Lesson 01 Demo 08

Extracting Database Information Using Metadata

Objective: To extract information about the database in a Java program using metadata for understanding the database structure and schema. This approach allows for dynamic retrieval of database details such as tables, columns, and data types.

Tool required: Eclipse IDE

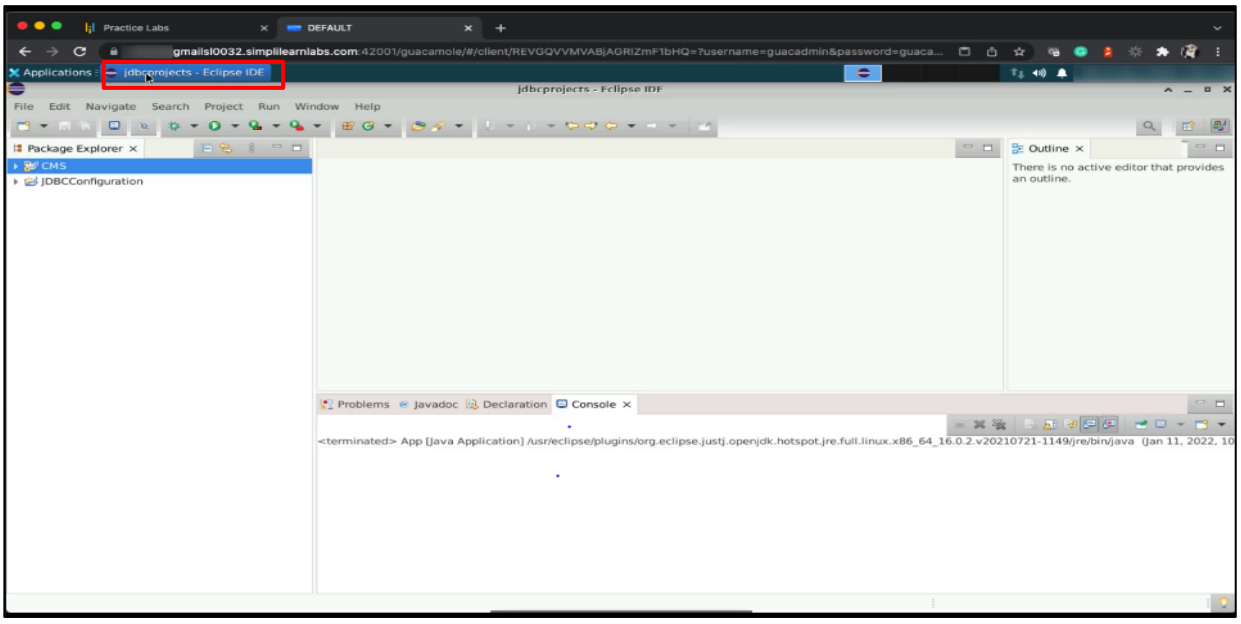
Prerequisites: None

Steps to be followed:

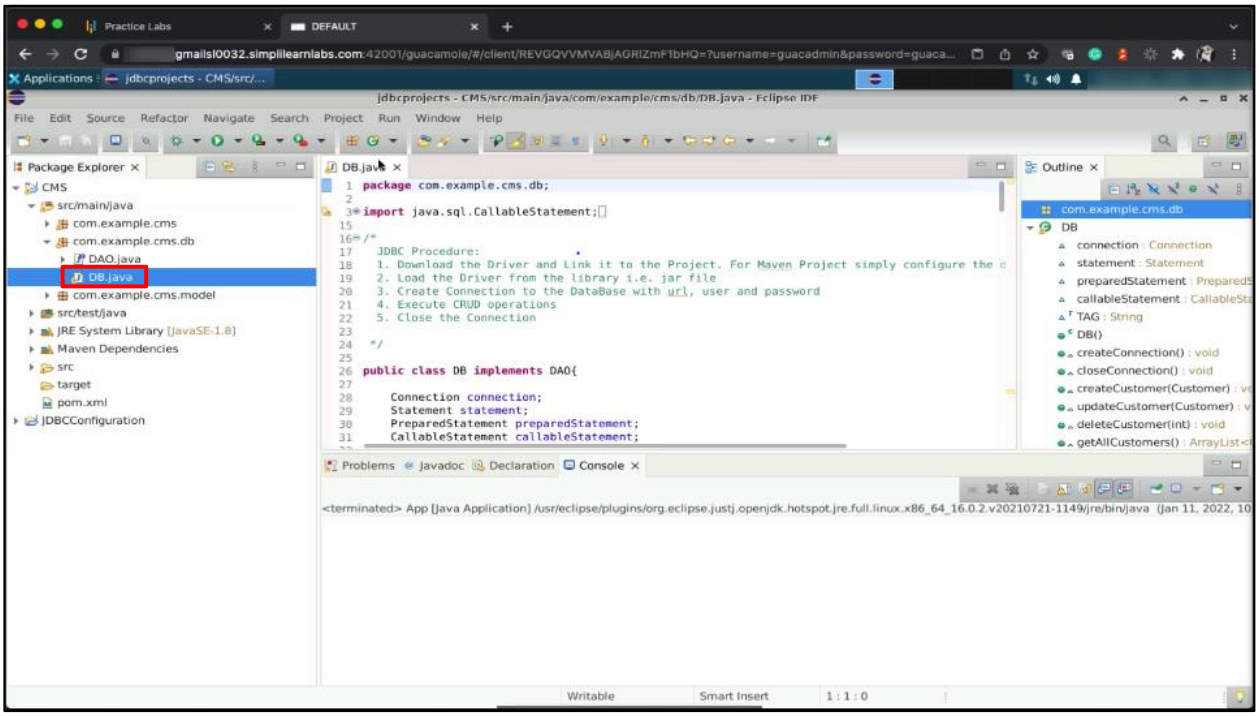
1. Extract details about the database and list of tables
2. Extract Metadata containing the list of tables

Step 1: Extract details about the database and list of tables

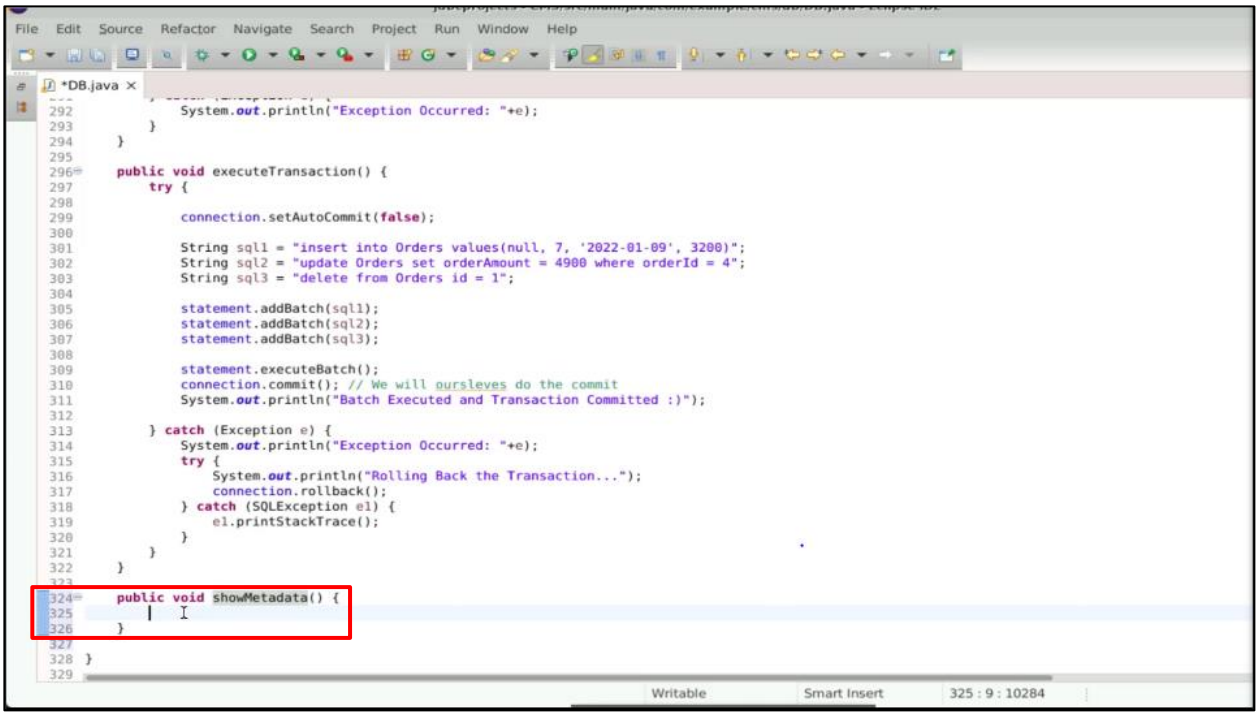
1.1 Open **Eclipse IDE**



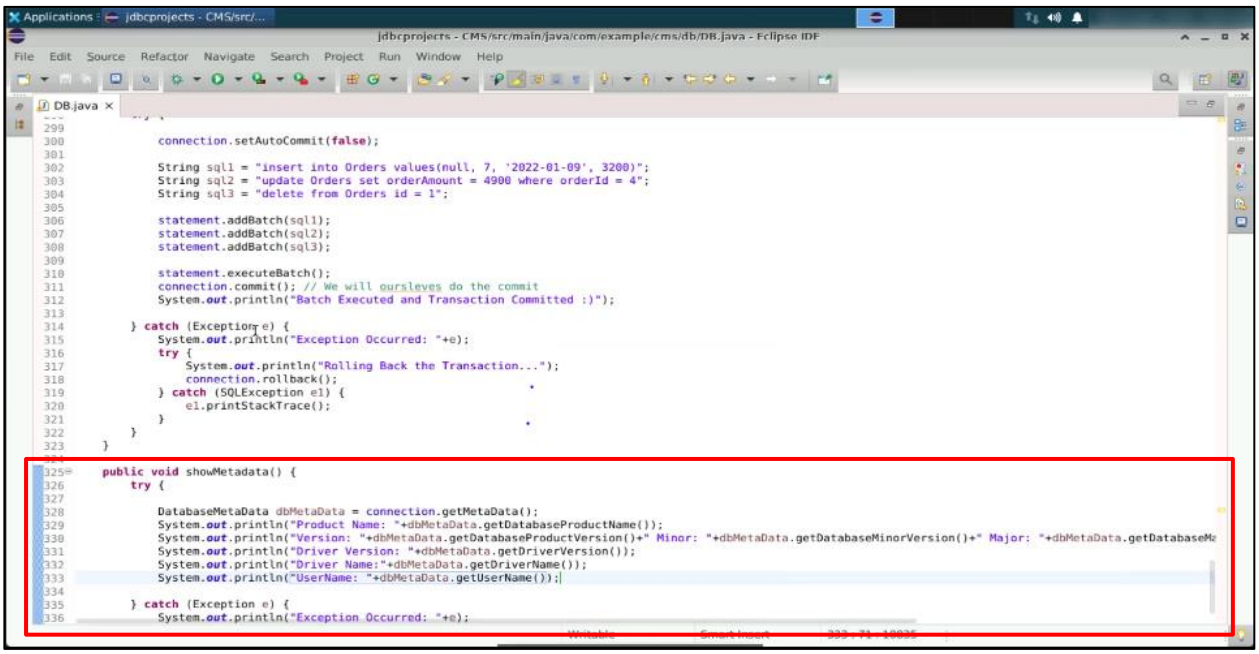
1.2 Open **CMS > src/main/java > com.example.cms.db > DB.java** file



1.3 Create a new method **showMetadata()**

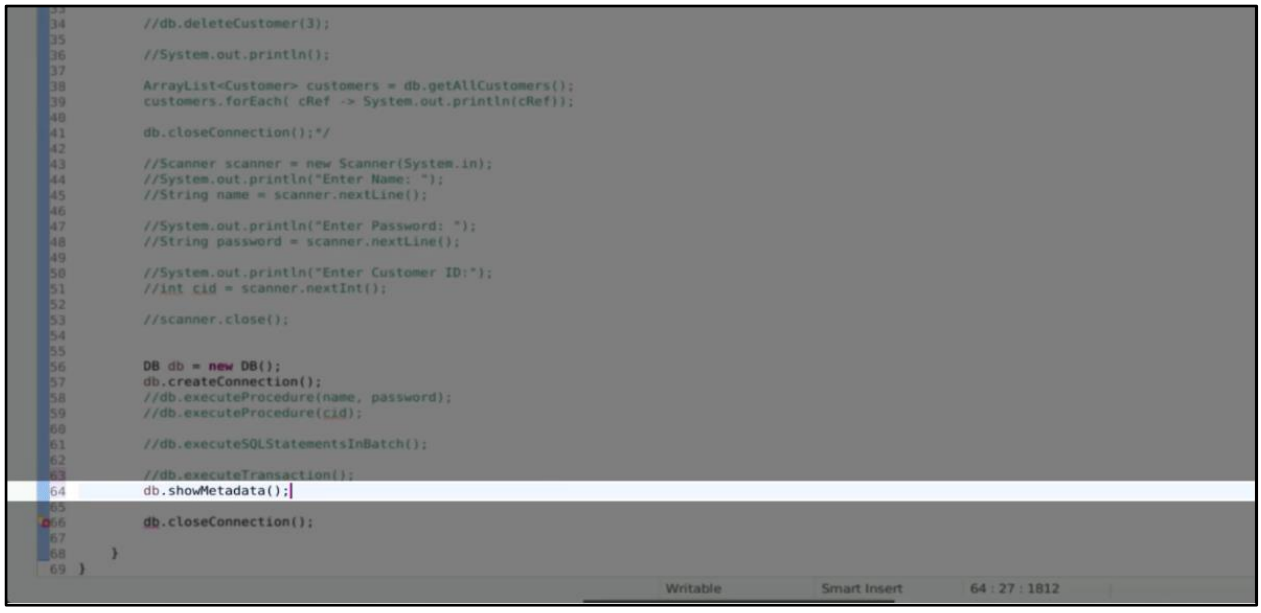


1.4 Write the **try-catch** block to work on the object **DatabaseMetaData** object which will provide the database information by using the **getMetaData** method

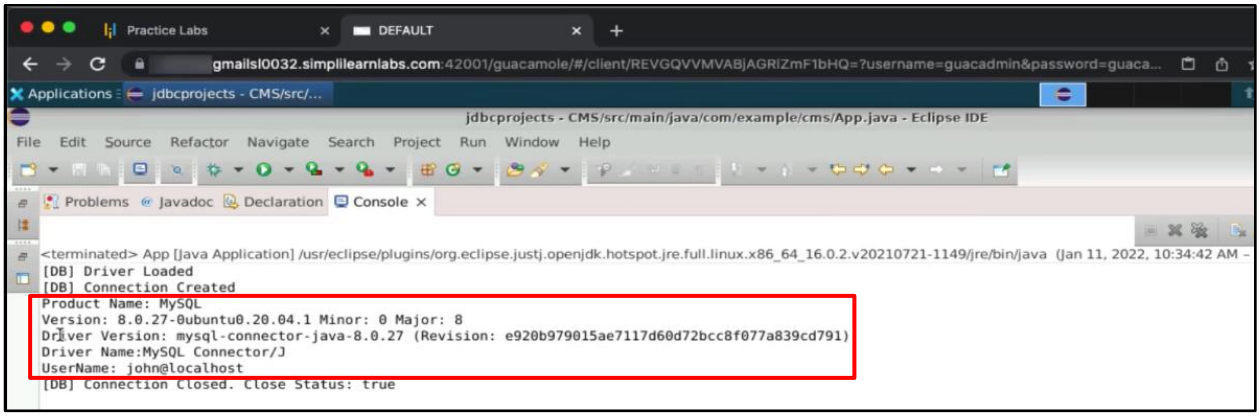


1.5 Run the **showMetadata** method from **App.java** by adding the below line in the **App.java** file:

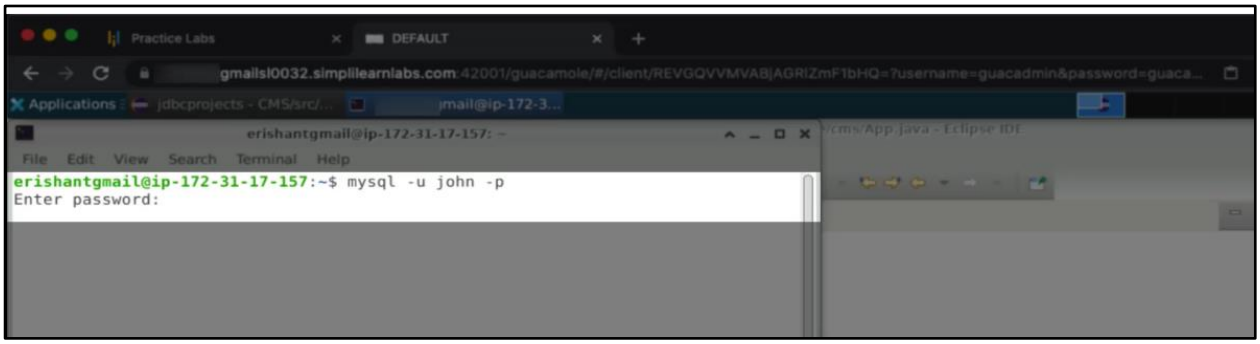
db.showMetadata()



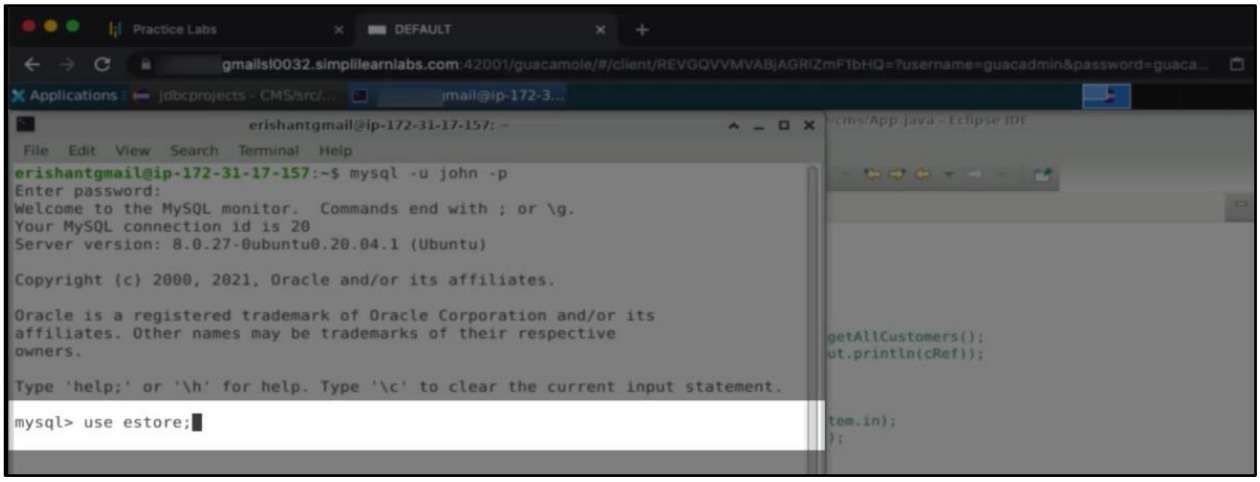
1.6 Run the code. In the output, see all the attributes, like Product Name and Version printed using the try-catch block.



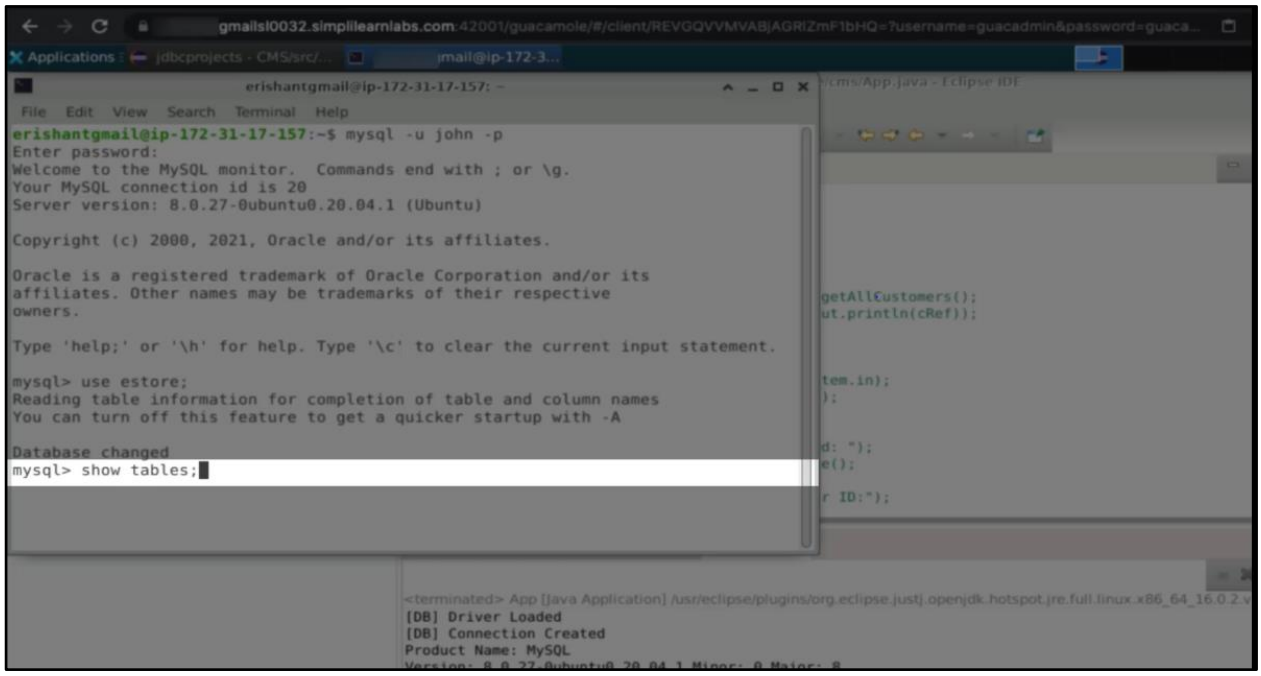
1.7 Log in into **mysql** by opening the terminal

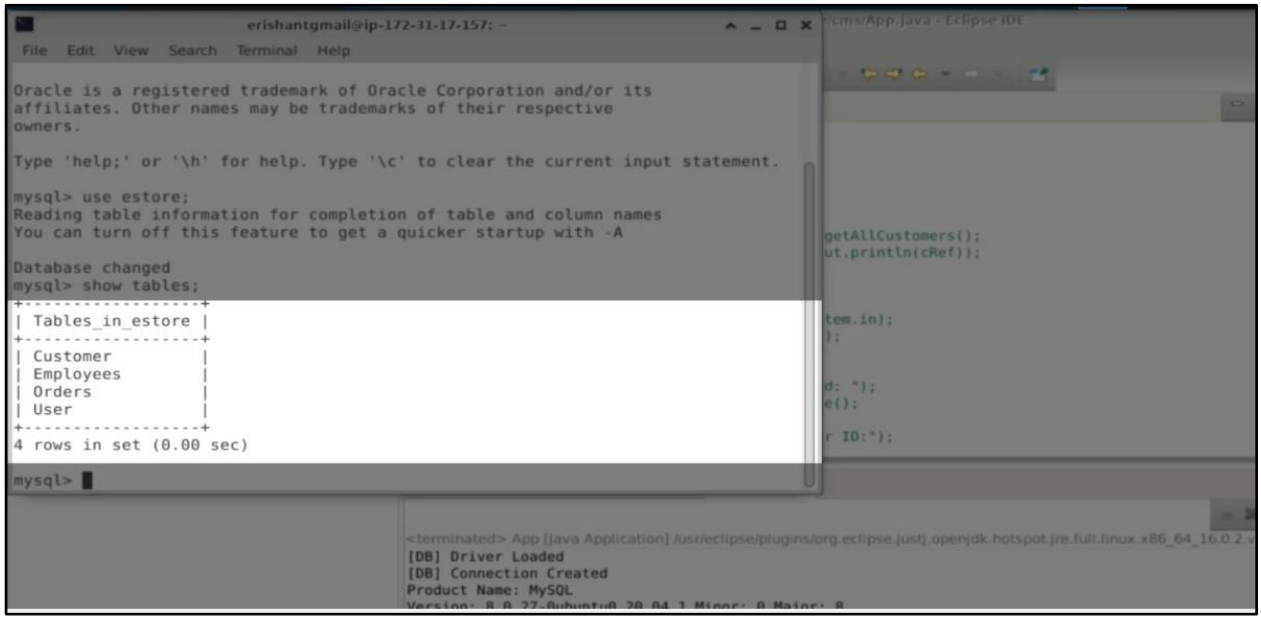


1.8 Type the command **use estore;** to change the database



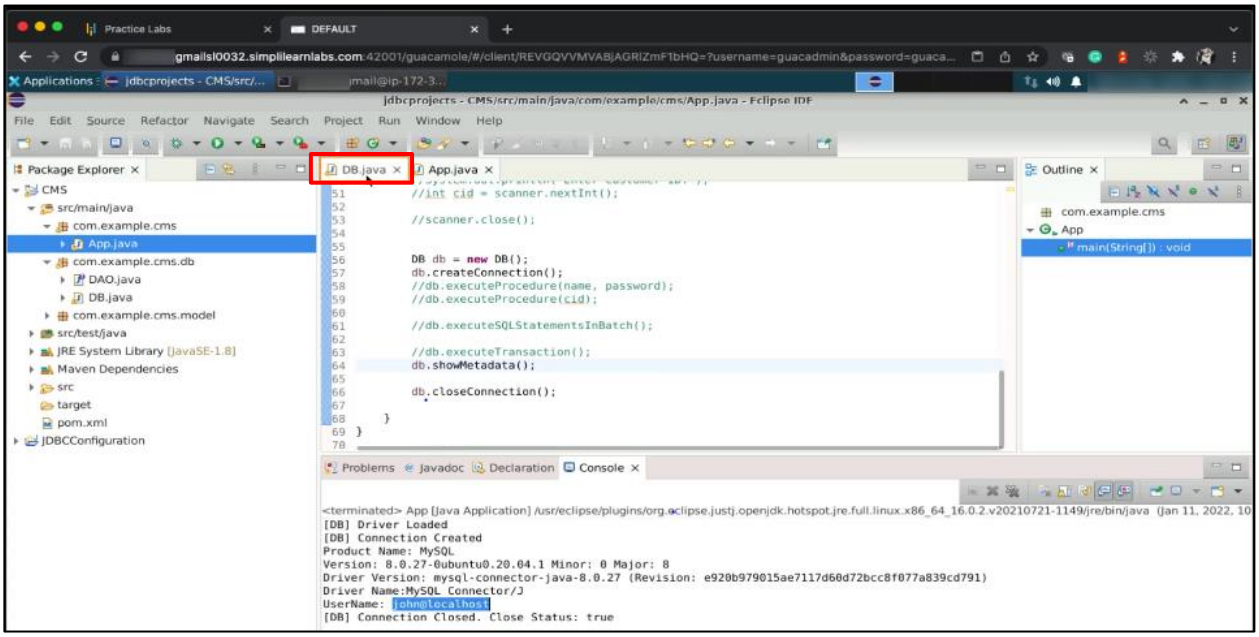
1.9 Write the **show tables;** command to list the tables in the **estore** database



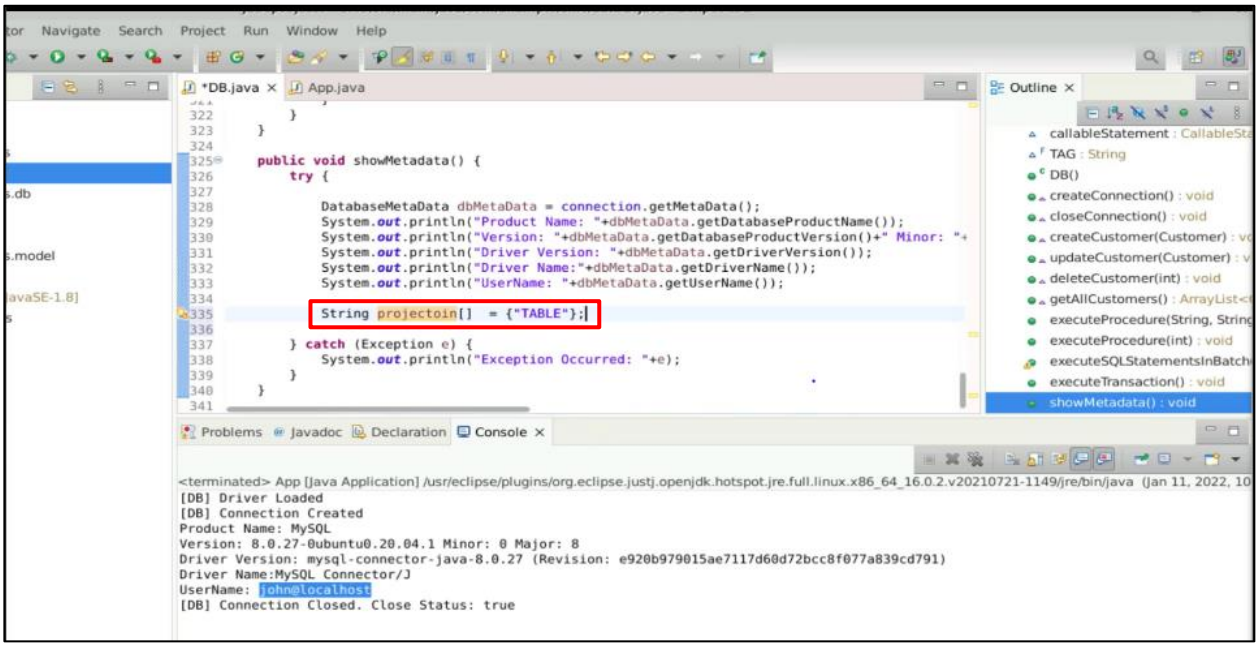


Step 2: Extract Metadata containing the list of tables

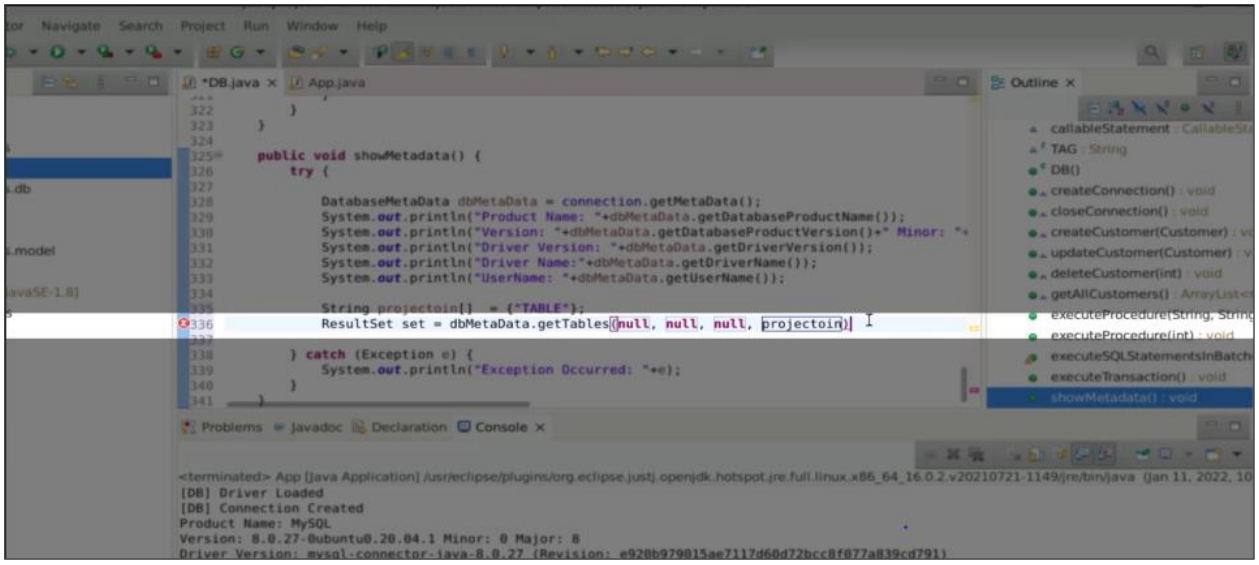
2.1 Open Eclipse IDE and go to the **DB.java** file to see the metadata containing the list of tables



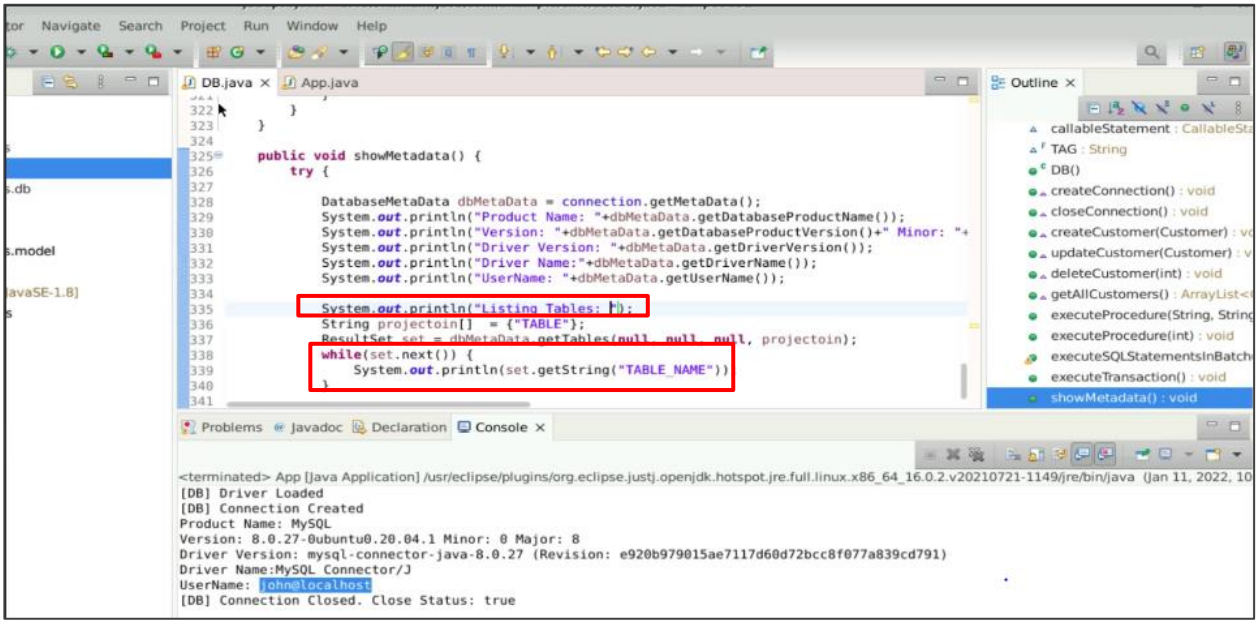
2.2 Create a projection array for extracting a table



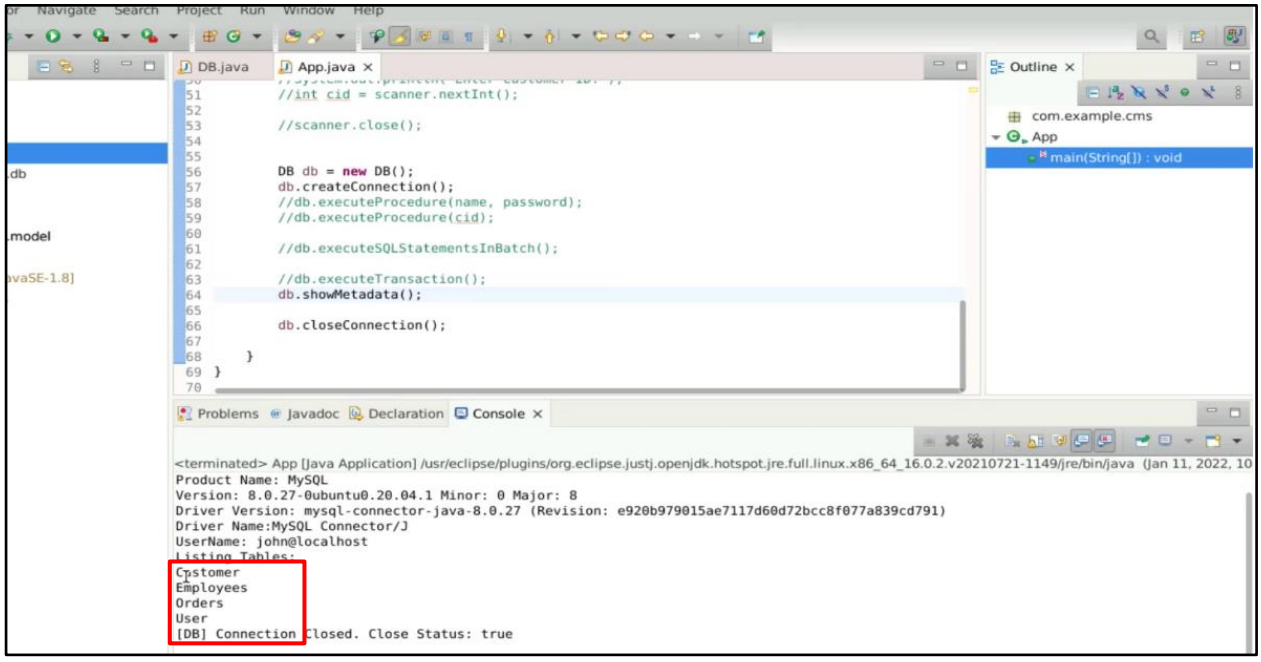
2.3 Create a result set using the ResultSet object to filter the data



2.4 Loop through the result set and add the print statement



2.5 Run the program from the **App.java** file. See the output similar to the **show tables;** command in the console.



By following these steps, you have successfully extracted information about the database in a Java program using metadata for understanding the database structure and schema. This approach allows for dynamic retrieval of database details such as tables, columns, and data types.