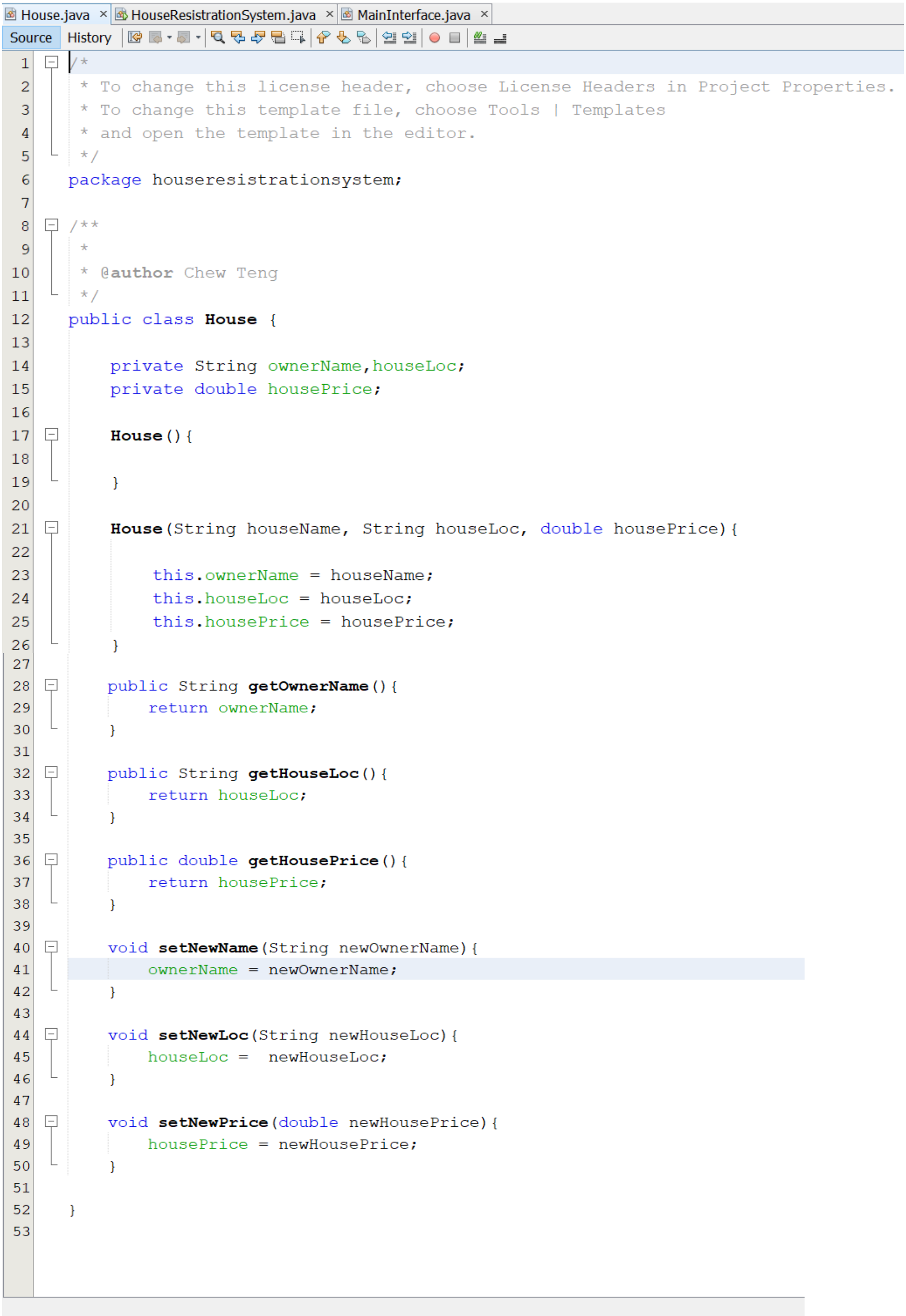
Final Project (Housing Registration System)

H’ng Chew Teng(263117)

Class House UML Diagram

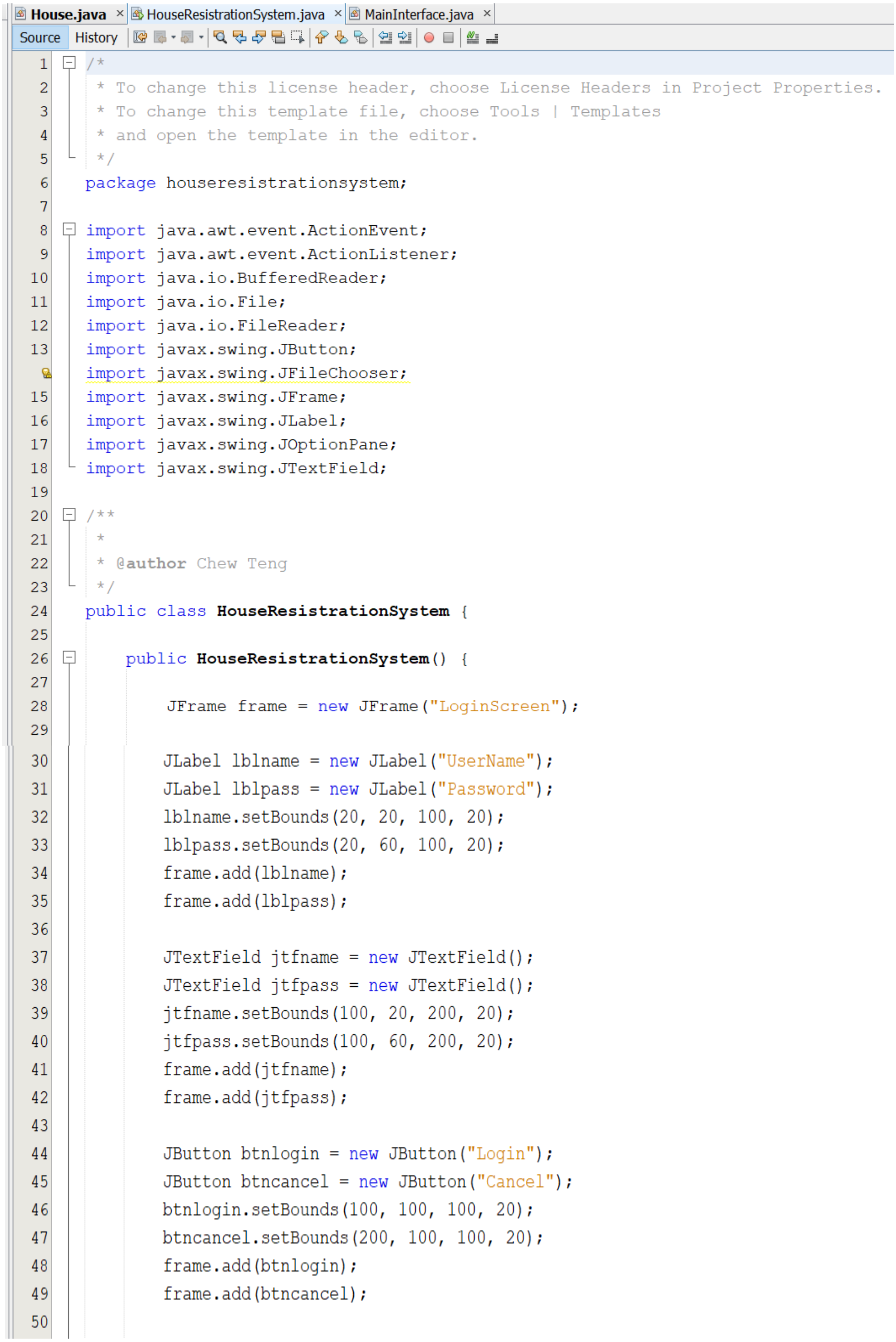
House
- ownerName: String - houseLoc: String - housePrice: double
+House (String houseName, String houseLoc, double housePrice) +getOwnerName() : String +getHouseLoc() : String +getHousePrice(): double +setNewName(String newOwnerName): void +setNewLoc(String newHouseLoc): void +setNewPrice(double newHousePrice): void

a) Class House

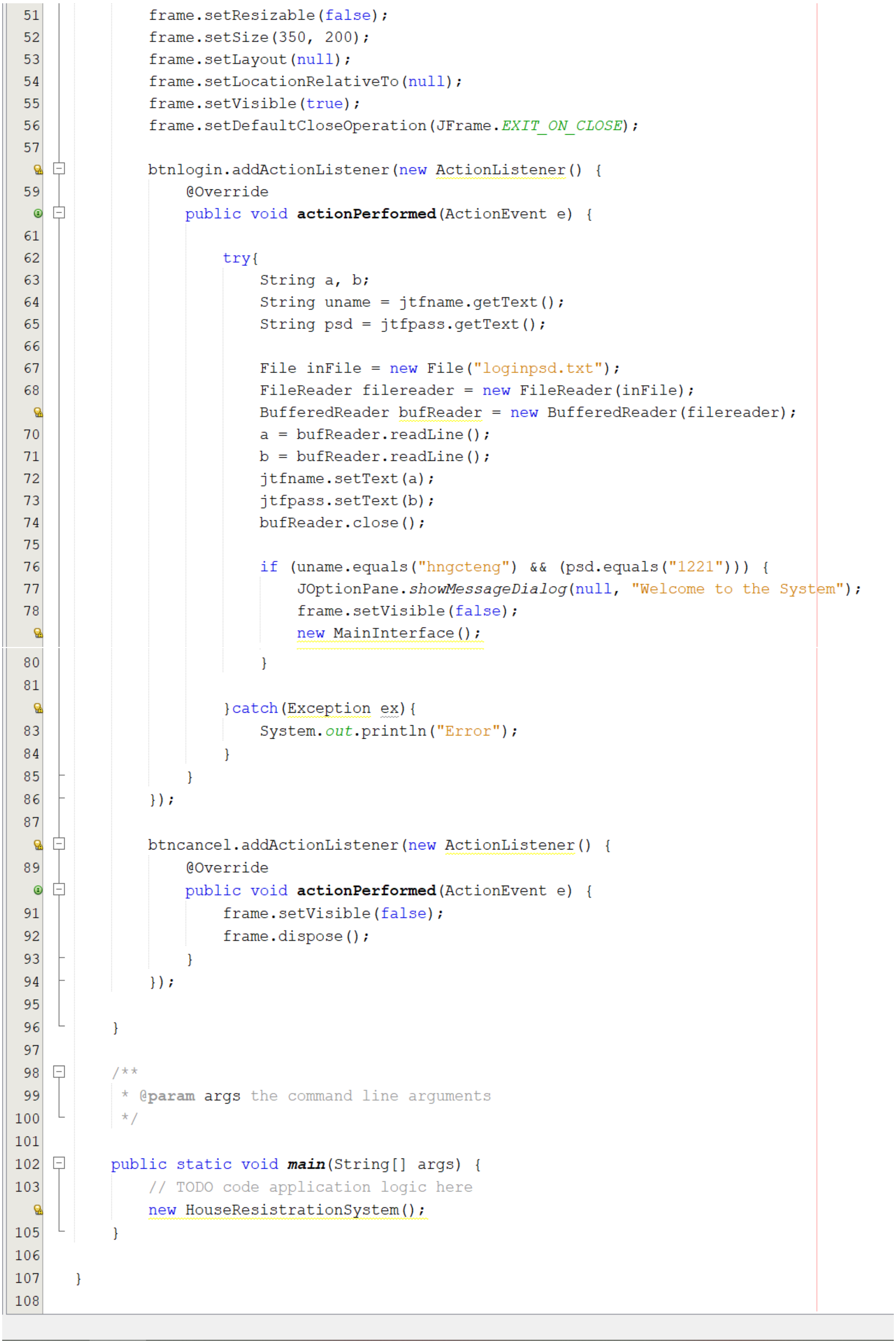


```java
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
package houseresistrationsystem;

/**
 *
 * @author Chew Teng
 */
public class House {

    private String ownerName,houseLoc;
    private double housePrice;

    House(){

    }

    House(String houseName, String houseLoc, double housePrice){

        this.ownerName = houseName;
        this.houseLoc = houseLoc;
        this.housePrice = housePrice;
    }

    public String getOwnerName(){
        return ownerName;
    }

    public String getHouseLoc(){
        return houseLoc;
    }

    public double getHousePrice(){
        return housePrice;
    }

    void setNewName(String newOwnerName){
        ownerName = newOwnerName;
    }

    void setNewLoc(String newHouseLoc){
        houseLoc =  newHouseLoc;
    }

    void setNewPrice(double newHousePrice){
        housePrice = newHousePrice;
    }

}
```

b) Login Screen

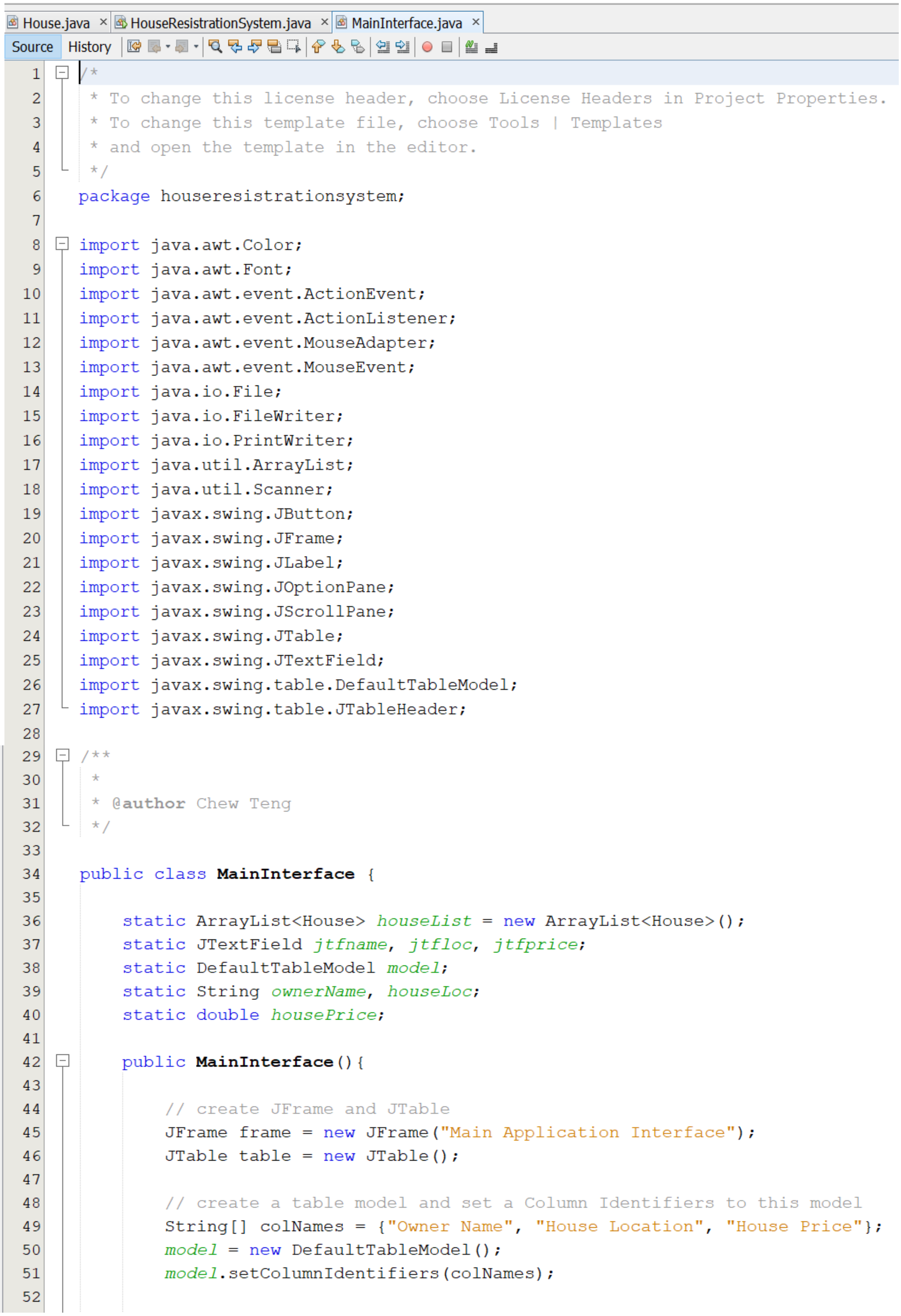


```java
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
package houseresistrationsystem;

import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import java.io.BufferedReader;
import java.io.File;
import java.io.FileReader;
import javax.swing.JButton;
import javax.swing.JFileChooser;
import javax.swing.JFrame;
import javax.swing.JLabel;
import javax.swing.JOptionPane;
import javax.swing.JTextField;

/**
 *
 * @author Chew Teng
 */
public class HouseResistrationSystem {

    public HouseResistrationSystem() {

        JFrame frame = new JFrame("LoginScreen");

        JLabel lblname = new JLabel("UserName");
        JLabel lblpass = new JLabel("Password");
        lblname.setBounds(20, 20, 100, 20);
        lblpass.setBounds(20, 60, 100, 20);
        frame.add(lblname);
        frame.add(lblpass);

        JTextField jtfname = new JTextField();
        JTextField jtfpass = new JTextField();
        jtfname.setBounds(100, 20, 200, 20);
        jtfpass.setBounds(100, 60, 200, 20);
        frame.add(jtfname);
        frame.add(jtfpass);

        JButton btnlogin = new JButton("Login");
        JButton btncancel = new JButton("Cancel");
        btnlogin.setBounds(100, 100, 100, 20);
        btncancel.setBounds(200, 100, 100, 20);
        frame.add(btnlogin);
        frame.add(btncancel);

```

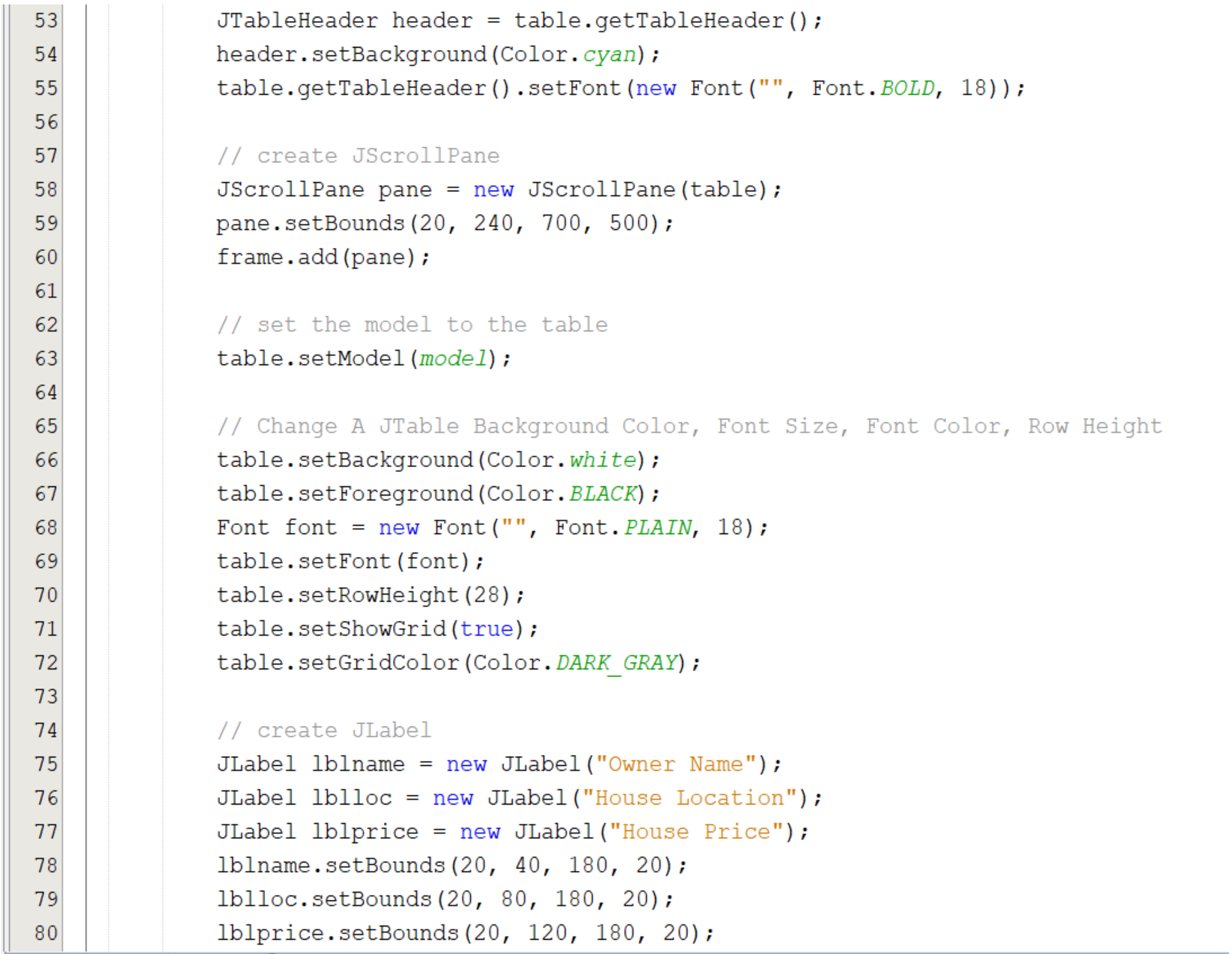


```java
        frame.setResizable(false);
        frame.setSize(350, 200);
        frame.setLayout(null);
        frame.setLocationRelativeTo(null);
        frame.setVisible(true);
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

        btnlogin.addActionListener(new ActionListener() {
            @Override
            public void actionPerformed(ActionEvent e) {

                try{
                    String a, b;
                    String uname = jtfname.getText();
                    String psd = jtfpass.getText();

                    File inFile = new File("loginpsd.txt");
                    FileReader filereader = new FileReader(inFile);
                    BufferedReader bufReader = new BufferedReader(filereader);
                    a = bufReader.readLine();
                    b = bufReader.readLine();
                    jtfname.setText(a);
                    jtfpass.setText(b);
                    bufReader.close();

                    if (uname.equals("hngcteng") && (psd.equals("1221"))) {
                        JOptionPane.showMessageDialog(null, "Welcome to the System");
                        frame.setVisible(false);
                        new MainInterface();
                    }

                }catch(Exception ex){
                    System.out.println("Error");
                }
            }
        });

        btncancel.addActionListener(new ActionListener() {
            @Override
            public void actionPerformed(ActionEvent e) {
                frame.setVisible(false);
                frame.dispose();
            }
        });

    }

    /**
     * @param args the command line arguments
     */

    public static void main(String[] args) {
        // TODO code application logic here
        new HouseResistrationSystem();
    }

}

```

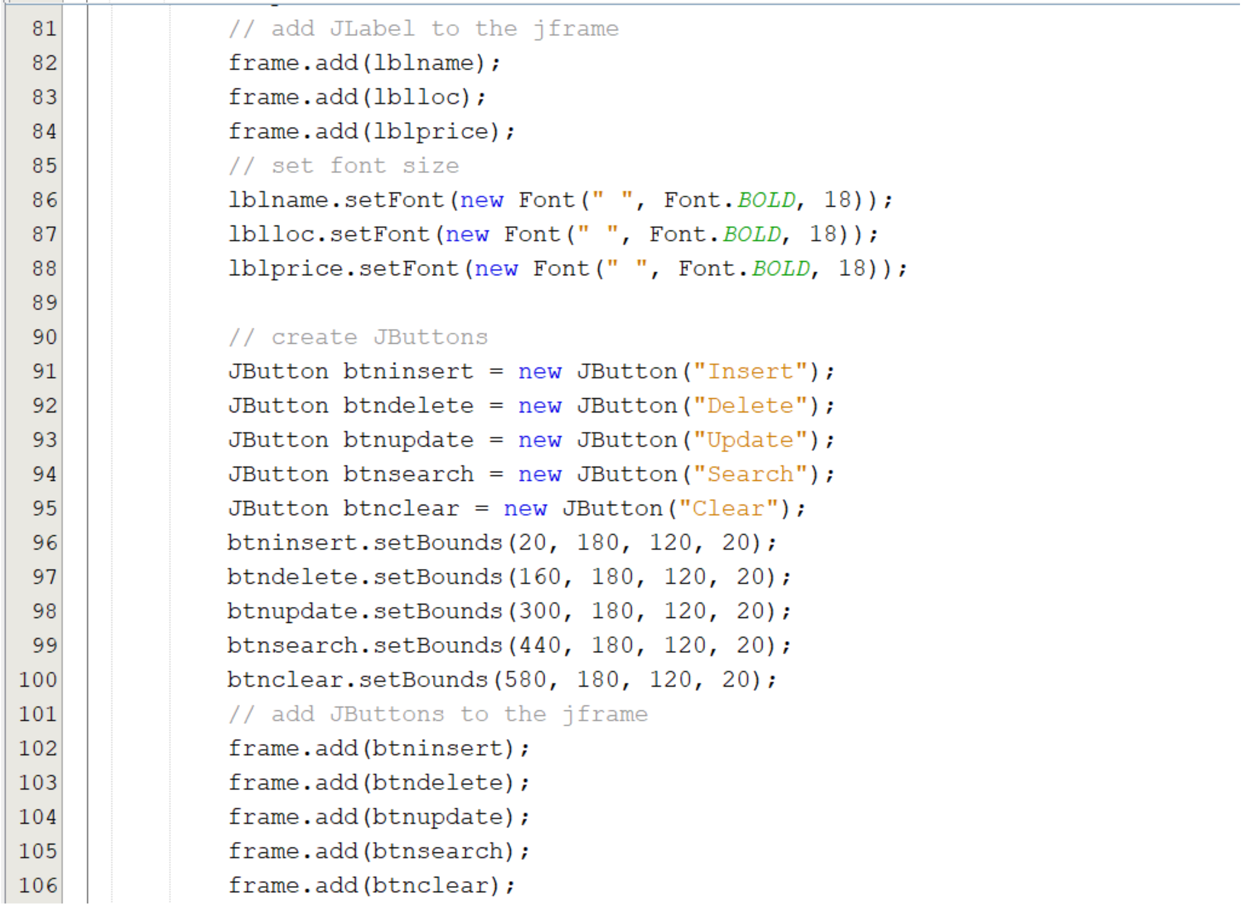
c) MainInterface



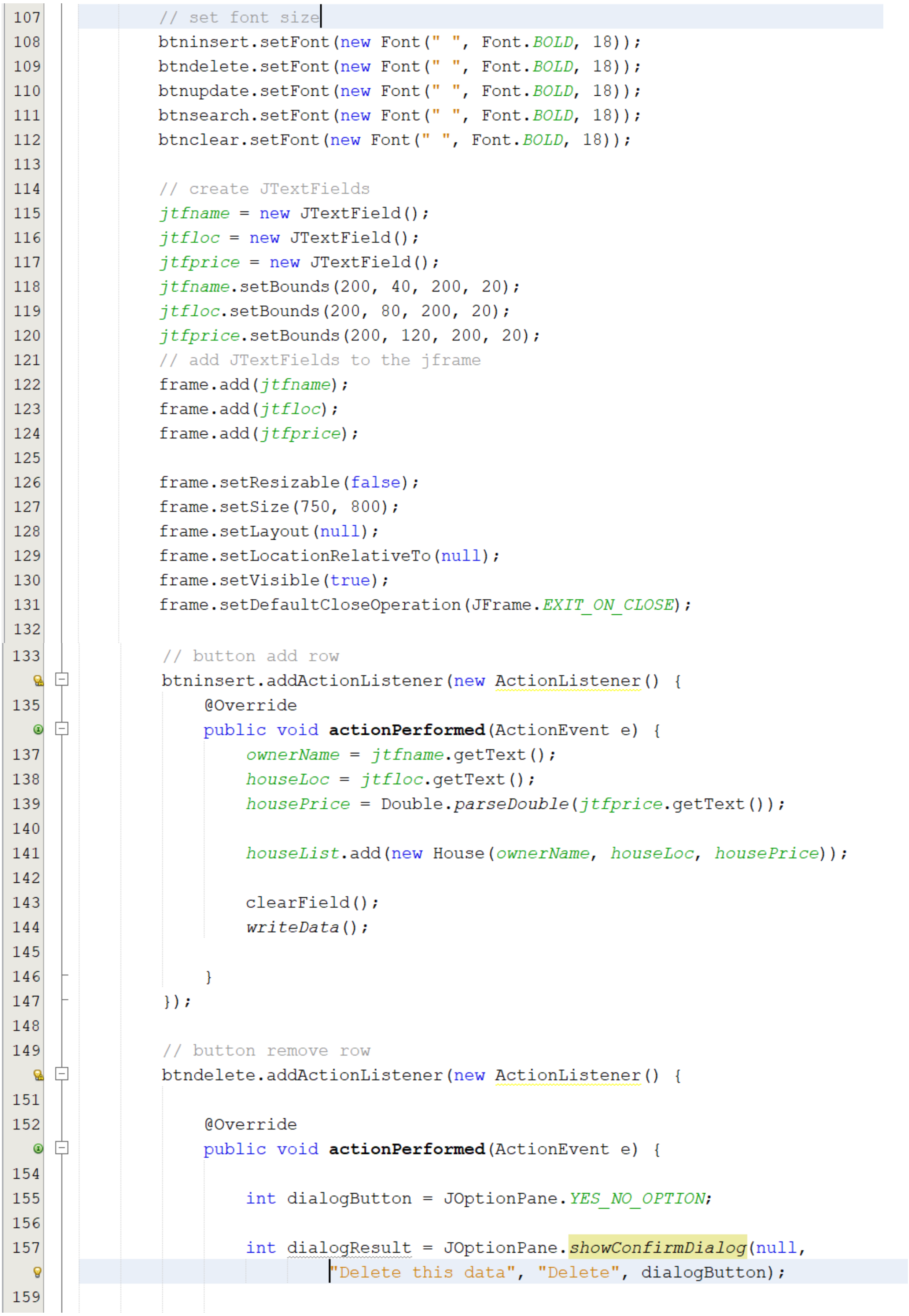
```java
/*
 * To change this license header, choose License Headers in Project Properties.
 * To change this template file, choose Tools | Templates
 * and open the template in the editor.
 */
package houseresistrationsystem;

import java.awt.Color;
import java.awt.Font;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import java.awt.event.MouseAdapter;
import java.awt.event.MouseEvent;
import java.io.File;
import java.io.FileWriter;
import java.io.PrintWriter;
import java.util.ArrayList;
import java.util.Scanner;
import javax.swing.JButton;
import javax.swing.JFrame;
import javax.swing.JLabel;
import javax.swing.JOptionPane;
import javax.swing.JScrollPane;
import javax.swing.JTable;
import javax.swing.JTextField;
import javax.swing.table.DefaultTableModel;
import javax.swing.table.JTableHeader;

/**
 *
 * @author Chew Teng
 */

public class MainInterface {

    static ArrayList<House> houseList = new ArrayList<House>();
    static JTextField jtfname, jtfloc, jtfprice;
    static DefaultTableModel model;
    static String ownerName, houseLoc;
    static double housePrice;

    public MainInterface(){

        // create JFrame and JTable
        JFrame frame = new JFrame("Main Application Interface");
        JTable table = new JTable();

        // create a table model and set a Column Identifiers to this model
        String[] colNames = {"Owner Name", "House Location", "House Price"};
        model = new DefaultTableModel();
        model.setColumnIdentifiers(colNames);

```



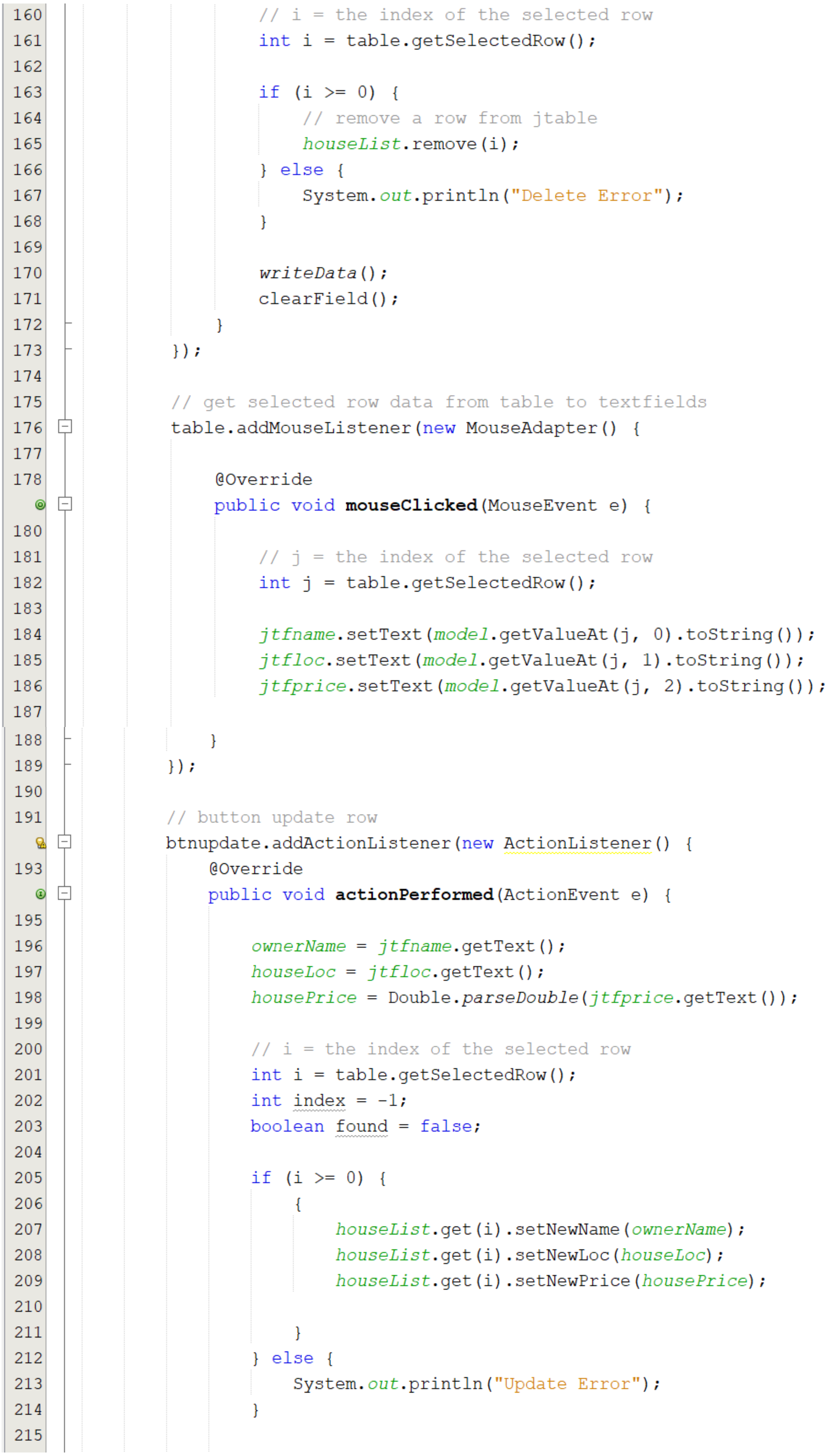
```
        JTableHeader header = table.getTableHeader();
        header.setBackground(Color.cyan);
        table.getTableHeader().setFont(new Font("", Font.BOLD, 18));

        // create JScrollPane
        JScrollPane pane = new JScrollPane(table);
        pane.setBounds(20, 240, 700, 500);
        frame.add(pane);

        // set the model to the table
        table.setModel(model);

        // Change A JTable Background Color, Font Size, Font Color, Row Height
        table.setBackground(Color.white);
        table.setForeground(Color.BLACK);
        Font font = new Font("", Font.PLAIN, 18);
        table.setFont(font);
        table.setRowHeight(28);
        table.setShowGrid(true);
        table.setGridColor(Color.DARK_GRAY);

        // create JLabel
        JLabel lblname = new JLabel("Owner Name");
        JLabel lblloc = new JLabel("House Location");
        JLabel lblprice = new JLabel("House Price");
        lblname.setBounds(20, 40, 180, 20);
        lblloc.setBounds(20, 80, 180, 20);
        lblprice.setBounds(20, 120, 180, 20);
```



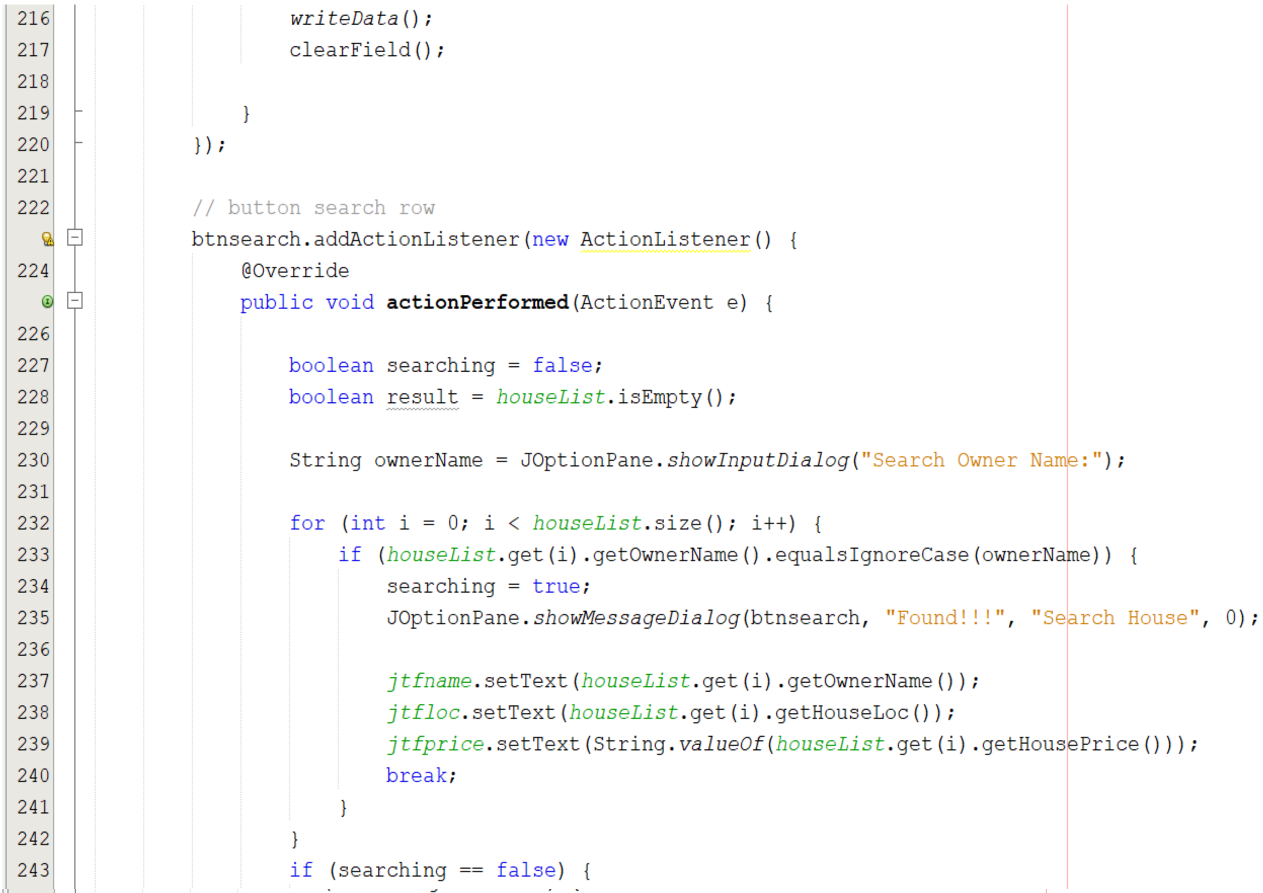
```
        // add JLabel to the jframe
        frame.add(lblname);
        frame.add(lblloc);
        frame.add(lblprice);
        // set font size
        lblname.setFont(new Font(" ", Font.BOLD, 18));
        lblloc.setFont(new Font(" ", Font.BOLD, 18));
        lblprice.setFont(new Font(" ", Font.BOLD, 18));

        // create JButtons
        JButton btninsert = new JButton("Insert");
        JButton btndelete = new JButton("Delete");
        JButton btnupdate = new JButton("Update");
        JButton btnsearch = new JButton("Search");
        JButton btnclear = new JButton("Clear");
        btninsert.setBounds(20, 180, 120, 20);
        btndelete.setBounds(160, 180, 120, 20);
        btnupdate.setBounds(300, 180, 120, 20);
        btnsearch.setBounds(440, 180, 120, 20);
        btnclear.setBounds(580, 180, 120, 20);
        // add JButtons to the jframe
        frame.add(btninsert);
        frame.add(btndelete);
        frame.add(btnupdate);
        frame.add(btnsearch);
        frame.add(btnclear);
```



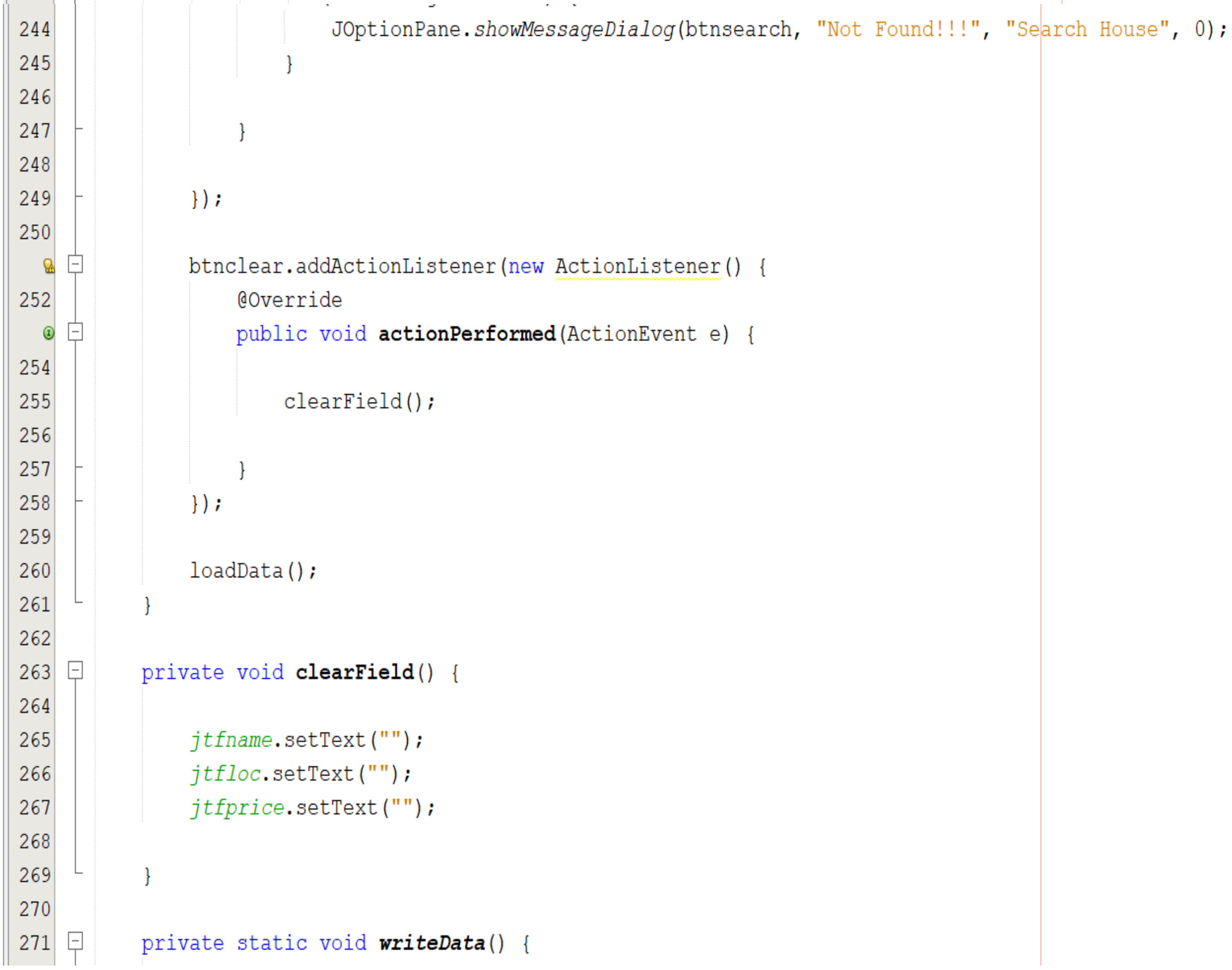
```java
        // set font size
        btninsert.setFont(new Font(" ", Font.BOLD, 18));
        btndelete.setFont(new Font(" ", Font.BOLD, 18));
        btnupdate.setFont(new Font(" ", Font.BOLD, 18));
        btnsearch.setFont(new Font(" ", Font.BOLD, 18));
        btnclear.setFont(new Font(" ", Font.BOLD, 18));

        // create JTextFields
        jtfname = new JTextField();
        jtfloc = new JTextField();
        jtfprice = new JTextField();
        jtfname.setBounds(200, 40, 200, 20);
        jtfloc.setBounds(200, 80, 200, 20);
        jtfprice.setBounds(200, 120, 200, 20);
        // add JTextFields to the jframe
        frame.add(jtfname);
        frame.add(jtfloc);
        frame.add(jtfprice);

        frame.setResizable(false);
        frame.setSize(750, 800);
        frame.setLayout(null);
        frame.setLocationRelativeTo(null);
        frame.setVisible(true);
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

        // button add row
        btninsert.addActionListener(new ActionListener() {
            @Override
            public void actionPerformed(ActionEvent e) {
                ownerName = jtfname.getText();
                houseLoc = jtfloc.getText();
                housePrice = Double.parseDouble(jtfprice.getText());

                houseList.add(new House(ownerName, houseLoc, housePrice));

                clearField();
                writeData();

            }
        });

        // button remove row
        btndelete.addActionListener(new ActionListener() {

            @Override
            public void actionPerformed(ActionEvent e) {

                int dialogButton = JOptionPane.YES_NO_OPTION;

                int dialogResult = JOptionPane.showConfirmDialog(null,
                        "Delete this data", "Delete", dialogButton);

```



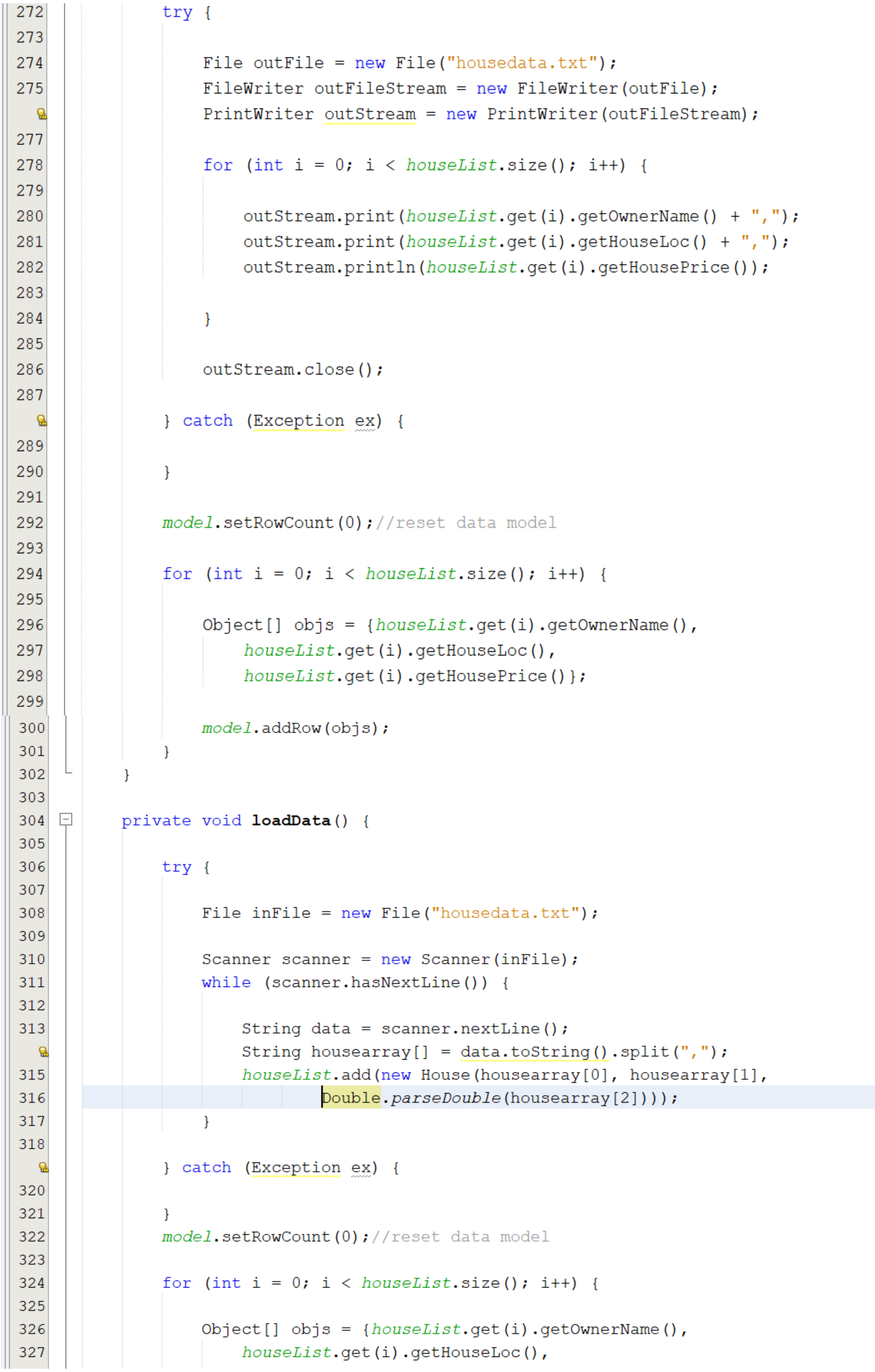
```java
                // i = the index of the selected row
                int i = table.getSelectedRow();

                if (i >= 0) {
                    // remove a row from jtable
                    houseList.remove(i);
                } else {
                    System.out.println("Delete Error");
                }

                writeData();
                clearField();
            }
        });

        // get selected row data from table to textfields
        table.addMouseListener(new MouseAdapter() {

            @Override
            public void mouseClicked(MouseEvent e) {

                // j = the index of the selected row
                int j = table.getSelectedRow();

                jtfname.setText(model.getValueAt(j, 0).toString());
                jtfloc.setText(model.getValueAt(j, 1).toString());
                jtfprice.setText(model.getValueAt(j, 2).toString());

            }
        });

        // button update row
        btnupdate.addActionListener(new ActionListener() {
            @Override
            public void actionPerformed(ActionEvent e) {

                ownerName = jtfname.getText();
                houseLoc = jtfloc.getText();
                housePrice = Double.parseDouble(jtfprice.getText());

                // i = the index of the selected row
                int i = table.getSelectedRow();
                int index = -1;
                boolean found = false;

                if (i >= 0) {
                    {
                        houseList.get(i).setNewName(ownerName);
                        houseList.get(i).setNewLoc(houseLoc);
                        houseList.get(i).setNewPrice(housePrice);

                    }
                } else {
                    System.out.println("Update Error");
                }

```



```java
            writeData();
            clearField();

        }
    });

    // button search row
    btnsearch.addActionListener(new ActionListener() {
        @Override
        public void actionPerformed(ActionEvent e) {

            boolean searching = false;
            boolean result = houseList.isEmpty();

            String ownerName = JOptionPane.showInputDialog("Search Owner Name:");

            for (int i = 0; i < houseList.size(); i++) {
                if (houseList.get(i).getOwnerName().equalsIgnoreCase(ownerName)) {
                    searching = true;
                    JOptionPane.showMessageDialog(btnsearch, "Found!!!", "Search House", 0);

                    jtfname.setText(houseList.get(i).getOwnerName());
                    jtfloc.setText(houseList.get(i).getHouseLoc());
                    jtfprice.setText(String.valueOf(houseList.get(i).getHousePrice()));
                    break;
                }
            }
            if (searching == false) {
```



```java
                JOptionPane.showMessageDialog(btnsearch, "Not Found!!!", "Search House", 0);
            }

        }

    });

    btnclear.addActionListener(new ActionListener() {
        @Override
        public void actionPerformed(ActionEvent e) {

            clearField();

        }
    });

    loadData();
}

private void clearField() {

    jtfname.setText("");
    jtfloc.setText("");
    jtfprice.setText("");

}

private static void writeData() {
```

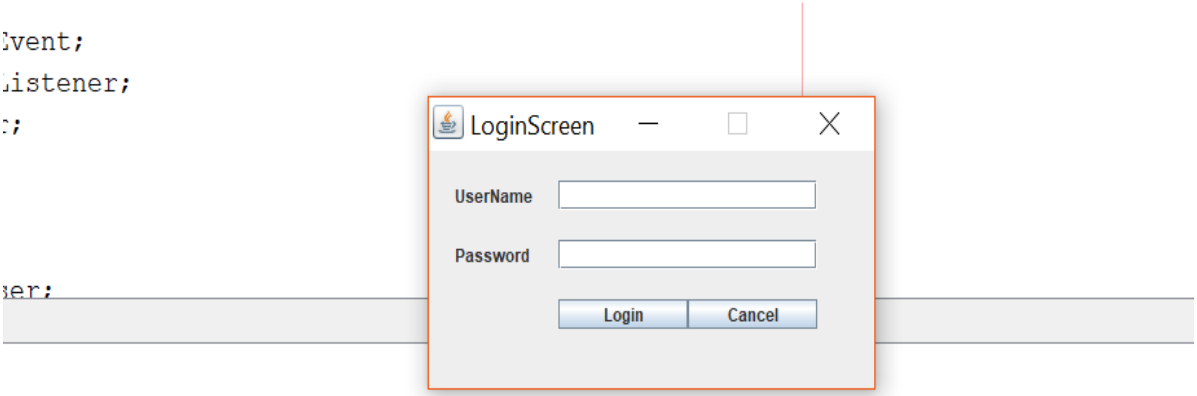


```
        try {

            File outFile = new File("housedata.txt");
            FileWriter outFileStream = new FileWriter(outFile);
            PrintWriter outStream = new PrintWriter(outFileStream);

            for (int i = 0; i < houseList.size(); i++) {

                outStream.print(houseList.get(i).getOwnerName() + ",");
                outStream.print(houseList.get(i).getHouseLoc() + ",");
                outStream.println(houseList.get(i).getHousePrice());

            }

            outStream.close();

        } catch (Exception ex) {

        }

        model.setRowCount(0);//reset data model

        for (int i = 0; i < houseList.size(); i++) {

            Object[] objs = {houseList.get(i).getOwnerName(),
                houseList.get(i).getHouseLoc(),
                houseList.get(i).getHousePrice()};

            model.addRow(objs);
        }
    }

    private void loadData() {

        try {

            File inFile = new File("housedata.txt");

            Scanner scanner = new Scanner(inFile);
            while (scanner.hasNextLine()) {

                String data = scanner.nextLine();
                String housearray[] = data.toString().split(",");
                houseList.add(new House(housearray[0], housearray[1],
                        Double.parseDouble(housearray[2])));
            }

        } catch (Exception ex) {

        }
        model.setRowCount(0);//reset data model

        for (int i = 0; i < houseList.size(); i++) {

            Object[] objs = {houseList.get(i).getOwnerName(),
                houseList.get(i).getHouseLoc(),
```

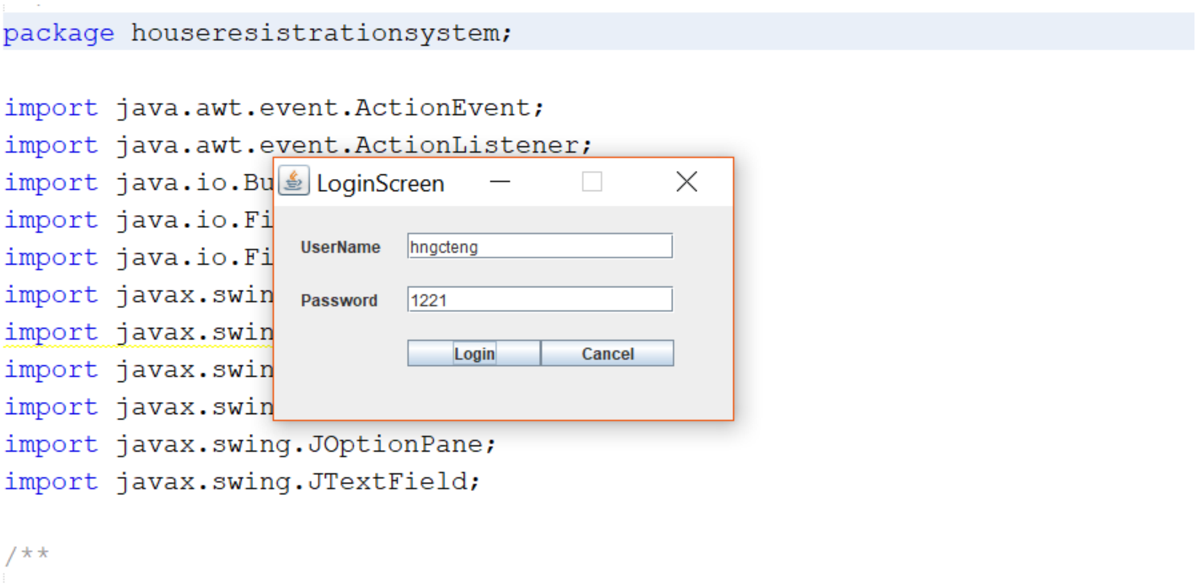
```
                houseList.get(i).getHousePrice()};

            model.addRow(objs);
        }

    }
}
```

Output

I. Login Screen



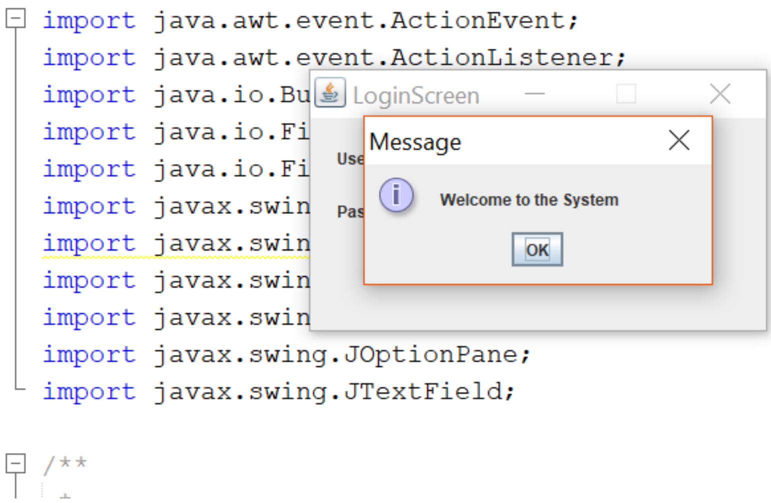
```
:vent;
.istener;
:;

ser;
```



```
package houseresistrationsystem;

import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import java.io.Bu
import java.io.Fi
import java.io.Fi
import javax.swin
import javax.swin
import javax.swin
import javax.swin
import javax.swing.JOptionPane;
import javax.swing.JTextField;

/**
```

UserName hngcteng

Password 1221

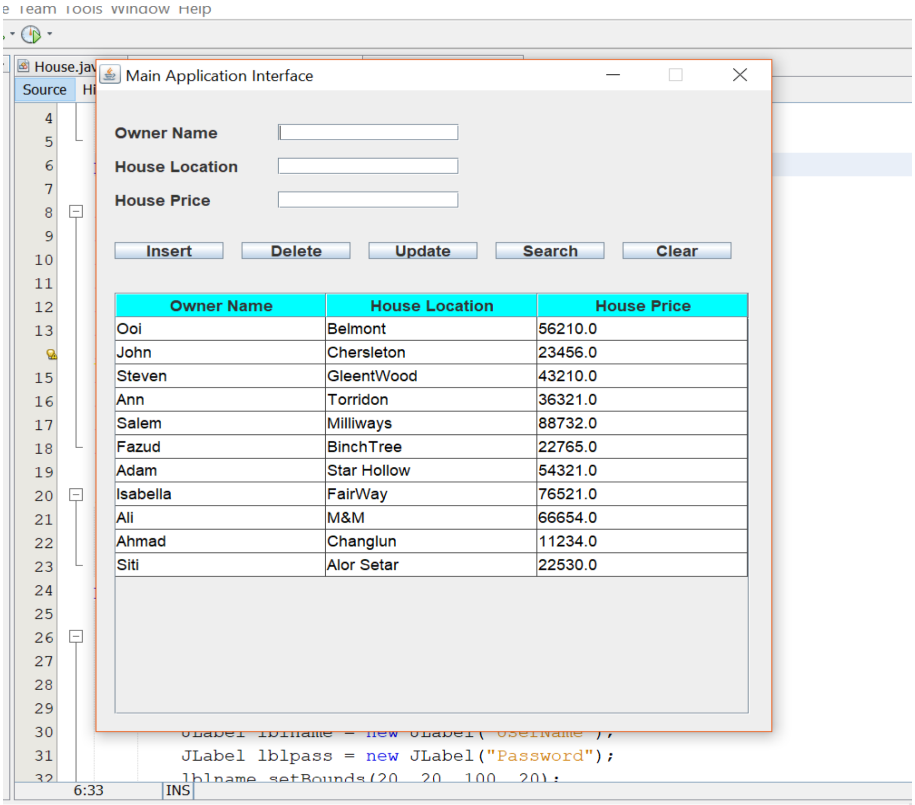


```
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import java.io.Bu
import java.io.Fi
import java.io.Fi
import javax.swin
import javax.swin
import javax.swin
import javax.swin
import javax.swing.JOptionPane;
import javax.swing.JTextField;

/**
```

Message

Welcome to the System

II. Main Application Interface



Owner Name

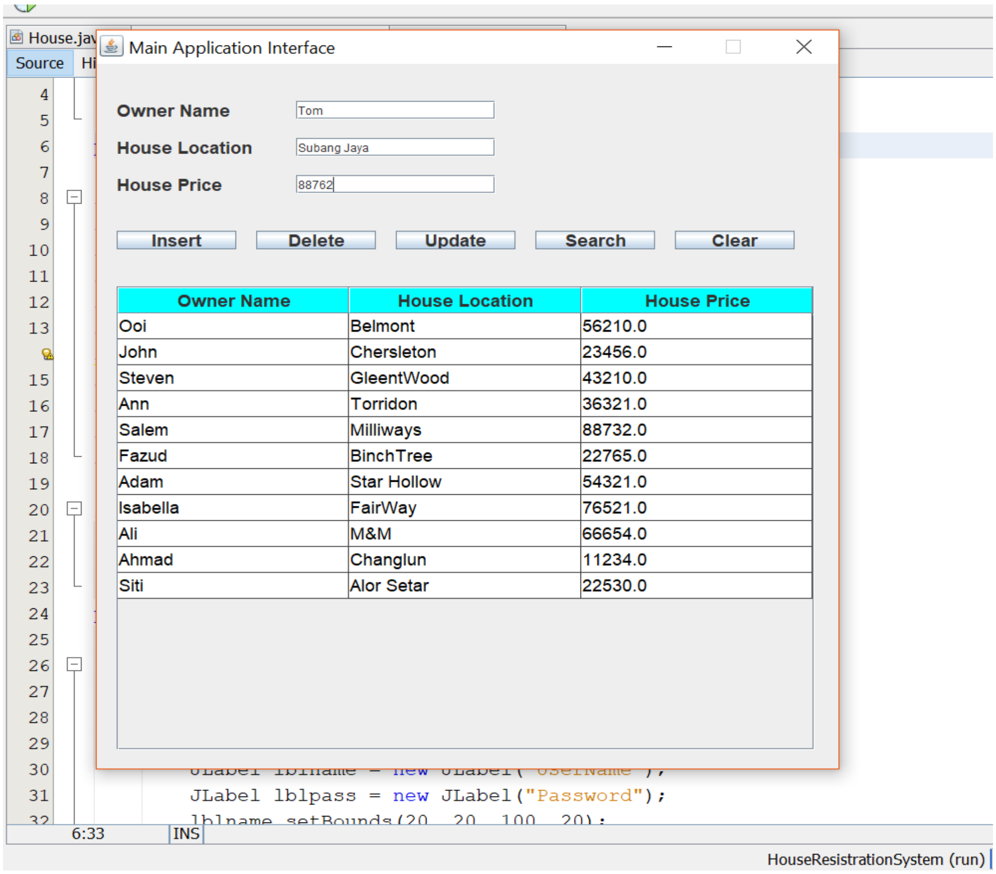
House Location

House Price

Owner Name	House Location	House Price
Ooi	Belmont	56210.0
John	Chersleton	23456.0
Steven	GleentWood	43210.0
Ann	Torridon	36321.0
Salem	Milliways	88732.0
Fazud	BinchTree	22765.0
Adam	Star Hollow	54321.0
Isabella	FairWay	76521.0
Ali	M&M	66654.0
Ahmad	Changlun	11234.0
Siti	Alor Setar	22530.0

```
JLabel lblpass = new JLabel("Password");
```

a. Insert new data (Tom, Subang Jaya, 88762)



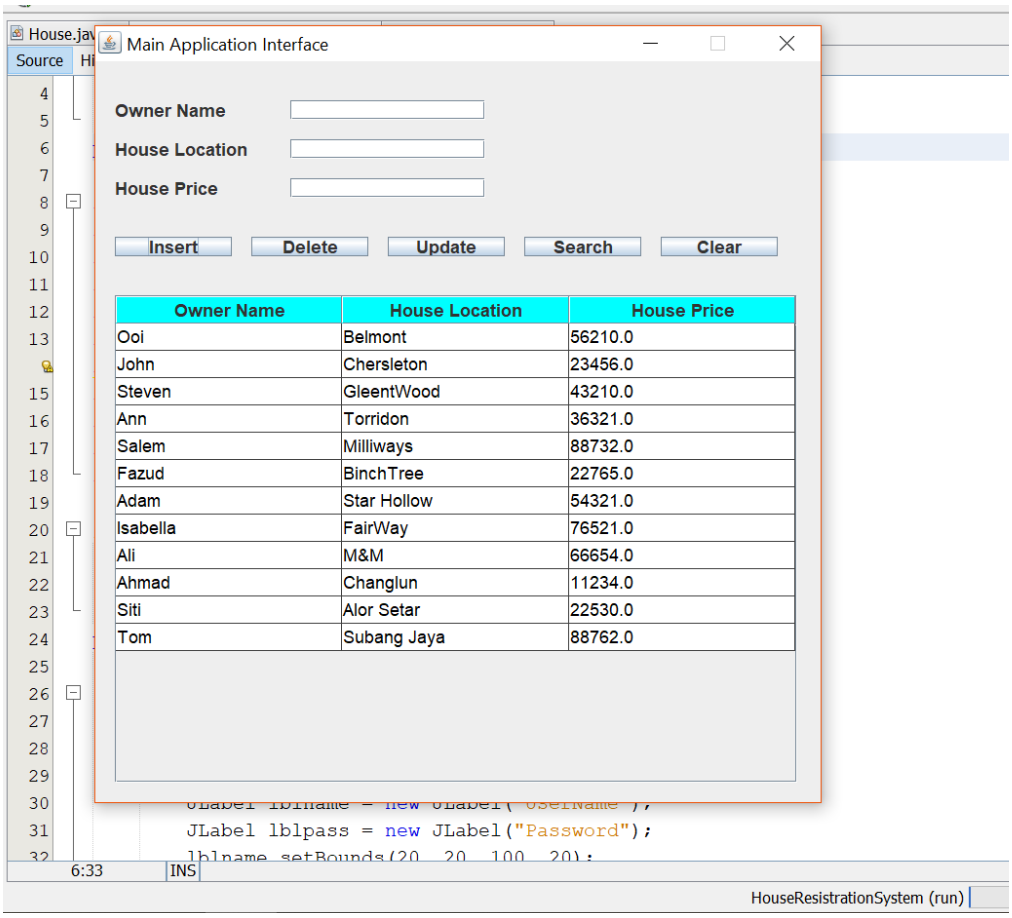
Owner Name: Tom

House Location: Subang Jaya

House Price: 88762

Owner Name	House Location	House Price
Ooi	Belmont	56210.0
John	Chersleton	23456.0
Steven	GleentWood	43210.0
Ann	Torridon	36321.0
Salem	Milliways	88732.0
Fazud	BinchTree	22765.0
Adam	Star Hollow	54321.0
Isabella	FairWay	76521.0
Ali	M&M	66654.0
Ahmad	Changlun	11234.0
Siti	Alor Setar	22530.0

```
JLabel lblpass = new JLabel("Password");
```



Owner Name

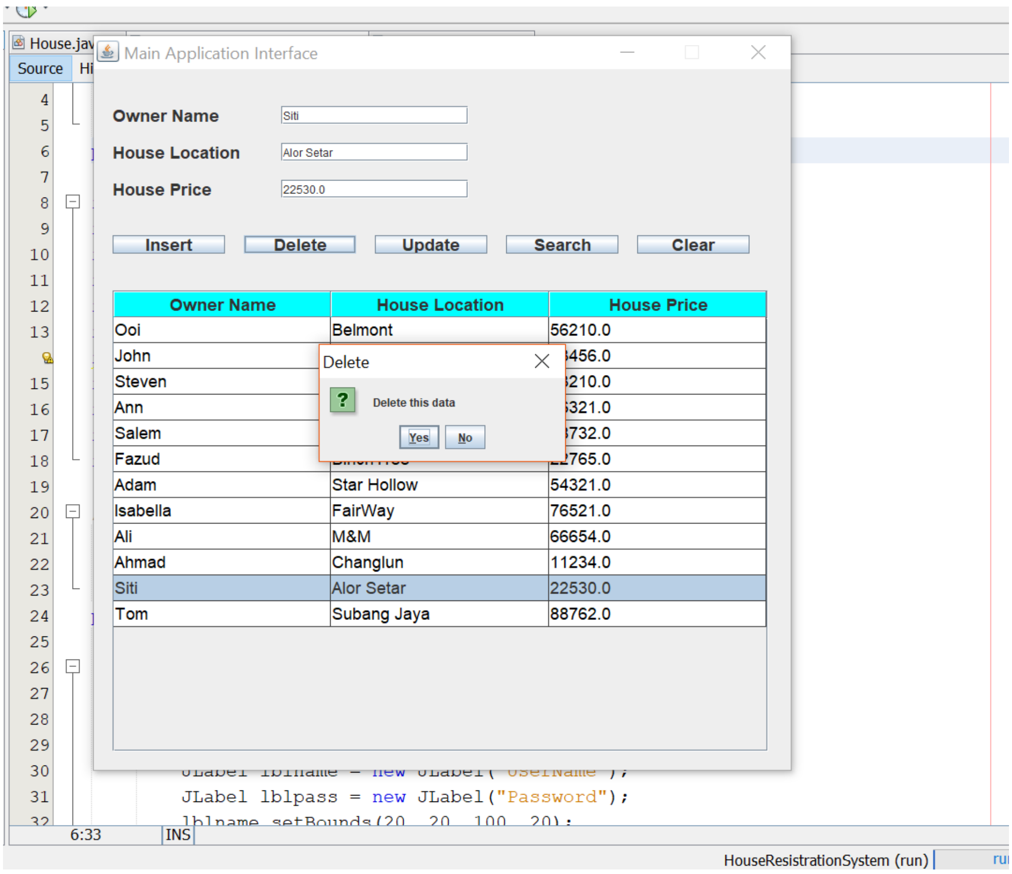
House Location

House Price

Owner Name	House Location	House Price
Ooi	Belmont	56210.0
John	Chersleton	23456.0
Steven	GleentWood	43210.0
Ann	Torridon	36321.0
Salem	Milliways	88732.0
Fazud	BinchTree	22765.0
Adam	Star Hollow	54321.0
Isabella	FairWay	76521.0
Ali	M&M	66654.0
Ahmad	Changlun	11234.0
Siti	Alor Setar	22530.0
Tom	Subang Jaya	88762.0

```
JLabel lblname = new JLabel("UserName");
JLabel lblpass = new JLabel("Password");
lblname.setBounds(20, 20, 100, 20);
```

b. Delete data (Siti, Alor Setar, 22530)



Owner Name Siti

House Location Alor Setar

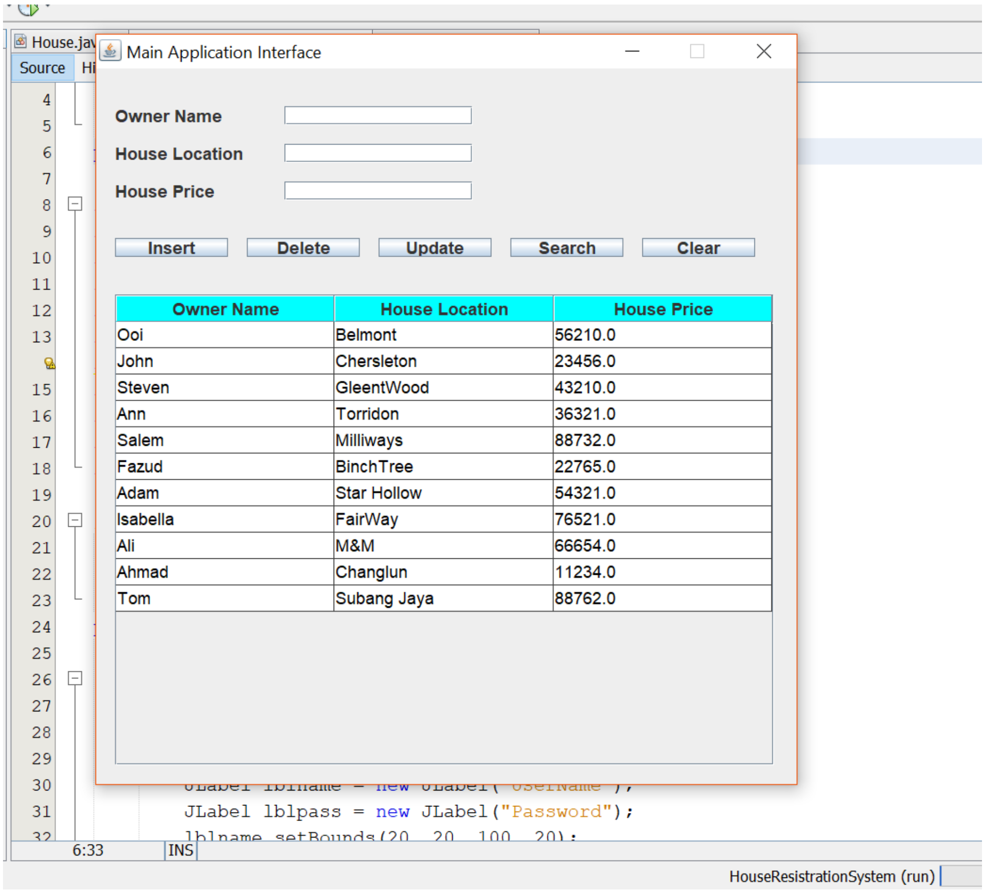
House Price 22530.0

Owner Name	House Location	House Price
Ooi	Belmont	56210.0
John		456.0
Steven		210.0
Ann		321.0
Salem		732.0
Fazud		765.0
Adam	Star Hollow	54321.0
Isabella	FairWay	76521.0
Ali	M&M	66654.0
Ahmad	Changlun	11234.0
Siti	Alor Setar	22530.0
Tom	Subang Jaya	88762.0

Delete

Delete this data

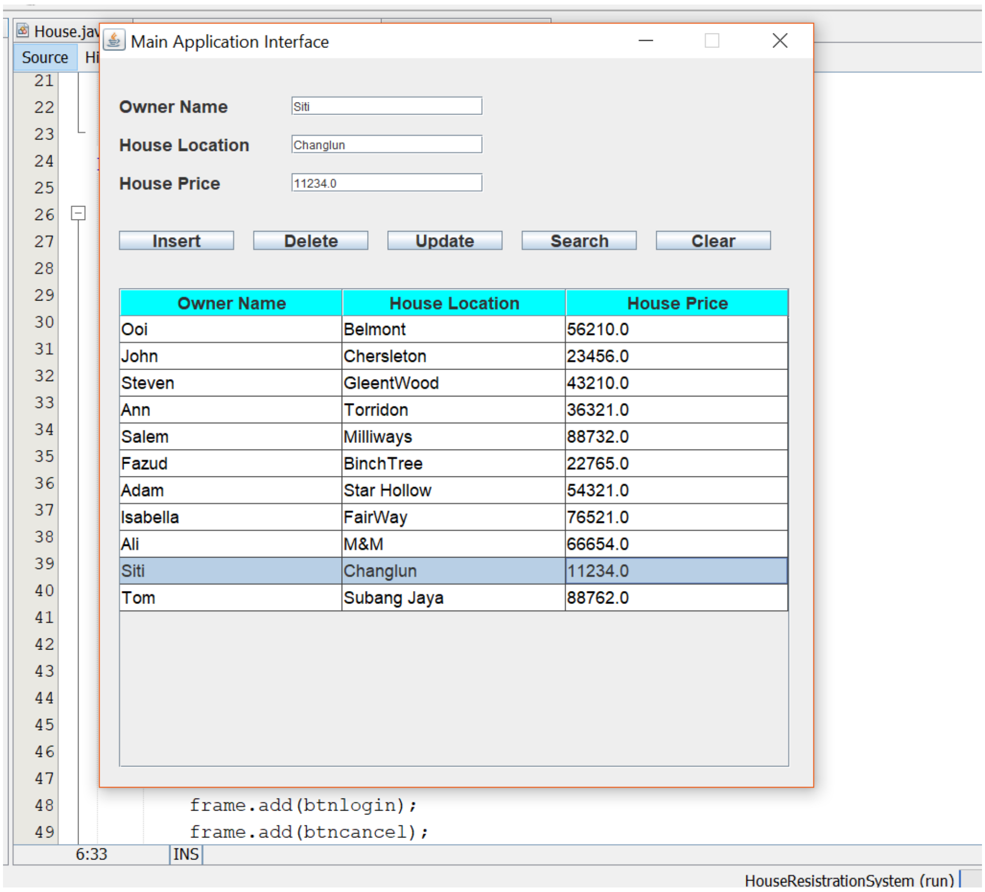
```
JLabel lblname = new JLabel("UserName");
JLabel lblpass = new JLabel("Password");
lblname.setBounds(20, 20, 100, 20);
```



Owner Name	House Location	House Price
Ooi	Belmont	56210.0
John	Chersleton	23456.0
Steven	GleentWood	43210.0
Ann	Torridon	36321.0
Salem	Milliways	88732.0
Fazud	BinchTree	22765.0
Adam	Star Hollow	54321.0
Isabella	FairWay	76521.0
Ali	M&M	66654.0
Ahmad	Changlun	11234.0
Tom	Subang Jaya	88762.0

```
        JLabel lblname = new JLabel("UserName");
        JLabel lblpass = new JLabel("Password");
        lblname.setBounds(20, 20, 100, 20);
```

c. Update owner name from Ahmad to Siti



Owner Name: Siti

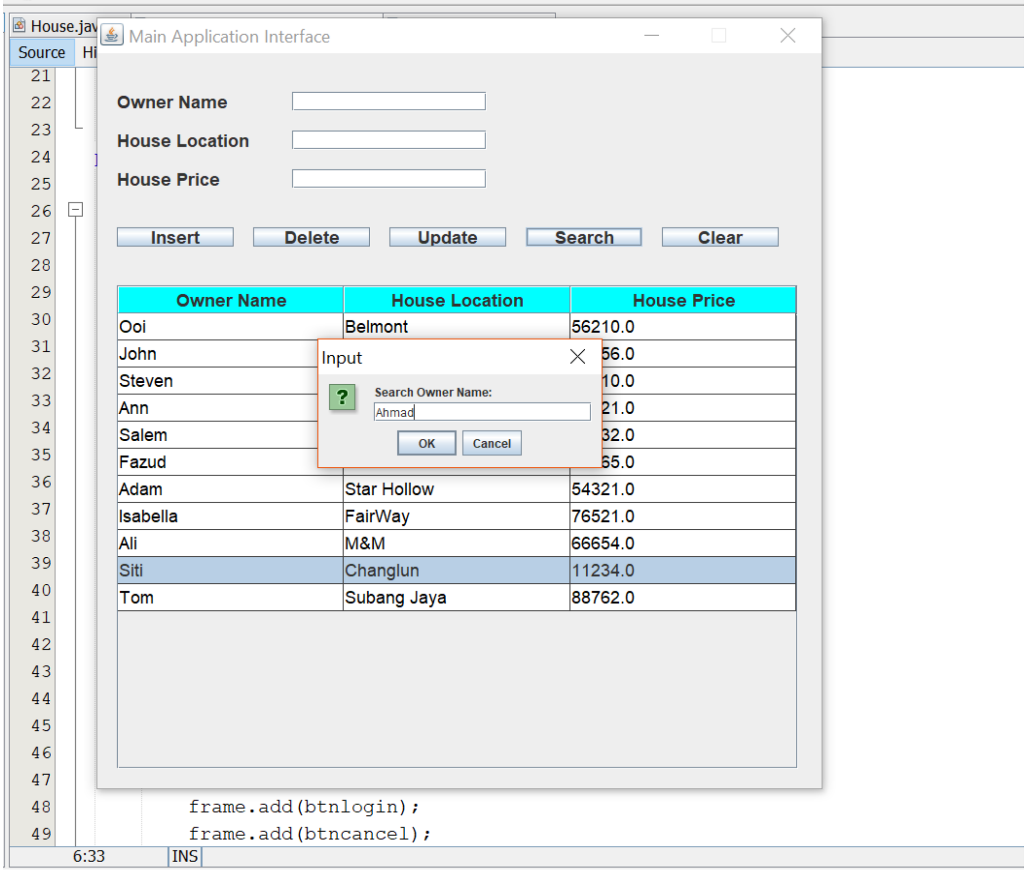
House Location: Changlun

House Price: 11234.0

Owner Name	House Location	House Price
Ooi	Belmont	56210.0
John	Chersleton	23456.0
Steven	GleentWood	43210.0
Ann	Torridon	36321.0
Salem	Milliways	88732.0
Fazud	BinchTree	22765.0
Adam	Star Hollow	54321.0
Isabella	FairWay	76521.0
Ali	M&M	66654.0
Siti	Changlun	11234.0
Tom	Subang Jaya	88762.0

```
        frame.add(btnlogin);
        frame.add(btncancel);
```

d. i) Search owner name Ahmad



Owner Name

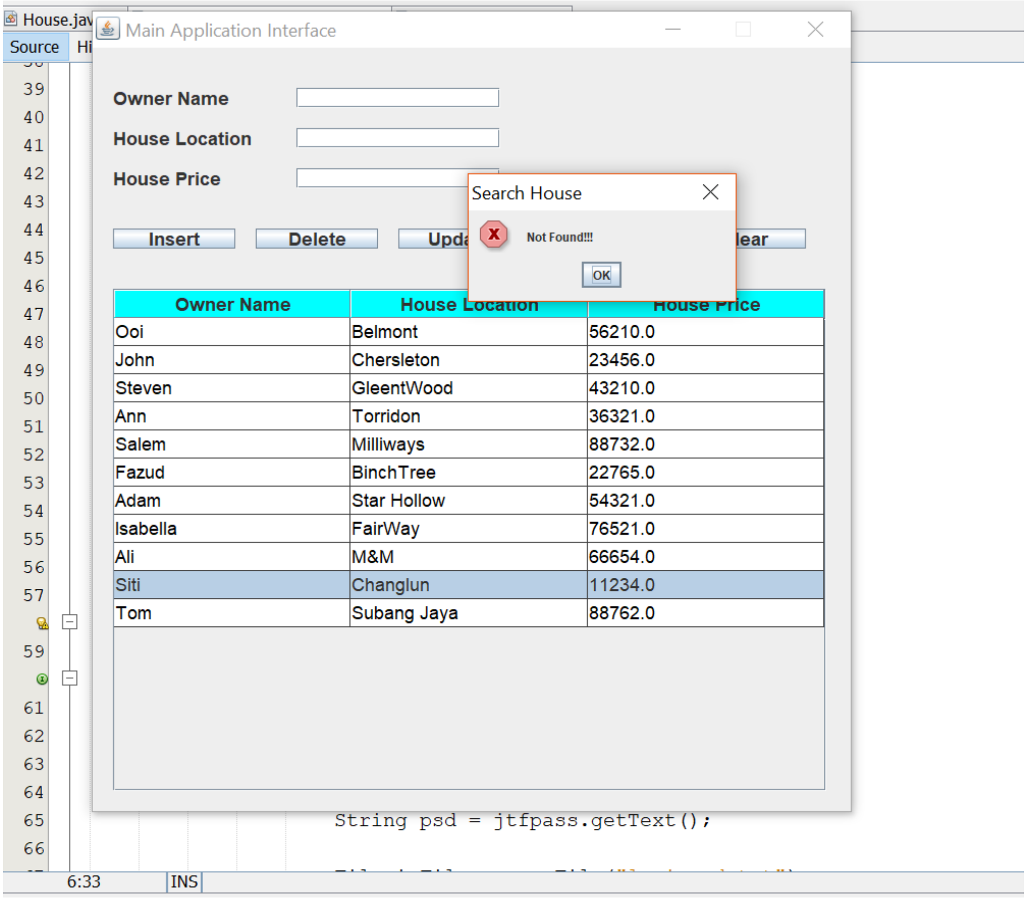
House Location

House Price

Owner Name	House Location	House Price
Ooi	Belmont	56210.0
John		56.0
Steven		10.0
Ann		21.0
Salem		32.0
Fazud		55.0
Adam	Star Hollow	54321.0
Isabella	FairWay	76521.0
Ali	M&M	66654.0
Siti	Changlun	11234.0
Tom	Subang Jaya	88762.0

Search Owner Name:
Ahmad

```
        frame.add(btnlogin);
        frame.add(btncancel);
```



Owner Name

House Location

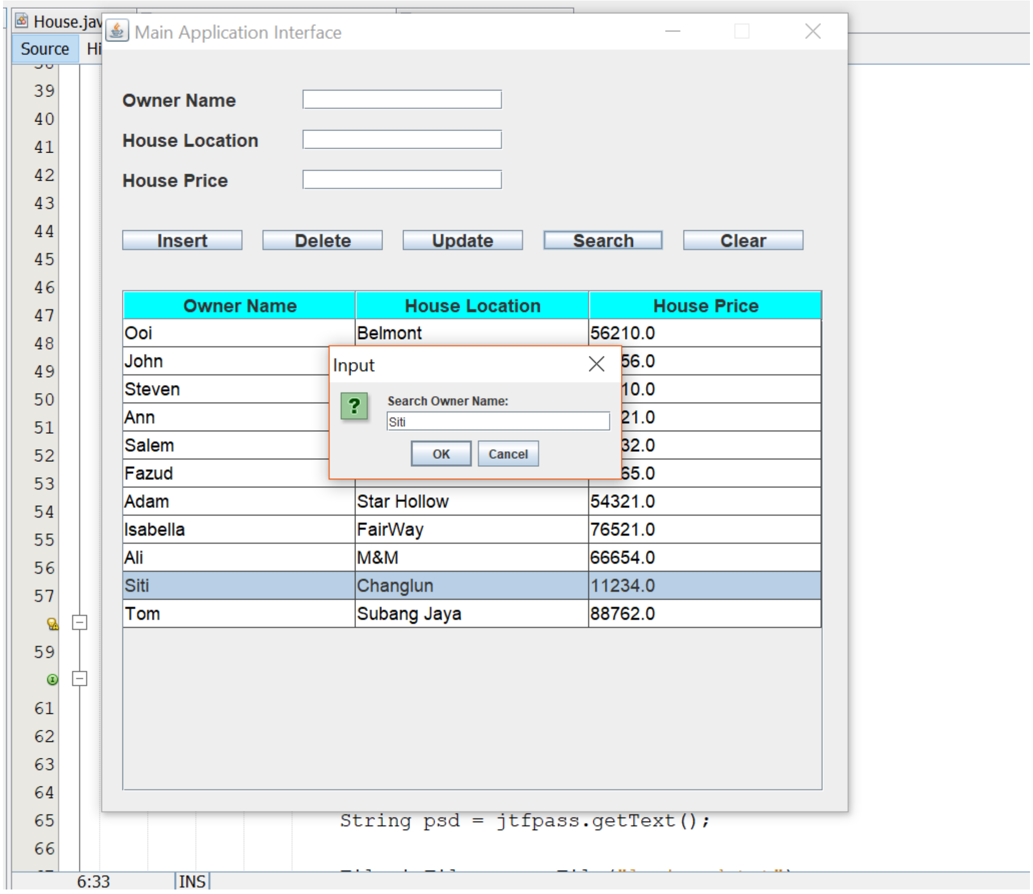
House Price

Not Found!!!

Owner Name	House Location	House Price
Ooi	Belmont	56210.0
John	Chersleton	23456.0
Steven	GleentWood	43210.0
Ann	Torridon	36321.0
Salem	Milliways	88732.0
Fazud	BinchTree	22765.0
Adam	Star Hollow	54321.0
Isabella	FairWay	76521.0
Ali	M&M	66654.0
Siti	Changlun	11234.0
Tom	Subang Jaya	88762.0

```
            String psd = jtfpass.getText();
```

ii) Search owner name Siti



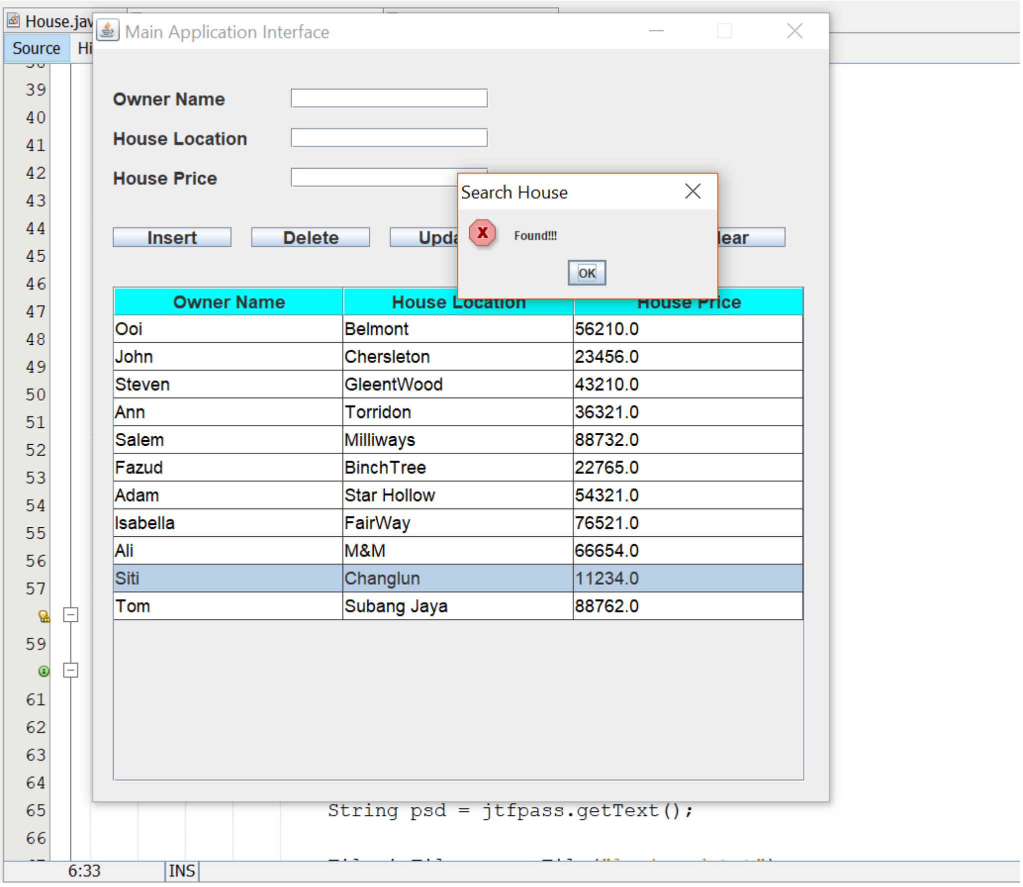
Owner Name	House Location	House Price
Ooi	Belmont	56210.0
John		56.0
Steven		10.0
Ann		21.0
Salem		32.0
Fazud		65.0
Adam	Star Hollow	54321.0
Isabella	FairWay	76521.0
Ali	M&M	66654.0
Siti	Changlun	11234.0
Tom	Subang Jaya	88762.0

Input

Search Owner Name: Siti

OK Cancel

```
String psd = jtfpass.getText();
```



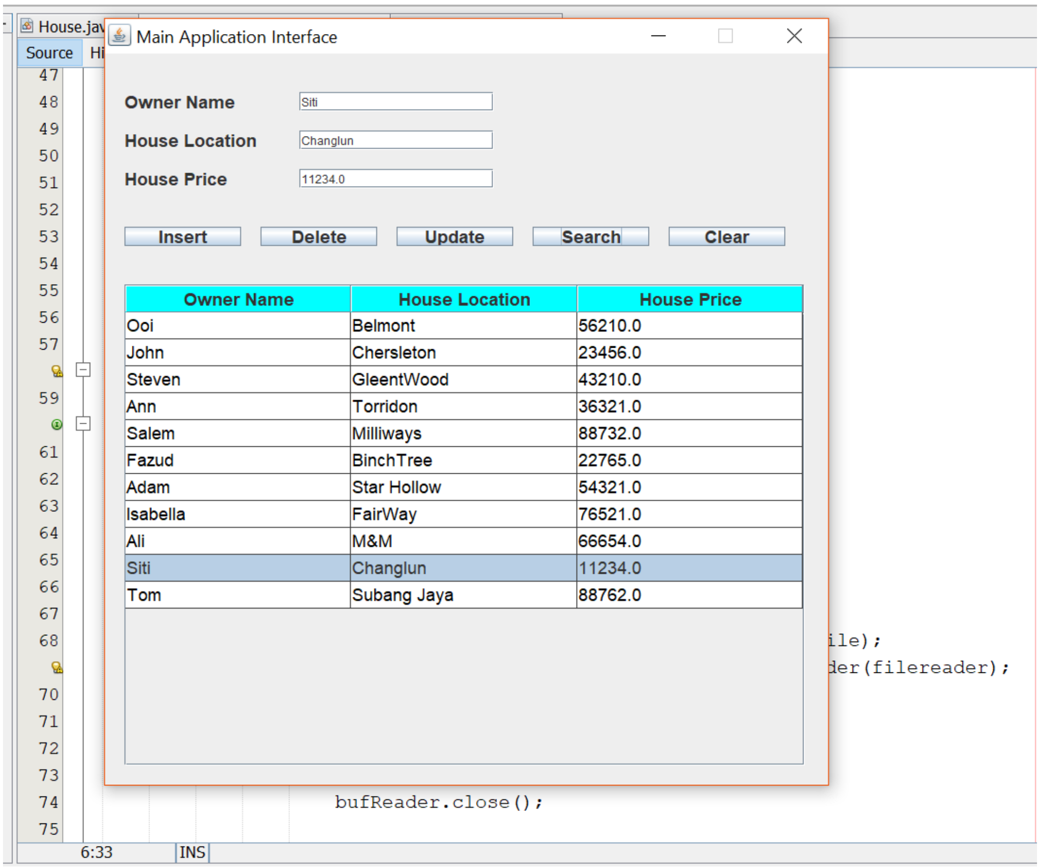
Search House

Found!!!

OK

Owner Name	House Location	House Price
Ooi	Belmont	56210.0
John	Chersleton	23456.0
Steven	GleentWood	43210.0
Ann	Torridon	36321.0
Salem	Milliways	88732.0
Fazud	BinchTree	22765.0
Adam	Star Hollow	54321.0
Isabella	FairWay	76521.0
Ali	M&M	66654.0
Siti	Changlun	11234.0
Tom	Subang Jaya	88762.0

```
String psd = jtfpass.getText();
```



Owner Name: Siti

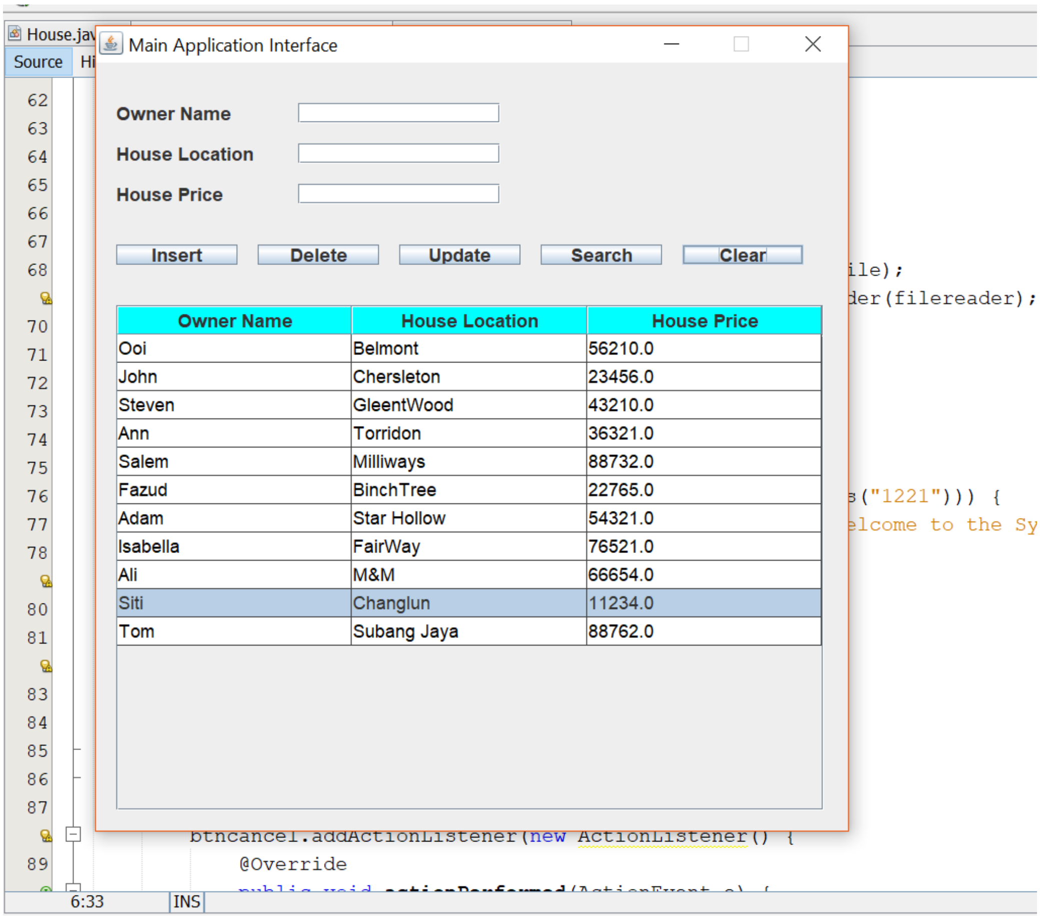
House Location: Changlun

House Price: 11234.0

Owner Name	House Location	House Price
Ooi	Belmont	56210.0
John	Chersleton	23456.0
Steven	GleentWood	43210.0
Ann	Torridon	36321.0
Salem	Milliways	88732.0
Fazud	BinchTree	22765.0
Adam	Star Hollow	54321.0
Isabella	FairWay	76521.0
Ali	M&M	66654.0
Siti	Changlun	11234.0
Tom	Subang Jaya	88762.0

```
ile);
der(filereader);
            bufReader.close();
```

e. Clear the info shown in the JtextField



Owner Name:

House Location:

House Price:

Owner Name	House Location	House Price
Ooi	Belmont	56210.0
John	Chersleton	23456.0
Steven	GleentWood	43210.0
Ann	Torridon	36321.0
Salem	Milliways	88732.0
Fazud	BinchTree	22765.0
Adam	Star Hollow	54321.0
Isabella	FairWay	76521.0
Ali	M&M	66654.0
Siti	Changlun	11234.0
Tom	Subang Jaya	88762.0

```
ile);
der(filereader);
s("1221"))) {
elcome to the Sy
        btncancel.addActionListener(new ActionListener() {
            @Override
```