CS 240: Structured Query Language (SQL) Transcript

This video shows a split screen of Professor Wilkerson on the right and a PowerPoint screen on the left. Visual descriptions are not needed.

[00:00:00]   **JEROD WILKERSON:** In the previous videos, you learned about the relational model.

[00:00:03]   You learned how to visually look at table structures and be able to answer some questions.

[00:00:09]   I showed you the book club example and you were able to look in the tables manually and see who had read which books, for example. That's great, but the main purpose of a database is to be able to answer those questions programmatically.

[00:00:23]   We need a language that allows us to ask questions of a database that the database can respond to you.

[00:00:29]   We have that language and it's called Structured Query Language—that usually gets abbreviated as SQL.

[00:00:34]   This is a standard language.

[00:00:36]   There are lots of different databases out there, lots of different relational databases, but all of them support standard Structured Query Language.

[00:00:43]   If you know SQL, you can work with the data in any database, even if it's a new one that you haven't worked with before.

[00:00:50]   Here is an example of some of the things that this language allows you to do with relational databases.

[00:00:56]   It provides ways to create tables, delete tables, insert rows in the tables, update those rows, change the values of specific rows.

[00:01:05]   You can delete rows, and this one, you can query for matching rows, or in other words, you can ask questions about the data.

[00:01:12]   That's what I was doing when I was teaching the relational model and asking you who had read which books.

[00:01:17]   You were manually querying the tables, but we need a way to do that programmatically.

[00:01:23]   That's what SQL is.

[00:01:24]   There's actually much more to it.

[00:01:26]   There's a lot more that you can do with it.

[00:01:28]   In this class, I'm not going to be able to teach you everything about SQL.

[00:01:32]   I'll teach you enough to be able to do anything you need in this class, of course, but it's the 80-20 rule.

[00:01:40]   I'll give you the 20 percent of the syntax that allows you to do 80 percent of what can be done with SQL.

[00:01:45]   I'm actually going to give you more than 20 percent of the syntax, but that's an example that you can think of, is you're not learning everything.

[00:01:52]   You'll learn everything when you take the database class.

[00:01:54]   When you take 452, you'll learn some of the concepts that we don't need here that are not used quite as often.

[00:02:02]   Structured Query Language is a very powerful database access and manipulation language that will be a very important part of your knowledge as a software engineer.