# CIST 2373 – Java III

# Lab #4 – 40 Points

# 

# [Business Objects]

***Part I*** – Build a *Customer Business Object*. This class will have 6 properties, custId, custPassword, custFirstName, custLastName, custAddress and custEmail. Build an empty args Constructor in the Customer class that initializes all properties to 0 or “”. Also build a constructor that takes all 6 args and set the appropriate properties. Then build the following 3 methods:

1. selectDB(custID); //to find a customer’s info in the DB

To Test the selectDB() method use this code in the main():

Customer c1 = new Customer();

c1.selectDB(custId);

c1.display();

1. insertDB(custId, custPassword, custFirstName, custLastName, custAddress, custEmail) // to insert a new Customer in the DB
2. deleteDB(); //this method will delete the Customer from the DB

//so to check login execute the following code 🡪

Customer c1 = new Customer(); //creates empty object

c1.selectDB(id); //does the DB lookup to find Customer

String pwdb = c1.getPassword();

if (pwgui.equals(pwdb)) { //this compares pw(from gui to the

//password from the database

//login correct

}

else {

//login incorrect

}

/\*

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Programme : Java III

Document : Custormer

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I Promise I wrote this code

\*/

package Business;

import java.sql.\*;

public class Customers {

// class member variables

private String custId, custPassword, custFirstName, custLastName,

custAddress, custEmail;

// Default constructor

public Customers(){

custId = "";

custPassword = "";

custFirstName = "";

custLastName = "";

custAddress = "";

custEmail = "";

}

// Overloaded constructor with 6 args

public Customers( String custId, String custPassword,

String custFirstName, String custLastName,

String custAddress, String custEmail ){

this.custId = custId;

this.custPassword = custPassword;

this.custFirstName = custFirstName;

this.custLastName = custLastName;

this.custAddress = custAddress;

this.custEmail = custEmail;

}

// ++++ Setters and Getters +++++

public void setCustId(String custId){

this.custId = custId;

}

public String getCustId(){

return custId;

}

//custPassword

public void setCustPassword(String custPassword){

this.custPassword = custPassword;

}

public String getCustPassword(){

return custPassword;

}

//custFirstName

public void setCustFirstName(String custFirstName){

this.custFirstName = custFirstName;

}

public String getCustFirstName(){

return custFirstName;

}

//custLastName

public void setCustLastName(String custLastName){

this.custLastName = custLastName;

}

public String getCustLastName(){

return custLastName;

}

// custAddress

public void setCustAddress(String custAddress){

this.custAddress = custAddress;

}

public String getCustAddress(){

return custAddress;

}

// custEmail

public void setCustEmail(String custEmail){

this.custAddress = custEmail;

}

public String getCustEmail(){

return custEmail;

}

// ++++++ class member functions +++++++

public void selectDB(String customerId){

setCustId(customerId);

try {

String connURL = "jdbc:ucanaccess:///Users/muhyideenelias/Documents/fareeda/project\_configs/database/ChattBankMDB.mdb";

Class.forName("net.ucanaccess.jdbc.UcanaccessDriver");

Connection conn = DriverManager.getConnection(connURL);

System.out.println("Database connection successfull");

Statement statement = conn.createStatement();

String query = "SELECT \* FROM Customers WHERE CustID='" + getCustId() + "'";

System.out.println("LOG : " + query);

ResultSet resultSet = statement.executeQuery(query);

resultSet.next();

setCustPassword(resultSet.getString("CustPassword"));

setCustFirstName(resultSet.getString("CustFirstName"));

setCustLastName(resultSet.getString("CustLastName"));

setCustAddress(resultSet.getString("CustAdress"));

setCustEmail(resultSet.getString("CustEmail"));

conn.close();

}

catch(ClassNotFoundException | SQLException sqlExcptn) {

System.out.println(sqlExcptn);

System.out.println("LOG : Database connection not working");

}

}

public void insertDB(String custId, String custPassword,String custFirstName,

String custLastName, String custAddress, String custEmail){

setCustId(custId);

setCustPassword(custPassword);

setCustFirstName(custFirstName);

setCustLastName(custLastName);

setCustAddress(custAddress);

setCustEmail(custEmail);

try{

String connURL = "jdbc:ucanaccess:///Users/muhyideenelias/Documents/fareeda/project\_configs/database/ChattBankMDB.mdb";

Class.forName("net.ucanaccess.jdbc.UcanaccessDriver");

Connection conn = DriverManager.getConnection(connURL);

System.out.println("Database connection is working");

Statement statement = conn.createStatement();

String query = "INSERT INTO Customers VALUES('"+getCustId()+"',"+

"'"+getCustPassword()+"',"+

"'"+getCustFirstName()+"',"+

"'"+getCustLastName()+"',"+

"'"+getCustAddress()+"',"+

"'"+getCustEmail()+"')";

System.out.println("LOG : " + query);

int querySuccess = statement.executeUpdate(query);

System.out.println("LOG : " + (querySuccess == 1 ? "Insert Successful" :"Insert Failed"));

conn.close();

}

catch(ClassNotFoundException | SQLException sqlExcptn) {

System.out.println(sqlExcptn);

System.out.println("LOG : Database connection not working");

}

}

public void deleteDB(){

try {

String connURL = "jdbc:ucanaccess:///Users/muhyideenelias/Documents/fareeda/project\_configs/database/ChattBankMDB.mdb";

Class.forName("net.ucanaccess.jdbc.UcanaccessDriver");

Connection conn = DriverManager.getConnection(connURL);

System.out.println("LOG : Database connection is working");

Statement statement = conn.createStatement();

String query = "Delete from Customers where CustID='"+getCustId()+"'";

System.out.println("LOG : "+ query);

int querySuccess = statement.executeUpdate(query);

System.out.println("LOG : " + (querySuccess == 1 ? "Delete Successful" :"Delete Failed"));

conn.close();

}

catch(ClassNotFoundException | SQLException sqlExcptn) {

System.out.println(sqlExcptn);

System.out.println("LOG : Database connection failed!!");

}

}

}

***Part II*** – Now build an *Account Business Object*. This class will have 4 properties, acctNo, custId, type and balance. Build an empty args Constructor in the Customer class that initializes all properties to 0 or “”. Also build a constructor that takes all 4 args and set the appropriate properties. Then build the following 3 methods:

1. selectDB(acctNo); //to find a account’s info in the DB
2. insertDB(aNo, cid, ty, bal) // to insert a new Account into the DB
3. deleteDB(); //this method will delete the current Cust from the DB

To Test the selectDB() method use this code in the main():

Account a1 = new Account();

a1.selectDB(acctNo);

a1.display();

/\*

Author : Fareeda Anderson

Programme : Java III

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I Promise I wrote this code

\*/

package Business;

import java.sql.\*;

public class Account {

private String acctNo, custId, type, balance;

public Account(){

acctNo = "";

custId = "";

type = "";

balance = "";

}

public Account(String acctNo, String custId, String type, String balance){

this.acctNo = acctNo;

this.custId = custId;

this.type = type;

this.balance = balance;

}

// Setters and Getters

public void setAcctNo(String acctNo){

this.acctNo = acctNo;

}

public String getAcctNo(){

return acctNo;

}

public void setCustId(String custId){

this.custId = custId;

}

public String getCustId(){

return custId;

}

public void setType(String type){

this.type = type;

}

public String getType(){

return type;

}

public void setBalance(String balance){

this.balance = balance;

}

public String getBalance(){

return balance;

}

public void selectDB(String acctNo){

setAcctNo(acctNo);

try {

String connURL = "jdbc:ucanaccess:///Users/muhyideenelias/Documents/fareeda/project\_configs/database/ChattBankMDB.mdb";

Class.forName("net.ucanaccess.jdbc.UcanaccessDriver");

Connection conn = DriverManager.getConnection(connURL);

System.out.println("LOG : Database connection successfull");

Statement statement = conn.createStatement();

String query = "SELECT \* FROM Accounts WHERE AcctNo='" + getAcctNo()+ "'";

System.out.println("LOG : " + query);

ResultSet resultSet = statement.executeQuery(query);

resultSet.next();

setCustId(resultSet.getString("Cid"));

setType(resultSet.getString("Type"));

setBalance(resultSet.getString("Balanace"));

conn.close();

}

catch(ClassNotFoundException | SQLException sqlExcptn) {

System.out.println(sqlExcptn);

System.out.println("LOG : Database connection not working");

}

}

public void insertDB(String aNo, String cid, String ty, String bal){

setAcctNo(aNo);

setCustId(cid);

setType(ty);

setBalance(bal);

try{

String connURL = "jdbc:ucanaccess:///Users/muhyideenelias/Documents/fareeda/project\_configs/database/ChattBankMDB.mdb";

Class.forName("net.ucanaccess.jdbc.UcanaccessDriver");

Connection conn = DriverManager.getConnection(connURL);

System.out.println("LOG : Database connection is working");

Statement statement = conn.createStatement();

String query = "INSERT INTO Accounts VALUES("

+ "'"+getAcctNo()+"',"+

"'"+getCustId()+"',"+

"'"+getType()+"',"+

"'"+getBalance()+"')";

System.out.println("LOG : " + query);

int querySuccess = statement.executeUpdate(query);

System.out.println("LOG : " + (querySuccess == 1 ? "Insert Successful" :"Insert Failed"));

conn.close();

}

catch(ClassNotFoundException | SQLException sqlExcptn) {

System.out.println(sqlExcptn);

System.out.println("LOG : Database connection not working");

}

}

public void deleteDB(){

try {

String connURL = "jdbc:ucanaccess:///Users/muhyideenelias/Documents/fareeda/project\_configs/database/ChattBankMDB.mdb";

Class.forName("net.ucanaccess.jdbc.UcanaccessDriver");

Connection conn = DriverManager.getConnection(connURL);

System.out.println("Database connection is working");

Statement statement = conn.createStatement();

String query = "Delete from Accounts where Cid='"+getCustId()+"'";

System.out.println("LOG : "+ query);

int querySuccess = statement.executeUpdate(query);

System.out.println("LOG : " + (querySuccess == 1 ? "Delete Successful" :"Delete Failed"));

conn.close();

}

catch(ClassNotFoundException | SQLException sqlExcptn) {

System.out.println(sqlExcptn);

System.out.println("LOG : Database connection failed!!");

}

}

}