

TUGAS 2

SISTEM MANAJEMEN BASIS DATA

ROLE DAN GRANT PADA DATABASE

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KELAS B

A. Pengertian *Role* dan *Grant* in Database

1. Pengertian *Role*

Role adalah kumpulan hak akses yang akan digunakan untuk *user* di *database*, fungsi *role* hanya untuk mempermudah pemberian hak akses di *user* lainnya. Misal pada suatu perusahaan terdapat banyak *department* (dimana dalam 1 *department* memiliki banyak *user*), yang masing-masing *department* memiliki hak akses tertentu dan berbeda ke dalam *database*. Dengan fasilitas *Role*, kita tidak perlu mengatur masing-masing hak akses *user* (banyak *user*) dari tiap *department*, cukup mengatur *Role* bagi suatu *department* yang dimaksud.

2. Pengertian *Grant*

Hak akses (*grant*) adalah kewenangan setiap *user* untuk melihat data, melakukan edit atau menghapus data yang berada di setiap tabel *database*. Setiap *user* pada *database* umumnya mempunyai hak akses/kewenangan sendiri sendiri, tergantung dengan kondisi di lapangan.

B. Pemberian *Role* dan Hak Akses (*Grant*) di Database classicmodels

1. Membuat 3 buah *role* yaitu **pemilikRetail**, **supervisorManager**, dan **operatorKasir**

```
MariaDB [(none)]> use classicmodels;
Database changed
MariaDB [classicmodels]> CREATE ROLE pemilikRetail, supervisorManager, operatorKasir;
Query OK, 0 rows affected (0.00 sec)
```

2. Menambahkan hak akses pada setiap *role*

a. Hak akses *select* pada semua *table* di *database* pada *role* **pemilikRetail**

```
MariaDB [classicmodels]> GRANT SELECT ON classicmodels.* TO pemilikRetail;
Query OK, 0 rows affected (0.00 sec)
```

- b. Hak akses penuh/semua hak akses pada *table* **offices**, **products**, **employees** di *database* pada *role* **supervisorManager**

```
MariaDB [classicmodels]> GRANT ALL ON classicmodels.offices TO supervisorManager;  
Query OK, 0 rows affected (0.00 sec)  
  
MariaDB [classicmodels]> GRANT ALL ON classicmodels.products TO supervisorManager;  
Query OK, 0 rows affected (0.00 sec)  
  
MariaDB [classicmodels]> GRANT ALL ON classicmodels.employees TO supervisorManager;  
Query OK, 0 rows affected (0.00 sec)
```

- c. Hak akses *INSERT*, dan *UPDATE* pada *table* **offices**, **products**, **employees** di *database* pada *role* **operatorKasir**

```
MariaDB [classicmodels]> GRANT INSERT, UPDATE ON classicmodels.customers TO operatorKasir;  
Query OK, 0 rows affected (0.00 sec)  
  
MariaDB [classicmodels]> GRANT INSERT, UPDATE ON classicmodels.payments TO operatorKasir;  
Query OK, 0 rows affected (0.00 sec)  
  
MariaDB [classicmodels]> GRANT INSERT, UPDATE ON classicmodels.orders TO operatorKasir;  
Query OK, 0 rows affected (0.00 sec)  
  
MariaDB [classicmodels]> GRANT INSERT, UPDATE ON classicmodels.orderdetails TO operatorKasir;  
Query OK, 0 rows affected (0.00 sec)
```

3. Membuat *user account*

- *User* retailWidiyarti di *localhost* dengan *password* '12345'. *User* ini akan berlaku sebagai pemilik retail.

```
MariaDB [classicmodels]> CREATE USER retailWidiyarti@localhost IDENTIFIED BY '12345';  
Query OK, 0 rows affected (0.00 sec)
```

- *User* managerWidiya di *localhost* dengan *password* 'wid123'. *User* ini akan berlaku sebagai supervisor manager.

```
MariaDB [classicmodels]> CREATE USER managerWidiya@localhost IDENTIFIED BY 'wid123';  
Query OK, 0 rows affected (0.00 sec)
```

- *User* kasirEndang di *localhost* dengan *password* '1212'. *User* ini akan berlaku sebagai operator kasir.

```
MariaDB [classicmodels]> CREATE USER kasirEndang@localhost IDENTIFIED BY '1212';  
Query OK, 0 rows affected (0.00 sec)
```

4. Memberikan hak akses *role* pada *user*

```
MariaDB [classicmodels]> GRANT pemilikRetail TO retailWidiyarti@localhost;  
Query OK, 0 rows affected (0.00 sec)
```

```
MariaDB [classicmodels]> GRANT supervisorManager TO managerWidiya@localhost;  
Query OK, 0 rows affected (0.00 sec)
```

```
MariaDB [classicmodels]> GRANT operatorKasir TO kasirEndang@localhost;  
Query OK, 0 rows affected (0.00 sec)
```

5. Menampilkan hak akses *role* dari user

- *User* retailWidiyarti

```
MariaDB [classicmodels]> SHOW GRANTS FOR retailWidiyarti@localhost;
+-----+
| Grants for retailWidiyarti@localhost |
+-----+
| GRANT pemilikRetail TO 'retailWidiyarti'@'localhost' |
| GRANT USAGE ON *.* TO 'retailWidiyarti'@'localhost' IDENTIFIED BY PASSWORD '*00A51F3F48415C7D4E8908980D443C29C69B60C9' |
+-----+
2 rows in set (0.00 sec)
```

- *User* managerWidiya

```
MariaDB [classicmodels]> SHOW GRANTS FOR managerWidiya@localhost;
+-----+
| Grants for managerWidiya@localhost |
+-----+
| GRANT supervisorManager TO 'managerWidiya'@'localhost' |
| GRANT USAGE ON *.* TO 'managerWidiya'@'localhost' IDENTIFIED BY PASSWORD '*482F4E5C8ACE48C9EE3815AA1CA727833C08C9AE' |
+-----+
2 rows in set (0.00 sec)
```

- *User* kasirEndang

```
MariaDB [classicmodels]> SHOW GRANTS FOR kasirEndang@localhost;
+-----+
| Grants for kasirEndang@localhost |
+-----+
| GRANT operatorKasir TO 'kasirEndang'@'localhost' |
| GRANT USAGE ON *.* TO 'kasirEndang'@'localhost' IDENTIFIED BY PASSWORD '*B4ED24274654A59A9D0C639C4DA9EBA414B887D8' |
+-----+
2 rows in set (0.00 sec)
```