# Advance Java

Assignment 1

[Introduction to JDBC]

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#### SET-A

Q1. Write a java program to count the no of records in a table

```
Code:
import java.sql.*;
import java.io.*;
class Q1{
       public static void main(String[] args) {
              String db="jdbc:mysql://localhost:3306/advance_java";
              String uname="root";
              String pwd="";
              try{
              Class.forName("com.mysql.cj.jdbc.Driver");
              Connection conn=DriverManager.getConnection(db,uname,pwd);
              Statement state=conn.createStatement();
              ResultSet op=state.executeQuery("select count(*) as data from employee");
                      if(op.next()){
                      int Count=op.getInt("data");
                      System.out.println("No of records in employee table are:"+Count);
                      op.close();
                      state.close();
                      conn.close();
              catch(Exception e){
                      System.out.println(e);
              }
```

#### SET-A

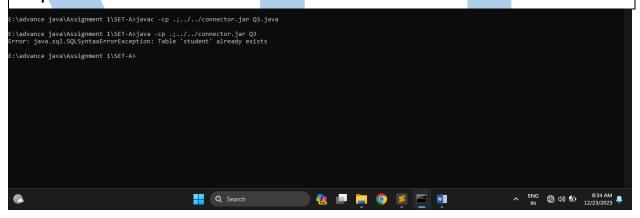
Q2. Write a java program to display all the EName from Emp table. Assume that (ENo, EName and Sal) table is already created.

```
Code:
import java.sql.*;
import java.io.*;
class Q2{
       public static void main(String[] args) {
              try{
                      Class.forName("com.mysql.cj.jdbc.Driver");
                      Connection
conn=DriverManager.getConnection("jdbc:mysql://localhost:3306/advance_java","root","");
                      Statement state=conn.createStatement();
                      ResultSet op=state.executeQuery("select EName from employee");
                      System.out.println("Employee names are as follows: ");
                      while(op.next()){
                             String name=op.getString("EName");
                             System.out.println(name);
                      op.close();
                      state.close();
                      conn.close();
              }catch(Exception e){
                      System.out.println(e);
              }
       }
```

#### SET-A

Q3. Write a java program to create a table Student with attribute Rno, Sname and Per.

```
Code:
import java.io.*;
import java.sql.*;
class Q3{
       public static void main(String[] args) {
              try{
                      Class.forName("com.mysql.cj.jdbc.Driver");
                      Connection
conn=DriverManager.getConnection("jdbc:mysql://localhost:3306/advance_java","root","");
                      Statement state=conn.createStatement();
                      String sql="create table student(rno int(10) primary key, sname
varchar(20), per double(10,2));";
                      int res=state.executeUpdate(sql);
                      if(res!=-1){
                             System.out.println("Student Table Created");
                      else{
                             System.out.println("Table Creation Failed..!");
              }catch(Exception e){
                      System.out.println("Error: "+e);
              }
```



#### SET-A

Q4. Write a java program to delete salary column in employee table. Assume that employee table already exists.

```
Code:
import java.io.*;
import java.sql.*;
class Q4{
       public static void main(String[] args) {
              try{
                      Class.forName("com.mysql.cj.jdbc.Driver");
                      Connection
conn=DriverManager.getConnection("jdbc:mysql://localhost:3306/advance_java","root","");
                      Statement state=conn.createStatement();
                      String sql="alter table employee drop column Salary";
                      int res=state.executeUpdate(sql);
                      if(res!=-1){}
                              System.out.println("Salary column deleted");
                      else{
                             System.out.println("Deletion Failed..!");
              }catch(Exception e){
                      System.out.println("Error: "+e);
Output:
```

# 

#### SET-A

Q5. Write a java program to delete the details of given teacher. Assume that Teacher table with attributes tno, tname, subject is already created.

```
Code:
import java.io.*;
import java.sql.*;
class Q5{
       public static void main(String[] args) {
              Class.forName("com.mysql.cj.jdbc.Driver");
              Connection
conn=DriverManager.getConnection("jdbc:mysql://localhost:3306/advance_java","root","");
                      Statement state=conn.createStatement();
                      String sql="delete from teacher where tname='Ashok Nabage'";
                      int res=state.executeUpdate(sql);
                      if(res!=-1){}
                             System.out.println("Record deleted");
                      else{
                             System.out.println("Deletion Failed..!");
              }catch(Exception e){
                      System.out.println("Error: "+e);
              }
       }
Output:
```



#### SET-B

Q1. Write a java program to accept the details of Hospital (HId, HName, Address, PH\_No) and store it into the database. (Use Swing).

```
Code:
import javax.swing.*;
import javax.swing.JOptionPane;
import java.awt.event.*;
import java.sql.*;
import java.awt.*;
import java.io.*;
class Q1 extends JFrame implements ActionListener(
       JButton submit:
       JTextField tb1,tb2,tb3,tb4;
       Q1(){}
              JLabel lbl1=new JLabel("Enter HID: ");
              tb1=new JTextField();
              lbl1.setBounds(50,50,100,50);
              tb1.setBounds(150,50,200,40);
              JLabel lbl2=new JLabel("Enter HName: ");
              tb2=new JTextField():
              lbl2.setBounds(50,100,100,50);
              tb2.setBounds(150,100,200,40);
              JLabel lbl3=new JLabel("Enter Address: ");
              tb3=new JTextField();
              lbl3.setBounds(50,150,100,50);
              tb3.setBounds(150,150,200,40);
              JLabel lbl4=new JLabel("Enter Phone No: ");
              tb4=new JTextField();
              lbl4.setBounds(50,200,100,50);
              tb4.setBounds(150,200,200,40);
              submit=new JButton("Insert");
              submit.setBounds(150,250,200,40);
              submit.setFocusPainted(false);
              this.add(lbl1);
              this.add(tb1);
              this.add(lbl2);
              this.add(tb2);
              this.add(lbl3);
              this.add(tb3);
              this.add(lbl4);
              this.add(tb4);
              this.add(submit);
              submit.addActionListener(this);
              this.setLayout(null);
              this.setSize(500,500);
              this.setVisible(true);
              this.setDefaultCloseOperation(this.EXIT ON CLOSE);
```

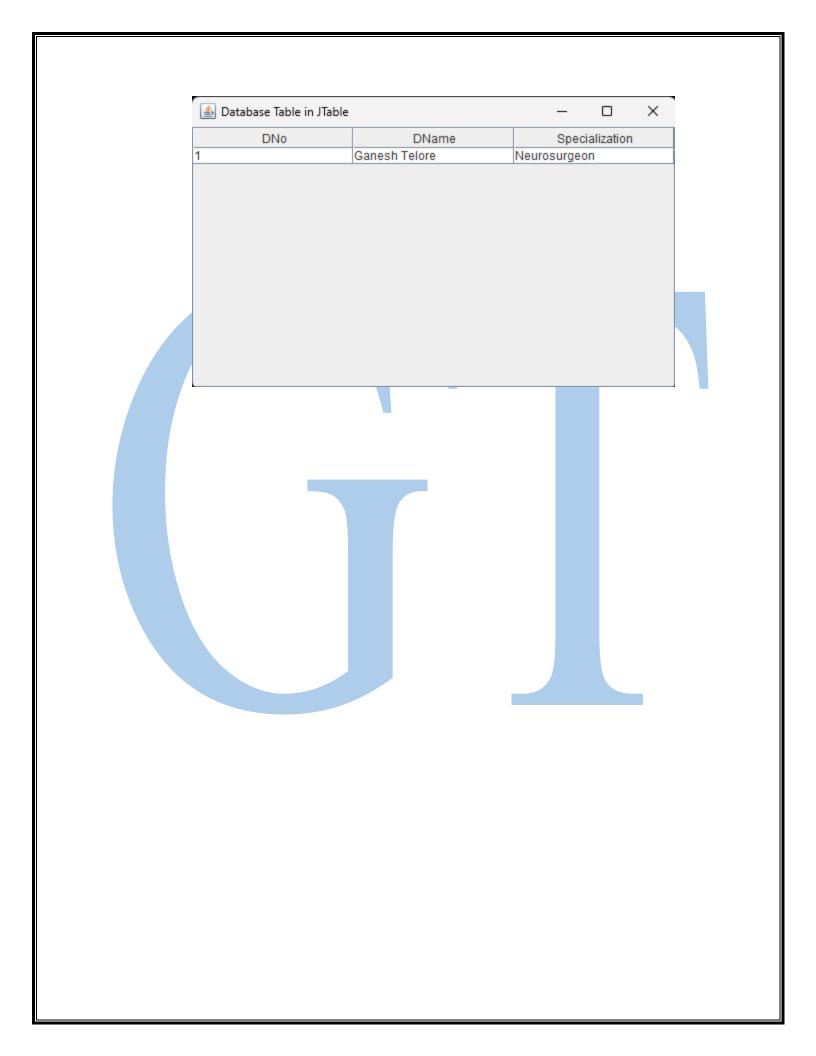
```
public void actionPerformed(ActionEvent e){
              if(e.getSource()==submit){
                      int val1=Integer.parseInt(tb1.getText());
                      String val2=tb2.getText();
                      String val3=tb3.getText();
                      String val4=tb4.getText();
                      try{
                             Class.forName("com.mysql.cj.jdbc.Driver");
                             Connection
conn=DriverManager.getConnection("jdbc:mysql://localhost:3306/advance_java","root","");
                             Statement state=conn.createStatement();
                             String sql="insert into hospital
values(""+val1+"",""+val2+"",""+val3+"",""+val4+"")";
                             int res=state.executeUpdate(sql);
                             if(res!=-1){
                                     JOptionPane.showMessageDialog(null,"Data Inserted.");
                             else{
                             JOptionPane.showMessageDialog(null, "Failed");
                             state.close();
                             conn.close();
                      }catch(Exception exc){
                             System.out.println(exc);
       public static void main(String[] args) {
              new Q1();
Output:
```

Enter HID:	
Enter HName:	
Enter Address:	
Enter Phone No:	
	Insert

#### SET-B

Q2. Write a java program to display the details of Doctor (DNO, DName, Specialization) on JTable. Assume Doctor table is already created.

```
Code:
import java.sql.*;
import java.awt.event.*;
import javax.swing.*;
import javax.swing.table.DefaultTableModel;
class Q2 extends JFrame {
  JTable tbl;
  Q2(){}
     String col[]={"DNo", "DName", "Specialization"};
     DefaultTableModel model=new DefaultTableModel();
     model.setColumnIdentifiers(col);
     try {
       Class.forName("com.mysql.cj.jdbc.Driver");
       Connection
conn=DriverManager.getConnection("jdbc:mysql://localhost:3306/advance_java", "root", "");
       Statement state=conn.createStatement():
       ResultSet op=state.executeQuery("select * from doctor");
       while (op.next()) {
          Object[] row=new Object[col.length];
          for (int i=0;i<col.length;i++) {
            row[i]=op.getObject(col[i]);
          model.addRow(row);
       tbl=new JTable(model);
       JScrollPane jp=new JScrollPane(tbl);
       add(jp);
       setSize(500, 300);
       setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
       setLocationRelativeTo(null);
       setVisible(true);
     } catch (Exception e) {
       System.out.println(e);
    }
  public static void main(String[] args) {
    new Q2();
```



#### SET-B

Q3. Write a java program to make the changes in data which is in ResultSet if you make the changes in data in database.

```
Code:
import java.sql.*;
class Q3{
       public static void main(String[] args) {
              try{
                      Class.forName("com.mysql.cj.jdbc.Driver");
                      Connection
conn=DriverManager.getConnection("jdbc:mysql://localhost:3306/advance_java","root","");
                      Statement st=conn.createStatement();
                      int res=st.executeUpdate("update friends set fage='19' where
fname='Ganesh Telore'");
                      if(res!=-1){
                              System.out.println("data updated...");
                      else{
                             System.out.println("error occured...");
                      ResultSet set=st.executeQuery("select fage from friends");
                      while(set.next()){
                      int age=set.getInt("fage");
                      System.out.println("Updated Age is: "+age);
               }catch(Exception e){
                      System.out.println(e);
```

```
E:\advance java\Assignment 1\SET-B>java -cp .;../../connector.jar Q3
data updated...
Updated Age is: 19
```

#### SET-B

Q4. Write a java program for the following:

- Create a Table
- ➤ Alter a Table
- Drop a Table

# Code:

```
import java.sql.*;
import java.io.*;
import java.util.*;
class Q4 {
       public static void main(String[] args) {
              try{
                      Class.forName("com.mysql.cj.jdbc.Driver");
                      Connection
conn=DriverManager.getConnection("jdbc:mysql://localhost:3306/ethicaldood","root","");
                      Statement state=conn.createStatement();
                      Scanner get=new Scanner(System.in);
                      /*String sql="create table friends(fname varchar(20),fage int(5),faddr
varchar(20),democol varchar(5))";
                      int res=state.executeUpdate(sql);
                      if(res!=-1){
                              System.out.println("Table Created.");
                      }else{
                              System.out.println("Table Created.");
                      }*/
                      /*String sql2="alter table friends drop column democol";
                      int res2=state.executeUpdate(sql2);
                      if(res2!=-1){
                              System.out.println("Table Altered");
                      }else{
                              System.out.println("Table not altered");
                      String sql3="drop table friends";
                      int res3=state.executeUpdate(sql3);
                      if(res3!=-1){}
                              System.out.println("Table Dropped");
                      else{
                              System.out.println("Table not dropped");
                      state.close();
                      conn.close();
              }catch(Exception e){
                      System.out.println(e);
```

}	
Output:	
E:\advance java\Assignment 1\SET-B>java -cp .;//connector.jar Q4 java.sql.SQLSyntaxErrorException: Unknown table 'ethicaldood.friends'	

Note: The output shown above is performed when drop table friends query fired on db.



#### SET-B

Q5. Write a java program to accept the details of College (CID, CName, Address) and display it on next frame. (Use Swing and PreparedStatement).

```
Code:
import javax.swing.*;
import javax.swing.JOptionPane;
import java.awt.event.*;
import java.sql.*;
import java.awt.*;
import java.io.*;
class Q5 extends JFrame implements ActionListener{
       JFrame f1,f2;
       JButton submit:
       JTextField tb1,tb2,tb3,tb4;
       JLabel 11,12,13;
       Q5(){
              f1=new JFrame();
              JLabel lbl1=new JLabel("Enter CID: ");
              tb1=new JTextField():
              lbl1.setBounds(50,50,100,50);
              tb1.setBounds(150,50,200,40);
              JLabel lbl2=new JLabel("Enter CName: ");
              tb2=new JTextField():
              lbl2.setBounds(50,100,100,50);
              tb2.setBounds(150,100,200,40);
              JLabel lbl3=new JLabel("Enter Address: ");
              tb3=new JTextField();
              lbl3.setBounds(50,150,100,50);
              tb3.setBounds(150,150,200,40);
              submit=new JButton("Insert");
              submit.setBounds(150,200,200,40);
              submit.setFocusPainted(false);
              f1.add(lbl1);
              f1.add(tb1);
              f1.add(lbl2);
              f1.add(tb2);
              f1.add(lbl3);
              f1.add(tb3);
              f1.add(submit);
              submit.addActionListener(this);
              f1.setLayout(null);
              f1.setSize(500,500);
              f1.setVisible(true);
              f1.setDefaultCloseOperation(f1.EXIT_ON_CLOSE);
       public void actionPerformed(ActionEvent e){
              if(e.getSource()==submit){
```

```
int val1=Integer.parseInt(tb1.getText());
                      String val2=tb2.getText();
                      String val3=tb3.getText();
                      try{
                             Class.forName("com.mysql.cj.jdbc.Driver");
                             String sql="insert into college values(?,?,?)";
                             Connection
conn=DriverManager.getConnection("jdbc:mysql://localhost:3306/advance_iava","root","");
                             PreparedStatement state=conn.prepareStatement(sql);
                             state.setInt(1,val1);
                             state.setString(2,val2);
                             state.setString(3,val3);
                             int res=state.executeUpdate();
                             if(res!=-1){}
                                    JOptionPane.showMessageDialog(null,"Data Inserted.");
                             else{
                             JOptionPane.showMessageDialog(null, "Failed");
                             state.close();
                             conn.close():
                      }catch(Exception exc){
                             System.out.println(exc);
                                            f1.setVisible(false);
                      f2=new JFrame();
                     11=new JLabel("college id");
              12=new JLabel("College name");
              13=new JLabel("College name");
              I1.setBounds(100,50,100,50);
              I2.setBounds(100,100,100,50);
              13.setBounds(100,150,100,50);
              f2.add(I1);
              f2.add(l2);
              f2.add(l3);
              f2.setLayout(null);
              f2.setSize(500,500);
                      f2.setVisible(true);
                      f2.setDefaultCloseOperation(f2.EXIT_ON_CLOSE);
                      try{
                             Class.forName("com.mysql.cj.jdbc.Driver");
                             String sql="select * from college";
                             Connection
conn=DriverManager.getConnection("jdbc:mysql://localhost:3306/advance_java","root","");
                             PreparedStatement state=conn.prepareStatement(sql);
                             ResultSet op=state.executeQuery();
                             while(op.next()){
                                    int cid=op.getInt("cid");
                                    String cname=op.getString("cname");
                                    String caddr=op.getString("addr");
                                    11.setText(String.valueOf(cid));
```

```
l2.setText(cname);
l3.setText(caddr);
                               } catch(Exception exc2){
    System.out.println(exc2);
                     }
         public static void main(String[] args) {
    new Q5();
Output:
                    <u>$</u>
                                                                                                            \times
                              Enter CID:
                              Enter CName:
                             Enter Address:
                                                                      Insert
```

#### SET-C

```
Q1. Write a java program for the following:
a. Create a table.
b. Insert
c. Update
d. Search
e. Display
```

```
Code:
```

```
import java.sql.*;
class Q1{
       public static void main(String[] args) {
              try{
                      Class.forName("com.mysql.cj.jdbc.Driver");
                      Connection
conn=DriverManager.getConnection("jdbc:mysql://localhost:3306/advance_java","root","");
                      Statement state=conn.createStatement();
                      String sql1="create table myfriend(fno int(5), fname varchar(20), faddr
varchar(20))";
                      String sql2="insert into myfriend values('1','Ganesh
Telore', 'Ganeshnagar')";
                      String sql3="update myfriend set faddr='GaneshNagar' where fno='1'";
                      String sql4="select * from myfriend where fno='1'";
                      String sql5="select * from myfriend";
                      int op1=state.executeUpdate(sql1);
            int op2=state.executeUpdate(sql2);
                      int op3=state.executeUpdate(sql3);
                      if(op1!=-1){
                              System.out.println("Table Created");
                      if(op2!=-1){}
                              System.out.println("Data inserted");
                      if(op3!=-1){
                              System.out.println("Data updated");
                      System.out.println("Searched Friend details having fno 1: ");
                      ResultSet rs=state.executeQuery(sql4);
                      while(rs.next()){
                             int fno=rs.getInt("fno");
                              String fname=rs.getString("fname");
                              String faddr=rs.getString("faddr");
                              System.out.println("fno: "+fno+" fname: "+fname+" faddress:
"+faddr);
                      rs.close():
                      System.out.println("All Friends Details: ");
```

```
ResultSet set=state.executeQuery(sql5);
                      while(set.next()){
                             int fno=set.getInt("fno");
                             String fname=set.getString("fname");
                             String faddr=set.getString("faddr");
                             System.out.println("fno: "+fno+" fname: "+fname+" faddress:
"+faddr);
              } catch(Exception e){
                      System.out.println(e);
```

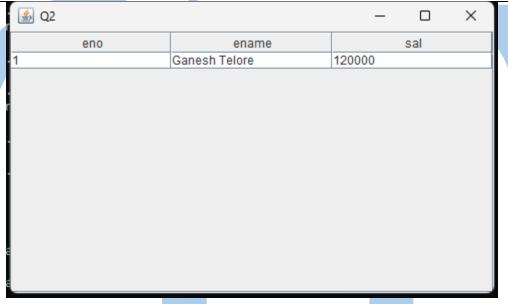
```
E:\advance java\Assignment 1\SET-C>java -cp .;../../connector.jar Q1
Table Created
Data inserted
Data updated
Data updated
Searched Friend details having fno 1:
fno: 1 fname: Ganesh Telore faddress: GaneshNagar
All Friends Details:
fno: 1 fname: Ganesh Telore faddress: GaneshNagar
```



#### SET-C

Q2. Write a java program to update the salary of given employee and display updated details in JTable. (Use Swing). Assume Emp (ENo, EName, Sal) table is already created.

```
Code:
import java.sql.*;
import java.awt.event.*;
import javax.swing.*;
import javax.swing.table.DefaultTableModel;
class Q2 extends JFrame{
  JTable tbl:
  Q2(){
     String col[] = {"eno", "ename", "sal"};
     DefaultTableModel model = new DefaultTableModel();
     model.setColumnIdentifiers(col);
     try{
       Class.forName("com.mysql.cj.jdbc.Driver");
       Connection conn =
DriverManager.getConnection("jdbc:mysql://localhost:3306/advance_java", "root", "");
       Statement state = conn.createStatement();
       ResultSet rs = state.executeQuery("select * from emp");
       while (rs.next()){
          Object[] row = new Object[col.length];
          for (int i=0:i < col.length:i++){
            row[i] = rs.getObject(col[i]);
          model.addRow(row);
       tbl = new JTable(model);
       JScrollPane jp = new JScrollPane(tbl);
       add(ip);
       setTitle("Q2");
       setSize(500, 300);
       setDefaultCloseOperation(JFrame.EXIT ON CLOSE);
       setLocationRelativeTo(null);
       setVisible(true);
     } catch (Exception e) {
       e.printStackTrace();
    }
  public static void main(String[] args) {
    try{
       Class.forName("com.mysql.cj.jdbc.Driver");
       Connection conn =
DriverManager.getConnection("jdbc:mysgl://localhost:3306/advance_java", "root", "");
       Statement state = conn.createStatement();
       String sgl="update emp set sal='120000' where ename='Ganesh Telore'";
       int res=state.executeUpdate(sql);
```



#### SET-C

Q3. Write a java program for the implementation of Scrollable ResultSet. Consider Teacher (TID, TName, Subject) table is already created.

```
Code:
import java.sql.*;
import java.awt.event.*;
import javax.swing.*;
import javax.swing.table.DefaultTableModel;
class Q3 extends JFrame{
  JTable tbl:
  Q3(){
     String col[] = {"tid", "tname", "subject"};
     DefaultTableModel model = new DefaultTableModel();
     model.setColumnIdentifiers(col);
     try{
       Class.forName("com.mysql.cj.jdbc.Driver");
       Connection conn =
DriverManager.getConnection("jdbc:mysql://localhost:3306/advance_java", "root", "");
       Statement state = conn.createStatement();
       ResultSet rs = state.executeQuery("select * from teacher2");
       while (rs.next()){
          Object[] row = new Object[col.length];
          for (int i=0;i<col.length;i++){
            row[i] = rs.getObject(col[i]);
          model.addRow(row);
       tbl = new JTable(model);
       JScrollPane jp = new JScrollPane(tbl);
       add(ip);
       setTitle("Q2");
       setSize(500, 100);
       setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
       setLocationRelativeTo(null);
       setVisible(true);
     } catch (Exception e) {
       e.printStackTrace();
    }
  public static void main(String[] args) {
    new Q3();
  }
```

<b>≜</b> Q2		- 0	×
tid	tname	subject	
1	Rohidas Lande	Android	•
2	Shivani Deshpande	Advance Java	
0	Vanisai Ohaa dastaa	Tanada in IT	



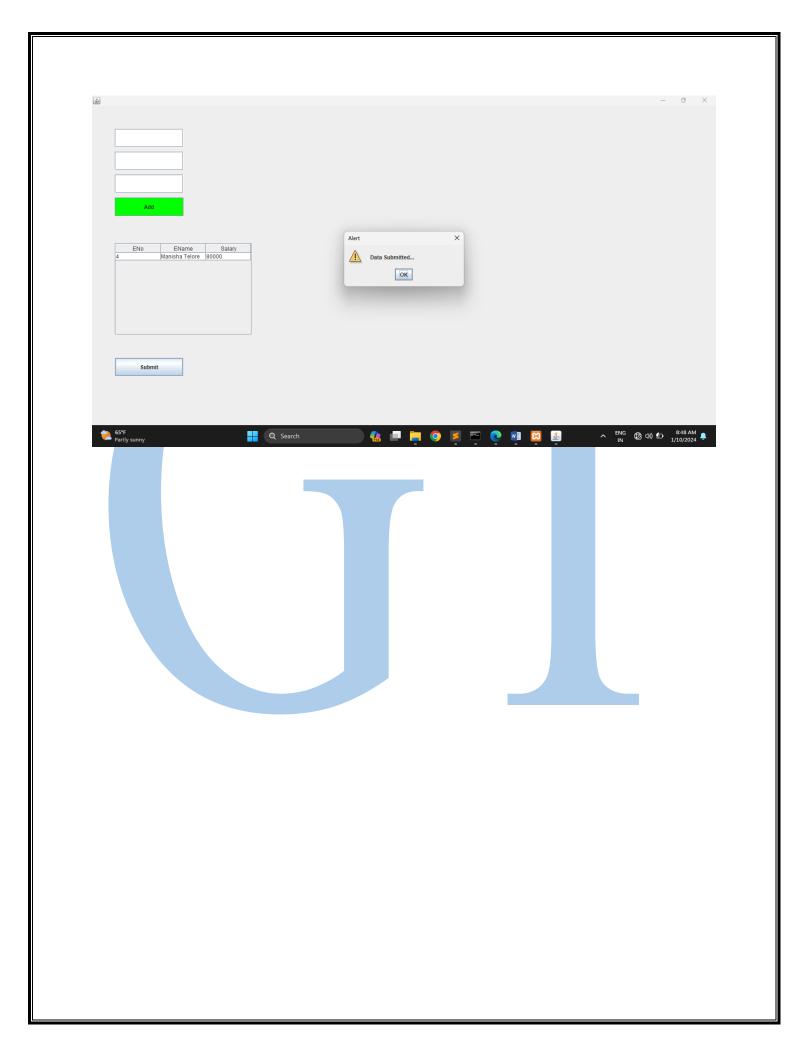
#### SET-C

Q4. Write a java program for the following: Accept the details of 5 Employees (ENo, EName, Salary), store it into the JTable by clicking on Add Button. If user clicks on Save button then data from JTable must be save into the database.

## Code:

```
import javax.swing.*;
import javax.swing.table.*;
import java.awt.event.*;
import java.awt.*;
import java.sql.*;
class Q4 extends JFrame implements ActionListener{
       JTextField tb1,tb2,tb3;
       JButton btn, submit;
       DefaultTableModel model:
       JTable tbl:
       Q4(){}
              tb1=new JTextField();
              tb1.setBounds(50,50,150,40);
              this.add(tb1);
              tb2=new JTextField();
              tb2.setBounds(50,100,150,40);
              this.add(tb2);
              tb3=new JTextField();
              tb3.setBounds(50,150,150,40);
              this.add(tb3);
              btn=new JButton("Add");
              btn.setBounds(50,200,150,40);
              btn.setFocusPainted(false):
              btn.setOpaque(true);
              btn.setBackground(Color.GREEN);
              this.add(btn):
              btn.addActionListener(this);
              model = new DefaultTableModel();
              model.addColumn("ENo");
              model.addColumn("EName");
              model.addColumn("Salary");
              tbl=new JTable(model);
              JScrollPane sp = new JScrollPane(tbl);
              sp.setBounds(50,300,300,200);
              this.add(sp);
              submit=new JButton("Submit");
              submit.setBounds(50,550,150,40);
              this.add(submit);
              submit.addActionListener(this);
              this.setLayout(null);
              this.setVisible(true);
              this.setSize(500,700);
```

```
this.setDefaultCloseOperation(this.EXIT_ON_CLOSE);
       public void actionPerformed(ActionEvent e){
              if(e.getSource()==btn){
                     String eno=tb1.getText();
                     String ename=tb2.getText();
                     String sal=tb3.getText():
                     model.addRow(new Object[]{eno,ename,sal});
                     tb1.setText("");
                     tb2.setText("");
                     tb3.setText("");
              }
                     else if(e.getSource()==submit){
                             int res=0:
                             try{
                                    Class.forName("com.mysql.cj.jdbc.Driver");
                                    Connection
conn=DriverManager.getConnection("jdbc:mysql://localhost:3306/advance_java","root","");
                                    Statement state=conn.createStatement();
                                    for (int i=0;i<model.getRowCount();i++) {
            String eno=model.getValueAt(i,0).toString();
            String ename=model.getValueAt(i,1).toString();
            String sal=model.getValueAt(i,2).toString();
            String query = "INSERT INTO employee2 VALUES
("+eno+"',"+ename+"',"+sal+"')";
            res=state.executeUpdate(query);
         if(res!=-1){
              JOptionPane.showMessageDialog(null,"Data
Submitted...","Alert", JOptionPane.INFORMATION_MESSAGE);
         state.close();
         conn.close();
                             catch(Exception ex){
                                    System.out.println(ex);
                             }
       public static void main(String[] args) {
              new Q4();
}
```



#### SET-C

Q5. Write a java program to create at least 5 tables in a database. Add a column(field) in a given table. Drop given table from the database.

```
Code:
import java.sql.*;
import java.util.*;
class Q5 {
  public static void main(String[] args) {
     try{
       Scanner get = new Scanner(System.in);
       System.out.println("Enter table name: ");
       String tbl = get.next();
       Class.forName("com.mysql.cj.jdbc.Driver");
       Connection conn =
DriverManager.getConnection("jdbc:mysql://localhost:3306/advance_java", "root", "");
       Statement state = conn.createStatement();
       String sql1 = "create table tbl1(name varchar(10))";
       String sql2 = "create table tbl2(name varchar(10))";
       String sql3 = "create table tbl3(name varchar(10))";
       String sql4 = "create table tbl4(name varchar(10))";
       String sql5 = "create table tbl5(name varchar(10))";
       state.executeUpdate(sql1);
       state.executeUpdate(sql2):
       state.executeUpdate(sql3);
       state.executeUpdate(sql4);
       state.executeUpdate(sql5);
       String update = "alter table" + tbl + " add column field varchar(2) after name";
       int res1 = state.executeUpdate(update);
       String drop = "drop table " + tbl;
       int res2 = state.executeUpdate(drop);
       if (res1 != -1 && res2 != -1) {
          System.out.println("Action Performed");
       } else {
          System.out.println("Error Occurred...");
     } catch (Exception e) {
       System.out.println(e);
  }
}
```

```
E:\advance java\Assignment 1\SET-C>java -cp .;../../connector.jar Q5
Enter table name:
tbl4
Action Performed
```