Development of Salary Grades using JDBC

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What is my project?

- I wrote a Java program which takes an employee’s Id from the user and return the name, job title, salary, and salary grade.
- The program uses JDBC to connect to the Database.
What is JDBC?

- JDBC (Java Database Connectivity) is a Java API for executing SQL statements.
- Using JDBC, it is easy to send SQL statements to almost any relational database.
Four JDBC Driver Categories

- JDBC-ODBC bridge plus ODBC driver
- Native-API partly Java Driver
- JDBC-Net pure Java Driver
- Native-protocol pure Java driver
ODBC Data Source Administrator

- Select the appropriate driver.
- Enter the data source name inside the setup window.
- Select the directory where the database’s files are stored.
Three steps involved in JDBC

• Establish the connection with the database.

• Send SQL statements.

• Process the results.
Establishing the Connection

• The following is code used to connect to the database:

  Connection con = DriverManager.getConnection
                   ("jdbc:odbc:abra", "login", "password");
The three parts to the URL

• Protocol

• subprotocol

• subname
Sending SQL Statements

- The SQL Statements are:

```java
Statement stmt = con.createStatement();
ResultSet rs = stmt.executeQuery("SELECT P_EMPNO, P_FNAME, P_LNAME, P_JOBTITLE, P_ANNUAL FROM hrPersnl.dbf");
```

<table>
<thead>
<tr>
<th>P_EMPNO</th>
<th>P_FNAME</th>
<th>P_LNAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>816001</td>
<td>Sally</td>
<td>Parker</td>
</tr>
<tr>
<td>816002</td>
<td>Billy</td>
<td>Smith</td>
</tr>
<tr>
<td>816003</td>
<td>Tina</td>
<td>Jones</td>
</tr>
</tbody>
</table>
Processing the Results

• $I = 0$

    while ( rs.next () ) {
        $Id[I] = rs.getInt ("P_EMPNO");$
        $fname[I] = rs.getString("P_FNAME");$
        $lname[I] = rs.getString("P_LNAME");$
        $jobtitle[I] = rs.getString("P_JOBTITLE");$
        $salary[I] = rs.getFloat("P_ANNUAL");$
        $I+$
        $I+$;
    }


When will this be useful?

- Promotions
- New Hire Purposes
- Up Grading Positions
- Scheduled Performance Reviews.
Problems

• Registering the Database in the ODBC Data Source Administrator.

• JDBC Code

• Syntax