LAPORAN SISTEM MANAJEMEN BASIS DATA

MANAJEMEN, USER, ROLE DAN PRIVILEGE

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D3 MANAJEMEN INFORMATIKA

PSDKU POLITEKNIK NEGERI MALANG DI KOTA KEDIRI

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Latihan Studi Kasus

Tuliskan scriptnya dan caputernya hasilnya disetiap Langkah berikut.

1. Lakukan proses pembuatan username sebanyak jumlah kelompok anda. Tuliskan script
dan tampilkan hasilnya.
2. Lakukan penghapusan username terhadap user yang sudah dibuat. Tuliskan script dan
tampilkan hasilnya
3. Buat role dengan "role_nama_anda_insert_select" → role_andi_select_insert.
4. Berikan privilege select, insert kedalam role diatas
5. Buat role dengan "role_nama_anda_create_drop" → role_andi_create_drop.
6. Berikan privilege create, drop kedalam role diatas
7. Berikan 2 user kedalam masing-masing role diatas.
8. Lakukan pengujian sebelum dan sesudah user diberikan role.
9. Lepas role dari user diatas. Sehingga user menjadi tidak memiliki role.
10. Lakukan konfigurasi untuk proses monitoring proses seperti contoh diatas, dan lakukan
beberapa kali proses query. Kemudian lihat di log nya dan tampilkan hasilnya.
11. Tulis kesimpulan dari kegiatan praktek kelompok anda.

1. Create User

QUERY
CREATE USER 'della'@'localhost' IDENTIFIED BY 'della'; CREATE USER 'alivia'@'localhost' IDENTIFIED BY 'alivia';
HASIL

```
mysql> CREATE USER 'della'@'localhost' IDENTIFIED BY 'della';
Query OK, 0 rows affected (0.08 sec)

mysql> CREATE USER 'alivia'@'localhost' IDENTIFIED BY 'alivia';
Query OK, 0 rows affected (0.02 sec)

mysql>
```

2. Drop User

QUERY
CREATE USER 'veri'@'localhost' IDENTIFIED BY 'veri'; DROP USER 'veri'@'localhost';
HASIL

```
mysql> DROP USER 'veri'@'localhost';
Query OK, 0 rows affected (0.03 sec)

mysql>
```

3. CREATE ROLE select_insert
   Dan no 5. CREATE ROLE create_drop

QUERY
CREATE ROLE 'role_della_select_insert'; CREATE ROLE 'role_alivia_create_drop';
HASIL

```
mysql> CREATE ROLE 'role_della_select_insert';
Query OK, 0 rows affected (0.02 sec)

mysql> CREATE ROLE 'role_alivia_create_drop';
Query OK, 0 rows affected (0.02 sec)

mysql>
```

4. Memberikan PRIVILEGE ke ROLE select_insert
   Dan no 6. Untuk ROLE create_drop

QUERY
GRANT SELECT, INSERT ON 06_a_veri_mhs.* TO 'role_della_select_insert';   GRANT CREATE, DROP ON 06_a_veri_mhs.* TO 'role_alivia_create_drop';

HASIL
mysql> GRANT SELECT, INSERT ON 06_a_veri_mhs.* TO 'role_della_select_insert'   Query OK, 0 rows affected (0.03 sec)   mysql> GRANT CREATE, DROP ON 06_a_veri_mhs.* TO 'role_alivia_create_drop';   Query OK, 0 rows affected (0.02 sec)   mysql> _

7. Menetapkan ROLE ke USER

QUERY
GRANT 'role_della_select_insert' TO 'della'@'localhost';   GRANT 'role_alivia_create_drop' TO 'alivia'@'localhost';

HASIL
mysql> GRANT 'role_della_select_insert' TO 'della'@'localhost';   Query OK, 0 rows affected (0.02 sec)   mysql> GRANT 'role_alivia_create_drop' TO 'alivia'@'localhost';   Query OK, 0 rows affected (0.01 sec)   mysql>

- Menerapkan Perubahan

QUERY
FLUSH PRIVILEGES;

HASIL
mysql> FLUSH PRIVILEGES;   Query OK, 0 rows affected (0.01 sec)   mysql>

- Cek Hak Akses yang Dimiliki

QUERY
SHOW GRANTS FOR 'della'@'localhost';

```
SHOW GRANTS FOR 'alivia'@'localhost';
SHOW GRANTS FOR 'role_della_select_insert';
SHOW GRANTS FOR 'role_alivia_create_drop';
```

HASIL

```
mysql> SHOW GRANTS FOR 'della'@'localhost';
+-----------------------------------------------------------+
| Grants for della@localhost                                |
+-----------------------------------------------------------+
| GRANT USAGE ON *.* TO `della`@`localhost`                 |
| GRANT `role_della_select_insert`@`%` TO `della`@`localhost` |
+-----------------------------------------------------------+
2 rows in set (0.00 sec)

mysql> SHOW GRANTS FOR 'alivia'@'localhost';
+-----------------------------------------------------------+
| Grants for alivia@localhost                               |
+-----------------------------------------------------------+
| GRANT USAGE ON *.* TO `alivia`@`localhost`                |
| GRANT `role_alivia_create_drop`@`%` TO `alivia`@`localhost` |
+-----------------------------------------------------------+
2 rows in set (0.00 sec)

mysql> SHOW GRANTS FOR 'role_della_select_insert';
+----------------------------------------------------------------------+
| Grants for role_della_select_insert@%                                |
+----------------------------------------------------------------------+
| GRANT USAGE ON *.* TO `role_della_select_insert`@`%`                 |
| GRANT SELECT, INSERT ON `06_a_veri_mhs`.* TO `role_della_select_insert`@`%` |
+----------------------------------------------------------------------+
2 rows in set (0.00 sec)

mysql> SHOW GRANTS FOR 'role_alivia_create_drop';
+----------------------------------------------------------------------+
| Grants for role_alivia_create_drop@%                                 |
+----------------------------------------------------------------------+
| GRANT USAGE ON *.* TO `role_alivia_create_drop`@`%`                  |
| GRANT CREATE, DROP ON `06_a_veri_mhs`.* TO `role_alivia_create_drop`@`%` |
+----------------------------------------------------------------------+
2 rows in set (0.00 sec)
```

- Mengaktifkan ROLE secara Otomatis saat Login

QUERY

```
SET DEFAULT ROLE ALL TO 'della'@'localhost';
SET DEFAULT ROLE ALL TO 'alivia'@'localhost';
```

HASIL

```
mysql> SET DEFAULT ROLE ALL TO 'della'@'localhost';
Query OK, 0 rows affected (0.01 sec)

mysql> SET DEFAULT ROLE ALL TO 'alivia'@'localhost';
Query OK, 0 rows affected (0.01 sec)

mysql>
```

8. Pengujian Sesudah Diberikan ROLE

QUERY
| ```
mysql -u della -p -P 3309
SHOW GRANTS FOR 'della'@'localhost';
SELECT * FROM 06_a_veri_mhs.mahasiswa;
INSERT INTO 06_a_veri_mhs.mahasiswa (id, nama) VALUES (1, 'Della');
``` |
| **HASIL** |

```
C:\Users\MyBook Z Series>mysql -u della -p -P 3309
Enter password: *****
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 16
Server version: 8.0.36 MySQL Community Server - GPL

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owners.

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

mysql> SHOW GRANTS FOR 'della'@'localhost';
+------------------------------------------------------------+
| Grants for della@localhost                                 |
+------------------------------------------------------------+
| GRANT USAGE ON *.* TO `della`@`localhost`                  |
| GRANT `role_della_select_insert`@`%` TO `della`@`localhost` |
+------------------------------------------------------------+
2 rows in set (0.00 sec)

mysql> SELECT * FROM 06_a_veri_mhs.mahasiswa;
Empty set (0.01 sec)

mysql> INSERT INTO 06_a_veri_mhs.mahasiswa (id, nama) VALUES (1, 'Della');
Query OK, 1 row affected (0.02 sec)

mysql> SELECT * FROM 06_a_veri_mhs.mahasiswa;
+----+-------+---------+----------+
| id | nama  | jurusan | angkatan |
+----+-------+---------+----------+
|  1 | Della | NULL    |     NULL |
+----+-------+---------+----------+
1 row in set (0.00 sec)
```

9. Pengujian Sebelum Diberikan ROLE

QUERY
| ```
REVOKE 'role_della_select_insert' FROM 'della'@'localhost';
``` |
| **HASIL** |

```
mysql> REVOKE 'role_della_select_insert' FROM 'della'@'localhost';
Query OK, 0 rows affected (0.02 sec)

mysql> SHOW GRANTS FOR 'della'@'localhost';
+------------------------------------------+
| Grants for della@localhost               |
+------------------------------------------+
| GRANT USAGE ON *.* TO `della`@`localhost` |
+------------------------------------------+
1 row in set (0.00 sec)
```

10. Konfigurasi Monitoring Proses & Logging di MYSQL

QUERY
| ```
SHOW VARIABLES LIKE 'general_log%';
``` |

```
SET global general_log = 1;
SHOW VARIABLES LIKE 'general_log%';
SET global log_output = 'table';
SELECT * FROM mysql.general_log;
```

HASIL

11. Kesimpulan

Praktik ini memberikan pemahaman mendalam tentang manajemen pengguna, role, hak akses, dan monitoring proses di MySQL. Kami berhasil membuat user, menetapkan role dengan privilege tertentu, serta melakukan pengujian sebelum dan sesudah pemberian role. Selain itu,monitoring query dengan General Query Log membantu dalam mencatat aktivitas pengguna dan memastikan keamanan database.

- Keamanan database dapat ditingkatkan dengan pemberian role yang sesuai untuk tiap pengguna, sehingga hanya memiliki akses yang diperlukan.
- Monitoring aktivitas user penting untuk mendeteksi aktivitas mencurigakan dan menjaga integritas data.
- Manajemen hak akses ini menjadi dasar penting dalam mengelola sistem basis data di lingkungan produksi agar lebih aman dan efisien.