3. Define DDL and DML.   What do the acronyms mean? Describe each one. Give examples.

DDL stands for Data Definition Language and DML stands for Data Manipulation Language. They are two key parts of SQL that are essential for handling and working with data in relational databases. They each serve their own purpose, as I will go over in the next two paragraphs.

DDL is used for setting up the structure of a database, including the table, views, indexes, and constraints. Key DDL commands include CREATE, ALTER, DROP, RENAME, and TRUNCATE. These commands are used to modify the database’s schema without directly affecting the data within it. DDL statements are permanent changes that can be challenging to reverse, making them important for establishing and managing the foundation of a database.

DML is used to work with data in a database, including adding, updating, deleting, and retrieving information. The main DML commands are SELECT, INSERT, UPDATE, DELETE, and MERGE. These commands change the data stored in the database. Unlike some other types of commands, DML statements can be reversed, making it possible to recover data is an error occurs.

To sum it up, DDL is used to define the structure of a database, while DML is used to add, retrieve, or modify the data within it. DDL specifies the columns of a table, whereas DML works with the rows of the table to update or add data. Unlike DDL, DML statements often include a WHERE clause to specify conditions for the data being manipulated. DDL statements are typically used less often than DML statements, as they focus on the database’s structure rather than its data. Additionally, DDL statements do not manipulate data directly, while DML statements do.

6. What is a JOIN when talking about databases?