CS 240: SQL Commands Transcript

[00:00:00] In previous videos, we learned the basic commands of SQL, we learned how to create a table.

[00:00:06] We learned how to do insert or insert rows. We learned how to update rows, how to um select rows or run a query.

Start visual description. The professor demonstrates how to insert rows into a table using SQL commands. The screen shows the SQL command INSERT INTO table_name (column1, column2, ...) VALUES (value1, value2, ...); being executed in the terminal. End visual description.

[00:00:14] We also learned how to delete rows that exist in the table.

[00:00:17] So you already know the basic uh SQL commands to operate on a relational database.

[00:00:23] However, as you're doing your development work and as you're using either the terminal client or the, the workbench to interact with your database, there's a few other uh SQL commands that will probably be useful from time to time.

[00:00:36] And so I just want to show you a few additional commands that that might help.

[00:00:42] So um on the first slide show databases is one command um that just lists all the databases that are in your MySQL server, you can run show tables once you've selected the database that you want to, to use, um you can run show tables and that will show all the tables that are in the selected database.

Start visual description. The professor demonstrates how to list all databases in the MySQL server using the SHOW DATABASES; command. The screen displays a list of databases available on the server. End visual description.

[00:01:04] Um you can run the described command and maybe we should uh log in to run that one here.

[00:01:14] So I'm going to log back in my database.

[00:01:34] So I'm going to say use pet shop short tables.

[00:01:39] Whoops.

[00:01:41] Let's see.

[00:01:46] Show tables.

[00:01:50] Oh, I'm in JavaScript mode. I need to change to SQL mode that's instructive error.

[00:01:57] Um So now I'm in SQL mode now I can run show tables and that shows me that I've got these two tables in my database.

Start visual description. The professor demonstrates switching to SQL mode in the terminal and running the SHOW TABLES; command to display all tables in the selected database. The screen shows the command being executed and the resulting list of tables. End visual description.

[00:02:04] Um You can also run the described command.

[00:02:12] And what that will do is it will show you information about the table.

[00:02:16] So if you're in the terminal-based interface, you can run uh the described command and it will show you all the details of your table columns.

Start visual description. The professor demonstrates using the DESCRIBE command to show information about a table's columns. The screen displays the command DESCRIBE

table_name; being executed and the resulting details of the table's columns. End visual description.

[00:02:24] So that's a good one to know about.

[00:02:27] Um There's a, there's a command called show index, and it will show you all the indexes that are on your table.

[00:02:36] Now, we don't talk about indexes in this class, but in general indexes are a really important part of database programming that you learn about in a later course.

[00:02:46] Um And then there's this other things you can do.

[00:02:49] If you want to look at all the queries that are currently running in your server, you can run show full process list because uh usually there's, there's lots of connections to the database and, and multiple programs running queries at the same time.

[00:03:01] And so you can run that command just to see what is my database doing right now.

[00:03:08] Um You can create a new database by running the create database uh command and that will be needed as you work on the class project, you'll need to create a database um for your project. And so that's a command you can use to do that.

[00:03:22] You can drop a database.

[00:03:23] These are similar to create table and drop table except you're creating and dropping entire databases.

[00:03:29] Um We, we do still have all the basic commands that you've already learned in class.

[00:03:33] You can run all of those create table insert, select drop um update should be on there as well. That was left out for some reason.

[00:03:41] Now, the last thing you're going to need to be able to do um with your my SQL server is you're going to need to create user accounts on your, your database because when you, as, as we've already seen, when you connect to a database, you need to log in.

[00:03:59] And so if we're going to log in, that means we need to have user accounts and users have passwords and so forth.

[00:04:05] And so you're going to need to learn how to create a user.

[00:04:08] When you install my SQL server, it comes with a built-in user called root, which is like a super user that can do anything that they want.

[00:04:18] But oftentimes you want to create other users um to have people log in under different credentials and sometimes the users that you create, you want them to have restricted privileges, you don't want them to be able to do everything that, that they want.

[00:04:29] And so you want to just grant them the permission that they actually need to do their work.

[00:04:35] So if you want to create a new user account, you can use the create user sequel command.

[00:04:38] So create user um then you in, in quotes because this is a string uh username at host.

[00:04:49] And so uh this is where you type in the username, you probably just type in local hosts as the host identified by. And then in uh quotes, you put the password for the user.

[00:04:59] And so over here, you can see an example of how to create a user.

[00:05:03] And then once you've created a user account by default, they really don't have permission to do anything.

Start visual description. The professor demonstrates creating a new user account in MySQL using the CREATE USER command. The screen shows the command CREATE USER 'username'@'host' IDENTIFIED BY 'password'; being executed. End visual description.

[00:05:08] And so you also need to grant them permissions.

[00:05:10] And so if you want to grant the user permission to operate on one of your databases, um you can use the grant permission um or the grant command.

[00:05:23] So an example that would be over here, we're going to grant all permissions.

[00:05:27] So all permissions would mean that they can do anything to the uh to the tables in this database.

[00:05:32] So we're going to give them all permissions on the Book Club database.

[00:05:38] And Book club dot star basically means all the tables in the Book Club database.

[00:05:43] And then you just specify the user to, to whom you're giving the permission.

[00:05:47] Again, by default, the root user can do anything or, and everything, but new users have to be given permissions explicitly.

[00:05:54] So those are some useful commands that you might find helpful as you, you do your work on the project.