**Pete Oram**

**ITCS-3160**

**Homework #12**

**#800159179**

**Please use this template to turn in your homework 12 assignment**

//Paste in **ALL** of your stored procedures here

USE [AutoDealer]

GO

/\*\*\*\*\*\* Object: StoredProcedure [dbo].[procGetBankByRoutingNumber] Script Date: 4/16/2014 10:10:31 PM \*\*\*\*\*\*/

SET ANSI\_NULLS ON

GO

SET QUOTED\_IDENTIFIER ON

GO

ALTER PROCEDURE [dbo].[procGetBankByRoutingNumber]

@RoutingNumber char(9) = NULL

AS

BEGIN

SELECT \*

FROM Banks

WHERE Banks.RoutingNumber = @RoutingNumber

END

USE [AutoDealer]

GO

/\*\*\*\*\*\* Object: StoredProcedure [dbo].[procGetCarByVehicleID] Script Date: 4/16/2014 10:10:49 PM \*\*\*\*\*\*/

SET ANSI\_NULLS ON

GO

SET QUOTED\_IDENTIFIER ON

GO

ALTER PROCEDURE [dbo].[procGetCarByVehicleID]

@VehicleID char(15)

AS

BEGIN

SELECT \*

FROM Cars

WHERE Cars.VehicleID = @VehicleID

END

USE [AutoDealer]

GO

/\*\*\*\*\*\* Object: StoredProcedure [dbo].[procGetMechanicByID] Script Date: 4/16/2014 10:11:22 PM \*\*\*\*\*\*/

SET ANSI\_NULLS ON

GO

SET QUOTED\_IDENTIFIER ON

GO

ALTER PROCEDURE [dbo].[procGetMechanicByID]

@ID int

AS

BEGIN

SELECT \*

FROM Mechanics

WHERE Mechanics.ID = @ID

END

USE [AutoDealer]

GO

/\*\*\*\*\*\* Object: StoredProcedure [dbo].[procGetServiceByServiceID] Script Date: 4/16/2014 10:11:43 PM \*\*\*\*\*\*/

SET ANSI\_NULLS ON

GO

SET QUOTED\_IDENTIFIER ON

GO

ALTER PROCEDURE [dbo].[procGetServiceByServiceID]

@ServiceID char(2)

AS

BEGIN

SELECT \*

FROM Services

WHERE Services.ServiceID = @ServiceID

END

//Paste in **ALL** of your data object classes here (the one you added to the database.dataobjects package for this problem)

**package** database.dataobjects;

**public** **class** Bank {

**private** String routingNumber = **null**;

**private** String bankName = **null**;

//Setters and Getters for Bank Name and Routing Number

**public** **void** setRoutingNumber(String rn) {

routingNumber = rn;

}

**public** **void** setBankName(String bankName) {

**this**.bankName = bankName;

}

**public** String getRoutingNumber() {

**return** routingNumber;

}

**public** String getBankName() {

**return** bankName;

}

//Constructor takes in Routing number and Name of the Bank

**public** Bank(String aRoutingNumber, String aBankName){

**this**.routingNumber = aRoutingNumber;

**this**.bankName = aBankName;

}

**public** String toString(){

StringBuffer buf = **new** StringBuffer();

buf.append("Routing Number:\t");

buf.append(getRoutingNumber());

buf.append("\nBank Name:\t");

buf.append(getBankName());

**return** buf.toString();

}

}

**package** database.dataobjects;

**public** **class** Car {

**private** String vehicleID = **null**;

**private** String manufacturer = **null**;

**private** String model = **null**;

**private** String color = **null**;

**private** String year = **null**;

**private** String cost = **null**;

//Setters for Car Attributes

**public** **void** setVehicleID(String vID) {

vehicleID = vID;

}

**public** **void** setManufacturer(String manufacturer) {

**this**.manufacturer = manufacturer;

}

**public** **void** setModel(String model) {

**this**.model = model;

}

**public** **void** setColor(String color) {

**this**.color = color;

}

**public** **void** setYear(String year) {

**this**.year = year;

}

**public** **void** setCost(String cost) {

**this**.cost = cost;

}

//Getters for Car Attributes

**public** String getVehicleID(){

**return** vehicleID;

}

**public** String getManufacturer(){

**return** manufacturer;

}

**public** String getModel(){

**return** model;

}

**public** String getColor(){

**return** color;

}

**public** String getYear(){

return year;

}

**public** String getCost(){

**return** cost;

}

//Constructor takes in the Car parameters

**public** Car(String anID, String aManufacturer, String aModel, String aColor, String aYear, String aCost){

**this**.vehicleID = anID;

**this**.manufacturer = aManufacturer;

**this**.model = aModel;

**this**.color = aColor;

**this**.year = aYear;

**this**.cost = aCost;

}

//toString method appends data from the getter methods for output

**public** String toString(){

StringBuffer buf = **new** StringBuffer();

buf.append("Vehicle ID:\t");

buf.append(getVehicleID());

buf.append("\nManufacturer:\t");

buf.append(getManufacturer());

buf.append("\nModel:\t");

buf.append(getModel());

buf.append("\nColor:\t");

buf.append(getColor());

buf.append("\nYear:\t");

buf.append(getYear());

buf.append("\nCost:\t");

buf.append(getCost());

**return** buf.toString();

}

}

**package** database.dataobjects;

**public** **class** Service {

**private** String serviceID = **null**;

**private** String serviceName = **null**;

**private** String allottedTime = **null**;

**private** String cost = **null**;

//Setters and Getters for Service class attributes

**public** **void** setServiceID(String sID) {

serviceID = sID;

}

**public** **void** setServiceName(String sName) {

**this**.serviceName = sName;

}

**public** **void** setAllottedTime(String aTime) {

**this**.allottedTime = aTime;

}

**public** **void** setCost(String cost) {

**this**.cost = cost;

}

**public** String getServiceID(){

**return** serviceID;

}

**public** String getServiceName(){

**return** serviceName;

}

**public** String getAllottedTime(){

**return** allottedTime;

}

**public** String getCost(){

**return** cost;

}

//Constructor takes in values for the service class attributes

**public** Service(String anID, String aName, String aTime, String aCost){

**this**.serviceID = anID;

**this**.serviceName = aName;

**this**.allottedTime = aTime;

**this**.cost = aCost;

}

//To String method appends the values from the getter methods

**public** String toString(){

StringBuffer buf = **new** StringBuffer();

buf.append("ServiceID:\t");

buf.append(getServiceID());

buf.append("\nService Name:\t");

buf.append(getServiceName());

buf.append("\nAllotted Time:\t");

buf.append(getAllottedTime());

buf.append("\nCost:\t");

buf.append(getCost());

**return** buf.toString();

}

}

//Paste in ALL of the methods you **added** to the ObjectBuilder class here

//Add constants to the DatabaseConstants class

**public** Bank createBank(ResultSet rs){

Bank b = **null**;

**try**{

//Set routing number by calling getString on rs (ResultSet)

String rNumber = rs.getString(DatabaseConstants.*COLUMN\_ROUTING\_NUMBER*);

//Set bank name by calling getString on rs

String bName = rs.getString(DatabaseConstants.*COLUMN\_BANK\_NAME*);

b = **new** Bank(rNumber, bName); //Create new Bank object

}**catch** (SQLException e){

e.printStackTrace();

}

**return** b;//Returns bank object

}

**public** Car createCar(ResultSet rs){

Car c = **null**;

**try**{

String vid=rs.getString(DatabaseConstants.*COLUMN\_VEHICLE\_VEHICLE\_ID*);

String man=rs.getString(DatabaseConstants.*COLUMN\_VEHICLE\_MANUFACTURER*);

String model=rs.getString(DatabaseConstants.*COLUMN\_VEHICLE\_MODEL*);

String color=rs.getString(DatabaseConstants.*COLUMN\_VEHICLE\_COLOR*);

String year=rs.getString(DatabaseConstants.*COLUMN\_VEHICLE\_YEAR*);

String cost=rs.getString(DatabaseConstants.*COLUMN\_VEHICLE\_COST*);

//Create new car object with id, manufacturer, model, color, year, cost

c = **new** Car(vid, man, model, color, year, cost);

}**catch** (SQLException e){

e.printStackTrace();

}

**return** c;

}

**public** Service createService(ResultSet rs){

Service s = **null**;

**try**{

String sid = rs.getString(DatabaseConstants.*COLUMN\_SERVICE\_SERVICE\_ID*);

String sName = rs.getString(DatabaseConstants.*COLUMN\_SERVICE\_NAME*);

String sTime = rs.getString(DatabaseConstants.*COLUMN\_SERVICE\_ALLOTTED\_TIME*);

String sCost = rs.getString(DatabaseConstants.*COLUMN\_SERVICE\_COST*);

//Create new service object with id, name, time and cost

s = **new** Service(sid, sName, sTime, sCost);

}**catch** (SQLException e){

e.printStackTrace();

}

**Return s;**

}

//Paste in ALL of the code you **added** to the DatabaseConstants class here

//Procs

**public** **static** String *SP\_GET\_BANK\_BY\_ROUTING\_NUMBER* = "procGetBankByRoutingNumber";

**public** **static** String *SP\_GET\_MECHANIC\_BY\_ID* = "procGetMechanicByID";

**public** **static** String *SP\_GET\_CAR\_BY\_VEHICLE\_ID* = "procGetCarByVehicleID";

**public** **static** String *SP\_GET\_SERVICE\_BY\_SERVICE\_ID* = "procGetServiceByServiceID";

**public** **static** String *COLUMN\_ROUTING\_NUMBER* = "RoutingNumber";

**public** **static** String *COLUMN\_BANK\_NAME* = "BankName";

//Mechanic

**public** **static** String *COLUMN\_MECHANIC\_ID* = "ID";

**public** **static** String *COLUMN\_MECHANIC\_FIRST\_NAME* = "FirstName";

**public** **static** String *COLUMN\_MECHANIC\_LAST\_NAME* = "LastName";

**public** **static** String *COLUMN\_MECHANIC\_START\_DATE* = "StartDate";

//Vehicle

**public** **static** String *COLUMN\_VEHICLE\_VEHICLE\_ID* = "VehicleID";

**public** **static** String *COLUMN\_VEHICLE\_MANUFACTURER* = "Manufacturer";

**public** **static** String *COLUMN\_VEHICLE\_MODEL* = "Model";

**public** **static** String *COLUMN\_VEHICLE\_COLOR* = "Color";

**public** **static** String *COLUMN\_VEHICLE\_YEAR* = "Year";

**public** **static** String *COLUMN\_VEHICLE\_COST* = "Cost";

//Service

**public** **static** String *COLUMN\_SERVICE\_SERVICE\_ID* = "ServiceID";

**public** **static** String *COLUMN\_SERVICE\_NAME* = "ServiceName";

**public** **static** String *COLUMN\_SERVICE\_ALLOTTED\_TIME* = "AllottedTime";

**public** **static** String *COLUMN\_SERVICE\_COST* = "Cost";

//Paste in ALL of the code you **added** to your DatabaseController class here

//Method to find bank by using the routing number

**public** Bank getBankByRoutingNumber(String routingNum){

Bank b = **null**;

ResultSet rs = **null**;

//Create new value pair list

ArrayList<NameValuePair> nvps = **new** ArrayList<NameValuePair>();

nvps.add(**new** NameValuePair(*COLUMN\_ROUTING\_NUMBER*, routingNum));

rs = executeStoredProcedure(SP\_GET\_BANK\_BY\_ROUTING\_NUMBER, nvps);

**try** {

**if** (rs.next()){

b = getObjectBuilder().createBank(rs);

}

} **catch** (SQLException e) {

e.printStackTrace();

}

**return** b;

}

**//Method to get car data by using vehicle ID number**

public Car getCarByVehicleID(String vehicleID){

Car c = null;

ResultSet rs = null;

ArrayList<NameValuePair> nvps = new ArrayList<NameValuePair>();

nvps.add(new NameValuePair(*COLUMN\_VEHICLE\_VEHICLE\_ID*, vehicleID));

rs = executeStoredProcedure(*SP\_GET\_CAR\_BY\_VEHICLE\_ID*, nvps);

try {

if (rs.next()){

c = getObjectBuilder().createCar(rs);

}

} catch (SQLException e) {

e.printStackTrace();

}

return c;

}

//Method to get service data by the service ID number

public Service getServiceByServiceID(String id){

Service s = null;

ResultSet rs = null;

ArrayList<NameValuePair> nvps = new ArrayList<NameValuePair>();

nvps.add(new NameValuePair(*COLUMN\_SERVICE\_SERVICE\_ID*, id));

rs = executeStoredProcedure(*SP\_GET\_SERVICE\_BY\_SERVICE\_ID*, nvps);

try {

if (rs.next()){

s = getObjectBuilder().createService(rs);

}

} catch (SQLException e) {

e.printStackTrace();

}

return s;

}

//Paste in ALL of the code you **added** to the StoredProcedureTester class here:

**// test code to the initialize() methods of the StoredProcedureTester class**

**import** database.dataobjects.Bank;

**import** database.dataobjects.Car;

**import** database.dataobjects.Service;

System.*out*.println("Finding bank with routing number…");

Bank bank1 = dbc.getBankByRoutingNumber("055003492");

System.*out*.println(bank1);

System.*out*.println("Finding car with vehicle ID…");

Car car1 = dbc.getCarByVehicleID("EQV536NJH730J");

System.*out*.println(car1);

System.*out*.println("Finding service order with Service ID#....");

Service service1 = dbc.getServiceByServiceID("TR");

System.*out*.println(service1);

//Paste in the output generated by running your StoredProcedureTester class here (should include output for ALL of the problems from the homework, including the optional bonus question):

Finding bank with routing number…

Routing Number: 055003492

Bank Name: HSBC National Bank

Finding car with vehicle ID…

Vehicle ID: EQV536NJH730J

Manufacturer: Ford

Model: Mustang

Color: Black

Year: 2007

Cost: 21042.00

Finding service order with Service ID#....

ServiceID: TR

Service Name:Tire Rotation

Allotted Time: 30

Cost: 19.95