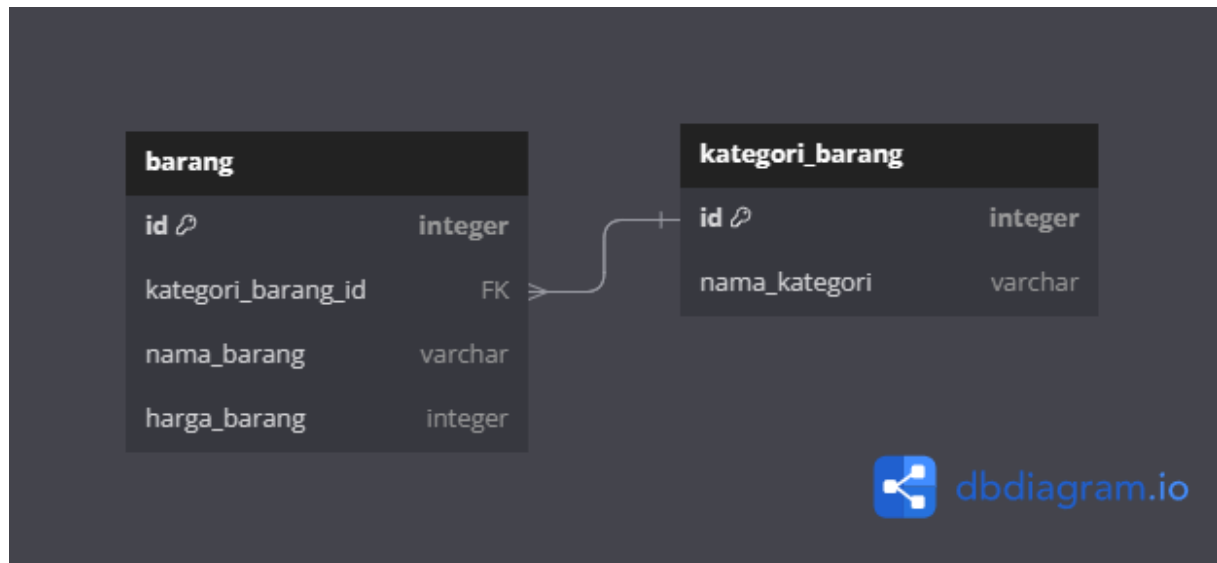


HOMEWORK - WEEK6

DATABASE (ERD, DDL, DML, JOIN RELATION)

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ENTITY RELATION DIAGRAM (ERD)



Pembuatan ERD ini ditugaskan untuk dibuat dalam aplikasi bernama dbdiagram.io. terdapat 2 tabel dari sebuah database toko mainan yaitu tabel barang & kategori dari barang tersebut. setiap kategori memiliki banyak barang dan 1 barang punya 1 kategori (one to many). Berikut adalah link dari ERD diatas : [Link ERD](#)

[Link Backup Tugas](#)

Screenshot semua syntax query CREATE, SELECT, INSERT, UPDATE, DELETE kedua tabel.

oleh **Raie aswajjillah**

CREATE DATABASE raie_toy_store;

```
Command Prompt - psql --us x + v
C:\Users\A S P I R E 5>psql --username=postgres
Password for user postgres:
psql (16.0)
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 raie_toy_store;
CREATE DATABASE
postgres=# \l

      Name      | Owner   | Encoding | Locale Provider | Collate      | Ctype      | ICU Locale | ICU Rules | Access privileges
-----
 postgres       | postgres | UTF8     | libc            | English_Indonesia.1252 | English_Indonesia.1252 |             |           |
 raie_toy_store | postgres | UTF8     | libc            | English_Indonesia.1252 | English_Indonesia.1252 |             |           |
 template0      | postgres | UTF8     | libc            | English_Indonesia.1252 | English_Indonesia.1252 |             |           |
```

CREATE TABLE (barang & kategori_barang)

```
Command Prompt - psql --us x + v
ERROR: unrecognized configuration parameter "tables"
raie_toy_store=#
raie_toy_store=# \dt
Did not find any relations.
raie_toy_store=# CREATE TABLE kategori_barang(id serial PRIMARY KEY, nama_kategori varchar);
CREATE TABLE
raie_toy_store=# \dt
      List of relations
 Schema | Name          | Type | Owner
-----
 public | kategori_barang | table | postgres
(1 row)

raie_toy_store=# CREATE TABLE barang(id serial PRIMARY KEY, kategori_barang_id integer REFERENCES kategori_barang (id), nama_barang varchar, harga_barang integer);
CREATE TABLE
raie_toy_store=# \dt
      List of relations
 Schema | Name          | Type | Owner
-----
 public | barang        | table | postgres
 public | kategori_barang | table | postgres
(2 rows)

raie_toy_store=#
```

SELECT, INSERT, UPDATE kategori_barang

```
raie_toy_store=# \dt
               List of relations
 Schema |      Name      | Type  | Owner
-----+-----+-----+-----
 public | barang         | table | postgres
 public | kategori_barang | table | postgres
(2 rows)

raie_toy_store=# SELECT * FROM kategori_barang;
 id | nama_kategori
----+-----
(0 rows)

raie_toy_store=# INSERT INTO kategori_barang(nama_kategori) VALUES('Action Figure');
INSERT 0 1
raie_toy_store=# INSERT INTO kategori_barang(nama_kategori) VALUES('Boneka');
INSERT 0 1
raie_toy_store=# INSERT INTO kategori_barang(nama_kategori) VALUES('Rubik');
INSERT 0 1
raie_toy_store=# INSERT INTO kategori_barang(nama_kategori) VALUES('Lego');
INSERT 0 1
raie_toy_store=# SELECT * FROM kategori_barang;
 id | nama_kategori
----+-----
  5 | Action Figure
  6 | Boneka
  7 | Rubik
  8 | Lego
(4 rows)

raie_toy_store=# UPDATE kategori_barang SET id=1 WHERE id=5;
UPDATE 1
raie_toy_store=# UPDATE kategori_barang SET id=2 WHERE id=6;
UPDATE 1
raie_toy_store=# UPDATE kategori_barang SET id=3 WHERE id=7;
UPDATE 1
raie_toy_store=# UPDATE kategori_barang SET id=4, nama_kategori='Alat Musik' WHERE id=8;
UPDATE 1
raie_toy_store=# SELECT * FROM kategori_barang;
 id | nama_kategori
----+-----
  1 | Action Figure
  2 | Boneka
  3 | Rubik
  4 | Alat Musik
(4 rows)

raie_toy_store=#
```

SELECT, INSERT, UPDATE barang

```
Command Prompt - psql --us  X + v - □ X

raie_toy_store=# INSERT INTO barang(kategori_barang_id, nama_barang, harga_barang) VALUES(3, 'Rubik 3X
3', 70000);
INSERT 0 1
raie_toy_store=# INSERT INTO barang(kategori_barang_id, nama_barang, harga_barang) VALUES(3, 'Rubik 4X
4', 85000);
INSERT 0 1
raie_toy_store=# INSERT INTO barang(kategori_barang_id, nama_barang, harga_barang) VALUES(3, 'Rubik Py
ramid', 95000);
INSERT 0 1
raie_toy_store=# INSERT INTO barang(kategori_barang_id, nama_barang, harga_barang) VALUES(4, 'Pianika'
, 120000);
INSERT 0 1
raie_toy_store=# INSERT INTO barang(kategori_barang_id, nama_barang, harga_barang) VALUES(4, 'Recorder
', 40000);
INSERT 0 1
raie_toy_store=# SELECT * FROM barang;
 id | kategori_barang_id |      nama_barang      | harga_barang
-----+-----+-----+-----
  1 |          1 | Iron Man Action Figure |      60000
  2 |          1 | Spiderman Action Figure |      55000
  3 |          2 | Teddy Bear             |      40000
  4 |          2 | Miky Mouse             |      35000
  5 |          2 | Minion                 |      35000
  6 |          3 | Rubik 3X3              |      70000
  7 |          3 | Rubik 4X4              |      85000
  8 |          3 | Rubik Pyramid          |      95000
  9 |          4 | Pianika                |     120000
 10 |          4 | Recorder               |      40000
(10 rows)

raie_toy_store=# UPDATE kategori_barang SET harga_barang=75000 WHERE id=9;
ERROR:  column "harga_barang" of relation "kategori_barang" does not exist
LINE 1: UPDATE kategori_barang SET harga_barang=75000 WHERE id=9;
                                ^
raie_toy_store=# UPDATE barang SET harga_barang=75000 WHERE id=9;
UPDATE 1
raie_toy_store=# SELECT * FROM barang;
 id | kategori_barang_id |      nama_barang      | harga_barang
-----+-----+-----+-----
  1 |          1 | Iron Man Action Figure |      60000
  2 |          1 | Spiderman Action Figure |      55000
  3 |          2 | Teddy Bear             |      40000
  4 |          2 | Miky Mouse             |      35000
  5 |          2 | Minion                 |      35000
  6 |          3 | Rubik 3X3              |      70000
  7 |          3 | Rubik 4X4              |      85000
  8 |          3 | Rubik Pyramid          |      95000
 10 |          4 | Recorder               |      40000
  9 |          4 | Pianika                |      75000
(10 rows)

raie_toy_store=# SELECT * FROM barang WHERE id=9;
 id | kategori_barang_id |      nama_barang      | harga_barang
-----+-----+-----+-----
  9 |          4 | Pianika                |      75000
(1 row)

raie_toy_store=#
```

JOIN TABLE barang & kategori_barang

```
Command Prompt - psql --us  X + v

raie_toy_store=# \dt
          List of relations
 Schema | Name          | Type  | Owner
-----|-----|-----|-----
 public | barang        | table | postgres
 public | kategori_barang | table | postgres
(2 rows)

raie_toy_store=# SELECT * FROM barang;
 id | kategori_barang_id | nama_barang          | harga_barang
----|-----|-----|-----
  1 |          1 | Iron Man Action Figure |      60000
  2 |          1 | Spiderman Action Figure |      55000
  3 |          2 | Teddy Bear            |      40000
  4 |          2 | Miky Mouse            |      35000
  5 |          2 | Minion                 |      35000
  6 |          3 | Rubik 3X3              |      70000
  7 |          3 | Rubik 4X4              |      85000
  8 |          3 | Rubik Pyramid          |      95000
 10 |          4 | Recorder               |      40000
  9 |          4 | Pianika                |      75000
(10 rows)

raie_toy_store=# SELECT * FROM kategori_barang;
 id | nama_kategori
----|-----
  1 | Action Figure
  2 | Boneka
  3 | Rubik
  4 | Alat Musik
(4 rows)

raie_toy_store=# SELECT b.nama_barang FROM barang b INNER JOIN kategori_barang k ON b.kategori_barang_id = k.id WHERE k.nama_kategori = 'Alat Musik';
nama_barang
-----
Recorder
Pianika
(2 rows)

raie_toy_store=# SELECT b.nama_barang FROM barang b INNER JOIN kategori_barang k ON b.kategori_barang_id = k.id WHERE k.nama_kategori = 'Boneka';
nama_barang
-----
Teddy Bear
Miky Mouse
Minion
(3 rows)

raie_toy_store=#
```

DELETE barang & kategori_barang

```
Command Prompt - psql --us  X + v

raie_toy_store=# \dt
          List of relations
 Schema |      Name      | Type  | Owner
-----+-----+-----+-----
 public | barang         | table | postgres
 public | kategori_barang | table | postgres
(2 rows)

raie_toy_store=# SELECT * FROM barang;
 id | kategori_barang_id |      nama_barang      | harga_barang
----+-----+-----+-----
  1 |          1         | Iron Man Action Figure |      60000
  2 |          1         | Spiderman Action Figure |      55000
  3 |          2         | Teddy Bear             |      40000
  4 |          2         | Miky Mouse             |      35000
  5 |          2         | Minion                 |      35000
  6 |          3         | Rubik 3X3              |      70000
  7 |          3         | Rubik 4X4              |      85000
  8 |          3         | Rubik Pyramid          |      95000
 10 |          4         | Recorder               |      40000
  9 |          4         | Pianika                |      75000
(10 rows)

raie_toy_store=# DELETE FROM barang WHERE id=4;
DELETE 1
raie_toy_store=# INSERT INTO kategori_barang(nama_kategori) VALUES ('petasan');
INSERT 0 1
raie_toy_store=# SELECT * FROM kategori_barang;
 id | nama_kategori
----+-----
  1 | Action Figure
  2 | Boneka
  3 | Rubik
  4 | Alat Musik
  9 | petasan
(5 rows)

raie_toy_store=# DELETE FROM kategori_barang WHERE id=9;
DELETE 1
raie_toy_store=# SELECT * FROM kategori_barang;
 id | nama_kategori
----+-----
  1 | Action Figure
  2 | Boneka
  3 | Rubik
  4 | Alat Musik
(4 rows)

raie_toy_store=#
```

Berikut adalah kode dari hasil pembuatan ERD di dbdiagram.io saya. atau bisa klik [Link ERD](#)

```
Table barang {  
  id integer PK  
  kategori_barang_id FK  
  nama_barang varchar  
  harga_barang integer  
}
```

```
Table kategori_barang {  
  id integer [pk]  
  nama_kategori varchar  
}
```

```
Ref: "kategori_barang"."id" < "barang"."kategori_barang_id"
```