The following topics cover Java Database programming. Choose **one topic from Group 1** and **one topic from Group 2** for your initial post. Provide a code example where necessary to elaborate on your thoughts.

**Group 1**

* Difference between a DBMS and a Database
* SQL for creating, populating, modifying, and dropping tables
* Connection to a database with Java

**Group 2 - Java Classes**

* DriverManager
* Connection
* Statement
* ResultSet

From group 1, my focus of discussion will be on the difference between a DBMS and a Database. According to (GeeksforGeeks, 2020), a database is organized data usually housed electronically and can be utilized to “store, manage, and retrieve data efficiently”. This means databases make maintaining and accessing data records easier (GeeksforGeeks, 2020). The defining characteristics of a database include its ability to organize data through tables, records, and fields, improve data security, help keep records consistent, and hold large database capacities (GeeksforGeeks, 2020). There are downfalls of using a database, such as the cost, complexity when maintaining and designing, and potential performance issues for large databases (GeeksforGeeks, 2020).

DBMS stands for Database Management Systems. According to GeeksforGeeks (2020), DBMS is “a software application that interacts with the user, applications, and the database to capture and analyze data”. The main difference between a database and a DBMS is that a DBMS is the interface for the data in the database (GeeksforGeeks, 2020). The DBMS supports data security, manipulation, access control, and backup and recovery (GeeksforGeeks, 2020). So, essentially, a database holds different data, and a DCMS allows a developer to create, manage, and operate the data in a database (GeeksforGeeks, 2020).

In group 2, I will explain how the DriverManager Java Class works. The DriverManager in Java manages the Java Database Connectivity drivers (IBM, 2025). Many JDBCs can be used simultaneously and specify the connections for the application to return (IBM, 2025). The DriverManager can be linked to a connection object using a string URL and a username and password (IBM, 2025).

Here is an example of the connection for a DriverManager looks: Connection c =

DriverManager.getConnection(jdbc:db2:rchasmop); (IBM, 2025).

**References**

GeeksforGeeks. (2020, June 5). *Difference between Database and DBMS*. GeeksforGeeks. https://www.geeksforgeeks.org/difference-between-database-and-dbms/

IBM. (2025, April 8). *Java DriverManager class*. Ibm.com. https://www.ibm.com/docs/en/i/7.5.0?topic=connections-java-drivermanager-class

Hey Arely! I think you did a really amazing job on your post for this week. You did a nice job explaining connection to a database with Java and connection. The included code helps exemplify the concept. Understanding how it truly works really helped with the programming assignment for this week. Seeing how Java can be connected back to what we learned about MySQL is amazing. How did you feel about completing the assignment this week? I felt frustrated for a while because I kept running into errors, so it felt like such a victory when I was finally able to connect it successfully.

Hi, Nardos! I enjoyed reading through your post for this week. It can be easy to confuse the difference between a database and a database management system, but it's essential to understand it. You clearly were able to explain what makes them different! I also chose to write about the same subject for my post, so it was intriguing to hear the concepts again, but through your words, I really liked the example of plugging a cable from your application to the database because it helped me better understand the connection. Your included example was a great addition to your post.

Hey, Nima. You did a great job elaborating on the topics you chose for your post. I think before this week, I would have fully understood the difference between DBMS and a database, so I am glad we touched on the subject. I like how you also provided a straightforward explanation of a database and DBMS to make it even easier to understand. Actually connecting to a database can be confusing at first, but after seeing it in action, I think it is worth all the effort. Your included code helped to support your thoughts on a database, DBMS, and class statement.

**Assignment Requirements and Grading:**

* An initial post of approximately 250 words is due by **Thursday, 11:59 p.m. CST**.
* For the initial post to be considered substantive, it should be at least 250 words in length and fully cover the topics being presented. Single-sentence definitions or responses will not be awarded points.
* Submit your post by clicking on the assignment link above, then Create Thread. You must create a thread in order to view your peers' posts. Tip: Create your post in a Word document and then copy and paste your work into the thread.
* A minimum of three (3) responses, to the original threads of other students, of 100-200 words each are due by **Sunday, 11:59 p.m., CST**.
* To view the rubric grading criteria, click on the following link: [Discussion Board Grading Rubric](https://content.bellevue.edu/cst/csd/rubricdbv3.pdf).