

XYZ Hotel Management System

By

Java Swing

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Introduction of the application

The XYZ Hotel Management System is a versatile Java Swing application designed to streamline and improve the XYZ Hotel's operations. This application is a useful tool for managing various aspects of hotel operations, such as guest reservations, billing, and reporting.

Features of the application

1. Friendly User Interface:

The application has an insightful and user-friendly interface, making it accessible to staff and administrators of varying technical expertise.

2. Admin Access:

When an administrator logs in, admin is taken to a main menu page with two buttons:

- **Manage Staff:** Enables administrators to add, remove, and update information about staff members, as well as assign roles and permissions.
- **Manage Packages:** Allows administrators to create, modify, and delete hotel packages, including pricing, inclusions, and availability.

3. Customer Access:

When a customer logs in, they are taken to a main menu page with two buttons:

- **Manage Reservations:** This feature enables customers to view, modify, or cancel their reservations, as well as make new reservations based on availability.
- **View Packages:** Gives customers detailed information about the hotel's packages, including pricing, inclusions, and availability.

4. Access Control and Security Validations:

Strong security measures are in place to protect sensitive data, and role-based access control ensures that staff members have appropriate levels of access.

5. Analytics and Management:

- Create informative package details to aid in data-driven decision-making.
- Provide management functions such as staff control, package control, reservation management, and so on.

Application design and source codes

Source Structure

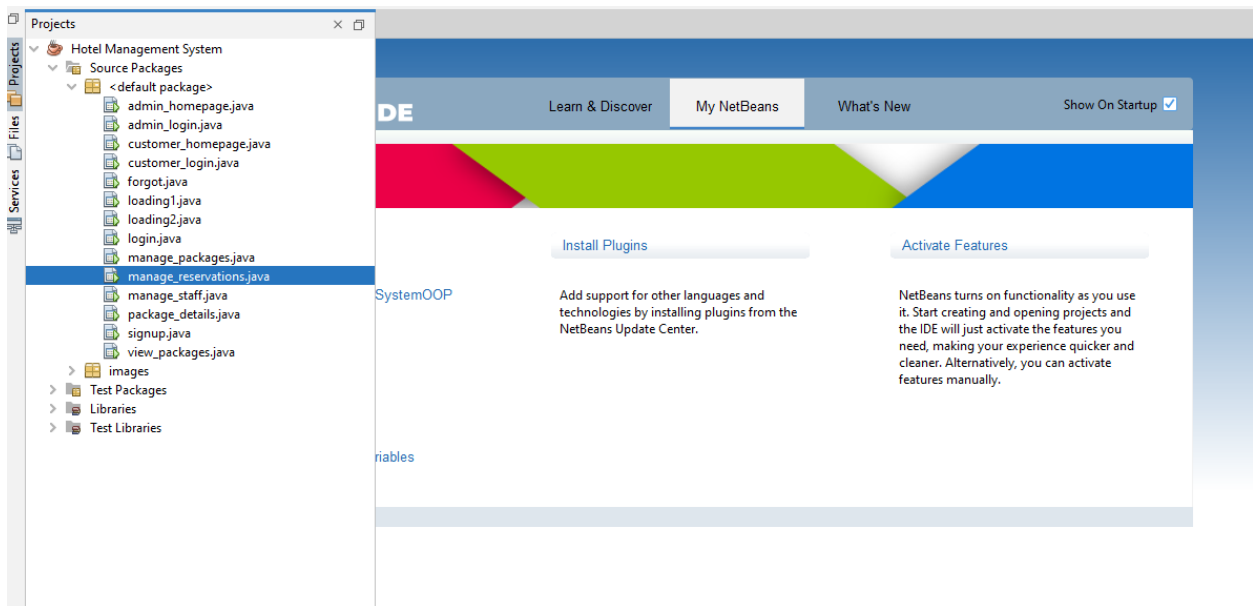


Figure 1 Package Structure

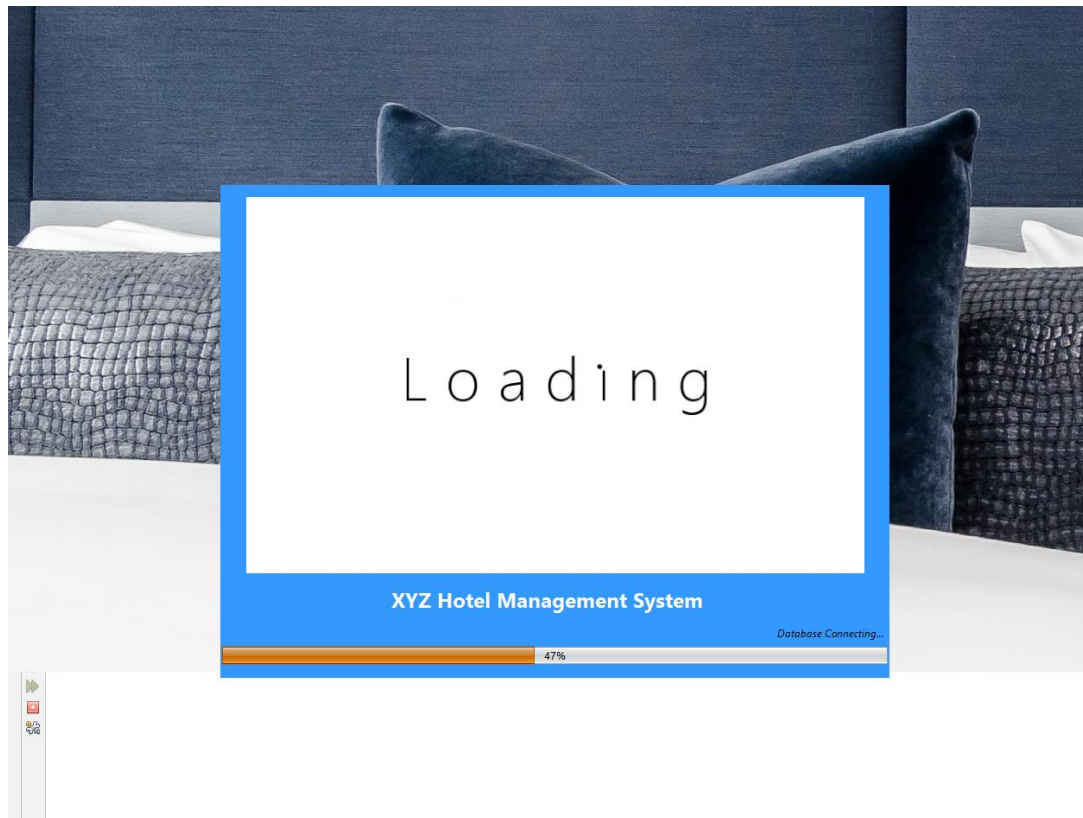


Figure 2 Loading screen

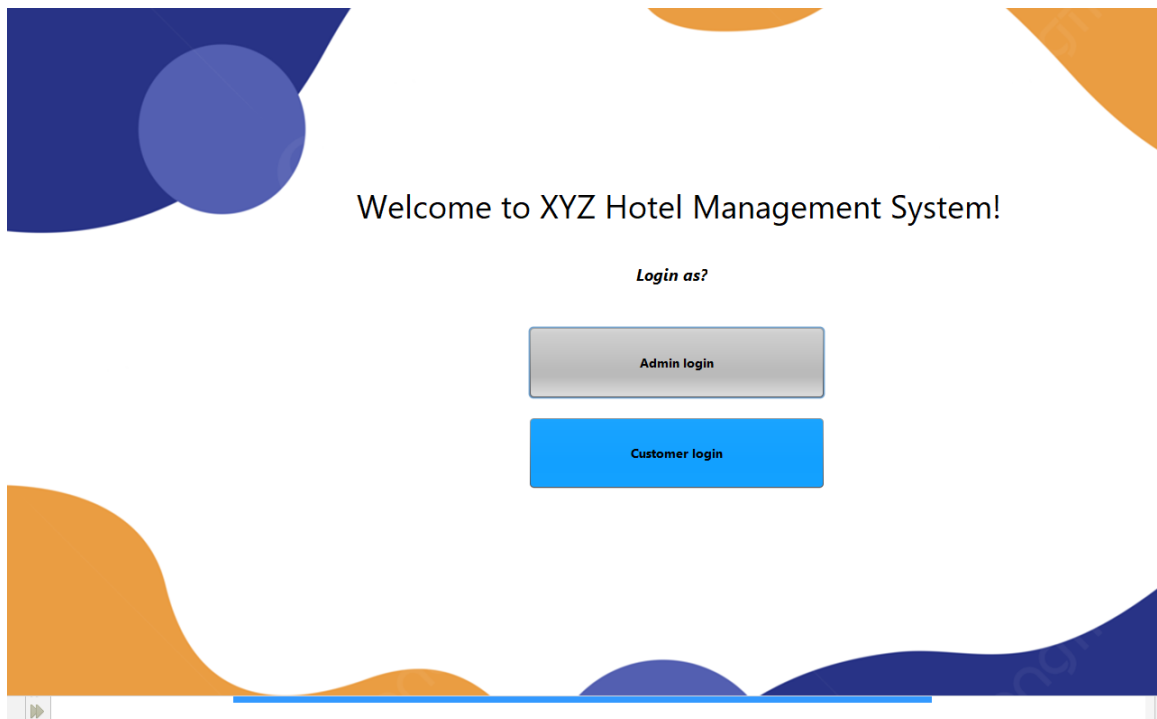


Figure 3 Select user type

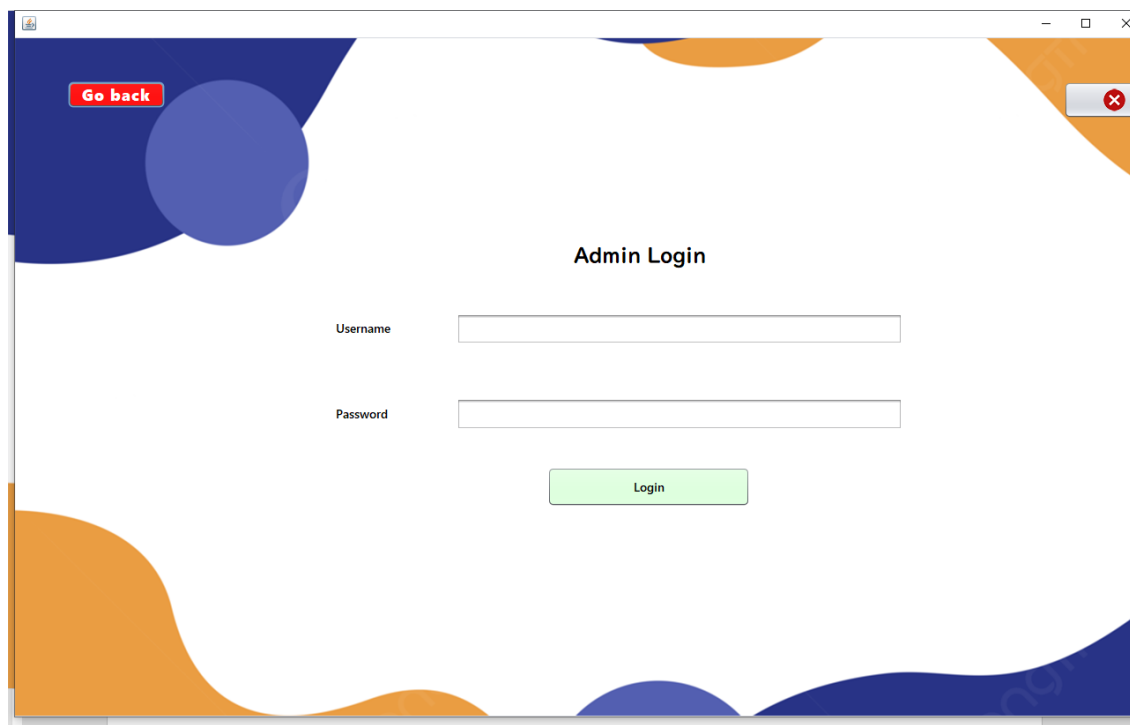


Figure 4 Admin login

```

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

    Connection con=null;
    Statement st=null;
    PreparedStatement pst=null;
    ResultSet rs=null;

    try {
        Class.forName( className: "com.mysql.cj.jdbc.Driver");
        con=DriverManager.getConnection( url: "jdbc:mysql://localhost:3306/hoteldb", user: "root", password: "admin123");
        pst=con.prepareStatement( sql: "Select * from admin where username=? and password=?");
        pst.setString( parameterIndex: 1, x: username.getText());
        pst.setString( parameterIndex: 2, x: password.getText());
        rs=pst.executeQuery();
        if(rs.next()){
            JOptionPane.showMessageDialog( parentComponent: this, message: "login");
            new admin_homepage().setVisible( b: true);
        }else{
            JOptionPane.showMessageDialog( parentComponent: this, message: "Invalid Username or Password!");
            new admin_homepage().setVisible( b: false);
        }
    } catch (ClassNotFoundException | SQLException ex) {
        Logger.getLogger( name: customer_login.class.getName()).log( level: Level.SEVERE, msg: null, thrown: ex);
    }

    // TODO add your handling code here:
}

```

Figure 5 Database establish and Admin login



Figure 6 Admin dashboard

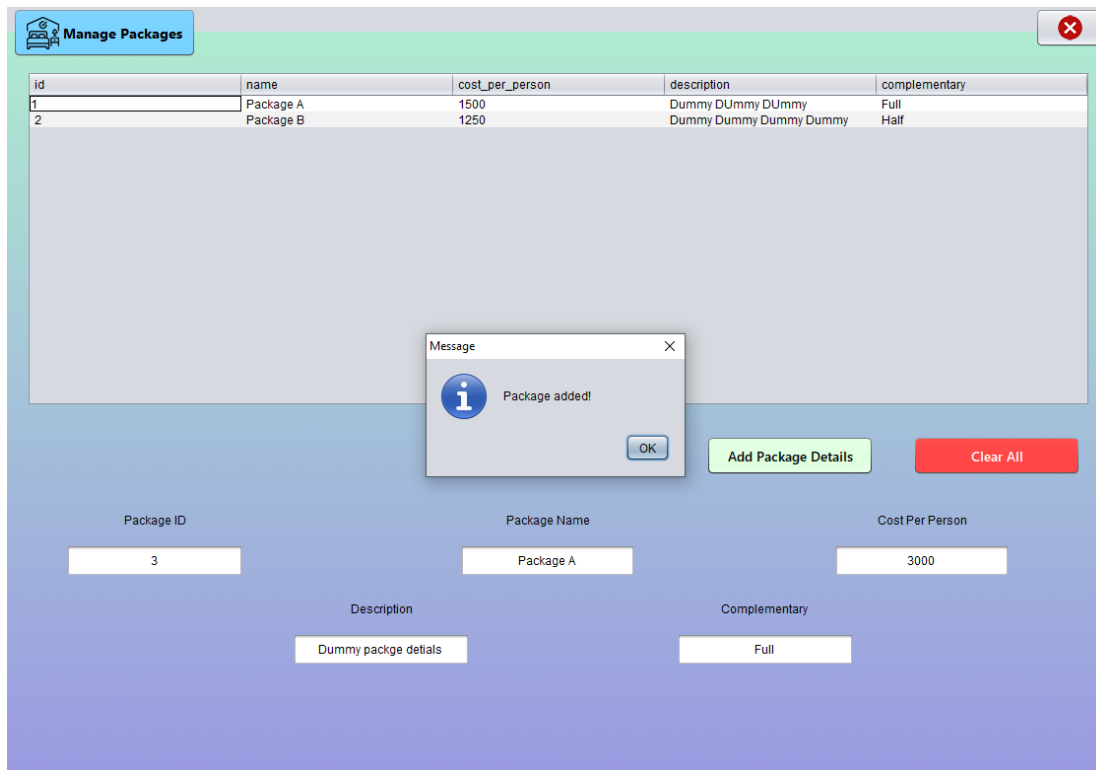


Figure 7 Admin manage packages

```

try {
    Class.forName ( className: "com.mysql.cj.jdbc.Driver");
    con=DriverManager.getConnection ( url: "jdbc:mysql://localhost:3306/hoteldb", user: "root", password: "admin123");
} catch (ClassNotFoundException | SQLException ex) {
    Logger.getLogger ( name: manage_packages.class.getName () ).log ( level: Level.SEVERE, msg: null, thrown: ex);
}

ShowRecordInTable ();

}

public void ShowRecordInTable () {
    int c=0;
    try {
        pst=con.prepareStatement ( sql: "select * from packages");
        rs=pst.executeQuery ();
        ResultSetMetaData rsmd=rs.getMetaData ();
        c=rsmd.getColumnCount ();
        DefaultTableModel DModel=(DefaultTableModel) jTable1.getModel ();
        DModel.setRowCount ( rowCount: 0);
        while (rs.next ()) {
            Vector column=new Vector ();
            for (int i=1;i<=c;i++) {
                column.add ( e: rs.getString ( columnLabel: "id"));
                column.add ( e: rs.getString ( columnLabel: "name"));
                column.add ( e: rs.getString ( columnLabel: "cost_per_person"));
                column.add ( e: rs.getString ( columnLabel: "description"));
                column.add ( e: rs.getString ( columnLabel: "complementary"));
            }
            DModel.addRow ( rowData: column);
        }
    } catch (SQLException ex) {
        Logger.getLogger ( name: manage_packages.class.getName () ).log ( level: Level.SEVERE, msg: null, thrown: ex);
    }
}
}

```

Figure 8 Manage packages source

Manage Staff

Emp ID

Department

Email

Emp Name

Address

Salary

Gender

Contact

id	name	gender	department	address	contact_number	email_address	salary
1	John Doe	Male	Maintenance	123 Main Street	555-1234	john.doe@example.c...	45000.00
2	Jane Smith	Female	Kitchen	456 Oak Avenue	555-5678	jane.smith@exampl...	50000.00
3	Bob Johnson	Male	Housekeeping	789 Pine Drive	555-4321	bob.johnson@exam...	35000.00
4	Mary Davis	Female	Banquets	101 Maple Lane	555-8765	mary.davis@exampl...	60000.00
6	Isuru	Male	Banquets	isas	044	sad@gmail.com	60000.00

Figure 9 Manage Staff Admin

```

    /**
    public manage_staff() {
        initComponents();

        try {
            Class.forName("com.mysql.cj.jdbc.Driver");
            con=DriverManager.getConnection(url: "jdbc:mysql://localhost:3306/hoteldb", user: "root", password: "admin123");
        } catch (ClassNotFoundException | SQLException ex) {
            Logger.getLogger(name: manage_packages.class.getName()).log(level: Level.SEVERE, msg: null, thrown: ex);
        }
        ShowRecordInTable();
    }

    public void ShowRecordInTable() {
        int c=0;
        try {
            pst=con.prepareStatement(sql: "select * from staff");
            rs=pst.executeQuery();
            ResultSetMetaData rsmd=rs.getMetaData();
            c=rsmd.getColumnCount();
            DefaultTableModel IModel=(DefaultTableModel) jTable1.getModel();
            IModel.setRowCount(0);
            while (rs.next()){
                Vector column=new Vector();
                for(int i=1;i<=c;i++){
                    column.add(e: rs.getString(columnLabel: "id"));
                    column.add(e: rs.getString(columnLabel: "name"));
                    column.add(e: rs.getString(columnLabel: "gender"));
                    column.add(e: rs.getString(columnLabel: "department"));
                    column.add(e: rs.getString(columnLabel: "address"));
                    column.add(e: rs.getString(columnLabel: "contact_number"));
                    column.add(e: rs.getString(columnLabel: "email_address"));
                    column.add(e: rs.getString(columnLabel: "salary"));
                }
                IModel.addRow(rowData: column);
            }
        } catch (SQLException ex) {
            Logger.getLogger(name: manage_packages.class.getName()).log(level: Level.SEVERE, msg: null, thrown: ex);
        }
    }
}

```

Figure 10 Manage staff source



Figure 11 Customer login

```
// TODO add your handling code here:

Connection con=null;
Statement st=null;
PreparedStatement pst=null;
ResultSet rs=null;
try {
    Class.forName("com.mysql.cj.jdbc.Driver");
    con=DriverManager.getConnection("url: \"jdbc:mysql://localhost:3306/hoteldb\", user: \"root\", password: \"admin123\");
    pst=con.prepareStatement("sql: \"Select * from login where username=? and password=?\"");
    pst.setString(parameterIndex: 1, x: txtusername.getText());
    pst.setString(parameterIndex: 2, x: txtpassword.getText());
    rs=pst.executeQuery();
    if(rs.next()){
        JOptionPane.showMessageDialog(parentComponent: this, message: "login");
        new customer_homepage().setVisible(b: true);
    }else{
        JOptionPane.showMessageDialog(parentComponent: this, message: "Invalid Username or Password!");
        new customer_homepage().setVisible(b: false);
    }
} catch (ClassNotFoundException ex) {
    Logger.getLogger(name: customer_login.class.getName()).log(level:Level.SEVERE, msg: null, thrown: ex);
} catch (SQLException ex) {
    Logger.getLogger(name: customer_login.class.getName()).log(level:Level.SEVERE, msg: null, thrown: ex);
}
}

private void jButton4ActionPerformed(java.awt.event.ActionEvent evt) {
    new forgot().setVisible(b: true);
}

// TODO add your handling code here:
}

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

    int yes=JOptionPane.showConfirmDialog(parentComponent: this, message: "Are you sure?", title: "Exit", optionType:JOptionPane.YES_NO_OPTION, messageType:
    if(yes==JOptionPane.YES_OPTION)
        System.exit(status:0);
}
}
```

Figure 12 Customer login and Validation source

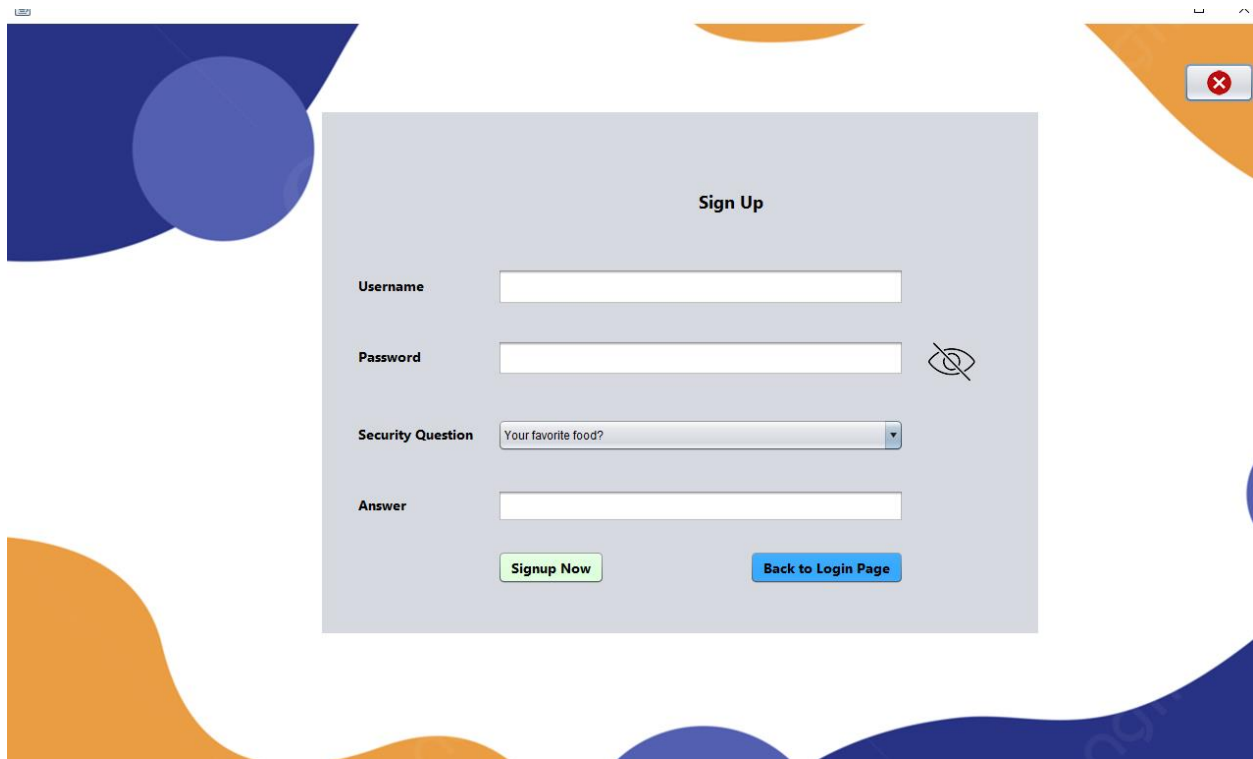


Figure 13 Signup

```

188
189
190     if(txtusername.getText().equals("")){
191         JOptionPane.showMessageDialog(parentComponent: this, message: "All field value is mandatory!");
192         txtusername.requestFocus();
193     }
194     else if(txtpassword.getText().equals("")){
195         JOptionPane.showMessageDialog(parentComponent: this, message: "All field value is mandatory!");
196         txtpassword.requestFocus();
197     }
198     else if(txtans.getText().equals("")){
199         JOptionPane.showMessageDialog(parentComponent: this, message: "All field value is mandatory!");
200         txtans.requestFocus();
201     }
202
203     else{
204         Connection con=null;
205         PreparedStatement pst=null;
206         ResultSet rs=null;
207         try {
208             Class.forName("com.mysql.cj.jdbc.Driver");
209             con=DriverManager.getConnection(url: "jdbc:mysql://localhost:3306/hoteldb", user: "root", password: "admin123");
210             pst=con.prepareStatement(sql: "select * from login where username=?");
211             pst.setString(parameterIndex: 1, x: txtusername.getText());
212             rs=pst.executeQuery();
213             if(rs.next()){
214                 JOptionPane.showMessageDialog(parentComponent: this, message: "Use another username");
215             }else{
216                 pst=con.prepareStatement(sql: "insert into login(username,password,sq,ans) values(?,?,?,?)");
217                 pst.setString(parameterIndex: 1, x: txtusername.getText());
218                 pst.setString(parameterIndex: 2, x: txtpassword.getText());
219                 pst.setString(parameterIndex: 3, x: JComboBox1.getItemAt(index: JComboBox1.getSelectedIndex()));
220                 pst.setString(parameterIndex: 4, x: txtans.getText());
221                 pst.executeUpdate();
222                 JOptionPane.showMessageDialog(parentComponent: this, message: "Registration Successful\n Login now!");
223             }
224         }
225         catch (ClassNotFoundException ex) {
226             Logger.getLogger(signup.class.getName()).log(level: Level.SEVERE, msg: null, thrown: ex);
227         }
228         catch (SQLException ex) {
229             Logger.getLogger(signup.class.getName()).log(level: Level.SEVERE, msg: null, thrown: ex);
230         }
231     }
232
233

```

Figure 14 Customer signup source

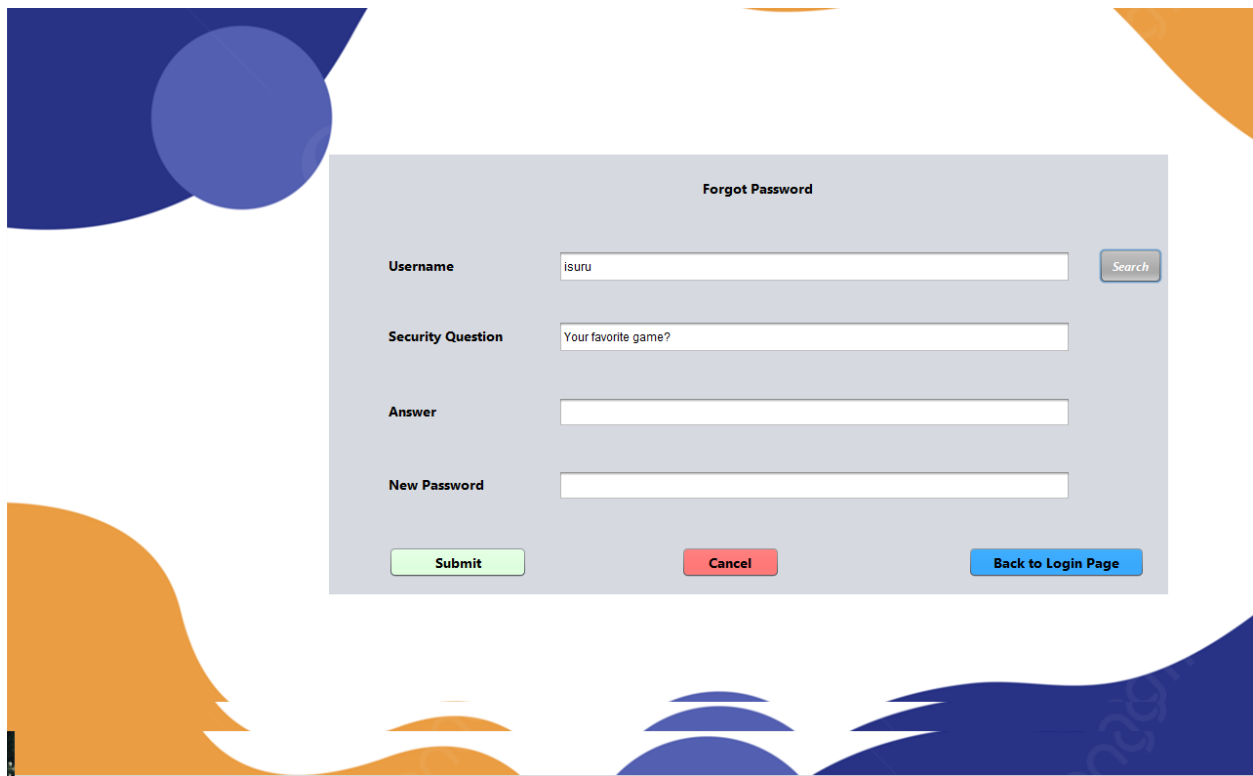


Figure 15 User forgot password

```

3 private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
    try {
        pst=con.prepareStatement( sql:"select * from login where username=? and ans=? ");
        pst.setString( parameterIndex: 1,  n: txtusernamefill.getText());
        pst.setString( parameterIndex: 2,  n: txtansfill.getText());
        rs=pst.executeQuery();
        if(rs.next()){

            try {
                pst=con.prepareStatement( sql:"update login set password=? where username=? and ans=?");
                pst.setString( parameterIndex: 1,  n: txtpwfill.getText());
                pst.setString( parameterIndex: 2,  n: txtusernamefill.getText());
                pst.setString( parameterIndex: 3,  n: txtansfill.getText());
                pst.executeUpdate();
                JOptionPane.showMessageDialog( parentComponent: this,  message: "Updated successful \n Login now!");
            } catch (SQLException ex) {
                Logger.getLogger( name: forgot.class.getName()).log( level:Level.SEVERE,  msg:null,  thrown:ex);
            }

        }else{
            JOptionPane.showMessageDialog( parentComponent: this,  message: "Answer not match");
        }
    }

    // TODO add your handling code here:
    } catch (SQLException ex) {
        Logger.getLogger( name: forgot.class.getName()).log( level:Level.SEVERE,  msg:null,  thrown:ex);
    }
}

3 private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {
    txtusernamefill.setText( s: "");
    txtansfill.setText( s: "");
    txtsqfill.setText( s: "");
    txtpwfill.setText( s: "");

    // TODO add your handling code here:
}

3 private void txtsqfillActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
}

```

Figure 16 Forgot password source



Figure 17 Customer panel

Manage Reservations

ID

Mobile

Total Cost

Full Name

Reservation Date

Address

No of Pax

Create

Edit

Cancel Reservation

Reset

ID	Full Name	Address	Mobile No	Reservation Date	No of Pax	Total Cost
007	1	1	1	2022-01-02	4	1231
01	sadsa	vpc	01	2022-01-01	1	155
02	asdas	asd	asdas	2022-01-22	1	1
05	sad	asd	202	2022-01-23	5	45
06	asd	asd	asd	2022-01-23	544	56
21152	1212	121	121	2020-02-28	2121	1122
asd	asd	asd	asd	2022-01-23	1	255

Figure 18 Manage Reservation

```

public void ShowRecordInTable() {
    int c=0;
    try {
        pst=con.prepareStatement( sql:"select * from reservations");
        rs=pst.executeQuery();
        ResultSetMetaData rsmd=rs.getMetaData();
        c=rsmd.getColumnCount();
        DefaultTableModel DModel=(DefaultTableModel) jTable1.getModel();
        DModel.setRowCount( rowCount: 0);
        while (rs.next()){
            Vector v=new Vector();
            for(int i=1;i<=c;i++){
                v.add( e:rs.getString( columnLabel: "id"));
                v.add( e:rs.getString( columnLabel: "full_name"));
                v.add( e:rs.getString( columnLabel: "address"));
                v.add( e:rs.getString( columnLabel: "mobile"));
                v.add( e:rs.getString( columnLabel: "reservation_date"));
                v.add( e:rs.getString( columnLabel: "no_of_pax"));
                v.add( e:rs.getString( columnLabel: "total_cost"));
            }
            DModel.addRow( rowData: v);
        }
    } catch (SQLException ex) {
        Logger.getLogger( name:manage_packages.class.getName()).log( level:Level.SEVERE, msg:null, thrown:ex);
    }
}

```

Figure 19 Manage reservation source 01

```

private void jButton3ActionPerformed(java.awt.event.ActionEvent evt) {
    if(txtdate.getText().equals( anObject: "")){
        JOptionPane.showMessageDialog( parentComponent: this, message: "All field is required!");
        txtdate.requestFocus();
    }
    else if(txtpax.getText().equals( anObject: "")){
        JOptionPane.showMessageDialog( parentComponent: this, message: "All field is required!");
        txtpax.requestFocus();
    }
    else{
        try {
            pst=con.prepareStatement( sql:"select * from reservations where reservation_date=?");
            pst.setString( parameterIndex: 1, x:txtdate.getText());
            rs=pst.executeQuery();
            if(rs.next()){
                JOptionPane.showMessageDialog( parentComponent: this, message: "Reservation date is already exist");
            }else{
                pst=con.prepareStatement( sql:"insert into reservations(id,full_name,address,mobile,reservation_date,no_of_pax,total_cost)v
                pst.setString( parameterIndex: 1, x:txtid.getText());
                pst.setString( parameterIndex: 2, x:txtname.getText());
                pst.setString( parameterIndex: 3, x:txtadrs.getText());
                pst.setString( parameterIndex: 4, x:txtmob.getText());
                pst.setString( parameterIndex: 5, x:txtdate.getText());
                pst.setString( parameterIndex: 6, x:txtpax.getText());
                pst.setString( parameterIndex: 7, x:txtcost.getText());
                pst.executeUpdate();
                JOptionPane.showMessageDialog( parentComponent: this, message: "Package added!");
                ShowRecordInTable();
                txtid.setText( s: "");
                txtname.setText( s: "");
                txtadrs.setText( s: "");
                txtmob.setText( s: "");
                txtdate.setText( s: "");
                txtpax.setText( s: "");
                txtcost.setText( s: "");
            }
        } catch (SQLException ex) {
            Logger.getLogger( name:manage_packages.class.getName()).log( level:Level.SEVERE, msg:null, thrown:ex);
        }
    }
}

```

Figure 20 Manage reservation source 02

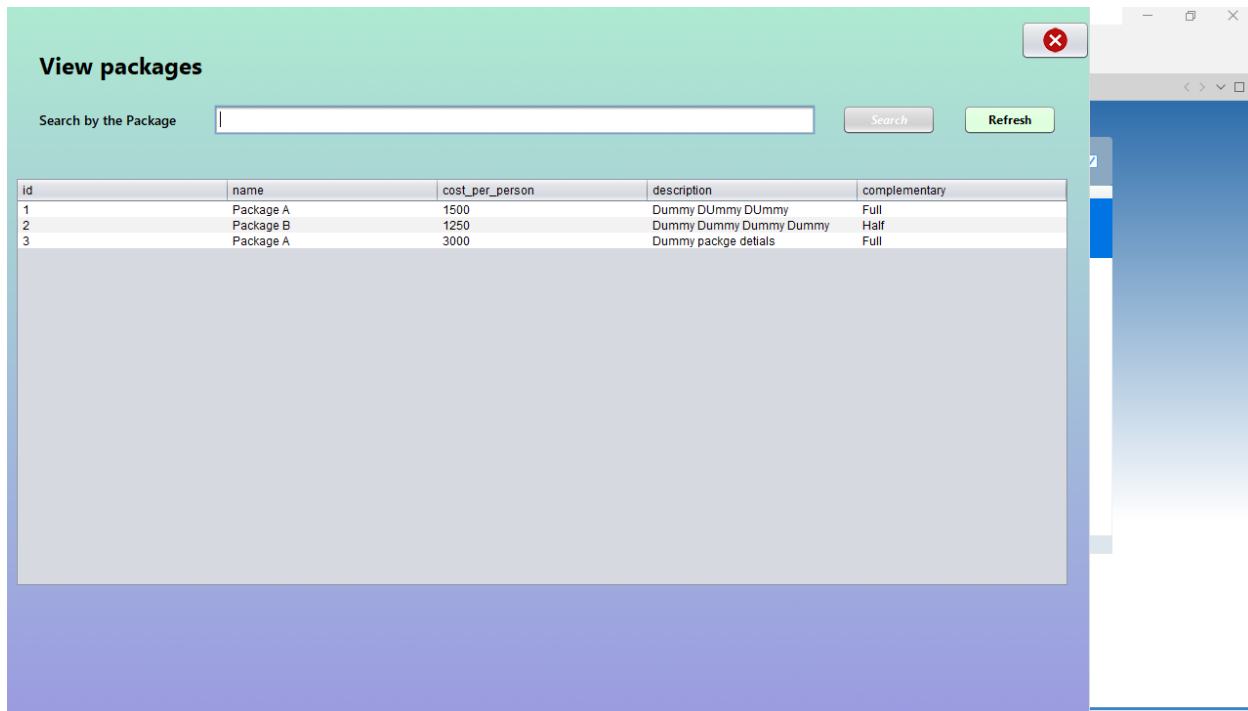


Figure 21 View packages

```

34  * Creates new form view_packages
35  */
36  public view_packages() {
37      initComponents();
38      try {
39          Class.forName("com.mysql.cj.jdbc.Driver");
40          con=DriverManager.getConnection("url: \"jdbc:mysql://localhost:3306/hotelldb\", user: \"root\", password: \"admin123\");
41      } catch (ClassNotFoundException | SQLException ex) {
42          Logger.getLogger("name: manage_packages.class.getName()").log(Level.SEVERE, msg: null, thrown: ex);
43      }
44      ShowRecordInTable();
45  }
46
47
48  public void ShowRecordInTable(){
49      int c=0;
50      try {
51          pst=con.prepareStatement("select * from packages");
52          rs=pst.executeQuery();
53          ResultSetMetaData rsmd=rs.getMetaData();
54          c=rsmd.getColumnCount();
55          DefaultTableModel DModel=(DefaultTableModel) jTable1.getModel();
56          DModel.setRowCount(0);
57          while (rs.next()){
58              Vector column=new Vector();
59              for(int i=1;i<=c;i++){
60                  column.add(rs.getString(columnLabel: "id"));
61                  column.add(rs.getString(columnLabel: "name"));
62                  column.add(rs.getString(columnLabel: "cost_per_person"));
63                  column.add(rs.getString(columnLabel: "description"));
64                  column.add(rs.getString(columnLabel: "complementary"));
65              }
66              DModel.addRow(column);
67          }
68      } catch (SQLException ex) {
69          Logger.getLogger("name: manage_packages.class.getName()").log(Level.SEVERE, msg: null, thrown: ex);
70      }
71  }
72
73
74  /**
75   * This method is called from within the constructor to initialize the form.
76   * WARNING: Do NOT modify this code. The content of this method is always
77   * regenerated by the Form Editor.

```

Figure 22 View packages source

```

4
5
6 private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {
7     try{
8         pst=con.prepareStatement("select * from packages where name=?");
9         pst.setString(1, txtsearchpack.getText());
10        rs=pst.executeQuery();
11        ResultSetMetaData ob=rs.getMetaData();
12        int n=ob.getColumnCount();
13        DefaultTableModel df=(DefaultTableModel) jTable1.getModel();
14        df.setRowCount(0);
15        while(rs.next()){
16            Vector v=new Vector();
17            for(int i=1;i<=n;i++){
18                v.add(rs.getString("id"));
19                v.add(rs.getString("name"));
20                v.add(rs.getString("cost_per_person"));
21                v.add(rs.getString("description"));
22                v.add(rs.getString("complementary"));
23            }
24            df.addRow(v);
25        }
26    } catch (SQLException ex) {
27        Logger.getLogger(manage_packages.class.getName()).log(Level.SEVERE, null, ex);
28    }
29
30    // TODO add your handling code here:
31    }
32
33 private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
34     dispose();
35 }

```

Figure 23 View packages source 02

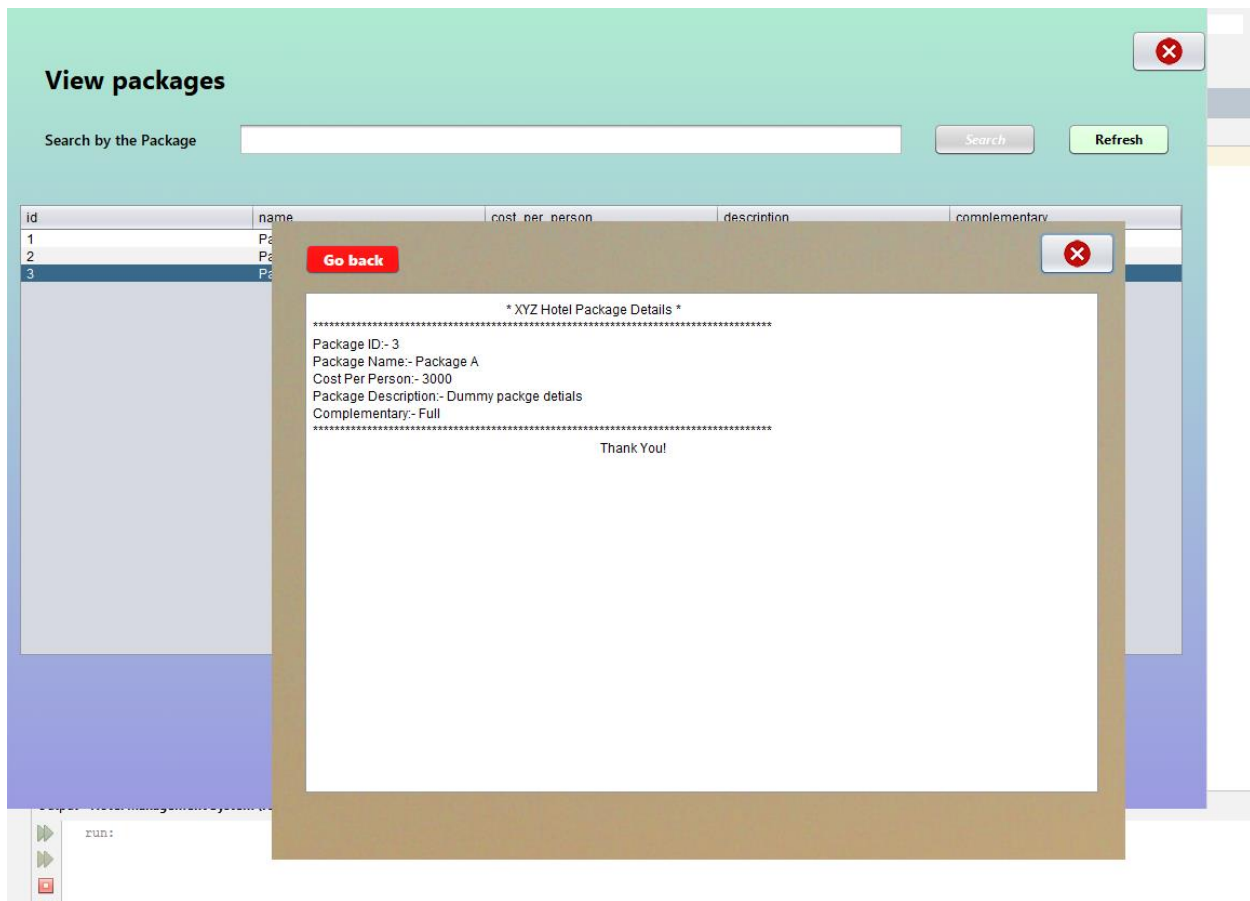


Figure 24 View packages expanded

```

19  L  */
20  □ public package_details() {
21      initComponents();
22
23
24      connect();
25      txtview.setText("\t\t * XYZ Hotel Package Details * \n");
26      txtview.setText(txtview.getText()+"***** \n");
27      txtview.setText(txtview.getText()+"Package ID:- "+id+"\n");
28      txtview.setText(txtview.getText()+"Package Name:- "+name+"\n");
29      txtview.setText(txtview.getText()+"Cost Per Person:- "+cost_per_person+"\n");
30      txtview.setText(txtview.getText()+"Package Description:- "+description+"\n");
31      txtview.setText(txtview.getText()+"Complementary:- "+complementary+"\n");
32      txtview.setText(txtview.getText()+"***** \n");
33      txtview.setText(txtview.getText()+"\t\t"+
34
35      Thank You! ");
36
37
38  }
39
40
41  public void connect(){
42      PreparedStatement pst;
43      ResultSet rs;
44      try{
45          Class.forName( className: "com.mysql.cj.jdbc.Driver");
46          java.sql.Connection con=DriverManager.getConnection( url: "jdbc:mysql://localhost:3306/hoteldb", user: "root", password: "admin123");
47          pst=con.prepareStatement( sql: "select * from packages where id=?");
48          pst.setString( parameterIndex: 1,  s: id);
49          rs=pst.executeQuery();
50          if(rs.next()){
51              id=rs.getString( columnIndex: "id");
52              name=rs.getString( columnIndex: "name");
53              cost_per_person=rs.getString( columnIndex: "cost_per_person");
54              description=rs.getString( columnIndex: "description");
55              complementary=rs.getString( columnIndex: "complementary");
56          }
57      }
58      catch (ClassNotFoundException | SQLException ex){
59          Logger.getLogger( name: view_packages.class.getName()).log( level: Level.SEVERE, msg: null, thrown: ex);
60      }
61  }
62

```

Figure 25 Package details source

Database Structure

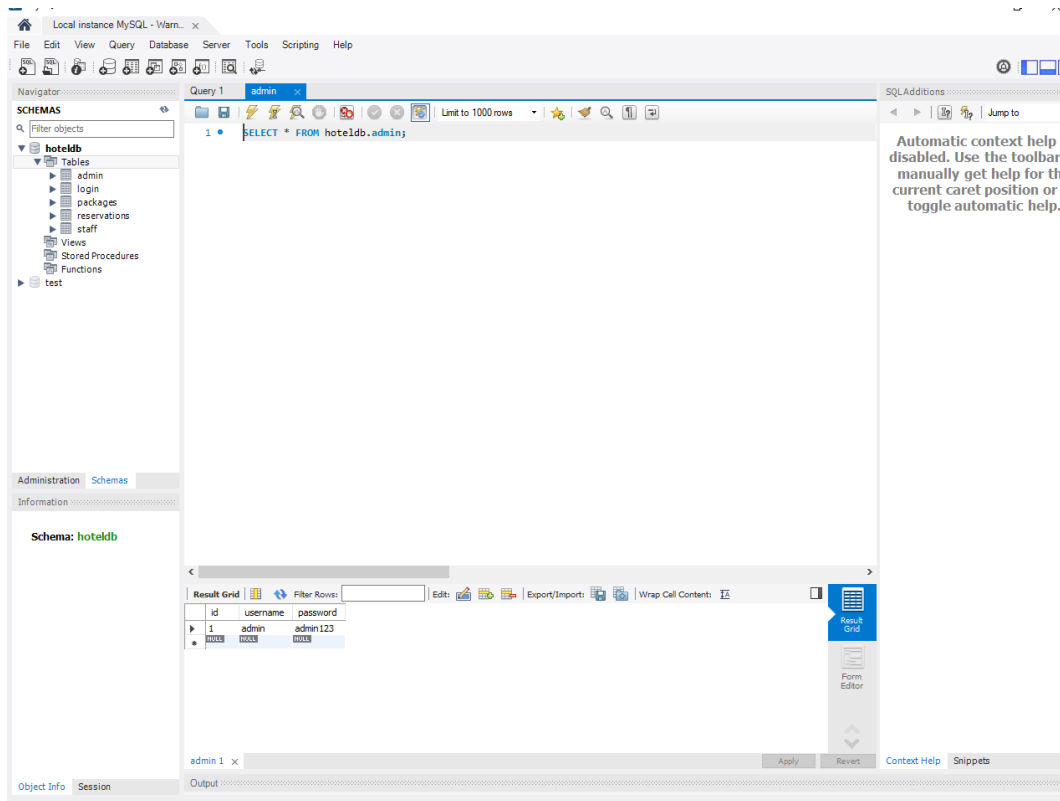


Figure 26 admin table

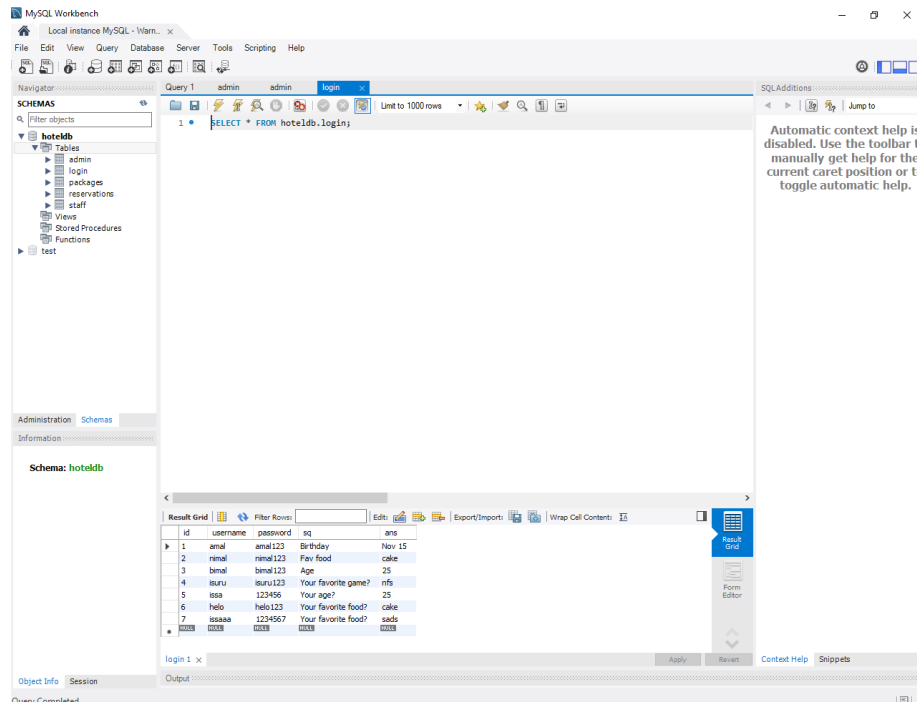


Figure 27 User login table

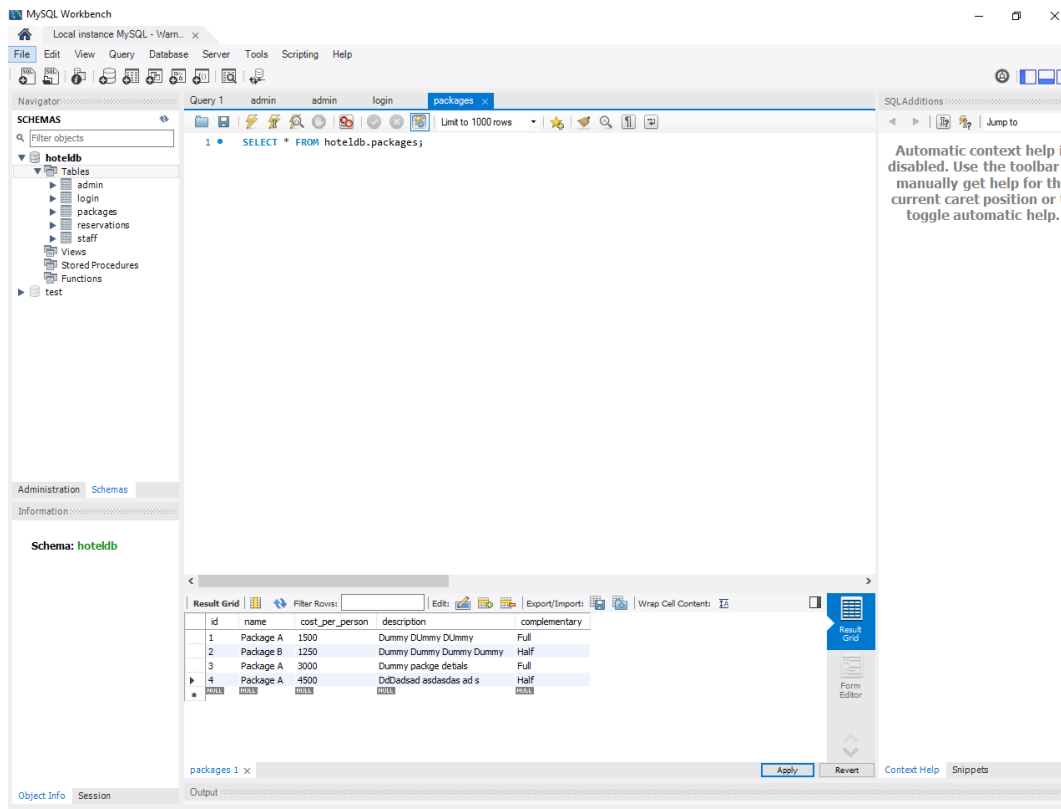


Figure 28 Packages database structure

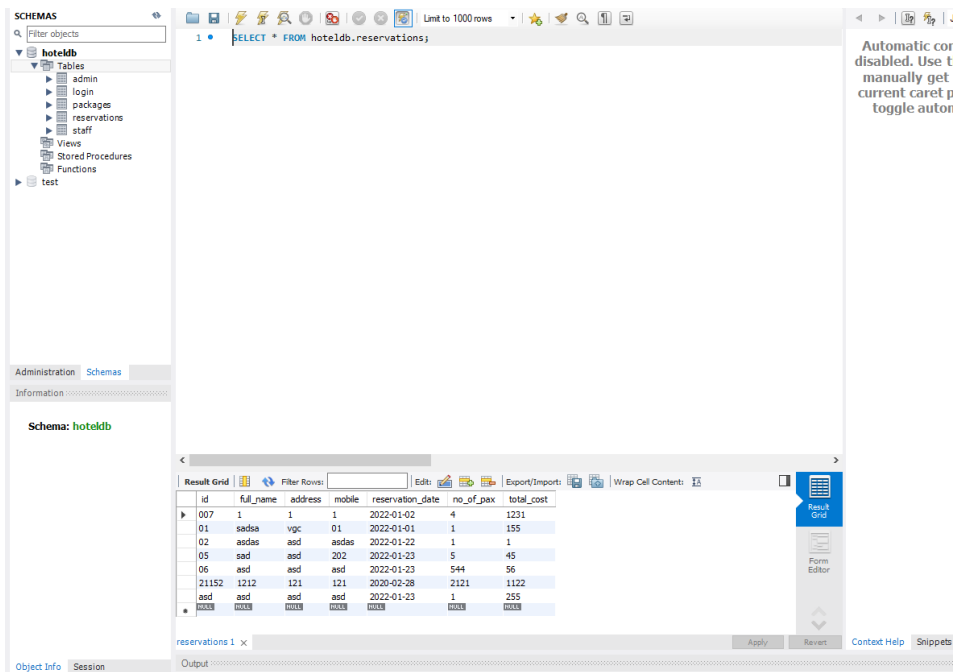


Figure 29 reservations table

MySQL Workbench

Local instance MySQL - Warn... x

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

hoteldb

- Tables
 - admin
 - login
 - packages
 - reservations
 - staff
- Views
- Stored Procedures
- Functions

test

Administration Schemas

Information

Schema: hoteldb

Query 1 admin admin login packages reservations staff x

Limit to 1000 rows

1 • SELECT * FROM hoteldb.staff;

SQLAdditions

Automatic context help disabled. Use the toolbar manually get help for current caret position toggle automatic help

Result Grid

id	name	gender	department	address	contact_number	email_address	salary
1	John Doe	Male	Maintenance	123 Main Street	555-1234	john.doe@example.com	45000.00
2	Jane Smith	Female	Kitchen	456 Oak Avenue	555-5678	jane.smith@example.com	50000.00
3	Bob Johnson	Male	Housekeeping	789 Pine Drive	555-4321	bob.johnson@example.com	35000.00
4	Mary Davis	Female	Banquets	101 Maple Lane	555-8765	mary.davis@example.com	60000.00
6	Isuru	Male	Banquets	Isas	044	sad@gmail.com	60000.00
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL

staff 1 x

Apply Revert Context Help Snippets

Object Info Session

Output

Query Completed

Figure 30 Staff database table