1-----

package assignment; //Bill class created

import java.sql.Timestamp;

public class Bill {

private int billId;

private int consumerId;

private Timestamp billDate;

private String billDescription;

private double billAmount;

//default constructor

Bill() {}

// parameterized constructor

public Bill(int billId, int consumerId, Timestamp billDate, String billDescription, double billAmount) {

super();

this.billId = billId;

this.consumerId = consumerId;

this.billDate = billDate;

this.billDescription = billDescription;

this.billAmount = billAmount;

}

//use getters and setters method

public int getBillId() {

return billId;

}

public void setBillId(int billId) {

this.billId = billId;

}

public int getConsumerId() {

return consumerId;

}

public void setConsumerId(int consumerId) {

this.consumerId = consumerId;

}

public Timestamp getBillDate() {

return billDate;

}

public void setBillDate(Timestamp billDate) {

this.billDate = billDate;

}

public String getBillDescription() {

return billDescription;

}

public void setBillDescription(String billDescription) {

this.billDescription = billDescription;

}

public double getBillAmount() {

return billAmount;

}

public void setBillAmount(double billAmount) {

this.billAmount = billAmount;

}

//create toString method

@Override

public String toString() {

return "Bill [billId=" + billId+ ", consumerId=" + consumerId + ", billDate=" + billDate + ", billDescription="

+ billDescription + ", billAmount=" + billAmount + "]";

}

}

2------

package assignment;

import java.sql.Timestamp;

import java.util.Date;

import java.util.List;

public interface IBillOperation { //interface created

public int saveBillRecord(Bill b);

public int editBillRecoord(int bil, int consumerld, Date billdate, String billDescription, double billamount);

public int removeBillRecord(int bil);

public List<Bill> getAllBillRecord();

public Bill getBillRecord(int bil);

}

3------

package assignment;

import java.security.Timestamp;

import java.util.Date;

import java.util.List;

public class BillOperationImpl implements IBillOperation {

Bill[] bill = new Bill[100];

static int index;

@Override

public int saveBillRecord(Bill b) {

// TODO Auto-generated method stub

bill[index] = b;

index++;

return 0;

}

// Edit operation

@Override

public int editBillrecoord(int bil, int consumerld, Date billdate, String billDescription, double billamount) {

// TODO Auto-generated method stub

for (int i = 0; i < index; i++) {

if (bill[i].getBill() == bil) {

bill[i].setConsumerld(consumerld);

bill[i].setBilldate(billdate);

bill[i].setBillDescription(billDescription);

bill[i].setBillamount(billamount);

break;

}

}

return 0;

}

//delete operation

@Override

public int removeBillRecord(int bil) {

// TODO Auto-generated method stub

for (int i = 0; i < index; i++) {

if (bill[i].getBill() == bil) {

bill[i].setConsumerld(-1);

bill[i].setBilldate(null);

bill[i].setBillDescription(null);

bill[i].setBillamount(-1);

bill[i].setBill(-1);

} else

System.out.println("Employee id not found");

}

return 0;

}

//show all operation

@Override

public List<Bill> getAllBillRecord() {

// TODO Auto-generated method stub

for (int i = 0; i < index; i++) {

System.out.println(bill[i]);

}

return null;

}

//search operation

@Override

public Bill GetBillRecord(int bil) {

// TODO Auto-generated method stub

for (int i = 0; i < index; i++) {

if (bill[i].getBill() == bil) {

System.out.println(bill[i]);

} else

System.out.println("Employee id not found");

}

return null;

}

}

4--------

import java.security.Timestamp;

import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.ResultSet;

import java.sql.SQLException;

import java.sql.Statement;

import java.text.ParseException;

import java.text.SimpleDateFormat;

import java.time.LocalDate;

import java.time.LocalDateTime;

import java.time.format.DateTimeFormatter;

import java.util.Date;

import java.util.Scanner;

public class BillOperation {

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

  BillOperationImpl bill = new BillOperationImpl();

       Scanner sc = new Scanner(System.in);

do {

try {

Connection con = null;

try {

con = DBConnection.getConnection();

} catch (Exception e) {

e.printStackTrace();

}

// Write and Execute query

Statement st = con.createStatement();

SimpleDateFormat sdf = new SimpleDateFormat("dd/MM/yyyy");

LocalDate dateObj = LocalDate.now();

int bil;

int consumerld;

java.util.Date billdate;

String billDescription;

String strdate;

double billamount;

java.sql.Date sqldate;

int ch;

ResultSet a;

System.out.println("\t1.save bill \t\t2.edit bill\n\t3.remove bill\t\t4. get all bil\n\t5 search\n");

System.out.println("enter your choice : ");

ch = sc.nextInt();

switch (ch) {

case 1: // ------------add

System.out.println("Enter billid number : ");

bil = sc.nextInt();

System.out.println("Enter consumer id : ");

consumerld = sc.nextInt();

System.out.println("Enter bill date : ");

strdate = new Scanner(System.in).nextLine();

billdate = sdf.parse(strdate);

sqldate = new java.sql.Date(billdate.getTime());

sc.nextLine();

System.out.println("Enter bill Description : ");

billDescription = sc.nextLine();

System.out.println("Enter bill amount : ");

billamount = sc.nextDouble();

String sql = "insert into bill values(" + bil + "," + consumerld + ",'" + sqldate + "','"

+ billDescription + "'," + billamount + ")";

Bill b1 = new Bill(bil, consumerld, sqldate, billDescription, billamount);

bill.saveBillRecord(b1);

ch = st.executeUpdate(sql);

break;

case 2: // -----edit-------

System.out.println("Enter bill id number : ");

bil = sc.nextInt();

System.out.println("Enter consumer id : ");

consumerld = sc.nextInt();

System.out.println("Enter bill date : ");

strdate = new Scanner(System.in).nextLine();

billdate = sdf.parse(strdate);

sqldate = new java.sql.Date(billdate.getTime());

sc.nextLine();

System.out.println("Enter bill Description : ");

billDescription = sc.nextLine();

System.out.println("Enter bill amount : ");

billamount = sc.nextDouble();

bill.editBillrecoord(bil, consumerld, billdate, billDescription, billamount);

String sql2 = "update bill set consumerId=(" + consumerld + "),billDate = ('" + sqldate

+ "'), billDescription = ('" + billDescription + "'),billAmount = (" + billamount

+ ") where billId=(" + bil + ")";

ch = st.executeUpdate(sql2);

System.out.println("\n \*\_\_Edited\_\_\* \n");

break;

case 3:// remove

System.out.println("Enter bill id number : ");

bil = sc.nextInt();

bill.removeBillRecord(bil);

String sql1 = "delete from bill where billId=(" + bil + ")";

ch = st.executeUpdate(sql1);

break;

case 4:// ------------------------show all

bill.getAllBillRecord();

String sqlq = "select \* from bill";

ResultSet rs = st.executeQuery(sqlq);

while (rs.next()) {

System.out.println(rs.getInt(1) + " " + rs.getInt(2) + " " + rs.getString(3) + " "

+ rs.getString(4) + " " + rs.getDouble(5));

}

break;

case 5: // ---------------- search

System.out.println("Enter id number : ");

bil = sc.nextInt();

bill.GetBillRecord(bil);

String sql3 = "Select \* from bill where billId=(" + bil + ")";

a = st.executeQuery(sql3);

while (a.next()) {

System.out.println(a.getInt(1) + " " + a.getInt(2) + " " + a.getString(3) + " " + a.getString(4)

+ " " + a.getDouble(5));

}

break;

case 5: // ---------------- search

System.out.println("Enter id number : ");

bil = sc.nextInt();

bill.GetBillRecord(bil);

String sql3 = "Select \* from bill where billId=(" + bil + ")";

a = st.executeQuery(sql3);

while (a.next()) {

System.out.println(a.getInt(1) + " " + a.getInt(2) + " " + a.getString(3) + " " + a.getString(4)

+ " " + a.getDouble(5));

}

Break;

        }

           } catch (SQLException e1) {  
                System.out.println(e1.getMessage());  
            }  
        } while (true);