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\*/

//Imports

import java.sql.\*;

import java.util.Scanner;

import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.SQLException;

import java.util.Properties;

import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.ResultSet;

import java.sql.SQLException;

import java.sql.Statement;

import java.util.logging.Level;

import java.util.logging.Logger;

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public class JavaConnectDB {

public static void main(String args[]) throws SQLException {

//datebase url

String dbURL = "jdbc:oracle:thin:@akka.d.umn.edu:1521:XE";

//user enters username and password

String username;

String password;

Scanner usernameline = new Scanner(System.in);

System.out.println("Enter Username:");

username = usernameline.nextLine();

Scanner passwordline= new Scanner(System.in);

System.out.println("Enter password:");

password = passwordline.nextLine();

Connection dbCon = null;

Boolean connect = true;

//This will try to connect the database url with user provided username and password

try{

dbCon = DriverManager.getConnection(dbURL, username, password);

}

catch(SQLException ex) {

System.out.println(ex);

connect = false;

}

//Checks to see if Connection is True. If true then start the query process

if(connect == true){

//Swtich loop for the four Queries

String switchnum;

Boolean again = true;

while(again == true){

//User enters what query they want. This will loop until user enters Exit

Scanner switchnumline = new Scanner(System.in);

System.out.println("Enter:\n \t1(Scheduling a Road Test)\n\t2(Scheduling a Driving Lesson)\n"

+ "\t3(Find the percentage of fail score of a specific school)\n\t4(Finds the list of student assoicated with a instructor)\n"

+ "\tExit(Exit the Program)\n");

switchnum = switchnumline.nextLine();

switch (switchnum){

case "1":

insertRoadTest(dbCon);

break;

case "2":

insertDrivingLesson(dbCon);

break;

case "3":

SelectPercentageFail(dbCon);

break;

case "4":

SelectNotYetPassed(dbCon);

break;

case "Exit":

again = false;

break;

}

}

}

}

//Schedules a Road Test

public static void insertRoadTest(Connection dbCon) throws SQLException{

String RoadTest\_ID,Test\_Date,Score,StateExaminer\_ID,StateExaminer\_name,Stein\_id,vin ;

//RoadTest\_ID

Scanner RoadTest\_IDline = new Scanner(System.in);

System.out.println("Enter RoadTest ID:");

RoadTest\_ID = RoadTest\_IDline.nextLine();

//Test\_Date

Scanner Test\_Dateline = new Scanner(System.in);

System.out.println("Enter Test Date(MM/DD/YYYY):");

Test\_Date = Test\_Dateline.nextLine();

//Score

Scanner Scoreline = new Scanner(System.in);

System.out.println("Enter Score(Pass/Fail):");

Score = Scoreline.nextLine();

//State Examiner ID

Scanner StateExaminer\_IDline = new Scanner(System.in);

System.out.println("Enter State Examiner ID:");

StateExaminer\_ID = StateExaminer\_IDline.nextLine();

//StateExaminer name

Scanner StateExaminer\_nameline = new Scanner(System.in);

System.out.println("Enter State Examiner Name:");

StateExaminer\_name = StateExaminer\_nameline.nextLine();

//Stein ID

Scanner Stein\_IDline = new Scanner(System.in);

System.out.println("Enter Stein ID:");

Stein\_id = Stein\_IDline.nextLine();

//Vehicle Vin

Scanner vinline = new Scanner(System.in);

System.out.println("Enter Vehicle Vin:");

vin = vinline.nextLine();

//Inserts road test in the database

try{

//create statement

Statement insert = dbCon.createStatement();

insert.executeUpdate("Insert into Road\_Test Values('"+RoadTest\_ID+"',TO\_DATE('"+Test\_Date+"', 'MM/DD/YYYY'), '"+Score+"', "+StateExaminer\_ID+", '"+StateExaminer\_name+"', '"+Stein\_id+"', '"+vin+"')");

System.out.println("Scheduled a Road Test!");

}

catch(SQLException ex) {

System.out.println(ex);

}

}

//Schedules a Driving Lesson

public static void insertDrivingLesson(Connection dbCon) throws SQLException{

String lesson\_id,date\_lesson,stein\_id,instructor\_ssn,vin;

//Lesson ID

Scanner lesson\_idline = new Scanner(System.in);

System.out.println("Enter Lesson ID:");

lesson\_id = lesson\_idline.nextLine();

//Date Lesson

Scanner date\_lessonline = new Scanner(System.in);

System.out.println("Enter Date of Lesson(MM/DD/YYYY):");

date\_lesson = date\_lessonline.nextLine();

//stein\_id

Scanner stein\_idline = new Scanner(System.in);

System.out.println("Enter Stein ID of the Student:");

stein\_id = stein\_idline.nextLine();

//Instructor\_SSN

Scanner instructor\_ssnline = new Scanner(System.in);

System.out.println("Enter Instructor's SSN:");

instructor\_ssn = instructor\_ssnline.nextLine();

try{

//create statement

Statement st = dbCon.createStatement();

st.executeUpdate("Insert into Lesson Values( "+lesson\_id+ ", TO\_DATE('"+date\_lesson+"', 'MM/DD/YYYY'), '"+stein\_id+"', "+instructor\_ssn+")");

System.out.println("Scheduled a Driving Lesson!\n");

}

catch(SQLException ex) {

System.out.println(ex);

}

}

//This function will find the fail scores of different schools

public static void SelectPercentageFail(Connection dbCon) throws SQLException{

//User enters a specific driving schoool id

String DrivingSchool\_ID;

Scanner DrivingSchool\_IDline = new Scanner(System.in);

System.out.println("Enter Driving School ID:");

DrivingSchool\_ID = DrivingSchool\_IDline.nextLine();

//my select query 3

String query ="Select DISTINCT( Select COUNT(Road\_Test.Score)\n" +

"FROM Instructor,Driving\_School,Student,Road\_Test\n" +

"where Instructor.drivingschool\_id = Driving\_School.drivingschool\_id\n" +

"AND Instructor.instructor\_ssn= Student.instructor\_ssn\n" +

"AND Student.Stein\_ID = Road\_Test.Stein\_id\n" +

"AND Driving\_School.drivingschool\_id = '"+DrivingSchool\_ID+"'\n" +

"AND Road\_Test.Score = 'Fail')/(Select COUNT(Road\_Test.Score)\n" +

"FROM Instructor,Driving\_School,Student,Road\_Test\n" +

"where Instructor.drivingschool\_id = Driving\_School.drivingschool\_id\n" +

"AND Instructor.instructor\_ssn= Student.instructor\_ssn\n" +

"AND Driving\_School.drivingschool\_id = '"+DrivingSchool\_ID+"'\n" +

"AND Student.Stein\_ID = Road\_Test.Stein\_id)\*100 as Score From Road\_Test";

//getting PreparedStatment to execute query

try{

//prepare stament to execute query

Statement state = dbCon.prepareStatement(query);

//Resultset returned by query

ResultSet selectresult = state.executeQuery(query);

while (selectresult.next()) {

System.out.println("Fail Percentage for the School is "+ selectresult.getString(1)+"%\n");

}

}

catch(SQLException ex) {

System.out.println(ex);

}

}

//This function will find students that have not yet passed their Road Test for Instructors

public static void SelectNotYetPassed(Connection dbCon) throws SQLException{

//User enters a specific instructor ID

String Instructor\_ID;

Scanner Instructor\_IDline = new Scanner(System.in);

System.out.println("Enter Instructor SSN:");

Instructor\_ID = Instructor\_IDline.nextLine();

//my select query 3

String query ="Select Student\_name FROM (\n" +

"Select Student.Stein\_ID,Student\_name,MAX(Road\_Test.Test\_Date)\n" +

"FROM Student, Instructor,Road\_Test\n" +

"Where Student.instructor\_ssn = Instructor.instructor\_ssn\n" +

"AND Student.Stein\_ID = Road\_Test.Stein\_id\n" +

"AND Instructor.instructor\_ssn = '"+Instructor\_ID+"'\n" +

"AND NOT EXISTS (SELECT Score FROM Road\_Test WHERE Score = 'Pass' AND Student.Stein\_ID = Road\_Test.Stein\_id)\n" +

"Group BY Student.Stein\_ID,Student\_name)";

try{

//Loop for printing result numbers

int rownum = 1;

//prepare stament to execute query

Statement state = dbCon.prepareStatement(query);

//Resultset returned by query

ResultSet selectresult = state.executeQuery(query);

System.out.println("Students that have not yet passed are:");

//prints out query

while (selectresult.next()) {

System.out.println(rownum + "." + selectresult.getString(1));

rownum++;

}

System.out.println("\n");

}

catch(SQLException ex) {

System.out.println(ex);

}

}

}