# Weak_Four_Assignment_Tosif_Mansuri

```
package weakfour;

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

public class Bill {
    private int billId;
    private int consumerId;
    private String billDate;
    private String billDescription;
    private double billAmount;
//create default constructor
   public Bill() {}
   //create parameter constructor
    public Bill(int billId, int consumerId, String strdate, String billDescription, double billAmount) {
        super();
        this.billId = billId;
        this.consumerId = consumerId;
        this.billDate = strdate;
        this.billDescription = billDescription;
        this.billAmount = billAmount;
    }
//create getter and setter mathod
   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 String getBillDate() {
    return billDate;
}

public void setBillDate(String billDate2) {
    this.billDate = billDate2;
}

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;
    }

   @Override
   // create to string mathod
   public String toString() {
      return "Bill [billId=" + billId + ", consumerId=" + consumerId + ", billDate=" + billDate + ",
billDescription="
            + billDescription + ", billAmount=" + billAmount + "]";
   }
}
```

```
package weakfour;

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

public class BillOperationImpl implements IBillOperation{
//create Array
   Bill[]bill=new Bill[100];
    static int index;
    //create save data record mathod
    @Override
    public int saveBillRecord(Bill b) {
        bill[index]=b;
        index++;
        System.out.println("Employee has been Added:");
        return 0;
```

```
    }
// create edit data record mathod
        @Override
        public int editBillRecord(int billId, int consumerId, String billDate, String billDescription,
double billAmount) {
                // TODO Auto-generated method stub
                boolean edited = false;
                for(int i =0;i<index;i++) {
                        if(bill[i].getBillId()==billId) {
          bill[i].setConsumerId(consumerId);
          bill[i].setBillDate(billDate);
          bill[i].setBillDescription(billDescription);
          bill[i].setBillAmount(billAmount);
          edited=true;
          break;
        }
                        if(edited)
            System.out.println("Employee details edited");
              else
            System.out.println("Employee not found");
              }
              return 0;
        }
//create remove mathod
        @Override
    public int removeBillRecord(int billId) {
      for(int i=0;i<index;i++) {
        if(bill[i].getBillId()==billId) {
          bill[i].setConsumerId(-1);
          bill[i].setBillDate(null);
          bill[i].setBillDescription(null);
```

```
            bill[i].setBillAmount(-1);
          }
        else {
          System.out.println("Bill id not found");
        }
    }
        return billId;
    }
   // create get all record
            @Override
    public List<Bill> getAllBillRecord() {
        for(int i=0;i<index;i++)
        {
          System.out.println(bill[i]);
        }
        return null;
    }
// create gettBill record mathod to by id
            @Override
            public Bill getBillRecordById(int billl) {
        for (int i=0;i<index;i++) {
          if(bill[i].getBillId()==billl) {

            System.out.println(bill[i]);
          }
          else
            System.out.println("Employee  id not found");
        }

        return null;
```

```
}
}
```

```
package weakfour;
import java.sql.Connection;
import java.sql.DriverManager;
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.util.Date;
import java.util.Scanner;

public class BillOperationMain {
   public static void main(String[] args) throws ParseException {
      // create object
      BillOperationImpl billImpl=new BillOperationImpl();
      Scanner sc=new Scanner(System.in);
      //create do while loop
      do {
         try {
            Connection con = null;
            try {
              con = DBConnection.getConnection();
            }
            catch(Exception e) {
```

```
        e.printStackTrace();
      }
       //Write and Execute query
       Statement st=con.createStatement();

int billId;
int consumerId;
// create date formate
java.sql.Date sqldate;
java.util.Date utildate;
SimpleDateFormat sdf = new SimpleDateFormat("yyyy-MM-dd");
String strdate="1-3-2021";
utildate=sdf.parse(strdate);
sqldate = new java.sql.Date(utildate.getTime());

String billDescription;
double billAmount;
ResultSet a;

       int ch;
       System.out.println("Select the operation to perform:");
       System.out.println("1.Save \n2.Edit\n3.Delete\n4.FetchAll \n5.FetchById");
       System.out.println("enter your choice:");
       ch=sc.nextInt();
       //create switch statement
       switch(ch) {
       case 1:
          System.out.println("Enter BillId id: ");
          billId=sc.nextInt();

          System.out.println("Enter Consumer id : ");
```

```
            consumerId=sc.nextInt();

            System.out.println("Enter bill Date : ");
            sc.nextLine();
            strdate=sc.nextLine();

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

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

            String sql2="insert into bill
values("+billId+","+consumerId+",'"+strdate+"','"+billDescription+"',"+billAmount+")";
            Bill b1=new Bill(billId,consumerId,strdate,billDescription,billAmount);
            billImpl.saveBillRecord(b1);
            ch=st.executeUpdate(sql2);
            System.out.println("\n *__Inserted__* \n");
            break;

          case 2:// Edit
            System.out.println("Enter the Employee id which u want to edit:");
            System.out.println("Enter Bill id: ");
            billId=sc.nextInt();

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

            System.out.println("Enter Bill Date : ");
            sc.nextLine();
```

```
            strdate=sc.nextLine();



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


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


            String sql3="update bill set
billId=("+billId+"),consumerId=("+consumerId+"),billDate=('"+strdate+"'),billDescription=('"+billDescr
iption+"'),billAmount=("+billAmount+") where billId=("+billId+")";
            billImpl.editBillRecord(billId, consumerId, strdate, billDescription, billAmount);
            ch= st.executeUpdate(sql3);
            System.out.println("...Edited...");
            break;


        case 3: //delete
            System.out.println("Enter id number : ");
            billId=sc.nextInt();
            String sql1="delete from bill where billid=("+billId+")";
            billImpl.removeBillRecord(billId);
            ch=st.executeUpdate(sql1);
            System.out.println("\n *__Delete succesfull__* \n");
            break;


        case 4://get all record for a databases
            billImpl.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: //get fetch record for specific id
                System.out.println("Enter BillId number : ");
                billId=sc.nextInt();
                billImpl.getBillRecordById(billId);
                String sql4="Select * from bill where billId=("+billId+")";
                a = st.executeQuery(sql4);
                while(a.next()) {
                   System.out.println(a.getInt(1)+" "+a.getInt(2)+" "+a.getDate(3)+" "+a.getString(4)+"
"+a.getDouble(5));              }
                break;
            }
        }
        catch(SQLException e1)
        {
           System.out.println(e1.getMessage());
        }
     }while(true);


   }
}
```

```
package weakfour;

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

//create interface
public interface IBillOperation {
	// create all mathods
   int saveBillRecord(Bill b);
   int editBillRecord(int billId,int consumerId,String billDate,String billDescription,double billAmount);
   int removeBillRecord(int bill);
   List<Bill> getAllBillRecord();
   Bill getBillRecordById(int bill);
}
```

```
package weakfour;

import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.SQLException;
import java.sql.Statement;
import java.util.Scanner;

public class DBConnection {

	public static Connection getConnection() throws ClassNotFoundException, SQLException
	{
		//cretae server root and password
```

```
        String driver="com.mysql.cj.jdbc.Driver";
        String dburl="jdbc:mysql://localhost:3306/billpayment";
        String user="root";
        String password="root";



        // load the driver
        Class.forName(driver);

        //create the connection
        Connection con =    DriverManager.getConnection(dburl,user,password);



                    return con;

            }

}
```

```
package weakfour;

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

import org.junit.jupiter.api.Test;
// create test class for BillOperation Test casses
class BillOperationTest {
  BillOperationImpl b = new BillOperationImpl();
            @Test
```

```
	void testSaveBillRecord() {
		assertEquals(0,b.getBill());
	}

	@Test
	void testEditBillRecord() {
		assertEquals(0,b.editBillRecord(0, 0, null, null, 0));
	}

	@Test
	void testRemoveBillRecord() {
		assertEquals(0,b.removeBillRecord(0));
	}

	@Test
	void testGetAllBillRecord() {
		assertEquals(null,b.getAllBillRecord());
	}

	@Test
	void testGetBillRecordById() {
		assertEquals(null,b.getBillRecordById(0));
	}

}
```

```
package weakfour;

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

```
import org.junit.jupiter.api.Test;
//create test cases for bill class
class BillTest {
	Bill b=new Bill();

	  @Test
	  void testGetBill() {
	     assertEquals(0,b.getBillId());
	  }

	  @Test
	  void testGetConsumerId() {
	     assertEquals(0,b.getConsumerId());
	  }

	  @Test
	  void testGetBilldate() {
	     assertEquals(null,b.getBillDate());
	  }

	  @Test
	  void testGetBillDescription() {
	     assertEquals(null,b.getBillDescription());
	  }

	  @Test
	  void testGetBillamount() {
	     assertEquals(0,b.getBillAmount());
	  }

}
```