Data Connectivity

Watch Showroom

Java (NetBeans)

JDBC Driver

SQL (MySQL)

INTRODUCTION

Watch Showroom

This project has been made for purchasing of stocked watches to customers for which customers have to make their Login Username and Password. It records customer's Name, Username, Gender, Mobile number. It contains Adding, Updating, Deleting and Details of members –*viz* (Customers). Also displays details of stock items. Customers can add their items to their cart, from there they can proceed to a new form "Cart" where they can see their cart items, can calculate total price to be paid and then place their order.

AIM

The main aim is to make purchases for entered products, quantities, and their payment methods in a modern cart type system in which customer can see their items can also see the total cost besides the item name in the table, or can calculate it by pressing calculate button and Buy it.

SQL (Backend)

Tables:-

```
mysql> show tables;
+-------------------+
| Tables_in_project1 |
+-------------------+
| items             |
| memberdetails     |
| members           |
| purchase          |
+-------------------+
4 rows in set (0.23 sec)
```

Table Structure:-

1. Member table

```
mysql> desc members;
+---------+-------------+------+-----+---------+-------+
| Field   | Type        | Null | Key | Default | Extra |
+---------+-------------+------+-----+---------+-------+
| Name    | varchar(40) | YES  |     | NULL    |       |
| UserID  | varchar(40) | YES  |     | NULL    |       |
| Gender  | varchar(6)  | YES  |     | NULL    |       |
| PhoneNo | varchar(15) | YES  |     | NULL    |       |
+---------+-------------+------+-----+---------+-------+
4 rows in set (0.06 sec)
```

2. Memberdetails table

```
mysql> desc memberdetails;
+-------------+-------------+------+-----+---------+-------+
| Field       | Type        | Null | Key | Default | Extra |
+-------------+-------------+------+-----+---------+-------+
| Name        | varchar(30) | YES  |     | NULL    |       |
| UserID      | varchar(40) | YES  |     | NULL    |       |
| Password    | varchar(25) | YES  |     | NULL    |       |
| Gender      | varchar(6)  | YES  |     | NULL    |       |
| PhoneNumber | varchar(15) | YES  |     | NULL    |       |
+-------------+-------------+------+-----+---------+-------+
5 rows in set (0.27 sec)
```

3. Items table

```
mysql> desc items;
+----------+-------------+------+-----+---------+-------+
| Field    | Type        | Null | Key | Default | Extra |
+----------+-------------+------+-----+---------+-------+
| ICode    | int(4)      | YES  |     | NULL    |       |
| IName    | varchar(30) | YES  |     | NULL    |       |
| Category | varchar(25) | YES  |     | NULL    |       |
| Price    | int(11)     | YES  |     | NULL    |       |
+----------+-------------+------+-----+---------+-------+
4 rows in set (0.01 sec)
```

4. Purchase table

```
mysql> desc purchase;
+-----------+-------------+------+-----+---------+-------+
| Field     | Type        | Null | Key | Default | Extra |
+-----------+-------------+------+-----+---------+-------+
| WatchName | varchar(40) | YES  |     | NULL    |       |
| Quantity  | int(5)      | YES  |     | NULL    |       |
| Payment   | varchar(25) | YES  |     | NULL    |       |
| Price     | int(11)     | YES  |     | NULL    |       |
+-----------+-------------+------+-----+---------+-------+
4 rows in set (0.04 sec)
```

Source code

For

The Project

JAVA (Frontend – GUI)

Login ID and Password

jFrame: "proceed_1"


```java
private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {

  // TODO add your handling code here:

  String ID=tfLogin.getText();

  String Pass=txt_password.getText();

  try

  {
```

```java
Class.forName("java.sql.DriverManager");

Connection con=(Connection)DriverManager.getConnection("jdbc:mysql://localhost:3306/project1","root","tiger");

Statement stmt=(Statement)con.createStatement();

String query="SELECT * from MemberDetails where UserID='"+ID+"' and Password='"+Pass+"'";

ResultSet rs=stmt.executeQuery(query);

If(rs.next())

{

    JOptionPane.showMessageDialog(this,"Username and Password are correct");

    main_menu_2 ff = new main_menu_2();

    ff.setVisible(true);

    this.setVisible(false);

}

else

    JOptionPane.showMessageDialog(this,"Username and Password are incorrect");

    tfLogin.setText("");

    txt_password.setText("");

}

catch(Exception e)

{

JOptionPane.showMessageDialog(this,e.getMessage());

}

}
```
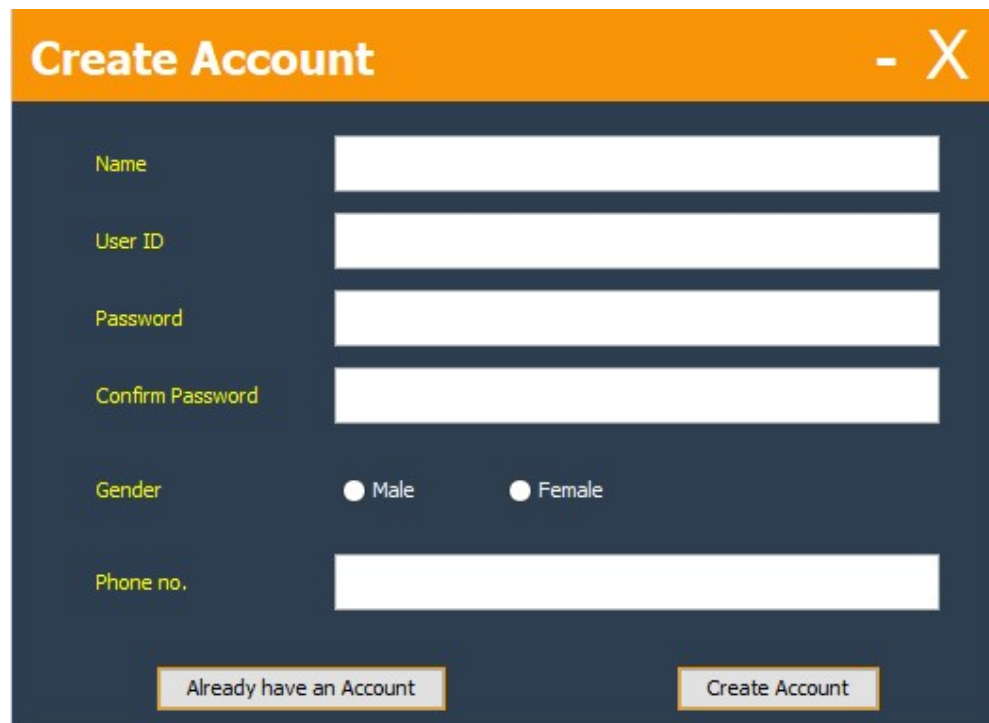
Coding for jLable "click here" to go to jFrame "create_ac_1a" :-

```
private void jLabel5MouseClicked(java.awt.event.MouseEvent evt) {

    create_ac_1a ff = new create_ac_1a();

    ff.setVisible(true);

    ff.pack();

    ff.setLocationRelativeTo(null);

    ff.setDefaultCloseOperation(proceed_1.EXIT_ON_CLOSE);

    this.dispose();

 }
```

Create Account

jFrame: "create_ac_1a"


```
private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {
    String Name=tfN.getText();
    String UID=tfUI.getText();
```

```java
String Pass=pf1.getText();

String Gender="";

if(rbMale.isSelected())

    Gender="Male";

else if(rbFemale.isSelected())

    Gender="Female";

String PhoneNum=tfPhone.getText();

 try

{

    Class.forName("java.sql.DriverManager");

    Connection
con=(Connection)DriverManager.getConnection("jdbc:mysql://localhost:3306/project1","root","tiger");

    Statement stmt=(Statement)con.createStatement();

    String query1="SELECT * FROM MemberDetails where UserID='"+UID+"';";

    String query2="INSERT INTO MemberDetails
VALUES('"+Name+"','"+UID+"','"+Pass+"','"+Gender+"','"+PhoneNum+"');";

    ResultSet rs=stmt.executeQuery(query1);

    int found=0;

    while(rs.next())

    {

    JOptionPane.showMessageDialog(this,"Email already exist \n"+"please try a new email");

    found++;

    tfUI.setText("");

 }

    if(found==0)

{

    stmt.executeUpdate(query2);

    JOptionPane.showMessageDialog(this,"Account created successfully !");

}

}

catch(Exception e) {
```
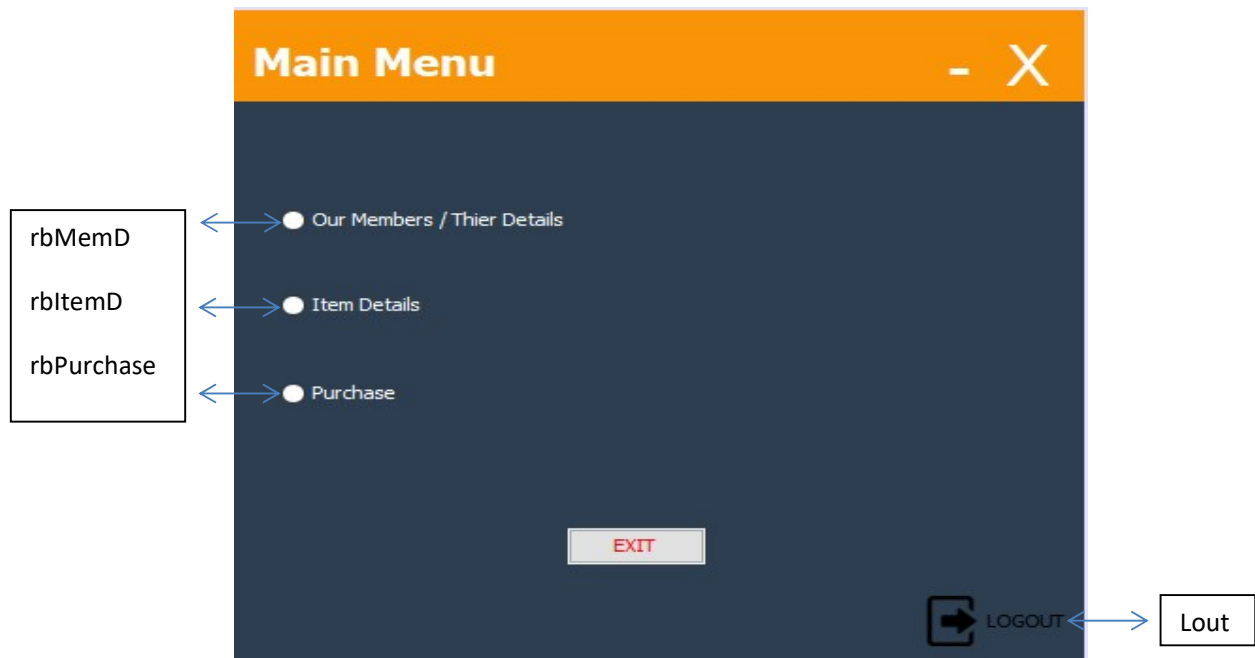
Main menu
jFrame: "main_menu_2"

1. private void rbMemDActionPerformed(java.awt.event.ActionEvent evt) {

    membersD_2a ff = new membersD_2a();

    ff.setVisible(true);

    this.setVisible(false);

    }

2. private void rbItemDMouseClicked(java.awt.event.MouseEvent evt) {

    itemdetails_2b ff=new itemdetails_2b();

    ff.setVisible(true);

    this.setVisible(false);
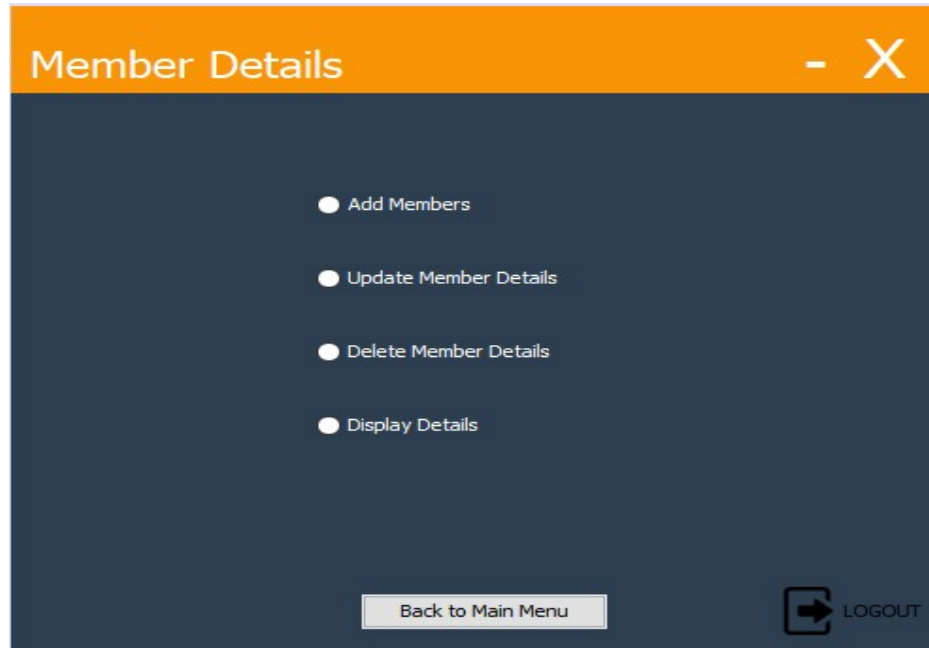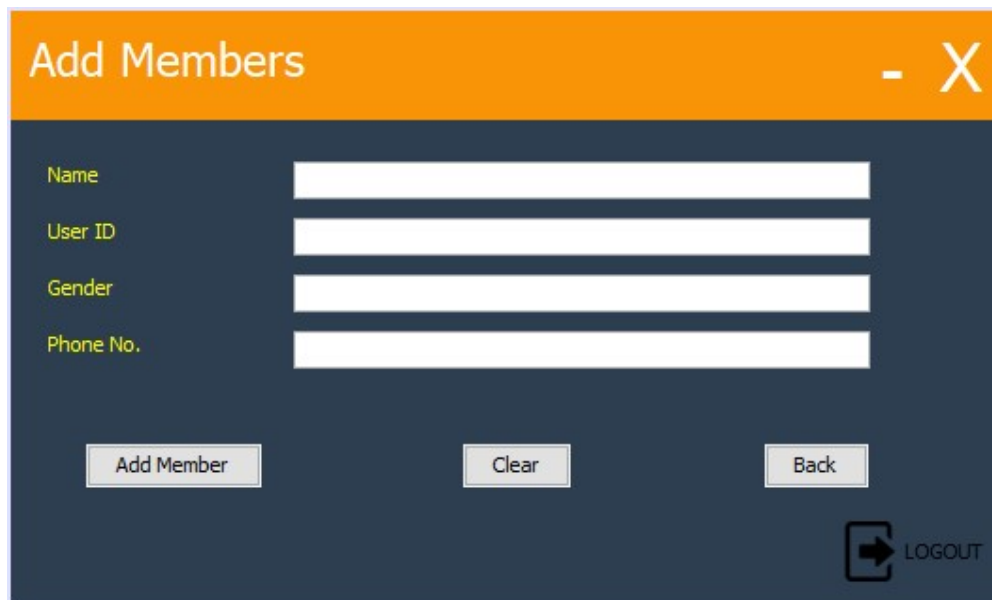
    }

3. private void rbPurchaseActionPerformed(java.awt.event.ActionEvent evt) {

    purchase_2c ff = new purchase_2c();

    ff.setVisible(true);

    this.setVisible(false);

```
    }
4.  private void LoutMouseClicked(java.awt.event.MouseEvent evt) {

    proceed_1 ff=new proceed_1();

    ff.setVisible(true);

    this.setVisible(false);

    }
```

Members Details

jFrame: "membersD_2a"


```
1.  private void jRadioButton1ActionPerformed(java.awt.event.ActionEvent evt) {

    addmember_2a_a ff=new addmember_2a_a();

    ff.setVisible(true);

    this.setVisible(false);

    }
2.  private void jRadioButton2ActionPerformed(java.awt.event.ActionEvent evt) {

    updatemember_2a_b ff = new updatemember_2a_b();

    ff.setVisible(true);

    this.setVisible(false);
```

```
    }
3.  private void jRadioButton3ActionPerformed(java.awt.event.ActionEvent evt) {

    deletemember_2a_c ff = new deletemember_2a_c();

    ff.setVisible(true);

    this.setVisible(false);

    }
4.  private void jRadioButton4ActionPerformed(java.awt.event.ActionEvent evt) {

    display_details_2a_d ff=new display_details_2a_d();

    ff.setVisible(true);

    this.setVisible(false);

    }
```

Add Members

jFrame: "addmember_2a_a"

1. **Coding for Add Member OK Button**

```
private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {

    String Name=tf1.getText();

    String UID=tf2.getText();

    String Gend=tf3.getText();
```

```java
    String Phon=tf4.getText();

    try

    {

        Class.forName("java.sql.DriverManager");

        Connection con=(Connection)DriverManager.getConnection

    ("jdbc:mysql://localhost:3306/project1","root","tiger");

        Statement stmt=(Statement)con.createStatement();

        String query2="INSERT INTO members Values('"+Name+"','"+UID+"','"+Gend+"','"+Phon+"');";

            stmt.executeUpdate(query2);

            JOptionPane.showMessageDialog(this,"Member added successfully !");

    }

    catch(Exception e)

    {

        JOptionPane.showMessageDialog(this,e.getMessage());

    }

    }
```

2. Coding for Clear OK Button

```java
private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {

    tf1.setText("");

    tf2.setText("");

    tf3.setText("");

    tf4.setText("");

    }
```

Update Member

jFrame: "updatemember_2a_b"

Update Members   − X

Name

User ID

Gender

Phone No.

Update Member   Clear   Back

Hint! Use name as indicator   LOGOUT

Update Member

jFrame: "updatemember_2a_b"

1. **Coding for Update Member OK Button:**

```
private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {

    String Name=tf1.getText();

    String UID=tf2.getText();

    String Gend=tf3.getText();

    String Phon=tf4.getText();

    try

    {

        Class.forName("java.sql.DriverManager");

        Connection con=(Connection)DriverManager.getConnection

    ("jdbc:mysql://localhost:3306/project1","root","tiger");

        Statement stmt=(Statement)con.createStatement();

        String query2="update members set userid='"+UID+"', Gender='"+Gend+"',
PhoneNo='"+Phon+"' where Name='"+Name+"';";

        stmt.executeUpdate(query2);
```

```
        JOptionPane.showMessageDialog(this,"Member updated successfully !");

    }

    catch(Exception e)

    {

        JOptionPane.showMessageDialog(this,e.getMessage());

    }

}
```

2. **Coding for Clear OK Button:**

```
private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {

    tf1.setText("");

    tf2.setText("");

    tf3.setText("");

    tf4.setText("");

}
```

Delete Member

jFrame: "deletemember_2a_c"

1. **Coding for Delete Member OK Button:**

```java
private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {

    String UID=tf2.getText();

    try

    {

        Class.forName("java.sql.DriverManager");

        Connection con=(Connection)DriverManager.getConnection

    ("jdbc:mysql://localhost:3306/project1","root","tiger");

        Statement stmt=(Statement)con.createStatement();

        String query2="delete from members where userid='"+UID+"';";

        stmt.executeUpdate(query2);

        JOptionPane.showMessageDialog(this,"Member deleted successfully !");

    }

    catch(Exception e)

    {

        JOptionPane.showMessageDialog(this,e.getMessage());

    }

 }
```

2. **Coding for Clear OK Button:**

```java
private void jButton3ActionPerformed(java.awt.event.ActionEvent evt) {

    membersD_2a ff = new membersD_2a();

    ff.setVisible(true);

    this.setVisible(false);

 }
```

Display Details

jFrame: "display_details_2a_d"

1. **Coding for Display OK Button:**

```
private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {

    // TODO add your handling code here:

    DefaultTableModel model=(DefaultTableModel)

        tb1.getModel();

    try

    {

        Class.forName("java.sql.DriverManager");

        Connection con=(Connection)DriverManager.getConnection

        ("jdbc:mysql://localhost:3306/project1","root","tiger");

        Statement stmt=(Statement)con.createStatement();

        String Tname;

        Tname="members";
```

```java
        String query="select * from "+Tname+";";

        ResultSet rs=stmt.executeQuery(query);

        while(rs.next())

        {

            String Name=rs.getString("Name");

            String UID=rs.getString("UserID");

            String Gend=rs.getString("Gender");

            String ph=rs.getString("PhoneNo");

            model.addRow(new Object[] {Name, UID, Gend, ph});

        }

    }

    catch(Exception e)

    {

        JOptionPane.showMessageDialog(this, e.getMessage());

    }

}
```

2. **Coding for Back OK Button:**

```java
private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {

    membersD_2a ff = new membersD_2a();

    ff.setVisible(true);

    this.setVisible(false);

}
```

3. **Coding for LOGOUT jLable:**

```java
private void LoutMouseClicked(java.awt.event.MouseEvent evt) {

    proceed_1 ff=new proceed_1();

    ff.setVisible(true);

    this.setVisible(false);

}
```

Item Details

jFrame: "itemdetails_2b"
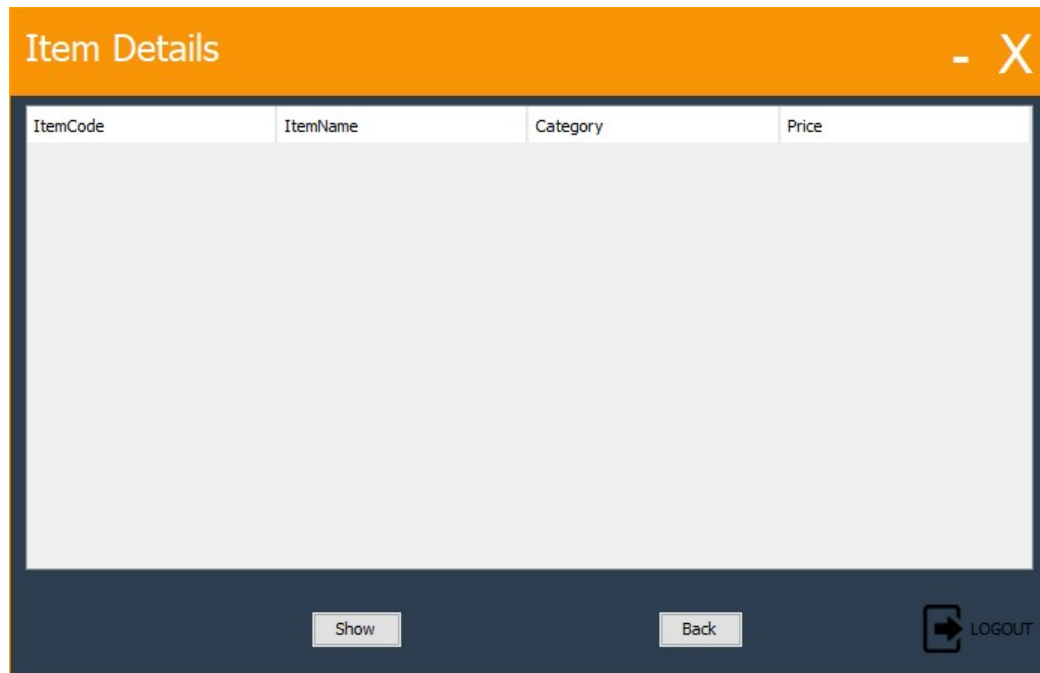
1. **Coding for Show OK Button:**

private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {

   DefaultTableModel model=(DefaultTableModel)

     tb1.getModel();

  try

  {

   Class.forName("java.sql.DriverManager");

   Connection con=(Connection)DriverManager.getConnection

   ("jdbc:mysql://localhost:3306/project1","root","tiger");

   Statement stmt=(Statement)con.createStatement();

   String Tname;

   Tname="items";

   String query="select * from "+Tname+";";

```
        ResultSet rs=stmt.executeQuery(query);

        while(rs.next())

        {

            String icode=rs.getString("Icode");

            String iname=rs.getString("Iname");

            String cat=rs.getString("Category");

            String price=rs.getString("Price");

            model.addRow(new Object[] {icode, iname, cat, price});

        }

    }

    catch(Exception e)

    {

        JOptionPane.showMessageDialog(this, e.getMessage());

    }

}
```

2. **Coding for Back OK Button:**

```
private void jButton3ActionPerformed(java.awt.event.ActionEvent evt) {

    main_menu_2 ff = new main_menu_2();

    ff.setVisible(true);

    this.setVisible(false);

}
```

Purchase

jFrame: "purchase_2c"

1. **Coding for Your Cart jLable:**

private void labelcartMouseClicked(java.awt.event.MouseEvent evt) {

    cart ff = new cart();

    ff.setVisible(true);

    this.setVisible(true);

  }

2. **Coding for Add To Cart OK Button:**

private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {

    String wn=(String) cb1.getSelectedItem();

    int qt=Integer.parseInt((String)cb2.getSelectedItem());

    String pay="";

```java
        int price=0;
    if(rb1.isSelected())

        pay="Cash";

    else if(rb2.isSelected())

        pay="Debit Card";

    else if(rb3.isSelected())

        pay="Credit Card";

    else if(rb4.isSelected())

        pay="NetBanking";
if(cb1.getSelectedIndex()==0)

    {

        wn="<Invalid item>";

        qt=0;

        pay="<Invalid payment>";

        JOptionPane.showMessageDialog(this,"Invalid Entry"+"\nItem "

            + "will not add up in\nyour total amount");

    }

    else if(cb1.getSelectedIndex()==1)

        price=9080000*qt;

    else if(cb1.getSelectedIndex()==2)

        price=12000*qt;

    else if(cb1.getSelectedIndex()==3)

        price=1884000*qt;

    else if(cb1.getSelectedIndex()==4)

        price=1800*qt;

    else if(cb1.getSelectedIndex()==5)

        price=7100*qt;

    else if(cb1.getSelectedIndex()==6)

        price=500*qt;
```

```java
else if(cb1.getSelectedIndex()==7)

    price=2000*qt;

else if(cb1.getSelectedIndex()==8)

    price=600*qt;

else if(cb1.getSelectedIndex()==9)

    price=46200*qt;

else if(cb1.getSelectedIndex()==10)

    price=3500*qt;

else if(cb1.getSelectedIndex()==11)

    price=4500*qt;

else if(cb1.getSelectedIndex()==12)

    price=8900*qt;

else if(cb1.getSelectedIndex()==13)

    price=22500*qt;

else if(cb1.getSelectedIndex()==14)

    price=1200*qt;

try

{

    Class.forName("java.sql.DriverManager");

    Connection con=(Connection)DriverManager.getConnection

    ("jdbc:mysql://localhost:3306/project1","root","tiger");

    Statement stmt=(Statement)con.createStatement();

    String query2="INSERT INTO Purchase Values('"+wn+"','"+qt+"','"+pay+"','"+price+"');";

        stmt.executeUpdate(query2);

        JOptionPane.showMessageDialog(this,"Item added to your Cart !");

}

catch(Exception e)

{

    JOptionPane.showMessageDialog(this,e.getMessage());
```

```
            }
      }
```

3. **Coding for Back OK Button:**

private void jButton3ActionPerformed(java.awt.event.ActionEvent evt) {

    membersD_2a ff = new membersD_2a();

    ff.setVisible(true);

    this.setVisible(false);

}

Your Cart

jFrame: "cart"

1. **Coding Show Cart OK Button:**

private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {

    DefaultTableModel model=(DefaultTableModel)

```java
        tb1.getModel();

    try

    {

        Class.forName("java.sql.DriverManager");

        Connection con=(Connection)DriverManager.getConnection

        ("jdbc:mysql://localhost:3306/project1","root","tiger");

        Statement stmt=(Statement)con.createStatement();

        String Tname;

        Tname="purchase";

        String query="select * from "+Tname+";";

        ResultSet rs=stmt.executeQuery(query);

        while(rs.next())

        {

            String wn=rs.getString("WatchName");

            String qt=rs.getString("Quantity");

            String pay=rs.getString("Payment");

            String price=rs.getString("Price");

            model.addRow(new Object[] {wn, qt, pay, price});

        }

    }

    catch(Exception e)

    {

        JOptionPane.showMessageDialog(this, e.getMessage());

    }

}
```

2. **Coding for Calculate OK Button:**

```java
private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {

    try

    {
```

```java
        Class.forName("java.sql.DriverManager");

        Connection con=(Connection)DriverManager.getConnection

        ("jdbc:mysql://localhost:3306/project1","root","tiger");

        Statement stmt=(Statement)con.createStatement();

        String query1="select sum(quantity) from purchase;";

        String query2="select sum(price) from purchase;";

            ResultSet rs1=stmt.executeQuery(query1);

            while(rs1.next())

            {

                String qt=rs1.getString("sum(Quantity)");

                tf1.setText(""+qt);

            }

            ResultSet rs2=stmt.executeQuery(query2);

            while(rs2.next())

            {

                String amt=rs2.getString("sum(price)");

                tf2.setText(""+amt);

            }

        }

        catch(Exception e)

        {

            JOptionPane.showMessageDialog(this,e.getMessage());

        }

    }
```

3. **Coding for Clear OK Button:**

```java
private void jButton4ActionPerformed(java.awt.event.ActionEvent evt) {

    tf1.setText("");

    tf2.setText("");

    DefaultTableModel model= (DefaultTableModel)
```

```java
        tb1.getModel(); int rows=model.getRowCount();

        if(rows>0)

        {

           for(int i=0; i<rows; i++)

              model.removeRow(0);

        }

    }
```

4. **Coding for Buy OK Button:**

```java
private void jButton3ActionPerformed(java.awt.event.ActionEvent evt) {

    try

    {

       Class.forName("java.sql.DriverManager");

       Connection con=(Connection)DriverManager.getConnection

       ("jdbc:mysql://localhost:3306/project1","root","tiger");

       Statement stmt=(Statement)con.createStatement();

       String query1="delete from purchase;";

       stmt.executeUpdate(query1);

       JOptionPane.showMessageDialog(this, "Thankyou for shopping here\nPlease visit your "

            + "email provide your address\nto collect your delivery\nService within 48 hours");

    }

    catch(Exception e)

    {

       JOptionPane.showMessageDialog(this,e.getMessage());

    }

    tf1.setText("");

    tf2.setText("");

    DefaultTableModel model= (DefaultTableModel)
```

```java
        tb1.getModel(); int rows=model.getRowCount();

if(rows>0)

{

   for(int i=0; i<rows; i++)

      model.removeRow(0);

}

}
```

Softwares & Drivers used in this project are:

1. NetBeans IDE (Front-End)
2. JDBC Driver Manager
3. MySQL (Back-End)

Some Common elements:-
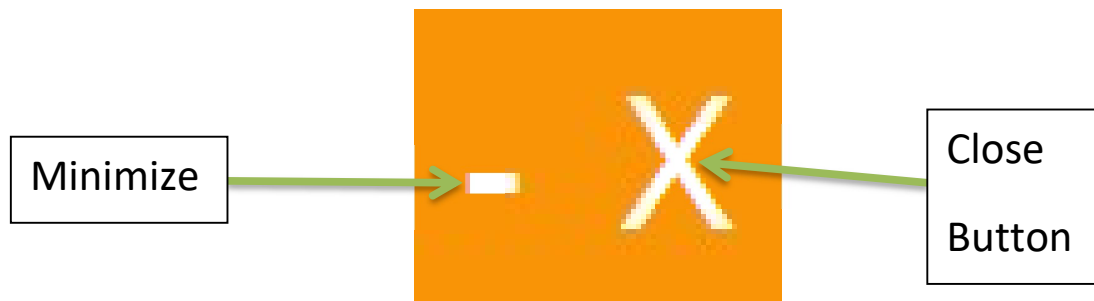
1. Minimize:

private void lbMinMouseReleased(java.awt.event.MouseEvent evt) {

    this.setState(proceed_1.ICONIFIED);

  }

2. Close Button:

private void lbCloseMouseReleased(java.awt.event.MouseEvent evt) {

    System.exit(0);

  }

About Data Connectivity:

A link needs to be established between the Front-End and Back-End using <u>JDBC Driver</u> (Java database connectivity) to facilitate communication between the two. A complete application requires combination of three i.e. ***<u>Front-End</u>, <u>Connection</u> and <u>Back-End</u>***.

A jdbc driver manager defines objects which can connect Java application to jdbc driver.

To establish connection between Back-End and Front-End we require 2 components –

1. JDBC API (Java Database Connectivity Application Programing Interface)
2. JDBC Driver for MySQL
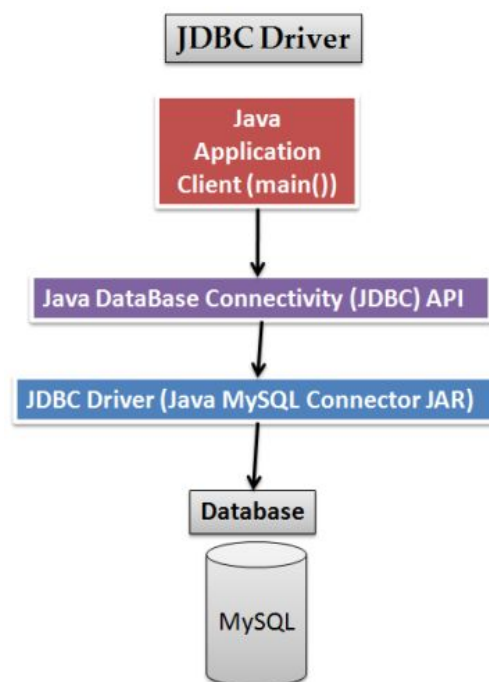
Front-End

It is a GUI that helps users to design forms to accept data and provide instructions for retrieving information from the Back-End.
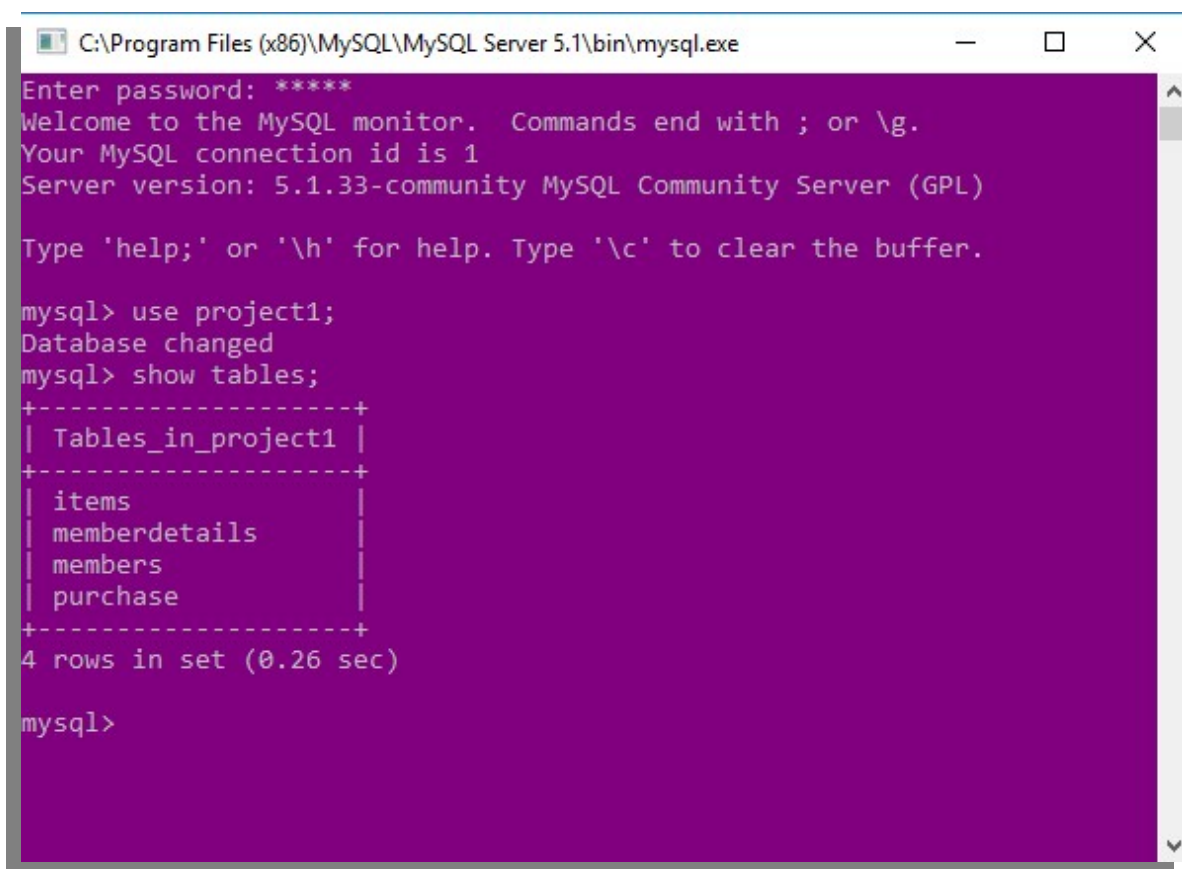
For e.g. NetBeans IDE
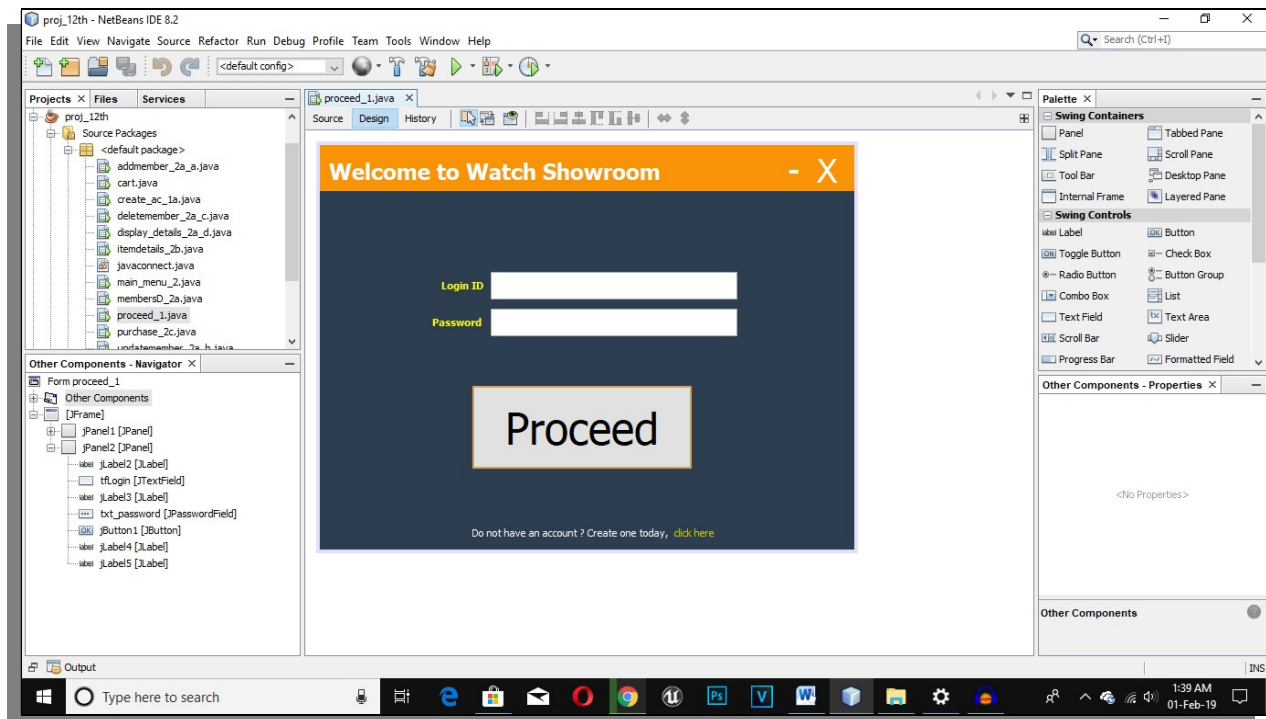
Back-End

It is a database which helps in storing data in organized manner for future use and reference.

For e.g. MySQL

Runtime Screenshots

1. Proceed

2. Create Account

3. Add Members

4. Update Member

5. Delete Member

6. Display Details

Member Details — X

Name	UserID	Gender	PhoneNumber
Sahil Verma	sahil@email.com	Male	7678583017
Ram	r1234@email.com	Male	23412123
Riya	r123@email.com	Female	47854711
Gulshan	g1312	Male	238579112
Victor	vic32@email.com	Male	12084773842
Piyush	p123@email.com	Male	1758349912
Abhishek	abhi46@email.com	Male	375485123

Display   Back   LOGOUT

7. Item Details

Item Details — X

ItemCode	ItemName	Category	Price
101	Audemars Piguet	Luxury	9080000
102	Vincero	Afordable	12000
103	Vancheron Constatin	Luxury	1884000
104	Fastrack Trendies	Regular	1800
105	Titan Chronograph	Royal	7100
106	Fitbit M2	Sports	500
107	Fastrack Reflex	Sports	2000
108	Mi M3 Fitness	Sports	600
109	Akribos XXIV	Royal	46200
110	Fastrack ng3022	Biker	3500
111	Titan 1734	Biker	4500
112	G-Shock A-n-D	Regular	8900
113	Diesel Analog	Regular	22500
114	Casio Vintage Digital	Vintage	1200

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