2023-11-02
                    18
                             Kredit
                                                                                               2023-11-03
                                                                              1500.00 | 2023-11-04
800.00 | 2023-11-05
                    19
                             Debit
                             Kredit
                    20
(20 rows)
```

## Operasi Create, Read, Update dan Delete

```
Basic-Banking-System=# -- Insert data baru ke dalam tabel Nasabah
Basic-Banking-System=# INSERT INTO Nasabah (ID_Nasabah, Nama_Nasabah, Alamat_Nasabah, Nomor_Telepon)
Basic-Banking-System-# VALUES
Basic-Banking-System-#
                          (11, 'Sarah Johnson', 'Semarang', '555-555-555');
INSERT 0 1
Basic-Banking-System=# -- Membaca data dari tabel Nasabah
Basic-Banking-System=# SELECT * FROM Nasabah;
 id_nasabah | nama_nasabah
                              | alamat_nasabah | nomor_telepon
          1 |
             John Doe
                                Medan
                                                 123-456-7890
          2 I
             Jane Smith
                                Jakarta
                                                 456-789-0123
             Alice Johnson
                                Surabaya
                                                 789-012-3456
             Bob Brown
                                Padang
                                                 987-654-3210
             Eve Wilson
                                Medan
                                                 234-567-8901
          5
             Charlie Davis
                              | Jakarta
                                                432-109-8765
          6
             Grace Miller
                                Surabaya
                                                 876-543-2109
          7
          8
             Frank Moore
                                Padang
                                                 543-210-9876
                                                 654-321-0987
          9
             Sophia Lee
                                Medan
         10 |
             Oliver Anderson |
                                Jakarta
                                                 765-432-1098
                                               555-555-5555
         11 | Sarah Johnson
                              Semarang
(11 rows)
```

```
Basic-Banking-System=# -- Mengubah alamat nasabah dengan ID_Nasabah 11
Basic-Banking-System=# UPDATE Nasabah
Basic-Banking-System-# SET Alamat_Nasabah = 'Yogyakarta'
Basic-Banking-System-# WHERE ID_Nasabah = 11;
UPDATE 1
Basic-Banking-System=# SELECT * FROM Nasabah;
 id_nasabah | nama_nasabah | alamat_nasabah | nomor_telepon
             1 | John Doe | Medan | 123-456-7890

2 | Jane Smith | Jakarta | 456-789-0123

3 | Alice Johnson | Surabaya | 789-012-3456

4 | Bob Brown | Padang | 987-654-3210

5 | Eve Wilson | Medan | 234-567-8901

6 | Charlie Davis | Jakarta | 432-109-8765

7 | Grace Miller | Surabaya | 876-543-2109
              7 | Grace Miller | Surabaya
                                                                  876-543-2109
            8 | Frank Moore | Padang
9 | Sophia Lee | Medan
10 | Oliver Anderson | Jakarta
                                                                  543-210-9876
                                                                  654-321-0987
                                                                    765-432-1098
            11 | Sarah Johnson | Yogyakarta
                                                                  555-555-5555
(11 rows)
```

```
Basic-Banking-System=# -- Menghapus data transaksi dengan ID_Transaksi antara 15 dan 20
Basic-Banking-System=# DELETE FROM Transaksi
Basic-Banking-System-# WHERE ID_Transaksi BETWEEN 15 AND 20;
DELETE 6
Basic-Banking-System=# SELECT * FROM Transaksi;
id_transaksi | jenis_transaksi | jumlah_transaksi | tanggal_transaksi | id_akun
           1 | Debit
                                           500.00 | 2023-10-17
           2 | Kredit
                                          200.00 | 2023-10-18
                                                                             1
                                          1000.00 | 2023-10-19
           3 |
               Debit
                                                                             1
           4
                                          300.00 | 2023-10-20
               Kredit
                                                                             2
           5 |
               Debit
                                          700.00 | 2023-10-21
               Kredit
                                          400.00 | 2023-10-22
           6
           7 I
               Debit
                                        1500.00 | 2023-10-23
                                                                             3
           8 |
               Kredit
                                           800.00 | 2023-10-24
                                                                             3
                                           300.00 | 2023-10-25
           9
               Debit
          10 |
                                          200.00 | 2023-10-26
               Kredit
                                                                             4
                                          600.00 | 2023-10-27
          11 |
               Debit
                                                                             Ц
          12 |
               Kredit
                                          300.00 | 2023-10-28
                                                                             Ц
          13 |
               Debit
                                          1000.00 | 2023-10-29
                                                                             5
          14 | Kredit
                                          700.00 | 2023-10-30
                                                                              5
(14 rows)
```