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**Lab 04**

File 1: Dao Source Code

import java.sql.ResultSet;  
import java.sql.SQLException;  
import java.sql.\*;  
import java.util.ArrayList;  
  
public class Dao {  
 //Declare DB objects  
 DBConnect conn = null;  
 Statement stmt = null;  
  
 // constructor  
 public Dao() { //create db object instance  
 conn = new DBConnect();  
 }  
  
 // CREATE TABLE METHOD  
 public void createTable() {  
 try {  
 // Open a connection  
 System.*out*.println("Connecting to a selected database to create Table...");  
 System.*out*.println("Connected database successfully...");  
  
 // Execute create query  
 System.*out*.println("Creating table in given database...");  
 stmt = conn.connect().createStatement();  
 String sql = "CREATE TABLE s\_mirz\_tab3 " +  
 "(pid INTEGER not NULL AUTO\_INCREMENT, " +  
 " id VARCHAR(10), " +  
 " income numeric(8,2), " +  
 " pep VARCHAR(4), " +  
 " PRIMARY KEY ( pid ))";  
 stmt.executeUpdate(sql);  
 System.*out*.println("Created table in given database...");  
 conn.connect().close(); //close db connection  
 }  
 catch (SQLException se) {  
 // Handle errors for JDBC  
 se.printStackTrace();  
 }  
 }  
  
 // INSERT INTO METHOD  
 public void insertRecords(BankRecords[] robjs) {  
 try {  
 // Execute a query  
 System.*out*.println("Inserting records into the table...");  
 stmt = conn.connect().createStatement();  
 String sql = null;  
  
 // Include all object data to the database table  
 for (int i = 0; i < robjs.length; ++i) {  
  
 // finish string assignment to insert all object data  
 // (id, income, pep) into your database table  
 sql = "INSERT INTO s\_mirz\_tab3(ID, Income, Pep) " +  
 "VALUES (' "+ robjs[i].getId() +" ', ' "+ robjs[i].getIncome() +" ', ' "+ robjs[i].getPep() +" ' )";  
 stmt.executeUpdate(sql);  
 }  
 conn.connect().close();  
  
 }  
 catch (SQLException se) {  
 se.printStackTrace();  
 }  
 }  
  
 public ResultSet retrieveRecords() {  
 ResultSet rs = null;  
 try {  
 stmt = conn.connect().createStatement();  
 String sql =  
 "select id, income, pep from s\_mirz\_tab3 order by pep desc";  
 ;  
 rs = stmt.executeQuery(sql);  
 conn.connect().close();  
 }  
 catch (SQLException se) {  
 se.printStackTrace();  
 }  
 return rs;  
 }  
}

File 2: DBConnect Source Code

import java.sql.Connection;  
import java.sql.DriverManager;  
import java.sql.SQLException;  
  
public class DBConnect {  
 // Code database URL  
 static final String *DB\_URL* =  
 "jdbc:mysql://www.papademas.net:3307/411labs?autoReconnect=true&useSSL=false";  
 // Database credentials  
 static final String *USER* = "db411", *PASS* = "411";  
 public Connection connect() throws SQLException {  
 return DriverManager.*getConnection*(*DB\_URL*, *USER*, *PASS*);  
 }  
}

File 3: LoanProcessing Source Code

import java.sql.ResultSet;  
import java.sql.DriverManager;  
import java.sql.Connection;  
import java.sql.PreparedStatement;  
import java.sql.SQLException;  
import java.sql.\*;  
  
public class LoanProcessing extends BankRecords {  
 public static void main(String[] args) throws SQLException {  
 BankRecords br = new BankRecords();  
 br.readData();  
 Dao dao = new Dao();  
 dao.createTable();  
 dao.insertRecords(*robjs*); // perform inserts  
 ResultSet rs = dao.retrieveRecords(); // fill result set object  
 // Create heading for display  
 System.*out*.println("Loan Analysis Report\n");  
 System.*out*.println("ID\t\tIncome\t\tPep");  
 // Extract data from result set  
 while (rs.next()) {  
 // Retrieve data by column name (i.e., for id,income,pep)  
 try {  
 String retrieveData =  
 rs.getString("id") + "\t\t" +  
 rs.getDouble("income") + "\t" +  
 rs.getString("pep");  
 // Display values for id,income,pep  
 System.*out*.println(retrieveData);  
 }  
 catch (SQLException se) {  
 se.printStackTrace();  
 }  
 }  
 rs.close(); // closes result set object  
 }  
}

LoanProcessing() Output Snapshot

Text

Description automatically generated with medium confidence