Customer Transaction using Oracle 11g and JAVA

1. Creating a table

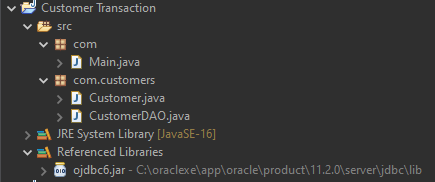
create table Customers(name varchar2(20), accountNo number(6) primary key, balance number(10,2))

1. Creation of structured procedures

create or replace procedure "SET\_CUS"  
(a IN OUT VARCHAR2,  
b IN OUT NUMBER,  
c IN OUT NUMBER)  
is  
begin  
insert into customers values (a, b, c);  
end;

create or replace procedure "SET\_TRAN"  
(a IN OUT NUMBER,  
b IN OUT NUMBER,  
c IN OUT NUMBER)  
is  
begin  
UPDATE Customers  
   SET balance = CASE accountno  
                      WHEN a THEN balance - c  
                      WHEN b THEN balance + c  
                      ELSE balance  
                      END  
 WHERE accountno IN(a,b);  
end;​

create or replace procedure "CHECK\_BAL"  
(a IN NUMBER,  
bal OUT NUMBER)  
is  
begin  
select balance into bal from Customers where Customers.accountno=a;  
end;



1. Java class for setting variables and fetching methods

package com.customers;

public class Customer {

private String name;

private int accountNo;

private double balance;

public void setName(String name) {

this.name = name;

}

public String getName() {

return name;

}

public void setAccountNo(int accountNo) {

this.accountNo = accountNo;

}

public int getAccountNo() {

return accountNo;

}

public void setBalance(double balance) {

this.balance = balance;

}

public double getBalance() {

return balance;

}

}

1. CustomerDAO class

package com.customers;

import java.sql.\*;

import java.util.Scanner;

public class CustomerDAO {

Customer customer;

public CustomerDAO(Customer b) {

customer = b;

}

public void getConnected() {

try {

String url = "jdbc:oracle:thin:password/TARPAN@localhost:1521:XE";

String uname = "TARPAN";

String pword = "password";

Class.forName("oracle.jdbc.OracleDriver");

Connection con = DriverManager.getConnection(url,uname,pword);

if(con==null) {

System.out.println("Connection not successful");

}else {

System.out.println("Connection successful");

}

int choice=0;

Scanner sc = new Scanner(System.in);

System.out.println("Enter your choice of operation: \n1. Save details\n2. Display All\n3. Do a Transaction\n4. Quit");

choice = sc.nextInt();

switch(choice) {

case 1:

saveCustomer(con);

break;

case 2:

displayAll(con);

break;

case 3:

boolean a = doTransaction(con);

if(a==true) {

System.out.println("Transaction successful");

}

break;

default:

System.out.println("\_\_EXIT\_\_");

}

sc.close();

con.close();

}catch(Exception e) {

e.printStackTrace();

}

}

public void displayAll(Connection con) {

try {

System.out.println("---Display the employee database---");

Statement st = con.createStatement();

ResultSet rs = st.executeQuery("select \* from Customers");

int c2; double c3;

String c1;

while(rs.next()){

c1 = rs.getString(1);

c2 = rs.getInt(2);

c3 = rs.getDouble(3);

System.out.println("'"+c1+"' '"+ c2 +"' '"+ c3+"'");

}

st.close();

}catch(Exception e) {

e.printStackTrace();

}

}

public void saveCustomer(Connection con) {

try {

enterData();

CallableStatement st = con.prepareCall("{call set\_cus(?, ?, ?)}");

st.setString(1,customer.getName());

st.setInt(2,customer.getAccountNo());

st.setDouble(3, customer.getBalance());

st.executeQuery();

System.out.println("Data inserted!");

st.close();

}catch(Exception e) {

e.printStackTrace();

}

}

private void enterData() {

Scanner num = new Scanner(System.in);

Scanner alpha = new Scanner(System.in);

System.out.print("Enter the Customer Account no.:");

int accountNo = num.nextInt();

customer.setAccountNo(accountNo);

System.out.print("Enter the Customer Name:");

String name = alpha.nextLine();

customer.setName(name);

System.out.print("Enter the Customer Balance:");

double balance = num.nextDouble();

customer.setBalance(balance);

num.close();

alpha.close();

}

public boolean doTransaction(Connection con){

try {

Scanner sc = new Scanner(System.in);

System.out.println("Enter the sender's account number: ");

int a = sc.nextInt();

System.out.println("Enter the reciever's account number: ");

int b = sc.nextInt();

System.out.println("Enter the amount to transfer: ");

double c = sc.nextDouble();

checkBal(a, c, con);

CallableStatement st = con.prepareCall("{call set\_tran(?, ?, ?)}");

st.setInt(1,a);

st.setInt(2,b);

st.setDouble(3,c);

ResultSet comp = st.executeQuery();

System.out.println("Data inserted!");

sc.close();

st.close();

if(comp!=null)

return true;

}catch(Exception e) {

e.printStackTrace();

}

return false;

}

private void checkBal(int a, double c, Connection con) {

try {

double bal;

CallableStatement st = con.prepareCall("{call check\_bal(?, ?)}");

st.setInt(1,a);

st.registerOutParameter(2,Types.DOUBLE);

st.executeQuery();

bal = st.getDouble(2);

if(bal<c) {

System.out.println("Balance too low for transaction.\n");

System.out.println("Available balance: "+bal+", Transfer amount: "+c);

System.exit(0);

}

st.close();

}catch(Exception e) {

e.printStackTrace();

}

}

}

1. Main Class

package com;

import com.customers.\*;

public class Main {

public static void main(String [] args) {

Customer b = new Customer();

CustomerDAO a = new CustomerDAO(b);

a.getConnected();

}

}