

**\*\*\*BILL.JAVA\*\*\***

```
package weekassignment;

import java.sql.Timestamp;
import java.util.Date;

public class Bill {

    private int billid;
    private int consumerid;
    private Date billDate;
    private String billdescription;
    private double billAmount;

    Bill(){} // Default Constructor

    // Parameterized constructor

    Bill(int billid,int consumerid,Date billDate,String
billdescription, double billAmount){
        this.billid=billid;
        this.consumerid=consumerid;
        this.billDate=billDate;
        this.billdescription=billdescription;
        this.billAmount=billAmount;
    }

    //Getters and Setters

    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 Date getBillDate() {
        return billDate;
    }
    public void setBillDate(Date 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 billamount2) {
        this.billAmount = billamount2;
    }

    // to string

    @Override
    public String toString() {
        return "Bill [billid=%s\t consumerID=%s\t Date=%s\t  
Description=%s\t Amount=$%s]";
    }
}

```

**\*\*\*BILL OPERATION\*\*\***

```
package weekassignment;

import java.text.ParseException;
import java.util.Date;
import java.util.List;

public interface BillOperation
{

    int saveBillRecord(int
consumerid,Date billdate,String
billdescription,double
billamount);

    int editBillRecord(int bill, int consumerId, Date billdate,
String billDescription, double billamount);

    int removeBillRecord(int bil);

    List<Bill>getAllBillRecord();

    Bill getBillRecordById(int bil);

}
```

### \*\*\*BILLOPERATIONIMPL\*\*\*

```
package weekassignment;

import java.security.Timestamp;
import java.text.ParseException;
import java.util.Date; import
java.util.List;

public class BillOperationImpl implements BillOperation {
    Bill[]bill=new Bill [100];
    static int index;

    @Override
    public int saveBillRecord(int
consumerid,Date
billdate,String billdescription,double billamount) {

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

            bill[i].setConsumerid(consumerid);
bill[i].setBillDate((java.sql.Timestamp) billdate);
            bill[i].setBilldescription(billdescription);
bill[i].setBillAmount(billamount);
            break;
        }

        return 0;
    }

    @Override
    public int editBillRecord(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].getBillid()==bil) {
                bill[i].setConsumerid(consumerld);
                bill[i].setBillDate((java.sql.Timestamp) billdate);
                bill[i].setBilldescription(billDescription);
                bill[i].setBillAmount(billamount);
            }
        }
    }
}
```

```

        break;
    }
}
return 0;
}

```

```

@Override
public int removeBillRecord(int bil) {
    // TODO Auto-generated method stub
    for (int i=0;i<index;i++) {
        if(bill[i].getBillid()==bil) {
            bill[i].setConsumerid(-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;
}

```

```

@Override
public List<Bill> getAllBillRecord() {
    // TODO Auto-generated method stub
    return null;
}

```

```

@Override
public Bill getBillRecordById(int bil) {
    // TODO Auto-generated method stub
    for (int i=0;i<index;i++) {
        if(bill[i].getBillid()==bil) {

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

```

```
        }  
        else  
            System.out.println("Employee id not  
found");  
    }  
    return null;  
}  
}
```

**\*\*\*BillOpeartionMain\*\*\***

```
package weekassignment;

import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet; import
java.sql.SQLException; import
java.sql.Statement; import
java.sql.Timestamp; import
java.text.ParseException; import
java.text.SimpleDateFormat; import
java.time.LocalDate; import
java.util.Date; import
java.util.Scanner;

public class BillOperationMain {

    public static void main(String[] args) throws
ParseException, SQLException {
        // TODO Auto-generated method stub

        BillOperationImpl bill=new BillOperationImpl();
        Scanner sc=new Scanner(System.in);
        int bil;

                int consumerId;                Timestamp
        billdate;                String billDescription;
        double billamount;
        do {
            try {
                Connection con = null;
                try {
                    con = BConnection.getConnection();
                } catch (Exception e) {
                    e.printStackTrace();
                }

                //Write and Execute query
```

```

Statement st=con.createStatement();

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 :
");
        consumerId=sc.nextInt();

java.sql.Date sqldate;
java.util.Date utildate;
SimpleDateFormat sdf=new
SimpleDateFormat("dd/MM/yyyy");

        System.out.println("Enter date");
        String strdate= new
Scanner(System.in).nextLine();
        utildate=sdf.parse(strdate);
        sqldate=new java.sql.Date(utildate.getTime());

        System.out.println("Enter bill Description
: ");
        sc.nextLine();
billDescription=sc.nextLine();

        System.out.println("Enter bill amount : ");
billamount=sc.nextDouble();

        String sql="insert into bill

```



```
values (" + bil + ", " + consumerId + ", " + sqlDate + ", " + billDescription + "
' , " + billAmount + " ) " ;
```

```
        bill.saveBillRecord( consumerId, sqlDate,
billDescription, billAmount);
        ch=st.executeUpdate(sql);
        System.out.println("\n * __Saved__ * \n");
        break;
```

```
        case 2: //edit
System.out.println("Enter bill id number :
");
        bil=sc.nextInt();

        System.out.println("Enter consumer id :
");
        consumerId=sc.nextInt();
```

```
java.sql.Date sqlDate1;
java.util.Date utilDate1;
SimpleDateFormat sdf1=new
SimpleDateFormat("dd/MM/yyyy");
```

```
        System.out.println("Enter date");
        String strDate1= new
Scanner(System.in).nextLine();
```

```
        utilDate1=sdf1.parse(strDate1);
        sqlDate1=new
java.sql.Date(utilDate1.getTime());
```

```
sc.nextLine();
        System.out.println("Enter bill Description : ");
billDescription=sc.nextLine();
```

```
        System.out.println("Enter bill amount : ");
        billAmount=sc.nextDouble();
```

```

        String sql2="update bill
consumerid=("+consumerId+"),billdate = ('"+sqldate1+"'),
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.getDate(3)+" "+rs.getString(4)+"
"+rs.getDouble(5));
    }
        break;

    case 5: //search
System.out.println("Enter id number : ");
bil=sc.nextInt();
bill.getBillRecordById(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.getDate(3)+" "+a.getString(4)+"
"+a.getDouble(5));
    }
        break;
    }
}

```

```

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

}
}

```

### \*\*\*DBConnection\*\*\*

```

package weekassignment;

import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.SQLException;

public class DBConnection
{
    public static Connection getConnection() throws
ClassNotFoundException, SQLException
    {
        String driver="com.mysql.cj.jdbc.Driver";

        String
dburl="jdbc:mysql://localhost:3306/billpayment";

        String user="root";

        String password="root";

        Class.forName(driver);
    }
}

```

```
        //create the connection

        Connection con=
DriverManager.getConnection(dburl,user,password);

        return con;
    }
}
```

### \*\*\*BillTest\*\*\*

```
package weekassignment;

import static org.junit.jupiter.api.Assertions.*;
import org.junit.jupiter.api.Test;

class BillTest
{

    Bill a=new Bill();

    @Test

    void testGetBillid() {

        //fail("Not yet implemented");

        assertEquals(0,a.getBillid());

    }

    @Test

    void testGetConsumerid() {

        //fail("Not yet implemented");

        assertEquals(0,a.getConsumerid());

    }

    @Test

    void testGetBillDate() {

        //fail("Not yet implemented");

        assertEquals(null,a.getBillDate());

    }

}
```

```
@Test

    void testGetBilldescription() {
//fail("Not yet implemented");
assertEquals(null,a.getBilldescription());
    }

@Test

    void testGetBillAmount() {
//fail("Not yet implemented");
assertEquals(0,a.getBillAmount());
    }

}
```

### \*\*\*BillImplTest\*\*\*

```
package weekassignment;

import static org.junit.jupiter.api.Assertions.*;
import org.junit.jupiter.api.Test;
class BillOperationImplTest {

    BillOperationImpl billImpl=new BillOperationImpl();

    @Test
    void testSaveBillRecord() {
//fail("Not yet implemented");

        assertEquals(0,billImpl.saveBillRecord(0, null, null,
0));
    }

    @Test
    void testEditBillRecord() {
//fail("Not yet implemented");

        assertEquals(0,billImpl.editBillRecord(0, 0, null, null, 0));
    }

    @Test
    void testRemoveBillRecord() { //fail("Not
yet implemented");

        assertEquals(0,billImpl.removeBillRecord(0));
    }
}
```

```
    @Test

    void testGetAllBillRecord() {                //fail("Not
yet implemented");

    assertEquals(null,billImpl.getAllBillRecord());

    }

    @Test

    void testGetBillRecordById() {                //fail("Not
yet implemented");

    assertEquals(null,billImpl.getBillRecordById(0));

    }

}
```



### \*\*\*Sql Query\*\*\*

```
create database billpayment;

use billpayment;

create table customer ( consumerid int NOT
NULL          auto_increment,      consumername
varchar(100),  contactno varchar(100),

PRIMARY KEY (consumerid)

);

Insert into
customer(consumerid,consumername,contactno) values (1,'Pooja',1234
56),(2,'Verma',997147),(3,'tanzila',99887766);

create table bill( billid int
NOT NULL auto_increment,  consumerid
int,

PRIMARY KEY (billid),
FOREIGN KEY (consumerid )
REFERENCES customer(consumerid),
billdate datetime,
billdescription varchar(100),
billamount double );

select*from customer;

select*from bill;
```