MODUL 9
Data Control Language

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KELAS : A

D. Langkah - langkah Praktikum

1. Jalankan XAMPP Control Panel
2. Jalankan server Apache dan MySQL
3. Buka Command Prompt dan login sebagai root ke MySQL
4. Pilih database perbankan dengan perintah "use mysql". sehingga akan muncul pemberitahuan "database changed"

```
C:\xampp\mysql\bin>mysql -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 33
Server version: 10.1.38-MariaDB mariadb.org binary distribution

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.
MariaDB [(none)]> use mysql;
Database changed
```

5. Masukkan user baru ke tabel user dengan sintaks berikut ini Create user 'myuser'@'localhost' identified by 'myuser';

```
MariaDB [mysql]> create user 'myuser'@'localhost' identified by 'myuser';
Query OK, 0 rows affected (0.00 sec)
```

6. Berikan hak akses kepada user "myuser" dengan sintaks berikut ini

   Grant select on perbankan.nasabah to myuser;

   Flush privileges;

   Grant select on perbankan.cabang_bank to myuser;

   Flush privileges;

```
MariaDB [mysql]> grant select on perbankan2.nasabah to myuser@localhost;
Query OK, 0 rows affected (0.00 sec)

MariaDB [mysql]> flush privileges;
Query OK, 0 rows affected (0.00 sec)

MariaDB [mysql]> grant select on perbankan2.cabang_bank to myuser@localhost;
Query OK, 0 rows affected (0.00 sec)

MariaDB [mysql]> flush privileges;
Query OK, 0 rows affected (0.00 sec)

MariaDB [mysql]> exit
Bye
```

7. Keluar sebagai user root dengan sintax "exit;"
8. Login lagi sebagai "myuser" dengan sintaks sebagai berikut Mysql -u myuser

```
C:\xampp\mysql\bin>mysql -u myuser -p
Enter password: ******
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 34
Server version: 10.1.38-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.
```

9. Ubah database yang digunakan ke database perbankan dengan sintaks "use perbankan" Sehingga akan muncul konfirmasi "database changed"

```
MariaDB [(none)]> use perbankan2;
Database changed
```

10. Coba lakukan select pada tabel nasabah dengan sintaks berikut select * from nasabah;

```
MariaDB [perbankan2]> select * from nasabah;
+------------+-------------------+--------------------------+
| id_nasabah | nama_nasabah      | alamat_nasabah           |
+------------+-------------------+--------------------------+
|          1 | Sutopo            | Jl. Jendral Sudirman 12  |
|          2 | Maryati           | Jl. MT. Haryono 31       |
|          3 | Suparman          | Jl. Hasanudin 81         |
|          4 | Kartika Padmasari | Jl. Manggis 15           |
|          5 | Budi Eko Prayogo  | Jl. Kantil 30            |
|          6 | Satria Eka Jaya   | Jl. Slamet Riyadi 45     |
|          7 | Indri Hapsari     | Jl. Sutoyo 5             |
|          8 | Sari Murti        | Jl. Pangandaran 11       |
|          9 | Canka Lokananta   | Jl. Tidar 86             |
|         10 | Budi Murtono      | Jl. Merak 22             |
|         11 | Joko Ndo Kondo    | Jl. Bareng jadian kagak  |
|         12 | Jon Koplo         | Jl. Angin Besar 12       |
|         13 | Anggit            | Solo                     |
|       1000 | Sutopo            | Jl. Jendral Sudirman     |
|       2000 | Maryati           | Jl. MT Haryono 31        |
+------------+-------------------+--------------------------+
15 rows in set (0.00 sec)
```

11. Kemudian ketikkan perintah "exit" . kemudian login lagi sebagai root

12. Kemudian hilangkan salah satu privilege untuk user myuser dengan sintaks berikut ini

    Revoke select on perbankan.nasabah from myuser;

    Flush privilege;

```
C:\xampp\mysql\bin>mysql -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 35
Server version: 10.1.38-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)]> revoke select on perbankan2.nasabah from myuser@localhost;
Query OK, 0 rows affected (0.06 sec)

MariaDB [(none)]> flush privileges;
Query OK, 0 rows affected (0.00 sec)

MariaDB [(none)]> exit
Bye
```

13. Kemudian exit dan kembali login sebagai user "myuser"

14. Gunakan database perbankan dengan sintaks "use perbankan"

```
C:\xampp\mysql\bin>mysql -u myuser -p
Enter password: ******
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 36
Server version: 10.1.38-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)]> use perbankan2;
```

15. Selanjutnya silahkan coba untuk menggunakan perintah select pada tabel nasabah.

```
MariaDB [(none)]> use perbankan2;
Database changed
MariaDB [perbankan2]> select * from nasabah;
ERROR 1142 (42000): SELECT command denied to user 'myuser'@'localhost' for table 'nasabah'
MariaDB [perbankan2]>
```

E.   Tugas

1. Buat user baru sesuai dengan nama anda masing - masing

```
Command Prompt - mysql -u Dessynaa -p                                    —    □    ×
C:\xampp\mysql\bin>mysql -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 37
Server version: 10.1.38-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)]> use mysql;
Database changed
MariaDB [mysql]> create user 'Dessynaa'@'localhost' identified by 'dessyna';
Query OK, 0 rows affected (0.00 sec)
```

2. Beri Privilege untuk user tersebut dengan ketentuan sebagai berikut ini.
   a. Dapat melakukan insert,update,dan delete pada tabel nasabah.

```
MariaDB [mysql]> grant insert on perbankan2.nasabah to Dessynaa@localhost;
Query OK, 0 rows affected (0.00 sec)

MariaDB [mysql]> flush privileges;
Query OK, 0 rows affected (0.00 sec)

MariaDB [mysql]> grant update on perbankan2.nasabah to Dessynaa@localhost;
Query OK, 0 rows affected (0.00 sec)

MariaDB [mysql]> flush privileges;
Query OK, 0 rows affected (0.00 sec)

MariaDB [mysql]> grant delete on perbankan2.nasabah to Dessynaa@localhost;
Query OK, 0 rows affected (0.00 sec)
```

   b. Hanya dapat melakukan select pada tabel cabang_bank.

```
MariaDB [mysql]> flush privileges;
Query OK, 0 rows affected (0.00 sec)

MariaDB [mysql]> grant select on perbankan2.cabang_bank to Dessynaa@localhost;
Query OK, 0 rows affected (0.00 sec)

MariaDB [mysql]> flush privileges;
Query OK, 0 rows affected (0.00 sec)

MariaDB [mysql]> exit
Bye
```

3. Coba lakukan kasus berikut ini dengan login sebagai user yang dibuat dan screenshot hasilnya.

   a. Lakukan perintah select pada tabel nasabah.

```
C:\xampp\mysql\bin>mysql -u Dessynaa -p
Enter password: *******
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 38
Server version: 10.1.38-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)]> use perbankan2;
Database changed
MariaDB [perbankan2]> select * from nasabah;
ERROR 1142 (42000): SELECT command denied to user 'Dessynaa'@'localhost' for table 'nasabah'
```

   b. Lakukan perintah insert pada tabel nasabah.

```
MariaDB [perbankan2]> insert into nasabah(id_nasabah,nama_nasabah,alamat_nasabah) values(19,'Nur','Kalimantan');
Query OK, 1 row affected (0.01 sec)
```

   c. Lakukan perintah insert pada tabel cabang_bank

```
Command Prompt - mysql -u Dessynaa -p                                    —  □  ×

MariaDB [perbankan2]> insert into cabang_bank values('BRUK','Bank Cabang Kalimantan','Kalimantan');
ERROR 1142 (42000): INSERT command denied to user 'Dessynaa'@'localhost' for table 'cabang_bank'
MariaDB [perbankan2]>
```

4. Analisa hasil percobaan kalian tersebut

   Grant memiliki fungsi untuk membuat user baru dan memberikan hak istimewa. Grant merupakan privilege untuk tabel. Dimana dalam percobaan ini apabila sebelum melakukan hak akses pada sebuah tabel maka harus membuat GRANT dengan privilege yang dibutuhkan terlebih dahulu. Apabila tidak membuat grant dengan privilege terlebih dahulu maka hasilnya akan eror. Revoke digunakan untuk menghapus batasan akses yang telah diatur menggunakan perintah GRANT.