

**Trong Dat Hoang 104194774**

## **For CyberSecurity Major || Implemented the Database User Roles and Privileges.**

**As they implemented in MySQLWorkBench.**

### **Administrator Role: Admin**

In order to preserve security and guarantee effective operations, it is imperative for managers of strong database systems to clearly define user roles and rights. Our database system has two different users, and each has roles and permissions customised to suit their needs.

The administrator role has been assigned to Admin, who has full access to and control over the database. With the ability to carry out a broad range of duties, an admin user can guarantee the database's integrity and proper operation. Among the admin's privileges are:

***Creating, Modifying, and Deleting Tables.***

***Executing Queries.***

***Managing User Permissions.***

***Maintaining Database Security.***

The admin user's detailed privileges span a variety of administrative responsibilities, ensuring that they can efficiently manage and maintain the database. These positions include DBA (Database Administrator), MaintenanceAdmin, ProcessAdmin, UserAdmin, and others, each with specialised competences required for comprehensive database management.

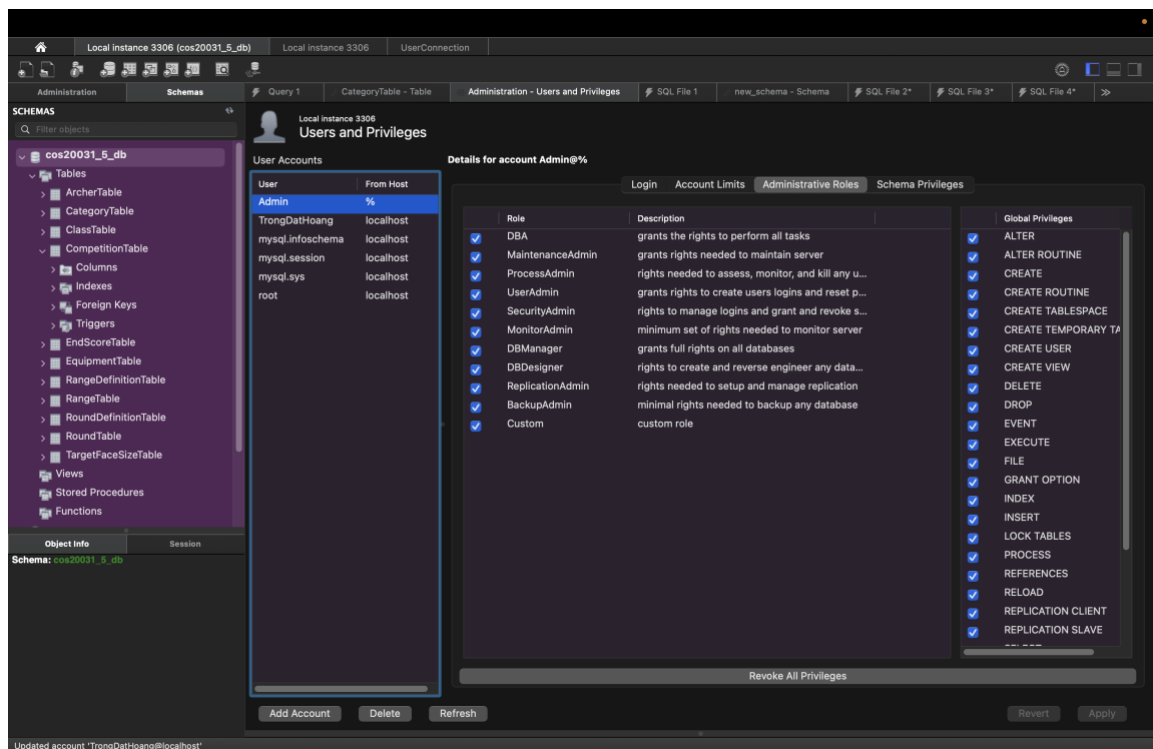


Figure 1: Configure Admin account's Administrative Roles.

In addition to the general administrative roles, the admin user has specialized schema-level permissions. These include the ability to build, modify, and delete routines, tables, and views, allowing the administrator to control the database structure extensively.

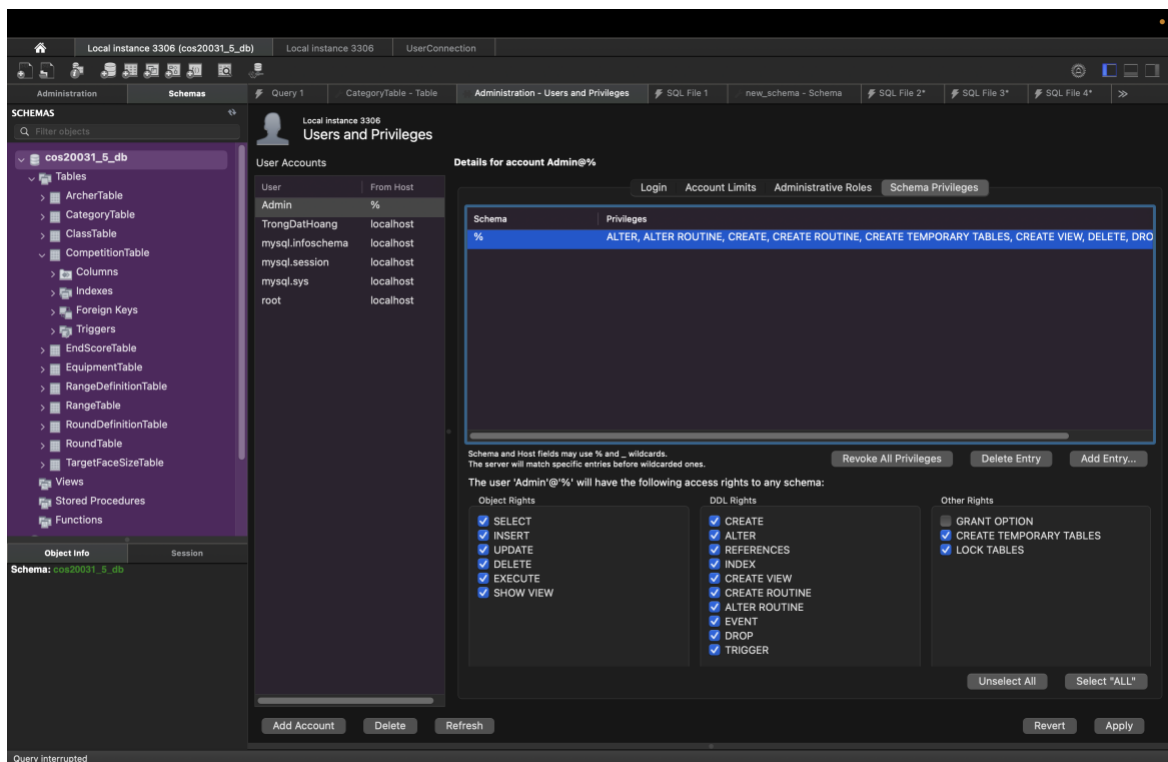


Figure 2: Configure Admin's Schema Privileges.

## Restricted User Role: TrongDatHoang

A new user named 'TrongDatHoang' has been added to the database, with privileges appropriate to their role. TrongDatHoang's access is generally limited to data viewing, giving a secure method of analysing and retrieving information without the risk of causing database changes. TrongDatHoang has the following particular privileges:

- SELECT Queries:** The user can perform SELECT queries to examine and analyse data from the tables to which they have access.
- Limited Schema Access:** TrongDatHoang has restricted schema access, which means that their actions are limited to data retrieval and cannot alter the database structure or contents. This strictly regulated access allows TrongDatHoang to accomplish their tasks while maintaining the database's overall security and integrity.

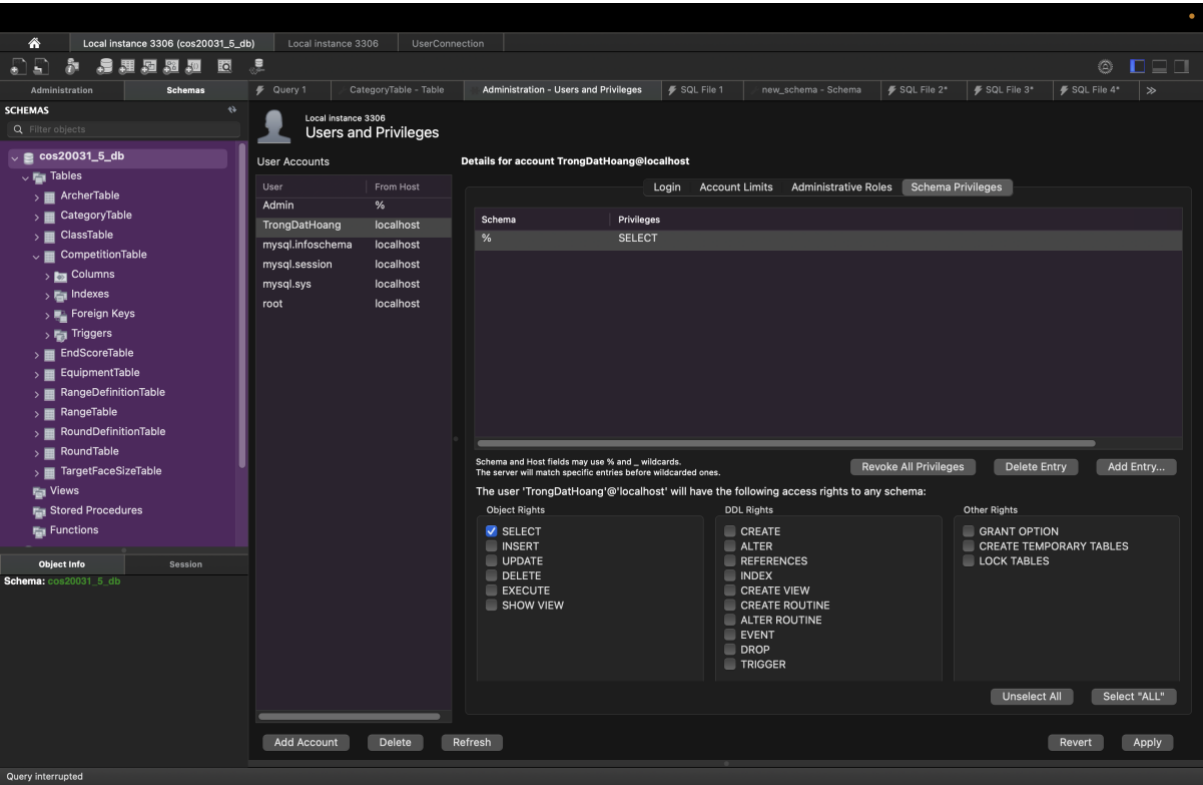


Figure 3: Configure TrongDatHoang user's Schema Privileges.

### Summary:

By effectively defining and implementing these roles and privileges, the database system ensures that operations run efficiently and securely. The administrator may maintain overall control and security, allowing users like TrongDatHoang to do their responsibilities efficiently despite their limited access, resulting in a balanced and well-managed database environment.