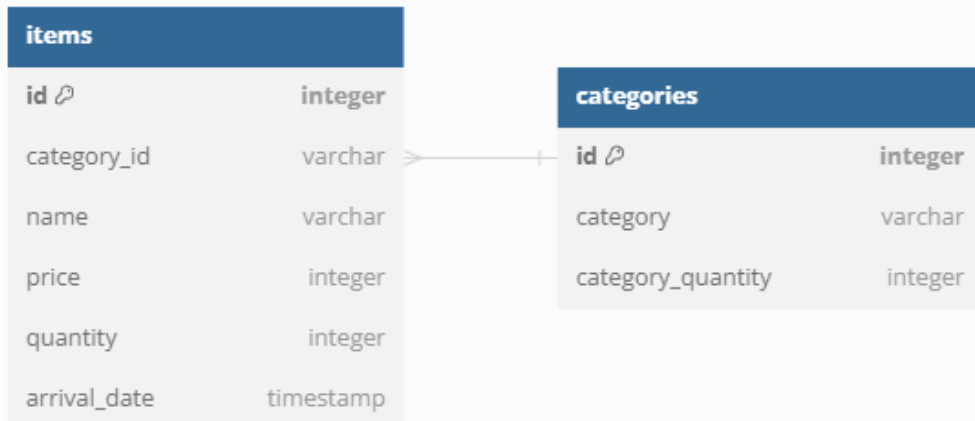**Assignment Week 6 – Database**

Soal Homework

Ada seorang penjual mainan yang sedang bingung dalam mengelola tokonya. Pemilik toko ingin data barang nya tersimpan di dalam sebuah database agar mudah dalam melakukan pencarian data barang. Bantu pemilik toko untuk menyimpan datanya.

- Buatlah design database menggunakan dbdiagram.io dengan entitas objek barang dan kategori barang. Barang dan kategori barang saling berelasi.
- Buatlah query untuk melakukan create table barang dan kategori barang
- Buatlah query untuk melakukan select, insert, update barang
- Buatlah query untuk melakukan select, insert, update kategori barang
- Buatlah query untuk melakukan join relasi antara barang dan kategori barang

Simpan semua query dalam sebuah txt files dan design database images dalam sebuah folder zip

Desain Database

Query:

```sql
/*Inisialisasi Tabel*/
CREATE TABLE IF NOT EXISTS categories(
      categoryid SERIAL PRIMARY KEY,
      category varchar NOT NULL,
      category_quantity integer,
      description varchar NOT NULL
      );
CREATE TABLE IF NOT EXISTS items(
      id SERIAL PRIMARY KEY,
      category_id integer NOT NULL,
      name varchar NOT NULL,
      price integer NOT NULL,
      quantity integer NOT NULL,
      arrival_date timestamp NOT NULL,
      FOREIGN KEY (category_id) REFERENCES categories(categoryid) ON DELETE
CASCADE
      );

/*Insert kedalam tabel 'categories'*/
INSERT INTO categories(category, description) VALUES
      ('PLUSHIES', 'Barang - barang seperti boneka, plushy, dan body
pillows.'),
      ('DIECAST CARS', 'Mobil - mobilan diecast'),
      ('PUZZLE', 'Mainan pemutar otak seperti rubix, puzzle gambar, dsb.'),
      ('REMOTE CONTROL', 'Mainan dengan kendali remot'),
      ('FIGURINE', 'Figure yang dapat dipajang, termasuk barang - barang
rakitan.'),
      ('FIDGETING', 'Mainan untuk menjaga tangan tetap sibuk.'),
      ('BATH/POOL', 'Mainan yang bisa dibawa ke kamar mandi atau kolam
renang.'),
      ('OUTDOOR', 'Mainan untuk bermain diluar rumah'),
      ('BOARD GAMES', 'Mainan papan fisik seperti monopoly, uno, dsb.'),
      ('MINIATURES', 'Miniatur pajangan dari benda - benda asli, termasuk
yang dapat dirakit.');

/*Insert kedalam tabel 'items'*/
INSERT INTO items(name, category_id, price, quantity, arrival_date) VALUES
      ('Pokemon GEN 1 Starter Plushies (5)', 1, 100000, 100, '09-07-2023'),
      ('KnY Tanjiro Plushies S', 1, 80000, 50, '09-07-2023'),
      ('KnY Nezuko Plushies S', 1, 80000, 50, '09-07-2023'),
      ('KnY Zenitsu Plushies S', 1, 80000, 50, '09-07-2023'),
      ('KnY Inosuke Plushies S', 1, 80000, 50, '09-07-2023'),
      ('Doraemon Plushie S', 1, 50000, 100, '09-07-2023'),
      ('Doraemon Plushie L', 1, 150000, 50, '09-07-2023'),
      ('Nerfgun Small', 8, 100000, 100, '09-07-2023'),
      ('Nerfgun Medium', 8, 300000, 50, '09-07-2023'),
      ('Nerfgun Big', 8, 600000, 20, '09-07-2023'),
      ('Hot Wheels', 8, 30000, 250, '09-07-2023'),
      ('Matchbox', 2, 25000, 250, '09-07-2023'),
      ('TOMICA', 2, 40000, 250, '09-07-2023'),
      ('Rubix Cube 3x3x3', 3, 25000, 100, '09-07-2023'),
      ('Rubix Cube 4x4x4', 3, 25000, 50, '09-07-2023'),
      ('Rubix Pyramid', 3, 25000, 50, '09-07-2023'),
      ('Puzzle Gambar Anak', 3, 15000, 100, '09-07-2023'),
      ('Puzzle Gambar 500 Pieces', 3, 50000, 25, '09-07-2023'),
      ('Puzzle Gambar 1000 Pieces', 3, 100000, 10, '09-07-2023'),
      ('Monopoly', 9, 15000, 50, '09-07-2023'),
      ('UNO', 9, 50000, 50, '09-07-2023'),
      ('Gaple', 9, 10000, 50, '09-07-2023'),
```

```
        ('Kartu Remi', 9, 25000, 50, '09-07-2023'),
        ('Splendor', 9, 150000, 10, '09-08-2023'),
        ('Mint Workers', 9, 150000, 10, '09-08-2023'),
        ('RC Driftcar', 4, 300000, 15, '09-08-2023'),
        ('RC Racers', 4, 200000, 25, '09-08-2023'),
        ('RC Helicopter', 4, 150000, 15, '09-08-2023'),
        ('Racing Drones', 4, 500000, 15, '09-08-2023'),
        ('Miniature House Set', 10, 150000, 10, '09-08-2023'),
        ('My Miniature Garage', 10, 250000, 10, '09-08-2023'),
        ('Rubber Ducky', 7, 25000, 100, '12-09-2023'),
        ('Bath Bombs', 7, 50000, 100, '12-09-2023'),
        ('Nendoroid', 5, 250000, 10, '12-09-2023'),
        ('Living Mecha', 5, 350000, 10, '12-09-2023'),
        ('Marvel Superheroes', 5, 150000, 10, '12-09-2023'),
        ('DC Universe', 5, 150000, 10, '12-09-2023'),
        ('Gundam HG', 5, 500000, 25, '12-09-2023'),
        ('Gundam MG', 5, 1000000, 20, '12-09-2023'),
        ('Gundam PG', 5, 1500000, 10, '12-09-2023'),
        ('Gundam RG', 5, 2500000, 5, '12-09-2023'),
        ('Lato-lato', 6, 15000, 100, '16-09-2023'),
        ('Fidget Spinners', 6, 50000, 100, '16-09-2023'),
        ('Pletokan Kecil', 6, 25000, 100, '16-09-2023'),
        ('Pletokan Besar', 6, 35000, 100, '16-09-2023');
```

Tabel yang Terbentuk:

Items:

categories:

Lanjutan Query:

```
/*Update Category untuk Menyimpan Total per Category*/
UPDATE categories
SET category_quantity = (
    SELECT sum(items.quantity)
    FROM items
    WHERE items.category_id = categories.categoryid
);
```

Hasil Update tabel categories:


```
/*Update Item*/
/*Ada kesalahan pada item 'Hot Wheels' dimana category_id
  seharusnya 2(DIECAST CARS), namun tercatat 8(OUTDOOR)
  maka perlu dilakukan edit/update: */
UPDATE items
SET category_id = 2
WHERE items.name = 'Hot Wheels';
```

Hasil Update tabel items:

```
/*Update Ulang Total per Category*/
UPDATE categories
SET category_quantity = (
    SELECT sum(items.quantity)
    FROM items
    WHERE items.category_id = categories.categoryid;
```

Hasil Update ulang tabel categories:

	categoryid	category	category_quantity	description
1	1	PLUSHIES	450	Barang - barang seperti boneka, plushy, dan body pillows.
2	2	DIECAST CARS	750	Mobil - mobilan diecast
3	3	PUZZLE	335	Mainan pemutar otak seperti rubix, puzzle gambar, dsb.
4	4	REMOTE CONTROL	70	Mainan dengan kendali remot
5	5	FIGURINE	100	Figure yang dapat dipajang, termasuk barang - barang rakitan.
6	6	FIDGETING	400	Mainan untuk menjaga tangan tetap sibuk.
7	7	BATH/POOL	200	Mainan yang bisa dibawa ke kamar mandi atau kolam renang.
8	8	OUTDOOR	170	Mainan untuk bermain diluar rumah
9	9	BOARD GAMES	220	Mainan papan fisik seperti monopoly, uno, dsb.
10	10	MINIATURES	20	Miniatur pajangan dari benda - benda asli, termasuk yang dapat dirakit.

```
/*Paginations*/

SELECT items.id, categories.category, items.name, items.price,
items.quantity
FROM items
INNER JOIN categories ON items.category_id = categories.categoryid
ORDER BY id
LIMIT 10 OFFSET 0;
```

Page 1:

	id	category	name	price	quantity
1	1	PLUSHIES	Pokemon GEN 1 Starter Plushies (5)	100,000	100
2	2	PLUSHIES	KnY Tanjiro Plushies S	80,000	50
3	3	PLUSHIES	KnY Nezuko Plushies S	80,000	50
4	4	PLUSHIES	KnY Zenitsu Plushies S	80,000	50
5	5	PLUSHIES	KnY Inosuke Plushies S	80,000	50
6	6	PLUSHIES	Doraemon Plushie S	50,000	100
7	7	PLUSHIES	Doraemon Plushie L	150,000	50
8	8	OUTDOOR	Nerfgun Small	100,000	100
9	9	OUTDOOR	Nerfgun Medium	300,000	50
10	10	OUTDOOR	Nerfgun Big	600,000	20

```sql
SELECT items.id, categories.category, items.name, items.price,
items.quantity
FROM items
INNER JOIN categories ON items.category_id = categories.categoryid
ORDER BY id
LIMIT 10 OFFSET 10;
```

Page 2:

	123 id	ABC category	ABC name	123 price	123 quantity
1	11	DIECAST CARS	Hot Wheels	30,000	250
2	12	DIECAST CARS	Matchbox	25,000	250
3	13	DIECAST CARS	TOMICA	40,000	250
4	14	PUZZLE	Rubix Cube 3x3x3	25,000	100
5	15	PUZZLE	Rubix Cube 4x4x4	25,000	50
6	16	PUZZLE	Rubix Pyramid	25,000	50
7	17	PUZZLE	Puzzle Gambar Anak	15,000	100
8	18	PUZZLE	Puzzle Gambar 500 Pieces	50,000	25
9	19	PUZZLE	Puzzle Gambar 1000 Pieces	100,000	10
10	20	BOARD GAMES	Monopoly	15,000	50

```sql
SELECT items.id, categories.category, items.name, items.price,
items.quantity
FROM items
INNER JOIN categories ON items.category_id = categories.categoryid
ORDER BY id
LIMIT 10 OFFSET 20;
```

Page 3:

	123 id	ABC category	ABC name	123 price	123 quantity
1	21	BOARD GAMES	UNO	50,000	50
2	22	BOARD GAMES	Gaple	10,000	50
3	23	BOARD GAMES	Kartu Remi	25,000	50
4	24	BOARD GAMES	Splendor	150,000	10
5	25	BOARD GAMES	Mint Workers	150,000	10
6	26	REMOTE CONTROL	RC Driftcar	300,000	15
7	27	REMOTE CONTROL	RC Racers	200,000	25
8	28	REMOTE CONTROL	RC Helicopter	150,000	15
9	29	REMOTE CONTROL	Racing Drones	500,000	15
10	30	MINIATURES	Miniature House Set	150,000	10

```sql
SELECT items.id, categories.category, items.name, items.price,
items.quantity
FROM items
INNER JOIN categories ON items.category_id = categories.categoryid
ORDER BY id
LIMIT 10 OFFSET 30;
```

Page 4:

	id	category	name	price	quantity
1	31	MINIATURES	My Miniature Garage	250,000	10
2	32	BATH/POOL	Rubber Ducky	25,000	100
3	33	BATH/POOL	Bath Bombs	50,000	100
4	34	FIGURINE	Nendoroid	250,000	10
5	35	FIGURINE	Living Mecha	350,000	10
6	36	FIGURINE	Marvel Superheroes	150,000	10
7	37	FIGURINE	DC Universe	150,000	10
8	38	FIGURINE	Gundam HG	500,000	25
9	39	FIGURINE	Gundam MG	1,000,000	20
10	40	FIGURINE	Gundam PG	1,500,000	10

```sql
SELECT items.id, categories.category, items.name, items.price,
items.quantity
FROM items
INNER JOIN categories ON items.category_id = categories.categoryid
ORDER BY id
LIMIT 10 OFFSET 40;
```

Page 5:

	id	category	name	price	quantity
1	41	FIGURINE	Gundam RG	2,500,000	5
2	42	FIDGETING	Lato-lato	15,000	100
3	43	FIDGETING	Fidget Spinners	50,000	100
4	44	FIDGETING	Pletokan Kecil	25,000	100
5	45	FIDGETING	Pletokan Besar	35,000	100