IT2351 Spring 2021 Matt Mahoney Assignment 7 No 4
Problem
If the guitar database was used in a production environment, explain the following(15points):
a.Circumstances for implementing each of the four privilege levels.
b.How you would group the privileges into roles

The four privilege levels are Global, Database, Table, and Column. The Global privilege level would be granted to the overall MySQL Server Administrator. This person would have full access to all databases and all tables in the entire server. I would create a role using this privilege, so that there could be multiple server administrators. They could then monitor server resources, and create new databases for the next group to make use of. This might be someone in the I.T. group that monitors the health of servers and infrastructure, but is not necessarily concerned with the actual data within any given database.

At the Database privilege level I would create a role for <DBName>_Admin. So "Mahoney_Guitar_Shop_Admin". I would assign this role to anyone that would need administrator access to the database, such as a database admin, or software developers. They can modify and create all the tables in the database. This role would be users that are concerned with modifying the data, and the database itself.

At the Table privilege level, I would grant access to specific tables based on the user's need. As an example, I may have a customer service representative that only deals with adding new customers and their addresses. I would grant them access to the customers and addresses tables. I might call this role "Customer_Entry". I could also have another role for a user in the accounts group. The role might be called "Accountants" or something. They would have access to the customers, addresses, orders, and order_items tables. I could then create a role for "Inventory Specialist" that only has access to the products and categories tables.

At the Column privilege level, you could restrict data so that users could only view/modify data of certain columns. For instance, if you only want a user to be able to edit the address information, but not customer_id or address_id of the addresses table, you could restrict that role, for say a Customer_Service Role, to only be able to edit the actual address information, but not the primary or foreign key information.