LAPORAN PRAKTIKUM 9

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A. User yang kalian buat beserta alasannya:

1. manajer_bb

-User manajer_bb dengan hak akses SELECT pada semua tabel dan bisa INSERT, UPDATE, DELETE pada tabel employees, menu_items, dan promotions

-Alasan Membuat user manajer bb:

Manajer perlu memonitor dan mengelola data menu, promosi, serta pegawai. Karena itu, dia diberikan akses membaca (SELECT), menambahkan (INSERT), mengubah (UPDATE), dan menghapus (DELETE) pada tabel tersebut.

-Query Grant

CREATE USER 'manajer_bb'@'localhost' IDENTIFIED BY 'manajer123';

GRANT SELECT ON black_beans.* TO 'manajer_bb'@'localhost';

GRANT INSERT, UPDATE, DELETE ON black_beans.employees TO 'manajer bb'@'localhost';

GRANT INSERT, UPDATE, DELETE ON black_beans.menu_items TO 'manajer bb'@'localhost';

GRANT INSERT, UPDATE, DELETE ON black_beans.promotions TO 'manajer_bb'@'localhost';

FLUSH PRIVILEGES;

-Cek Grant User

SHOW GRANTS FOR 'manajer_bb'@'localhost';

```
MariaDB [(none)]> GRANT SELECT ON black_beans.* TO 'manajer_bb'@'localhost';
Query OK, 0 rows affected (0.055 sec)

MariaDB [(none)]> GRANT INSERT, UPDATE, DELETE ON black_beans.employees TO 'manajer_bb'@'localhost';
Query OK, 0 rows affected (0.012 sec)

MariaDB [(none)]> GRANT INSERT, UPDATE, DELETE ON black_beans.menu_items TO 'manajer_bb'@'localhost';
Query OK, 0 rows affected (0.005 sec)

MariaDB [(none)]> GRANT INSERT, UPDATE, DELETE ON black_beans.promotions TO 'manajer_bb'@'localhost';
Query OK, 0 rows affected (0.004 sec)

MariaDB [(none)]> SHOW GRANTS FOR 'manajer_bb'@'localhost';

GRANT USAGE ON *.* TO 'manajer_bb'@'localhost'
| GRANT SELECT ON 'black_beans'.* TO 'manajer_bb'@'localhost'
| GRANT INSERT, UPDATE, DELETE ON 'black_beans'.'promotions' TO 'manajer_bb'@'localhost'
| GRANT INSERT, UPDATE, DELETE ON 'black_beans'.'menu_items' TO 'manajer_bb'@'localhost'
| GRANT INSERT, UPDATE, DELETE ON 'black_beans'.'menu_items' TO 'manajer_bb'@'localhost'
| GRANT INSERT, UPDATE, DELETE ON 'black_beans'.'menu_items' TO 'manajer_bb'@'localhost'
| GRANT INSERT, UPDATE, DELETE ON 'black_beans'.'menu_items' TO 'manajer_bb'@'localhost'
| GRANT INSERT, UPDATE, DELETE ON 'black_beans'.'menu_items' TO 'manajer_bb'@'localhost'
| GRANT INSERT, UPDATE, DELETE ON 'black_beans'.'menu_items' TO 'manajer_bb'@'localhost'
| GRANT INSERT, UPDATE, DELETE ON 'black_beans'.'menu_items' TO 'manajer_bb'@'localhost'
| GRANT INSERT, UPDATE, DELETE ON 'black_beans'.'menu_items' TO 'manajer_bb'@'localhost'
| GRANT INSERT, UPDATE, DELETE ON 'black_beans'.'menu_items' TO 'manajer_bb'@'localhost'
| GRANT INSERT, UPDATE, DELETE ON 'black_beans'.'menu_items' TO 'manajer_bb'@'localhost'
| GRANT INSERT, UPDATE, DELETE ON 'black_beans'.'menu_items' TO 'manajer_bb'@'localhost'
| GRANT INSERT, UPDATE, DELETE ON 'black_beans'.'menu_items' TO 'manajer_bb'@'localhost'
```

2. Kasir_bb

-User kasir_bb dengan hak akses SELECT dan INSERT pada tabel payments, orders, dan order_items.

-Alasan Membuat user kasir bb:

Kasir perlu mengelola data orderan serta pembayaran. Karena itu, dia diberikan akses membaca (SELECT) dan menambahkan (INSERT) pada ketiga tabel.

-Query Grant

```
CREATE USER 'kasir bb'@'localhost' IDENTIFIED BY 'kasir123';
GRANT
           SELECT,
                        INSERT
                                   ON
                                          black beans.orders
                                                               to
'kasir bb'@'localhost';
GRANT
          SELECT,
                      INSERT
                                ON
                                      black beans.order items
                                                               to
'kasir bb'@'localhost';
GRANT
                                        black beans.payments
           SELECT.
                      INSERT
                                 ON
                                                               to
'kasir bb'@'localhost';
FLUSH PRIVILEGES;
```

-Cek Grant User SHOW GRANTS FOR 'kasir bb'@'localhost';

```
MariaDB [(none)]> create user 'kasir_bb'@'localhost' identified by 'kasir123';
Query OK, 0 rows affected (0.064 sec)

MariaDB [(none)]> use black_beans;
Database changed

MariaDB [black_beans]> grant select, insert orders to 'kasir_bb'@'localhost';
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'orders to 'kasir_bb'@'localhost' at line 1

MariaDB [black_beans]> grant select, insert on orders to 'kasir_bb'@'localhost';
Query OK, 0 rows affected (0.040 sec)

MariaDB [black_beans]> grant select, insert on order_items to 'kasir_bb'@'localhost';
Query OK, 0 rows affected (0.008 sec)

MariaDB [black_beans]> show grant select, insert on payments to 'kasir_bb'@'localhost';
Query OK, 0 rows affected (0.007 sec)

MariaDB [black_beans]> show grants for 'kasir_bb'@'localhost';

Grants for kasir_bb@localhost

GRANT USAGE ON *.* TO 'kasir_bb'@'localhost' DENTIFIED BY PASSWORD '*DS84EF6B33BEBCE2A594C96BDDAA0E2B9A05B7D4' |
GRANT SELECT, INSERT ON 'black_beans'.'order_items' TO 'kasir_bb'@'localhost'

GRANT SELECT, INSERT ON 'black_beans'.'order_items' TO 'kasir_bb'@'localhost'

4 rows in set (0.008 sec)

MariaDB [black_beans]>
```

3. Barista bb

-User barista_bb hanya memiliki hak akses SELECT pada tabel menu_items, orders, promotions, category, dan shifts.

-Alasan Membuat user barista bb:

Barista tentukan perlu untuk melihat menu, orderan, promosi, dll nya. Maka dari itu, kita perlu memberikan hak akses untuk menselect tabel tersebut.

-Query Grant

CREATE USER 'barista_bb'@'localhost' IDENTIFIED BY 'barista123';

GRANT SELECT ON black_beans.menu_items TO 'barista bb'@'localhost';

GRANT SELECT ON black_beans.orders TO 'barista_bb'@'localhost';

GRANT SELECT ON black_beans.promotions TO 'barista bb'@'localhost';

GRANT SELECT ON black_beans.categories TO 'barista bb'@'localhost';

GRANT SELECT ON black_beans.shifts TO 'barista_bb'@'localhost'; FLUSH PRIVILEGES;

-Cek Grant User

SHOW GRANTS FOR 'barista bb'@'localhost';

```
MariaDB [(none)]> CREATE USER 'barista_bb'@'localhost' IDENTIFIED BY 'barista123';
Query OK, 0 rows affected (0.017 sec)

MariaDB [(none)]> GRANT SELECT ON black_beans.menu_items TO 'barista_bb'@'localhost';
Query OK, 0 rows affected (0.004 sec)

MariaDB [(none)]> GRANT SELECT ON black_beans.orders TO 'barista_bb'@'localhost';
Query OK, 0 rows affected (0.004 sec)

MariaDB [(none)]> GRANT SELECT ON black_beans.promotions TO 'barista_bb'@'localhost';
Query OK, 0 rows affected (0.004 sec)

MariaDB [(none)]> GRANT SELECT ON black_beans.categories TO 'barista_bb'@'localhost';
Query OK, 0 rows affected (0.004 sec)

MariaDB [(none)]> GRANT SELECT ON black_beans.shifts TO 'barista_bb'@'localhost';
Query OK, 0 rows affected (0.004 sec)

MariaDB [(none)]> FLUSH PRIVILEGES;
Query OK, 0 rows affected (0.007 sec)

MariaDB [(none)]> SHOW GRANTS FOR 'barista_bb'@'localhost';

Grants for barista_bb@localhost

GRANT USAGE ON *.* TO 'barista_bb'@'localhost' IDENTIFIED BY PASSWORD '*9C35639A3AA76D2016A98E6D0EA8ED1A1DC2403E'
GRANT SELECT ON 'black_beans'.'orders' TO 'barista_bb'@'localhost'
GRANT SELECT ON 'black_beans'.'snenu_items' TO 'barista_bb'@'localhost'
GRANT SELECT ON 'black_beans'.'nonun_items' TO 'barista_bb'@'localhost'
GRANT SELECT ON 'blac
```

Alasan User yang telah dibuat telah cukup:

Saya membuat user sesuai dengan job desk yang ada pada pegawai black_beans saja, yang paling utamanya yaitu manajer, kasir, barista, dan waiter. Manajer di sini tentunya memiliki hak akses yang paling beda (spesial) karena dia bisa menambahkan, merubah, atau menghapus pegawai yang ada pada black_beans. Selain itu, ada kasir yang tentunya akan fokus pada transaksi orderan dan pembayaran. Dan Terakhir, tentunya kita juga perlu membuatkan user untuk pekerja lainnya, disini saya menyatukan kategori untuk waiter dan barista, karena menurut saya, mereka memiliki kewenangan yang sama untuk mengakses data dalam black_beans.

Menurut saya 3 user itu cukup, karena setiap dari user itu memiliki peran yang berbeda-beda, dan untuk pelanggan itu sebenarnya tidak perlu melihat data langsung dari databasenya untuk menu, dia bisa melihat data menu berdasarkan data yang sudah disajikan oleh pegawai, dalam bentuk buku menu yang tinggal dibaca saja.

- B. Perintah hak akses dengan transactions (cukup DML saja):
 - 1. Manajer bb
 - -Screenshot mysql -u user -p

```
D:\Muhammad 'Azmi Salam\Kuliah\Semester 2\Algoritma dan Struktur Data\Day-13
>mysql -u manajer_bb -p
Enter password: ********
Welcome to the MariaDB monitor. Commands end with ; or \g.
Your MariaDB connection id is 11
Server version: 10.4.32-MariaDB mariadb.org binary distribution

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statemen t.

MariaDB [(none)]>
```

-Query Commit START TRANSACTION; INSERT INTO menu_items (name, price, category_id) VALUES ('Kopi Luwak', 20000, 1); COMMIT;

-Cek perubahan

```
MariaDB [black_beans]> SELECT item_id, name, price, c.category_name from menu_items
-> JOIN categories c ON menu_items.category_id = c.category_id;
   item_id | name
                                                       price
                                                                            category_name
                                                       25000 .00
30000 .00
27000 .00
32000 .00
28000 .00
25000 .00
25000 .00
20000 .00
22000 .00
24000 .00
28000 .00
29000 .00
                                                                            Coffee
Coffee
Coffee
                     Espresso
                     Latte
                     Americano
                                                                            Coffee
Tea
Tea
                    Cappuccino
Green Tea
Black Tea
                     Matcha Latte
                                                                            Tea
                    Croissant
Chocolate Muffin
                                                                            Pastry
Pastry
                     Cheese Danish
                                                                            Pastry
                     Espresso
                                                                            Coffee
                                                                            Tea
Pastry
                     Oolong Tea
Almond Croissant
13 rows in set (0.002 sec)
```

```
MariaDB [black_beans]> START TRANSACTION;
Query OK, 0 rows affected (0.001 sec)
MariaDB [black_beans]> INSERT INTO menu_items (name, price, category_id)
    -> VALUES ('Kopi Luwak', 20000, 1);
Query OK, 1 row affected (0.003 sec)
MariaDB [black_beans]> COMMIT;
Query OK, 0 rows affected (0.004 sec)
MariaDB [black_beans]> SELECT item_id, name, price, c.category_name from menu_items
-> JOIN categories c ON menu_items.category_id = c.category_id;
  item_id | name
                                        price
                                                       category_name
               Espresso
                                         25000.00
                                                       Coffee
Coffee
               Latte
                                         30000.00
               Americano
                                         27000.00
                                                       Coffee
          4
               Cappuccino
                                         32000.00
               Green Tea
Black Tea
                                         28000.00
                                                       Tea
                                         25000.00
                                                       Tea
                                         35000.00
               Matcha Latte
                                                       Tea
               Croissant
                                         20000.00
                                                       Pastry
               Chocolate Muffin
                                         22000.00
                                                        Pastry
               Cheese Danish
                                         24000.00
                                                        Pastry
                                         28000.00
               Espresso
                                                        Coffee
               Oolong Tea
Almond Croissant
                                         29000.00
                                                        Tea
                                         26000.00
                                                       Pastry
               Kopi Luwak
                                         20000.00
                                                       Coffee
14 rows in set (0.001 sec)
MariaDB [black_beans]>
```

Setelah dicommit data baru menjadi masuk ke database, karena kita mengakhiri transaksi dengan query COMMIT.

```
-Query Rollback
START TRANSACTION;
INSERT INTO menu_items (name, price, category_id)
VALUES ('Teh Tarik Mantap', 23000, 2);
SELECT item_id, name, price, c.category_name from menu_items
JOIN categories c ON menu_items.category_id = c.category_id;
ROLLBACK;
```

-Cek Perubahan data (screenshot tabel select - before dan after transaction)

```
MariaDB [black_beans]> SELECT item_id, name, price, c.category_name from menu_items
-> JOIN categories c ON menu_items.category_id = c.category_id;
 item id | name
                                               price
                                                                category_name
                                                25000.00
30000.00
                  Espresso
Latte
                                                                 Coffee
                                                                 Coffee
                                                27000.00
32000.00
28000.00
                                                                Coffee
Coffee
                  Americano
                 Cappuccino
Green Tea
Black Tea
                                                                 Tea
                                                25000.00
35000.00
20000.00
                                                                 Tea
                  Matcha Latte
Croissant
                                                                 Tea
                                                                 Pastry
                                               22000.00
24000.00
28000.00
                  Chocolate Muffin
                                                                 Pastry
                                                                 Pastry
          10
                 Cheese Danish
Espresso
                                                                 Coffee
                  Oolong Tea
Almond Croissant
                                                29000.00
                                                                 Tea
                                                26000.00
20000.00
                                                                 Pastry
                  Kopi Luwak
                                                                 Coffee
14 rows in set (0.002 sec)
```

Dapat dilihat gambar di atas merupakan tabel sebelum kita melakukan transaksi apapun, data terakhir ada pada kopi luwak.

-> J0I item_id	+ name	 price	 category_name	† 			
1	+ Espresso	 25000.00	 Coffee	+ 			
2	Latte	3000.00	Coffee	i			
3	Americano	27000.00	Coffee	i			
4	Cappuccino	32000.00	Coffee	i			
5	Green Tea	28000.00	Tea	i			
6	Black Tea	25000.00	Tea	i			
7	Matcha Latte	35000.00	Tea	i			
8	Croissant	20000.00	Pastry	į .			
9	Chocolate Muffin	22000.00	Pastry				
10	Cheese Danish	24000.00	Pastry	İ			
11	Espresso	28000.00	Coffee	İ			
12	Oolong Tea	29000.00	Tea	İ			
13	Almond Croissant	26000.00	Pastry	i			
15	Kopi Luwak	20000.00	Coffee	}			
16 5 rows in ariaDB [b uery OK,	Teh Tarik Mantap 	23000.00 + CK; 905 sec)	Tea	<u> </u> 			
16 5 rows in ariaDB [b uery OK,	Teh Tarik Mantap set (0.001 sec) lack_beans]> ROLLBAG rows affected (0.0 lack_beans]> SELECT N categories c ON mo	23000.00 	Tea		from menu	∟items	
16 5 rows in ariaDB [b uery OK, ariaDB [b -> JOI item_id	Teh Tarik Mantap set (0.001 sec) lack_beans]> ROLLBA(0 rows affected (0.0 lack_beans]> SELECT N categories c ON mo	23000.00 CK; 905 sec) item_id, na enu_items.ca price	Tea ame, price, c.ca ategory_id = c.c category_name		from menu	∟items	
16 orows in ariaDB [b iery OK, ariaDB [b -> JOI item_id	Teh Tarik Mantap set (0.001 sec) lack_beans]> ROLLBAG rows affected (0.0 lack_beans]> SELECT N categories c ON model name	23000.00 item_id, namenu_items.ca	Tea ame, price, c.ca ategory_id = c.c category_name Coffee		from menu	ı_items	
16 5 rows in ariaDB [b lery OK, s ariaDB [b -> JOI item_id 1	Teh Tarik Mantap set (0.001 sec) Lack_beans]> ROLLBAG rows affected (0.0 Lack_beans]> SELECT N categories c ON mm name Espresso Latte	23000.00 ck; 905 sec) item_id, na enu_items.ca price 25000.00 30000.00	Tea ame, price, c.ca ategory_id = c.c category_name Coffee Coffee		from menu	∟items	
16 5 rows in ariaDB [b lery OK, ariaDB [b -> JOI item_id 1 2 3	Teh Tarik Mantap set (0.001 sec) lack_beans]> ROLLBA(0 rows affected (0.0) lack_beans]> SELECT N categories c ON molecules name rows affected Control second control contro	23000.00 item_id, na enu_items.ca price 25000.00 30000.00	Tea ame, price, c.ca ategory_id = c.c category_name coffee Coffee Coffee		from menu	_items	
16 5 rows in ariaDB [b ery OK, ariaDB [b -> JOI item_id 11 2 3 4	Teh Tarik Mantap set (0.001 sec) Lack_beans]> ROLLBAG rows affected (0.0 Lack_beans]> SELECT Categories c ON model name name Espresso Latte Americano Cappuccino	23000.00 item_id, na enu_items.ca price 25000.00 30000.00 27000.00	Tea ame, price, c.ca ategory_id = c.c category_name category_name Coffee Coffee Coffee		from menu	∟items (
16 5 rows in ariaDB [b lery OK, ariaDB [b -> JOI item_id 1 2 3	Teh Tarik Mantap set (0.001 sec) lack_beans]> ROLLBA(0 rows affected (0.0) lack_beans]> SELECT N categories c ON molecules name rows affected Control second control contro	23000.00 item_id, na enu_items.ca price 25000.00 30000.00 27000.00 32000.00	Tea ame, price, c.ca ategory_id = c.c category_name coffee Coffee Coffee		from menu	_items	
16 5 rows in ariaDB [b lery OK, s ariaDB [b -> JOI item_id 1 2 3 4 5 6	Teh Tarik Mantap set (0.001 sec) Lack_beans]> ROLLBAG rows affected (0.0 Lack_beans]> SELECT N categories c ON mm name Espresso Latte Americano Cappuccino Green Tea Black Tea	23000.00 item_id, na enu_items.ca price 25000.00 30000.00 32000.00 28000.00 25000.00	Tea ame, price, c.ca ategory_id = c.c category_name Coffee Coffee Coffee Coffee Toffee Tea		from menu	∟items	
16 5 rows in ariaDB [b uery OK, ariaDB [b -> JOI -> item_id 1 2 3 4 5	Teh Tarik Mantap set (0.001 sec) Lack_beans]> ROLLBAG rows affected (0.0 Lack_beans]> SELECT N categories c ON molecular name Espresso Latte Americano Cappuccino Green Tea	23000.00 item_id, na enu_items.ca price 25000.00 30000.00 27000.00 28000.00 28000.00 25000.00 35000.00	Tea ame, price, c.ca ategory_id = c.c category_name Coffee Coffee Coffee Coffee Coffee Tea Tea Tea		from menu	∟items	
16 5 rows in ariaDB [b ery OK, ariaDB [b -> JOI	Teh Tarik Mantap set (0.001 sec) Lack_beans]> ROLLBAGO rows affected (0.000) Lack_beans]> SELECT No categories con model in the content of	23000.00 item_id, na enu_items.ca price 25000.00 30000.00 27000.00 32000.00 28000.00 35000.00 20000.00	Tea ame, price, c.ca ategory_id = c.c category_name coffee Coffee Coffee Coffee Tea Tea Tea Pastry		from menu	_items	
16 5 rows in ariaDB [b ery OK, ariaDB [b -> JOI item_id 2 3 4 5 6 7 8 9	Teh Tarik Mantap set (0.001 sec) lack_beans]> ROLLBAGO rows affected (0.000) lack_beans]> SELECT lack_beans]> SELECT lack_beans]> SELECT lack_beans]> SELECT lack_beans]> SELECT lack_beans]> SELECT lack_beans]> SELECT lack_beans]> SELECT lack_beans]> SELECT lack_beans]> SELECT lack_beans]> SELECT lack_beans]> SELECT lack_beans]> SELECT lack_beans] lack	23000.00 item_id, na enu_items.ca price 25000.00 30000.00 27000.00 28000.00 25000.00 25000.00 25000.00 25000.00	Tea ame, price, c.ca ategory_id = c.c category_name category_name Coffee Coffee Coffee Tea Tea Pastry Pastry		from menu	∟items	
16 5 rows in ariaDB [b lery OK, ariaDB [b -> JOI item_id 1 2 3 4 5 6 7 8	Teh Tarik Mantap set (0.001 sec) Lack_beans]> ROLLBAG rows affected (0.0 Lack_beans]> SELECT N categories c ON mm categories	23000.00 item_id, na enu_items.ca price 25000.00 30000.00 27000.00 32000.00 28000.00 35000.00 20000.00	Tea ame, price, c.ca ategory_id = c.c category_name coffee Coffee Coffee Coffee Tea Tea Tea Pastry		from menu	_items	
16 5 rows in ariaDB [b uery OK, d ariaDB [b -> JOI 	Teh Tarik Mantap set (0.001 sec) lack_beans]> ROLLBAGO rows affected (0.000) lack_beans]> SELECT lack_beans]> SELECT lack_beans]> SELECT lack_beans]> SELECT lack_beans]> SELECT lack_beans]> SELECT lack_beans]> SELECT lack_beans]> SELECT lack_beans]> SELECT lack_beans]> SELECT lack_beans]> SELECT lack_beans]> SELECT lack_beans]> SELECT lack_beans] lack	23000.00 item_id, na enu_items.ca price 25000.00 30000.00 27000.00 32000.00 25000.00 25000.00 25000.00 25000.00 24000.00	Tea ame, price, c.ca ategory_id = c.c category_name Coffee Coffee Coffee Coffee Tea Tea Pastry Pastry Pastry		from menu	_items	
16 5 rows in ariaDB [b ery OK, ariaDB [b -> JOI	Teh Tarik Mantap set (0.001 sec) lack_beans]> ROLLBAGO rows affected (0.001 sec) lack_beans]> SELECT N categories c ON model of the second s	23000.00 item_id, na enu_items.ca price 25000.00 30000.00 27000.00 28000.00 25000.00 25000.00 20000.00 20000.00 20000.00 24000.00 24000.00 24000.00	Tea ame, price, c.ca ategory_id = c.c category_name Coffee Coffee Coffee Tea Tea Tea Pastry Pastry Pastry Coffee		from menu	_items	

Gambar di atas merupakan query ketika saya sudah memulai transaksi, saya memasukan salah satu data, dan dapat dilihat data itu juga masuk ke dalam tabel yaitu 'Teh Tarik Mantap'. Namun, saya ingin membatalkan transaksi, maka saya perlu mengakhiri transaksinya dengan query ROLLBACK, dan saya juga kembali menselect tabel, dapat dilihat data 'Teh Tarik Mantap', yang tadi sempat masuk ke dalam tabel, kini sudah tidak ada dalam tabel, hal itu dikarenakan transaksi yang kita lakukan tadi sudah kita batalkan dengan query ROLLBACK.

2. kasir bb

-Screenshot mysql -u user -p

```
C:\Users\ASUS>mysql -u kasir_bb -p
Enter password: *******
Welcome to the MariaDB monitor. Commands end with ; or \g.
Your MariaDB connection id is 62
Server version: 10.4.32-MariaDB mariadb.org binary distribution

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statemen t.

MariaDB [(none)]>
```

-Query Commit START TRANSACTION; INSERT INTO payments (order_id, amount_paid, payment_method) VALUES (7, 75000, 'Cash'); COMMIT;

-Cek perubahan

```
MariaDB [black_beans]> SELECT payment_id, order_id, amount_paid, payment_method from payments;
  payment_id | order_id | amount_paid | payment_method
                                  58500.00
                                               Cash
                                  48000.00
                          2
                                               Debit Card
                                  40000.00
                                               E-Wallet
             Ц
                          4
                                  48600.00
                                               Cash
                                  43200.00
                                               E-Wallet
             5
                          5
                                  59000.00
                                               Credit Card
6 rows in set (0.001 sec)
MariaDB [black_beans] > START TRANSACTION;
Query OK, 0 rows affected (0.000 sec)
MariaDB [black_beans]> INSERT INTO payments (order_id, amount_paid, payment_method)
    -> VALUES (7, 75000, 'Cash');
Query OK, 1 row affected (0.003 sec)
MariaDB [black_beans]> COMMIT;
Query OK, 0 rows affected (0.003 sec)
MariaDB [black_beans]> SELECT payment_id, order_id, amount_paid, payment_method from payments;
  payment_id | order_id | amount_paid | payment_method
                                  58500.00
                          1
2
3
                                  48000.00
40000.00
                                               Debit Card
                                               E-Wallet
                                              Cash
E-Wallet
                                  48600.00
             4
             5
                                  43200.00
                          5
                                               Credit Card
                                  59000.00
                                  75000.00
                                               Cash
7 rows in set (0.001 sec)
MariaDB [black_beans]>
```

Setelah di commit data baru menjadi masuk ke database, karena kita mengakhiri transaksi dengan query COMMIT.

-Query Rollback

START TRANSACTION;

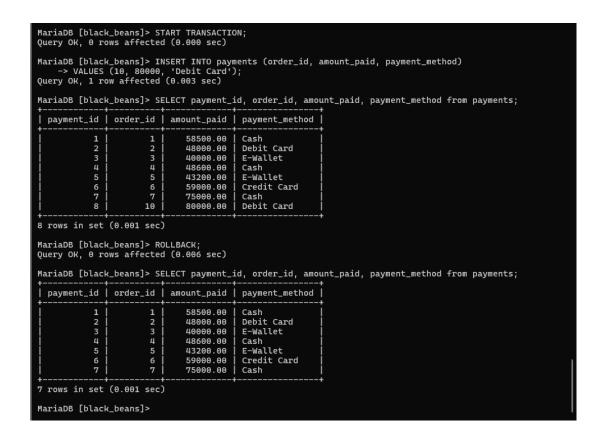
INSERT INTO payments (order_id, amount_paid, payment_method) VALUES (10, 80000, 'Debit Card');

SELECT payment_id, order_id, amount_paid, payment_method from payments;

ROLLBACK;

-Cek Perubahan data (screenshot tabel select - before dan after transaction)

Dapat dilihat gambar di atas merupakan tabel sebelum kita melakukan transaksi apapun, data terakhir ada pada id ke 7.



Gambar di atas merupakan query ketika saya sudah memulai transaksi, saya memasukan salah satu data, dan dapat dilihat data itu juga masuk ke dalam tabel yaitu payment dengan id 8. Namun, saya ingin membatalkan transaksi, maka saya perlu mengakhiri transaksinya dengan query ROLLBACK, dan saya juga kembali menselect tabel, dapat dilihat data pada payment id ke 8, yang tadi sempat masuk ke dalam tabel, kini sudah tidak ada dalam tabel, hal itu dikarenakan transaksi yang kita lakukan tadi sudah kita batalkan dengan query ROLLBACK.

3. barista bb

-Screenshot mysql -u user -p

```
C:\Users\ASUS>mysql -u barista_bb -p
Enter password: **********
Welcome to the MariaDB monitor. Commands end with ; or \g.
Your MariaDB connection id is 188
Server version: 10.4.32-MariaDB mariadb.org binary distribution

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]>
```

-Query Commit

START TRANSACTION;

SELECT item_id, name, price, c.category_name from menu_items JOIN categories c ON menu_items.category_id = c.category_id; COMMIT;

-Cek perubahan

```
MariaDB [black_beans]> START TRANSACTION;
Query OK, 0 rows affected (0.001 sec)
item_id | name
                                | price
                                            | category_name
                                  25000.00
             Espresso
            Latte
Americano
                                  30000.00
27000.00
                                              Coffee
Coffee
                                  32000.00
28000.00
                                              Coffee
             Cappuccino
             Green Tea
Black Tea
                                  25000.00
                                              Tea
             Matcha Latte
                                  35000.00
                                              Tea
                                  20000.00
             Croissant
                                              Pastry
             Chocolate Muffin
                                  22000.00
                                              Pastry
             Cheese Danish
                                  24000.00
                                              Pastry
                                  28000.00
                                              Coffee
             Espresso
             Oolong Tea
Almond Croissant
                                  29000.00
26000.00
                                              Tea
                                              Pastry
             Kopi Luwak
                                  20000 00
                                              Coffee
14 rows in set (0.017 sec)
MariaDB [black_beans]> COMMIT;
Query OK, 0 rows affected (0.000 sec)
MariaDB [black_beans]>
```

Sebenarnya tidak ada perubahan apapun yang dapat dilakukan pada transaction, karena grant untuk user barista_bb hanya untuk men select tabel tertentu saja, jadi tentunya dia tidak akan bisa INSERT/ UPDATE/ DELETE data pada tabel manapun.

-Query Rollback
START TRANSACTION;

INSERT INTO menu_items (name, price, category_id) VALUES ('Espresso Special', 18000, 1);

SELECT item_id, name, price, c.category_name from menu_items JOIN categories c ON menu_items.category_id = c.category_id;

ROLLBACK;

-Cek Perubahan data (screenshot tabel select - before dan after transaction)

```
MariaDB [black_beans]> SELECT item_id, name, price, c.category_name from menu_items
-> JOIN categories c ON menu_items.category_id = c.category_id;
                                              price
                                                              category_name
                 Espresso
                                              25000.00
                                                               Coffee
                                              30000.00
27000.00
32000.00
                                                              Coffee
Coffee
                 Latte
                Americano
                Cappuccino
                                                               Coffee
                                              28000.00
25000.00
35000.00
                Green Tea
Black Tea
                                                               Tea
                                                               Tea
                 Matcha Latte
                                                               Tea
                                              20000.00
22000.00
24000.00
                 Croissant
Chocolate Muffin
                                                               Pastry
                                                               Pastry
                 Cheese Danish
                                                               Pastry
                                              28000.00
29000.00
26000.00
                 Espresso
                                                               Coffee
                 Oolong Tea
Almond Croissant
                                                               Tea
Pastry
                 Kopi Luwak
                                              20000.00
14 rows in set (0.002 sec)
```

Dapat dilihat gambar di atas merupakan tabel sebelum kita melakukan transaksi apapun, data terakhir ada pada kopi luwak.

```
MariaDB [black_beans]> START TRANSACTION;
Query OK, 0 rows affected (0.000 sec)
MariaDB [black_beans]> INSERT INTO menu_items (name, price, category_id)
-> VALUES ('Espresso Special', 18000, 1);
ERROR 1142 (42000): INSERT command denied to user 'barista_bb'@'localhost' for table `black_beans`.`me
MariaDB [black_beans]> SELECT item_id, name, price, c.category_name from menu_items
-> JOIN categories c ON menu_items.category_id = c.category_id;
  item_id | name
                                            price
                                                            category_name
                 Espresso
                                            25000.00
                                                            Coffee
                Latte
Americano
                                                            Coffee
Coffee
Coffee
                                            30000.00
                                            27000.00
32000.00
                Cappuccino
                Green Tea
Black Tea
                                            28000.00
                                                            Tea
                                            25000.00
                                                            Tea
                 Matcha Latte
                                            35000.00
                                                            Tea
                                                            Pastry
                 Croissant
                                            20000.00
                Chocolate Muffin
                                            22000.00
                                                            Pastry
                                            24000.00
28000.00
                                                            Pastry
Coffee
          10
                Cheese Danish
                 Espresso
                Oolong Tea
Almond Croissant
                                            29000.00
                                                            Tea
                                            26000.00
                                                            Pastry
                 Kopi Luwak
                                            20000.00
                                                            Coffee
14 rows in set (0.001 sec)
MariaDB [black_beans]> ROLLBACK;
Query OK, 0 rows affected (0.001 sec)
MariaDB [black_beans]>
```

Gambar di atas merupakan query ketika saya sudah memulai transaksi, saya mencoba memasukan salah satu data, dan dapat dilihat ketika saya mencoba melakukan INSERT, dia mengeluarkan ERROR denied, hal itu dikarenakan pada user barista_bb, dia tidak memiliki hak akses untuk melakukan INSERT data, maka dari itu akan terjadi error, dan karena ada yang error saya mengakhiri transaksinya dengan query ROLLBACK, (sebenernya sama aja sih gak bakal ngaruh apa apa, untuk user yang tidak dapat melakukan perubahan pada isi tabel, umumnya tidak perlu melakukan transaksi, di sini saya melakukan transaksi itu biar tau aja ternyata kita bisa START TRANSACTION tanpa perlu ngapa-ngapain lohh hehe, bisa diakhiri dengan COMMIT dan ROLLBACK juga, biar tau saja. Aslinya mah biar ngikutin template jawaban asprak sih hehe)