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Task : Join, Union, Agregasi, Subquery, Function (DBMS)

1. Insert

A. Insert 5 operators pada table operators

```
MariaDB [alta_online_shop]> insert into operator (name) values
-> ('Telkomsel'),
-> ('Indosat Ooredoo'),
-> ('Smartfren'),
-> ('Tri'),
-> ('XL');
Query OK, 5 rows affected (0.011 sec)
Records: 5 Duplicates: 0 Warnings: 0

MariaDB [alta_online_shop]> select * from operator;
+-----+-----+
| id | name          |
+-----+-----+
| 1  | Telkomsel     |
| 2  | Indosat Ooredoo |
| 3  | Smartfren     |
| 4  | Tri           |
| 5  | XL            |
+-----+-----+
5 rows in set (0.007 sec)
```

B. Insert 3 product type .

```
MariaDB [alta_online_shop]> insert into product_type (name) values
-> ('Paket Internet'),
-> ('Pulsa'),
-> ('Paket Nelpon');
Query OK, 3 rows affected (0.008 sec)
Records: 3 Duplicates: 0 Warnings: 0

MariaDB [alta_online_shop]> select * from product_type;
+-----+-----+
| id | name          |
+-----+-----+
| 1  | Paket Internet |
| 2  | Pulsa         |
| 3  | Paket Nelpon  |
+-----+-----+
3 rows in set (0.000 sec)
```

C. Insert 2 product dengan product type id = 1 , dan operators id = 3 .

```
MariaDB [alta_online_shop]> insert into products (name, product_type_id, operator_id,description_id,status,code) values
-> ('Paket Unlimited Nonstop 2 GB', 1, 3, 1, 1, '*123*4#'),
-> ('Paket Unlimited Nonstop 6 GB', 1, 3, 2, 1, '*123*5#'),
-> ('Paket Unlimited Nonstop 12 GB', 1, 3, 3, 1, '*123*6#');
Query OK, 3 rows affected (0.007 sec)
Records: 3 Duplicates: 0 Warnings: 0

MariaDB [alta_online_shop]> select * from products;
+-----+-----+-----+-----+-----+-----+-----+
| id | name                                | product_type_id | operator_id | description_id | status | code      |
+-----+-----+-----+-----+-----+-----+-----+
| 7  | Paket Unlimited Nonstop 2 GB       | 1               | 3           | 1              | 1      | *123*4#   |
| 8  | Paket Unlimited Nonstop 6 GB       | 1               | 3           | 2              | 1      | *123*5#   |
| 9  | Paket Unlimited Nonstop 12 GB      | 1               | 3           | 3              | 1      | *123*6#   |
+-----+-----+-----+-----+-----+-----+-----+
3 rows in set (0.000 sec)
```

D. Insert 3 product dengan product type id = 2 , dan operators id = 1 .

```
MariaDB [alta_online_shop]> insert into products (name, product_type_id, operator_id,description_id,status,code) values
-> ('Pulsa Telkomsel 10000', 2, 1, 3, 1, '*888#'),
-> ('Pulsa Telkomsel 20000', 2, 1, 4, 1, '*888#'),
-> ('Pulsa Telkomsel 50000', 2, 1, 5, 1, '*888#');
Query OK, 3 rows affected (0.007 sec)
Records: 3 Duplicates: 0 Warnings: 0
```

E. Insert 3 product dengan product type id = 3 , dan operators id = 4 .

```
MariaDB [alta_online_shop]> insert into products (name, product_type_id, operator_id,description_id,status,code) values
-> ('Paket nelpon semua operaor 60 menit', 3, 4, 6, 1, '*123#'),
-> ('Paket nelpon sesama tri 150 menit', 3, 4, 7, 1, '*123#'),
-> ('Paket bebas bicara 200 menit', 3, 4, 8, 1, '*123#');
Query OK, 3 rows affected (0.007 sec)
Records: 3 Duplicates: 0 Warnings: 0
```

F. Insert product description pada setiap product .

```
MariaDB [alta_online_shop]> insert into product_descriptions (description) values
-> ('Paket internet unlimited nostop 2gb'),
-> ('Paket internet unlimited nostop 6gb'),
-> ('Paket internet unlimited nostop 12gb');
Query OK, 3 rows affected (0.008 sec)
Records: 3 Duplicates: 0 Warnings: 0
```

```
MariaDB [alta_online_shop]> insert into product_descriptions (description) values
-> ('Pulsa telkomsel dengan harga 10000'),
-> ('Pulsa telkomsel dengan harga 20000'),
-> ('Pulsa telkomsel dengan harga 50000');
Query OK, 3 rows affected (0.007 sec)
Records: 3 Duplicates: 0 Warnings: 0
```

```
MariaDB [alta_online_shop]> insert into product_descriptions (description) values
-> ('Paket telepon Tri semua operator selama 60 menit'),
-> ('Paket telepon Tri sesama Tri selama 150 menit'),
-> ('Paket bebas bicara tri selama 200 menit');
Query OK, 3 rows affected (0.007 sec)
Records: 3 Duplicates: 0 Warnings: 0
```

G. Insert 3 payment methods .

```
MariaDB [alta_online_shop]> select * from payment_method;
```

id	name	status
1	Transfer Bank	1
2	E-Wallet	1
3	Credit Card	1

3 rows in set (0.007 sec)

H. Insert 5 user pada tabel user .

```
MariaDB [alta_online_shop]> select * from users;
```

id	nama	alamat	status_user	gender	tanggal_lahir	created_at	update_at
1	John Doe	Bogor	active	Laki -laki	2000-09-15 12:43:40	2022-09-15 17:48:04	NULL
2	Jane Dou	Jakarta	active	Perempuan	2001-09-15 12:43:40	2022-09-15 17:48:04	NULL
3	Harris	Bogor	active	Laki -laki	2002-07-15 12:43:40	2022-09-15 17:48:15	NULL
4	Bella Dou	Jakarta	active	Perempuan	2001-09-15 12:43:40	2022-09-15 17:48:15	NULL
5	James	Depok	active	Laki-laki	2004-10-15 12:48:20	2022-09-15 17:49:27	NULL

5 rows in set (0.001 sec)

- I. Insert 3 transaksi di masing - masing user . (soal berlanjut ke soal 1.j)

```
MariaDB [alta_online_shop]> select * from transactions;
```

id	user_id	payment_method_id	total_qty	total_price	status
1	1	1	2	30000	success
2	1	2	3	40000	success
3	1	2	4	100000	success
5	2	1	2	80000	success
6	2	1	2	80000	success
7	2	3	6	120000	success
8	3	1	3	20000	success
9	3	3	1	10000	success
10	3	1	3	20000	success
12	4	1	1	30000	success
13	4	2	5	100000	success
14	4	3	2	40000	success
18	5	1	3	120000	success
19	5	1	4	50000	success
20	5	1	3	120000	success

15 rows in set (0.001 sec)

- J. Insert 3 product di masing - masing transaksi . j .

```
MariaDB [alta_online_shop]> select * from transaction_detail;
```

id	transaction_id	product_id	status	qty	price
1	1	2	success	1	20000
2	1	2	success	1	20000
3	1	2	success	1	30000
4	2	2	success	1	30000
5	2	3	success	1	12000
6	2	3	success	1	12000
7	3	6	success	1	20000
8	3	6	success	1	20000
9	3	3	success	1	12000
10	5	3	success	1	12000
11	5	1	success	1	30000
12	5	1	success	1	30000
13	6	7	success	1	15000
14	6	7	success	1	15000
15	6	4	success	1	22000
16	7	4	success	1	22000
17	7	4	success	1	20000
18	7	2	success	1	20000
19	8	8	success	1	10000
20	8	8	success	1	10000
21	8	1	success	1	15000
22	9	6	success	1	10000
23	9	5	success	1	50000
24	9	5	success	1	50000
25	10	3	success	1	12000
26	10	3	success	1	12000
27	10	1	success	1	22000
28	12	1	success	1	22000
29	12	8	success	1	10000
30	12	8	success	1	10000
31	13	4	success	1	22000
32	13	2	success	1	10000
33	13	4	success	1	22000
34	14	2	success	1	10000
35	14	6	success	1	15000
36	14	2	success	1	30000

2. Select

a. Tampilkan nama user / pelanggan dengan gender Laki - laki / M.

```
MariaDB [alta_online_shop]> select * from users where gender = "Laki-laki";
```

id	nama	alamat	status_user	gender	tanggal_lahir	created_at	update_at
1	John Doe	Bogor	active	Laki-laki	2000-09-15 12:43:40	2022-09-15 17:48:04	NULL
3	Harris	Bogor	active	Laki-laki	2002-07-15 12:43:40	2022-09-15 17:48:15	NULL
5	James	Depok	active	Laki-laki	2004-10-15 12:48:20	2022-09-15 17:49:27	NULL

3 rows in set (0.001 sec)

b. Tampilkan product dengan id = 3 .

```
MariaDB [alta_online_shop]> select * from products where id = 3;
```

id	name	product_type_id	operator_id	description_id	status	code
3	Pulsa Telkomsel 10000	2	1	3	1	*888#

1 row in set (0.000 sec)

c. Tampilkan data pelanggan yang created_at dalam range 7 hari kebelakang dan mempunyai nama mengandung kata 'a' .

```
MariaDB [alta_online_shop]> select * from users where date(created_at) > CURDATE() - interval 7 day AND nama like '%a%';
```

id	nama	alamat	status_user	gender	tanggal_lahir	created_at	update_at
2	Jane Dou	Jakarta	active	Perempuan	2001-09-15 12:43:40	2022-09-15 17:48:04	NULL
3	Harris	Bogor	active	Laki-laki	2002-07-15 12:43:40	2022-09-15 17:48:15	NULL
4	Bella Dou	Jakarta	active	Perempuan	2001-09-15 12:43:40	2022-09-15 17:48:15	NULL
5	James	Depok	active	Laki-laki	2004-10-15 12:48:20	2022-09-15 17:49:27	NULL

4 rows in set (0.007 sec)

d. Hitung jumlah user / pelanggan dengan status gender Perempuan .

```
MariaDB [alta_online_shop]> select count(id) users_perempuan from users where gender = "perempuan";
```

users_perempuan
2

1 row in set (0.000 sec)

e. Tampilkan data pelanggan dengan urutan sesuai nama abjad

```
MariaDB [alta_online_shop]> select * from users order by nama asc;
```

id	nama	alamat	status_user	gender	tanggal_lahir	created_at	update_at
4	Bella Dou	Jakarta	active	Perempuan	2001-09-15 12:43:40	2022-09-15 17:48:15	NULL
3	Harris	Bogor	active	Laki-laki	2002-07-15 12:43:40	2022-09-15 17:48:15	NULL
5	James	Depok	active	Laki-laki	2004-10-15 12:48:20	2022-09-15 17:49:27	NULL
2	Jane Dou	Jakarta	active	Perempuan	2001-09-15 12:43:40	2022-09-15 17:48:04	NULL
1	John Doe	Bogor	active	Laki-laki	2000-09-15 12:43:40	2022-09-15 17:48:04	NULL

5 rows in set (0.000 sec)

f. Tampilkan 5 data pada data product

```
MariaDB [alta_online_shop]> select * from products limit 5;
```

id	name	product_type_id	operator_id	description_id	status	code
1	Paket Unlimited Nonstop 2 GB	1	3	1	1	*123*4#
2	Paket Unlimited Nonstop 6 GB	1	3	2	1	*123*5#
3	Pulsa Telkomsel 10000	2	1	3	1	*888#
4	Pulsa Telkomsel 20000	2	1	4	1	*888#
5	Pulsa Telkomsel 50000	2	1	5	1	*888#

5 rows in set (0.000 sec)

3. Update

a . Ubah data product id 1 dengan nama ' product dummy ' .

```
MariaDB [alta_online_shop]> update products set name = 'Product dummy' where id = 1;
Query OK, 1 row affected (0.002 sec)
Rows matched: 1 Changed: 1 Warnings: 0

MariaDB [alta_online_shop]> select * from products;
```

id	name	product_type_id	operator_id	description_id	status	code
1	Product dummy	1	3	1	1	*123*4#
2	Paket Unlimited Nonstop 6 GB	1	3	2	1	*123*5#
3	Pulsa Telkomsel 10000	2	1	3	1	*888#
4	Pulsa Telkomsel 20000	2	1	4	1	*888#
5	Pulsa Telkomsel 50000	2	1	5	1	*888#
6	Paket nelson semua operaor 60 menit	3	4	6	1	*123#
7	Paket nelson sesama tri 150 menit	3	4	7	1	*123#
8	Paket bebas bicara 200 menit	3	4	8	1	*123#

```
8 rows in set (0.000 sec)
```

b . Update qty = 3 pada transaction detail dengan product id 1 .

```
MariaDB [alta_online_shop]> update transaction_detail set qty = 3 where product_id = 1;
Query OK, 5 rows affected (0.007 sec)
Rows matched: 5 Changed: 5 Warnings: 0

MariaDB [alta_online_shop]> select * from transaction_detail;
```

id	transaction_id	product_id	status	qty	price
1	1	2	success	1	20000
2	1	2	success	1	20000
3	1	2	success	1	30000
4	2	2	success	1	30000
5	2	3	success	1	12000
6	2	3	success	1	12000
7	3	6	success	1	20000
8	3	6	success	1	20000
9	3	3	success	1	12000
10	5	3	success	1	12000
11	5	1	success	3	30000
12	5	1	success	3	30000
13	6	7	success	1	15000
14	6	7	success	1	15000
15	6	4	success	1	22000
16	7	4	success	1	22000
17	7	4	success	1	20000
18	7	2	success	1	20000
19	8	8	success	1	10000
20	8	8	success	1	10000
21	8	1	success	3	15000
22	9	6	success	1	10000
23	9	5	success	1	50000
24	9	5	success	1	50000
25	10	3	success	1	12000
26	10	3	success	1	12000
27	10	1	success	3	22000
28	12	1	success	3	22000
29	12	8	success	1	10000

4. Delete

a . Delete data pada tabel product dengan id 1 .

```
MariaDB [alta_online_shop]> delete from products where id = 1;
ERROR 1451 (23000): Cannot delete or update a parent row: a foreign key constraint fails ('alta_online_shop`.`transaction_detail`, CONSTRAINT `transaction_detail_ibfk_2` FOREIGN KEY (`product_id`) REFERENCES `products` (`id`))
```

b . Delete pada pada tabel product dengan product type id 1 .

```
MariaDB [alta_online_shop]> delete from products where product_type_id = 1;
ERROR 1451 (23000): Cannot delete or update a parent row: a foreign key constraint fails ('alta_online_shop`.`transaction_detail`, CONSTRAINT `transaction_detail_ibfk_2` FOREIGN KEY (`product_id`) REFERENCES `products` (`id`))
MariaDB [alta_online_shop]>
```

Join , Union , Sub - query , Function

1. Gabungkan data transaksi dari user id 1 dan user id 2 .

```
MariaDB [alta_online_shop]> select * from transactions where user_id between 1 and 2;
```

id	user_id	payment_method_id	total_qty	total_price	status
1	1	1	2	30000	success
2	1	2	3	40000	success
3	1	2	4	100000	success
5	2	1	2	80000	success
6	2	1	2	80000	success
7	2	3	6	120000	success

```
6 rows in set (0.001 sec)
```

2. Tampilkan jumlah harga transaksi user id 1 .

```
MariaDB [alta_online_shop]> select sum(total_price) jumlah_harga from transactions where user_id = 1;
```

jumlah_harga
170000

```
1 row in set (0.000 sec)
```

3. Tampilkan total transaksi dengan product type 2 .

```
MariaDB [alta_online_shop]> select count(user_id) from transactions t inner join transaction_detail d on t.id = d.transaction_id inner join products p on d.product_id = p.id where product_type_id = 2;
```

count(user_id)
17

```
1 row in set (0.001 sec)
```

4. Tampilkan semua field table product dan field name table product type yang saling berhubungan .

```
MariaDB [alta_online_shop]> select products.*,product_type.name from products inner join product_type on products.id = product_type.id;
```

id	name	product_type_id	operator_id	description_id	status	code	name
1	Product dummy	1	3	1	1	*123*4#	Paket Internet
2	Paket Unlimited Nonstop 6 GB	1	3	2	1	*123*5#	Pulsa
3	Pulsa Telkomsel 10000	2	1	3	1	*888#	Paket Nelpon

```
3 rows in set (0.000 sec)
```

5. Tampilkan semua field table transaction , field name table product dan field name table user .

```
MariaDB [alta_online_shop]> select t.*, p.name, u.name from transactions t
-> inner join products p on t.id = p.id
-> inner join users u on p.id = u.id;
```

id	user_id	payment_method_id	total_qty	total_price	status	name	nama
1	1	1	2	30000	success	Product dummy	John Doe
2	1	2	3	40000	success	Paket Unlimited Nonstop 6 GB	Jane Dou
3	1	2	4	100000	success	Pulsa Telkomsel 10000	Harris
5	2	1	2	80000	success	Pulsa Telkomsel 50000	James

```
4 rows in set (0.000 sec)
```

6. Buat function setelah data transaksi dihapus maka transaction detail terhapus juga dengan transaction id yang dimaksud .

```
MariaDB [alta_online_shop]> DELIMITER $$
MariaDB [alta_online_shop]> CREATE TRIGGER transaction_delete AFTER DELETE ON transactions
-> FOR EACH ROW
-> BEGIN
-> DELETE FROM transaction_detail
-> WHERE transaction_detail.transaction_id = old.id;
-> END $$
Query OK, 0 rows affected (0.009 sec)
```

DELIMITER \$\$

CREATE TRIGGER transaction_delete AFTER DELETE on transactions

FOR EACH ROW

BEGIN

DELETE FROM transaction_detail

WHERE transaction_detail.transaction_id = old.id;

END \$\$

DELIMITER ;

7. Buat function setelah data transaksi detail dihapus maka data total_qty terupdate berdasarkan qty data transaction id yang dihapus .

```
MariaDB [alta_online_shop]> CREATE TRIGGER transaction_detail_delete AFTER DELETE ON transaction_detail
-> FOR EACH ROW
-> BEGIN
-> DECLARE v_qty INT;
-> SET v_qty = OLD.qty;
-> UPDATE transactions SET total_qty = v_qty;
-> END $$
Query OK, 0 rows affected (0.016 sec)
```

```
MariaDB [alta_online_shop]> DELETE FROM transaction_detail where id = 1;
Query OK, 1 row affected (0.008 sec)
```

```
MariaDB [alta_online_shop]> select * from transactions;
```

id	user_id	payment_method_id	total_qty	total_price	status
1	1	1	1	30000	success
2	1	2	1	40000	success
3	1	2	1	100000	success
5	2	1	1	80000	success
6	2	1	1	80000	success
7	2	3	1	120000	success
8	3	1	1	20000	success
9	3	3	1	10000	success
10	3	1	1	20000	success
12	4	1	1	30000	success
13	4	2	1	100000	success
14	4	3	1	40000	success
18	5	1	1	120000	success
19	5	1	1	50000	success
20	5	1	1	120000	success

15 rows in set (0.000 sec)

8. Tampilkan data products yang tidak pernah ada di tabel transaction_details dengan sub - query .

```
MariaDB [alta_online_shop]> select * from products where id NOT IN (select product_id from transaction_detail);
Empty set (0.008 sec)
```