**Assignment -6:: JDBC and Swing**

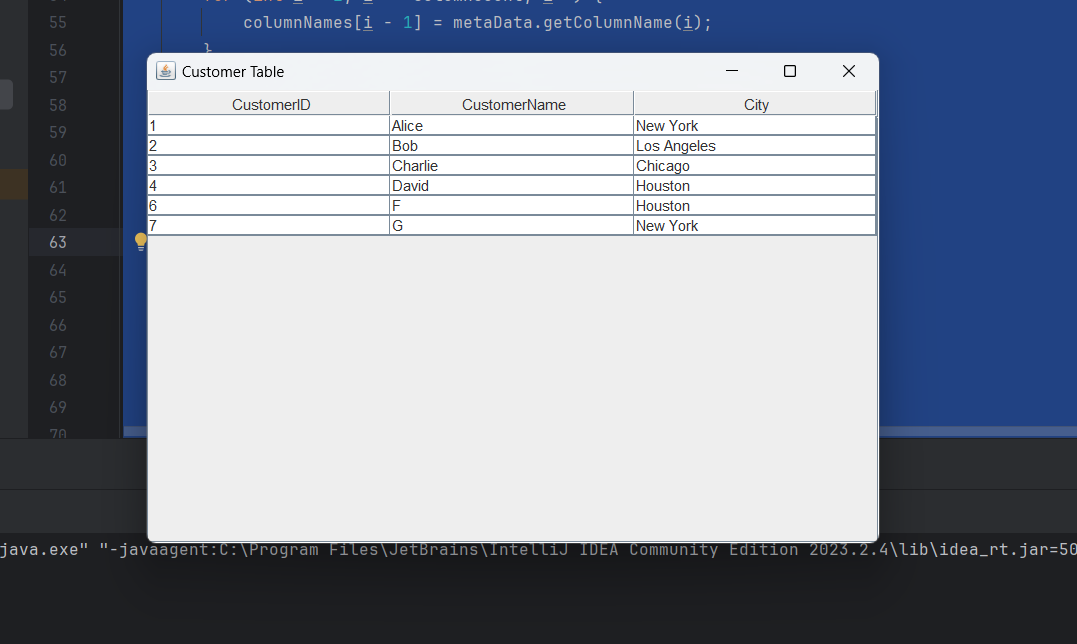
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Code :

package org.example;  
import javax.swing.\*;  
import javax.swing.table.DefaultTableModel;  
import java.awt.\*;  
import java.sql.\*;  
  
public class Main extends JFrame {  
 private JTable table;  
 private JScrollPane scrollPane;  
  
 public Main() {  
 String url = "jdbc:mysql://localhost:3306/sales\_database";  
 String username = "root";  
 String password = "Mysql123#";  
  
 try {  
 Class.*forName*("com.mysql.cj.jdbc.Driver");  
 Connection connection = DriverManager.*getConnection*(url, username, password);  
 Statement statement = connection.createStatement();  
 ResultSet resultSet = statement.executeQuery("SELECT \* FROM customers");  
  
 // Create a JTable to display the result set  
 table = new JTable(*buildTableModel*(resultSet));  
 scrollPane = new JScrollPane(table);  
  
 // Set up JFrame  
 setTitle("Customer Table");  
 setDefaultCloseOperation(JFrame.*EXIT\_ON\_CLOSE*);  
 setSize(600, 400);  
 setLocationRelativeTo(null);  
 setLayout(new BorderLayout());  
  
 // Add JTable to JFrame  
 add(scrollPane, BorderLayout.*CENTER*);  
 } catch (Exception e) {  
 e.printStackTrace();  
 JOptionPane.*showMessageDialog*(null, "Error: " + e.getMessage(), "Error", JOptionPane.*ERROR\_MESSAGE*);  
 }  
 }  
  
 public static void main(String[] args) {  
 SwingUtilities.*invokeLater*(() -> {  
 new Main().setVisible(true);  
 });  
 }  
  
 // Helper method to convert ResultSet to TableModel  
 public static DefaultTableModel buildTableModel(ResultSet resultSet) throws SQLException {  
 ResultSetMetaData metaData = resultSet.getMetaData();  
  
 // Get column names  
 int columnCount = metaData.getColumnCount();  
 String[] columnNames = new String[columnCount];  
 for (int i = 1; i <= columnCount; i++) {  
 columnNames[i - 1] = metaData.getColumnName(i);  
 }  
  
 // Get data  
 Object[][] data = new Object[0][];  
 int rowCount = 0;  
 while (resultSet.next()) {  
 rowCount++;  
 Object[] rowData = new Object[columnCount];  
 for (int i = 1; i <= columnCount; i++) {  
 rowData[i - 1] = resultSet.getObject(i);  
 }  
 data = *appendRow*(data, rowData);  
 }  
  
 return new DefaultTableModel(data, columnNames);  
 }  
  
 // Helper method to append a row to a 2D array  
 public static Object[][] appendRow(Object[][] array, Object[] newRow) {  
 Object[][] newArray = new Object[array.length + 1][];  
 System.*arraycopy*(array, 0, newArray, 0, array.length);  
 newArray[array.length] = newRow;  
 return newArray;  
 }  
}

**Output: **