

## **INTRODUCTION**

JAVA is a programming language created by James Gosling from Sun Microsystems(sun) in 1991. The target of Java is to write the program once and run on multiple operating systems. In this project we are using the jswing, thread, class, jdbc and etc features which are inbuilt in java in order to implement the linear regression method. Here we already have a set of values stored in the data base which contains details of the previous sales. We use this data to predict the price of the house.

The user can select the given situations such as “1BHK” “2BHK” “HOUSE” “SWIMMING” “BALCONY”. It depends on the conditions selected and the entered value of the square-feet we will predict the price of the house.

## **SPECIFIC REQUIREMENTS**

### **HARDWARE REQUIREMENTS:**

- Minimum Windows 95 software
- IBM-compatible 486 system
- Hard Drive and Minimum of 8 MB memory
- A CD-ROM drive
- Mouse, keyboard.

### **SOFTWARE REQUIREMENTS:**

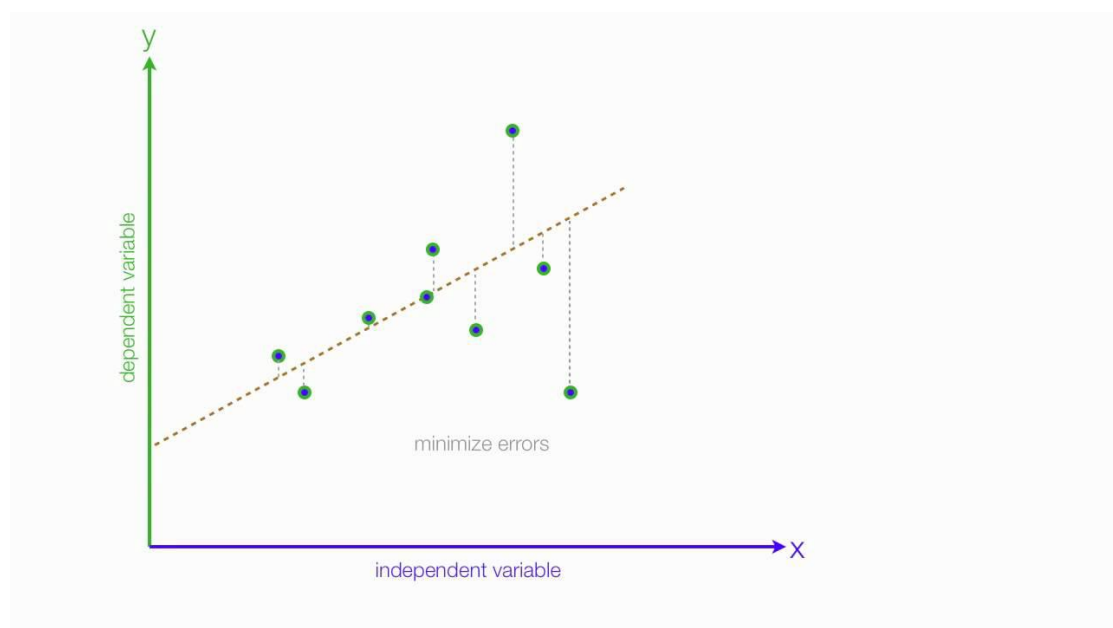
- Operating System
- Java SDK or JRE 1.6 or higher
- Java Servlet Container (Free Servlet Container available)
- Supported Database and library that supports the database connection with Java.

## IMPLEMENTATION

Linear regression attempts to model the relationship between two variables by fitting a linear equation to observed data. One variable is considered to be an explanatory variable, and the other is considered to be a dependent variable. For example, a modeler might want to relate the weights of individuals to their heights using a linear regression model.

Before attempting to fit a linear model to observed data, a modeler should first determine whether or not there is a relationship between the variables of interest. This does not necessarily imply that one variable *causes* the other (for example, higher SAT scores do not *cause* higher college grades), but that there is some significant association between the two variables. A [scatterplot](#) can be a helpful tool in determining the strength of the relationship between two variables. If there appears to be no association between the proposed explanatory and dependent variables (i.e., the scatterplot does not indicate any increasing or decreasing trends), then fitting a linear regression model to the data probably will not provide a useful model. A valuable numerical measure of association between two variables is the [correlation coefficient](#), which is a value between -1 and 1 indicating the strength of the association of the observed data for the two variables.

A linear regression line has an equation of the form  $Y = a + bX$ , where  $X$  is the explanatory variable and  $Y$  is the dependent variable. The slope of the line is  $b$ , and  $a$  is the intercept (the value of  $y$  when  $x = 0$ ).



Given a **data** set of  $n$  **statistical units**, a linear regression model assumes that the relationship between the dependent variable  $y_i$  and the  **$p$ -vector** of regressors  $\mathbf{x}_i$  is **linear**. This relationship is modeled through a *disturbance term* or *error variable*  $\varepsilon_i$  — an unobserved **random variable** that adds noise to the linear relationship between the dependent variable and regressors. Thus the model takes the form

$$y_i = \beta_0 \mathbf{1} + \beta_1 x_{i1} + \cdots + \beta_p x_{ip} + \varepsilon_i = \mathbf{x}_i^\top \boldsymbol{\beta} + \varepsilon_i, \quad i = 1, \dots, n,$$

where  $^\top$  denotes the **transpose**, so that  $\mathbf{x}_i^\top \boldsymbol{\beta}$  is the **inner product** between **vectors**  $\mathbf{x}_i$  and  $\boldsymbol{\beta}$ .

Often these  $n$  equations are stacked together and written in vector form as

$$\mathbf{y} = \mathbf{X}\boldsymbol{\beta} + \boldsymbol{\varepsilon},$$

where

$$\mathbf{y} = \begin{pmatrix} y_1 \\ y_2 \\ \vdots \\ y_n \end{pmatrix},$$

$$\mathbf{X} = \begin{pmatrix} \mathbf{x}_1^\top \\ \mathbf{x}_2^\top \\ \vdots \\ \mathbf{x}_n^\top \end{pmatrix} = \begin{pmatrix} 1 & x_{11} & \cdots & x_{1p} \\ 1 & x_{21} & \cdots & x_{2p} \\ \vdots & \vdots & \ddots & \vdots \\ 1 & x_{n1} & \cdots & x_{np} \end{pmatrix},$$

$$\boldsymbol{\beta} = \begin{pmatrix} \beta_0 \\ \beta_1 \\ \beta_2 \\ \vdots \\ \beta_p \end{pmatrix}, \quad \boldsymbol{\varepsilon} = \begin{pmatrix} \varepsilon_1 \\ \varepsilon_2 \\ \vdots \\ \varepsilon_n \end{pmatrix}.$$

## **SOURCE CODE**

### **JDBC.java:**

```
//STEP 1. Import required packages
import java.sql.*;

public class JDBC {
    // JDBC driver name and database URL
    static final String JDBC_DRIVER = "com.mysql.jdbc.Driver";
    static final String DB_URL = "jdbc:mysql://localhost/Java";
    static double x[]=new double[1000];
    static double y[]=new double[1000];
    static int z[]= new int[1000];
    static int a[]=new int[1000];
    static int s[]=new int[1000];
    // Database credentials
    static final String USER = "staff";
    static final String PASS = "qwerty";
    int n=0;
    int nvalue(){
        return n;
    }
    double[] yvalue(){
        return(y);
    }
    double[] xvalue(){
        return(x);
    }
    int[] zvalue(){
        return(z);
    }
}
```

```
int[] bvalue(){
    return(a);
}

int[] svalue(){
    return(s);
}

public void dbms() {
    Connection conn = null;
    Statement stmt = null;
    try{
        //STEP 2: Register JDBC driver
        Class.forName("com.mysql.jdbc.Driver");//jar

        //STEP 3: Open a connection
        System.out.println("Connecting to a selected database...");
        conn = DriverManager.getConnection(DB_URL, USER, PASS);
        System.out.println("Connected database successfully...");

        //STEP 4: Execute a query
        System.out.println("Creating statement...");
        stmt = conn.createStatement();

        String sql = "SELECT * FROM house";
        ResultSet rs = stmt.executeQuery(sql);

        //STEP 5: Extract data from result set
        while(rs.next()){
            //Retrieve by column name
            String type = rs.getString("type");
            if("1BHK".equals(type))
            {
                z[n]=1;
            }
        }
    }
}
```

```
        if("2BHK".equals(type))
        {
            z[n]=2;
        }
        if("H".equals(type))
        {
            z[n]=3;
        }
```

```
        a[n] = rs.getInt("balcony");
```

```
        x[n] = rs.getFloat("sq_feet");
        y[n] = rs.getFloat("price");
        s[n] = rs.getInt("swimming");
        System.out.print("type: " + type);
```

```
        System.out.print(", sq: " + x[n]);
        System.out.println(", price: " + y[n]);
        ++n;
    }
    // x[n]=sq;
    // y[n]=price;
    //Display values
```

```
        rs.close();
    } catch(SQLException se){
        //Handle errors for JDBC
        se.printStackTrace();
    } catch(Exception e){
        //Handle errors for Class.forName
        e.printStackTrace();
    }
```

```
}finally{
    //finally block used to close resources
    try{
        if(stmt!=null)
            conn.close();
    }catch(SQLException se){
        // do nothing
    }
    try{
        if(conn!=null)
            conn.close();
    }catch(SQLException se){
        se.printStackTrace();
    }
    //end finally try
}
//end try
System.out.println("Goodbye!\n="+n);
}
//end main

public static void main(String args[])
{
    JDBC j=new JDBC();
    j.dbms();
}
}
//end JDBCExample
```

### **LinearRegression.java:**

```
public class LinearRegression {

    public static void main(String[] args) {
        JFrame f=new JFrame();
        f.setVisible(true);
    }
}
```



**Lm.java:**

```
public class Lm extends Thread {
    double qw;
    Lm(double x)
    {
        this.qw=x;
    }

    double calc(int action1,int action2,int action3) throws InterruptedException
    {
        JDBC j=new JDBC();
        j.dbms();
        int n= j.nvalue();
        int ni=0;
        int MAXN = 1000;
        int z[]=new int[1000];
        int b[]=new int[1000];
        int s[]=new int[1000];
        int i=0;
        double y[]=new double[1000];
        double x[] = new double[1000];
        x = j.xvalue();
        double x1[] = new double[1000];
        y = j.yvalue();
        double y1[]=new double[1000];
        z=j.zvalue();
        b=j.bvalue();
        s=j.svalue();
        for(i=0;i<n;++i)
        {
            System.out.println(x[i]+","+y[i]+","+z[i]+","+b[i]);
        }
        if(action1==0)
```

```
{
    for(i=0;i<n;++i)
    {
        if(z[i]==1)
        {
            x1[ni]=x[i];
            y1[ni]=y[i];
            ++ni;
        }
    }
    x=x1;
    y=y1;
    n=ni;
}
else if(action1==1)
{
    for(i=0;i<n;++i)
    {
        if(z[i]==2)
        {
            x1[ni]=x[i];
            y1[ni]=y[i];
            ++ni;
        }
    }
    x=x1;
    y=y1;
    n=ni;
}
else if(action1==2)
{
    for(i=0;i<n;++i)
    {
        if(z[i]==3)
```

```
        {
            x1[ni]=x[i];
            y1[ni]=y[i];
            ++ni;
        }
    }
    x=x1;
    y=y1;
    n=ni;
}
ni=0;
if(action2==1)
{
    for(i=0;i<n;++i)
    {
        if(b[i]==1)
        {
            x1[ni]=x[i];
            y1[ni]=y[i];
            ++ni;
        }
    }
    x=x1;
    y=y1;
    n=ni;
}
ni=0;
if(action3==1)
{
    for(i=0;i<n;++i)
    {
        if(s[i]==1)
        {
            x1[ni]=x[i];
```

```
        y1[ni]=y[i];
        ++ni;
    }
}
x=x1;
y=y1;
n=ni;

}

    for(i=0;i<n;++i)
    {
        System.out.println("#"+x[i]+" "+y[i]+" "+z[i]+" "+b[i]);
    }

// first pass: read in data, compute xbar and ybar
double sumx = 0.0, sumy = 0.0, sumx2 = 0.0;
while(i!=n) {
    //  x[n] = s[i];
    //y[n] = r[i];
    sumx  += x[n];
    sumx2 += x[n] * x[n];
    sumy  += y[n];
    i++;
}
double xbar = sumx / n;
double ybar = sumy / n;

// second pass: compute summary statistics
double xxbar = 0.0, yybar = 0.0, xybar = 0.0;
for ( i = 0; i < n; i++) {
    xxbar += (x[i] - xbar) * (x[i] - xbar);
    yybar += (y[i] - ybar) * (y[i] - ybar);
    xybar += (x[i] - xbar) * (y[i] - ybar);
}
double beta1 = xybar / xxbar;
```

```
double beta0 = ybar - beta1 * xbar;

// print results
System.out.println("y      = " + beta1 + " * x + " + beta0);

System.out.println("x="+qw+", "+"y?"+(beta1*qw+beta0));
// analyze results-
int df = n - 2;
double rss = 0.0;      // residual sum of squares
double ssr = 0.0;      // regression sum of squares
for ( i = 0; i < n; i++) {
    double fit = beta1*x[i] + beta0;
    rss += (fit - y[i]) * (fit - y[i]);
    ssr += (fit - ybar) * (fit - ybar);
}
double R2      = ssr / yybar;
double svar    = rss / df;
double svar1 = svar / xxbar;
double svar0 = svar/n + xbar*xbar*svar1;
System.out.println("R^2              = " + R2);
System.out.println("std error of beta_1 = " + Math.sqrt(svar1));
System.out.println("std error of beta_0 = " + Math.sqrt(svar0));
svar0 = svar * sumx2 / (n * xxbar);
System.out.println("std error of beta_0 = " + Math.sqrt(svar0));

System.out.println("SSTO = " + yybar);
System.out.println("SSE  = " + rss);
System.out.println("SSR  = " + ssr);
double fina1=(double)(beta1*qw+beta0);
return(fina1);
}
}
```

**Newframe.java**

```
*/  
  
public class NewJFrame extends javax.swing.JFrame {  
  
    /**  
     * Creates new form NewJFrame  
     */  
    public NewJFrame() {  
        initComponents();  
    }  
  
    /**  
     * This method is called from within the constructor to initialize the form.  
     * WARNING: Do NOT modify this code. The content of this method is always  
     * regenerated by the Form Editor.  
     */  
    @SuppressWarnings("unchecked")  
    // <editor-fold defaultstate="collapsed" desc="Generated Code">  
    private void initComponents() {  
  
        jLabel1 = new javax.swing.JLabel();  
        jLabel2 = new javax.swing.JLabel();  
        jButton1 = new javax.swing.JButton();  
        jTextField1 = new javax.swing.JTextField();  
        jPasswordField1 = new javax.swing.JPasswordField();  
        jLabel3 = new javax.swing.JLabel();  
  
        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);  
        setBackground(new java.awt.Color(153, 51, 0));  
  
        jLabel1.setText("Username:");
```

```
jLabel2.setText("Password:");
```

```
jButton1.setBackground(new java.awt.Color(51, 255, 0));  
jButton1.setForeground(new java.awt.Color(153, 153, 153));  
jButton1.setText("LOGIN");  
jButton1.addMouseListener(new java.awt.event.MouseAdapter() {  
    public void mouseClicked(java.awt.event.MouseEvent evt) {  
        jButton1MouseClicked(evt);  
    }  
});
```

```
jPasswordField1.addActionListener(new java.awt.event.ActionListener() {  
    public void actionPerformed(java.awt.event.ActionEvent evt) {  
        jPasswordField1ActionPerformed(evt);  
    }  
});
```

```
jLabel3.setFont(new java.awt.Font("Tempus Sans ITC", 1, 18)); // NOI18N  
jLabel3.setForeground(new java.awt.Color(204, 0, 204));  
jLabel3.setHorizontalAlignment(javax.swing.SwingConstants.LEFT);  
jLabel3.setText("HOUSE PRICE PREDICTOR");
```

```
javax.swing.GroupLayout layout = new  
javax.swing.GroupLayout(getContentPane());  
getContentPane().setLayout(layout);  
layout.setHorizontalGroup(  
  
layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)  
    .addGroup(layout.createSequentialGroup()  
        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.  
Alignment.LEADING)  
            .addGroup(layout.createSequentialGroup()  
                .addGap(108, 108, 108)
```

```
        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING)
        .addComponent(jLabel2)
        .addComponent(jLabel1))
        .addGap(78, 78, 78)
        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING, false)
        .addComponent(jTextField1,
        javax.swing.GroupLayout.DEFAULT_SIZE, 113, Short.MAX_VALUE)
        .addComponent(jPasswordField1)))
        .addGroup(layout.createSequentialGroup()
        .addGap(154, 154, 154)
        .addComponent(jButton1,
        javax.swing.GroupLayout.PREFERRED_SIZE, 100,
        javax.swing.GroupLayout.PREFERRED_SIZE)))
        .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE,
        Short.MAX_VALUE))
        .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
        layout.createSequentialGroup()
        .addGap(0, 87, Short.MAX_VALUE)
        .addComponent(jLabel3)
        .addGap(83, 83, 83))
    );
    layout.setVerticalGroup(

    layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(layout.createSequentialGroup()
        .addGap(37, 37, 37)
        .addComponent(jLabel3)
        .addGap(45, 45, 45)
        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addComponent(jLabel1)
```



```
        .addComponent(jTextField1,  
javax.swing.GroupLayout.PREFERRED_SIZE,  
javax.swing.GroupLayout.DEFAULT_SIZE,  
javax.swing.GroupLayout.PREFERRED_SIZE))  
        .addGap(27, 27, 27)  
        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.  
Alignment.BASELINE)  
        .addComponent(jLabel2)  
        .addComponent(jPasswordField1,  
javax.swing.GroupLayout.PREFERRED_SIZE,  
javax.swing.GroupLayout.DEFAULT_SIZE,  
javax.swing.GroupLayout.PREFERRED_SIZE))  
        .addGap(24, 24, 24)  
        .addComponent(jButton1)  
        .addContainerGap(73, Short.MAX_VALUE))  
    );
```

```
    pack();  
} // </editor-fold>
```

```
private void jButton1MouseClicked(java.awt.event.MouseEvent evt) {  
    // TODO add your handling code here:  
    try {  
        String x = jTextField1.getText();  
  
        String y = jPasswordField1.getText();  
        if(x.equals("123")&&y.equals("123"))  
        {  
            GUI g=new GUI();  
            g.setVisible(true);  
        }  
    }  
    catch(Exception e)  
    {
```

```
        System.out.println("REad erro");

    }

}

private void jPasswordField1ActionPerformed(java.awt.event.ActionEvent evt)
{
    // TODO add your handling code here:
}

/**
 * @param args the command line arguments
 */
public static void main(String args[]) {
    /* Set the Nimbus look and feel */
    //<editor-fold defaultstate="collapsed" desc=" Look and feel setting code
(optional) ">
    /* If Nimbus (introduced in Java SE 6) is not available, stay with the default
look and feel.
    * For details see
http://download.oracle.com/javase/tutorial/uiswing/lookandfeel/plaf.html
    */
    try {
        for (javax.swing.UIManager.LookAndFeelInfo info :
javax.swing.UIManager.getInstalledLookAndFeels()) {
            if ("Nimbus".equals(info.getName())) {

javax.swing.UIManager.setLookAndFeel(info.getClassName());
                break;
            }
        }
    } catch (ClassNotFoundException ex) {
```

```
java.util.logging.Logger.getLogger(NewJFrame.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
```

```
    } catch (InstantiationException ex) {
```

```
java.util.logging.Logger.getLogger(NewJFrame.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
```

```
    } catch (IllegalAccessException ex) {
```

```
java.util.logging.Logger.getLogger(NewJFrame.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
```

```
    } catch (javax.swing.UnsupportedLookAndFeelException ex) {
```

```
java.util.logging.Logger.getLogger(NewJFrame.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
```

```
    }
```

```
//</editor-fold>
```

```
/* Create and display the form */
```

```
java.awt.EventQueue.invokeLater(new Runnable() {
```

```
    public void run() {
```

```
        new NewJFrame().setVisible(true);
```

```
    }
```

```
});
```

```
}
```

```
// Variables declaration - do not modify
```

```
private javax.swing.JButton jButton1;
```

```
private javax.swing.JLabel jLabel1;
```

```
private javax.swing.JLabel jLabel2;
```

```
private javax.swing.JLabel jLabel3;
```

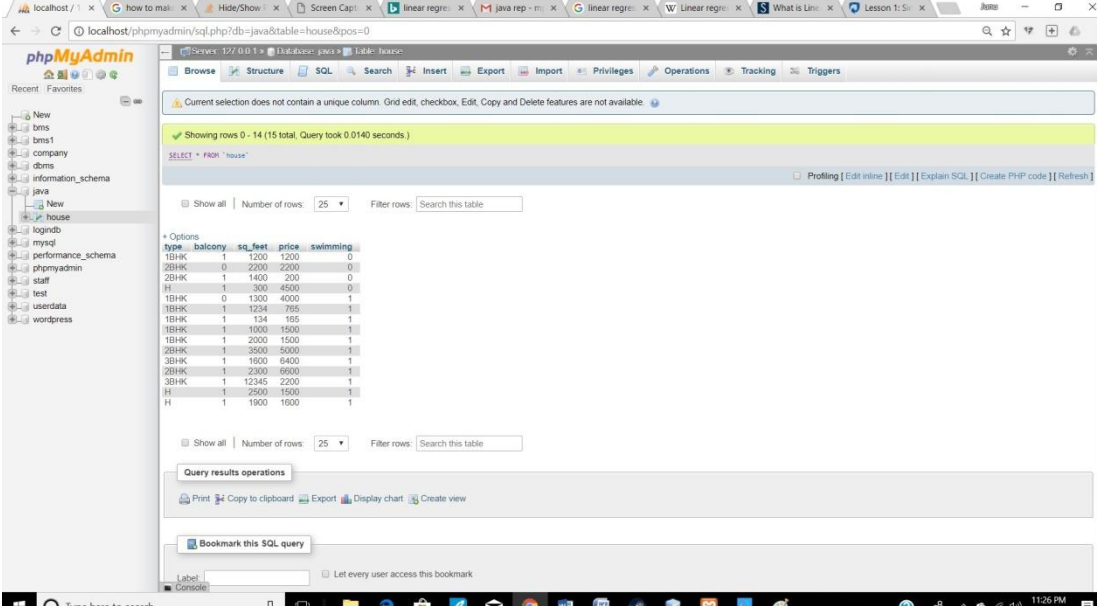
```
private javax.swing.JPasswordField jPasswordField1;
```

```
private javax.swing.JTextField jTextField1;
```

```
// End of variables declaration
```

```
}
```

## SNAPSHOTS



Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.

Showing rows 0 - 14 (15 total. Query took 0.0140 seconds)

SELECT \* FROM `house`

Options

type	balcony	sq_feet	price	swimming
1BHK	1	1200	1200	0
2BHK	0	2200	2200	0
2BHK	1	1400	200	0
H	1	300	4500	0
1BHK	0	1300	4000	1
1BHK	1	1234	765	1
1BHK	1	134	165	1
1BHK	1	1000	1500	1
1BHK	1	2000	1500	1
2BHK	1	3500	5000	1
3BHK	1	1600	6400	1
2BHK	1	2300	6600	1
3BHK	1	12345	2200	1
H	1	2500	1500	1
H	1	1900	1600	1

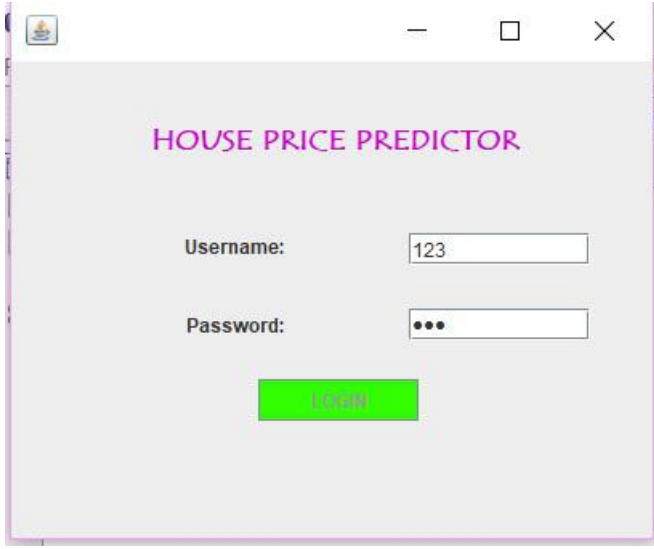
Query results operations

Print Copy to clipboard Export Display chart Create view

Bookmark this SQL query

Label Let every user access this bookmark

Fig1.The values presenting database which is used for prediction.



HOUSE PRICE PREDICTOR

Username: 123

Password: ...

LOGIN

Fig2.login

The image displays three sequential screenshots of a web application for house price prediction. Each screenshot shows a form with the following fields and options:

- Enter the square feet:** A text input field.
- BHK Type:** Radio buttons for 1BHK, 2BHK, and HOUSE.
- balcony:** A checkbox.
- swimming:** A checkbox.
- Predict Button:** A green button labeled "PREDICT".
- Output:** A text label showing the predicted price.

**Screenshot 1 (Top):** The input square feet is 123. BHK is not selected, balcony and swimming are unchecked. The predicted price is 59.01752102155655.

**Screenshot 2 (Middle):** The input square feet is 1213. BHK is not selected, balcony and swimming are checked. The predicted price is 526.8919154482481.

**Screenshot 3 (Bottom):** The input square feet is 1213. 1BHK is selected, balcony is checked, and swimming is unchecked. The predicted price is 939.3917926996559.

**Java console output:**

Connecting to a selected database...

Connected database successfully...

Creating statement...

type: 1BHK, sq: 1200.0, price: 1200.0

type: 2BHK, sq: 2200.0, price: 2200.0

type: 2BHK, sq: 1400.0, price: 200.0

type: H, sq: 300.0, price: 4500.0

type: 1BHK, sq: 1300.0, price: 4000.0

type: 1BHK, sq: 1234.0, price: 765.0

type: 1BHK, sq: 134.0, price: 165.0

type: 1BHK, sq: 1000.0, price: 1500.0

type: 1BHK, sq: 2000.0, price: 1500.0

type: 2BHK, sq: 3500.0, price: 5000.0

type: 3BHK, sq: 1600.0, price: 6400.0

type: 2BHK, sq: 2300.0, price: 6600.0

type: 3BHK, sq: 12345.0, price: 2200.0

type: H, sq: 2500.0, price: 1500.0

type: H, sq: 1900.0, price: 1600.0

Goodbye!n=15

1200.0,1200.0,1,1

2200.0,2200.0,2,0

1400.0,200.0,2,1

300.0,4500.0,3,1

1300.0,4000.0,1,0

1234.0,765.0,1,1

134.0,165.0,1,1

1000.0,1500.0,1,1

2000.0,1500.0,1,1

3500.0,5000.0,2,1

1600.0,6400.0,0,1

2300.0,6600.0,2,1

12345.0,2200.0,0,1

```

2500.0,1500.0,3,1
1900.0,1600.0,3,1
#1200.0,1200.0,1,1
#2200.0,2200.0,2,0
#1400.0,200.0,2,1
#300.0,4500.0,3,1
#1300.0,4000.0,1,0
#1234.0,765.0,1,1
#134.0,165.0,1,1
#1000.0,1500.0,1,1
#2000.0,1500.0,1,1
#3500.0,5000.0,2,1
#1600.0,6400.0,0,1
#2300.0,6600.0,2,1
#12345.0,2200.0,0,1
#2500.0,1500.0,3,1
#1900.0,1600.0,3,1
y      = 0.4798172440776955 * x + 0.0
x=123.0,y?59.01752102155655
R^2                = 0.2744713334390051
std error of beta_1 = 0.21636298677553228
std error of beta_0 = 787.9093907327132
std error of beta_0 = 0.0
SSTO = 1.6685245E8
SSE   = 1.2105623556093508E8
SSR   = 4.579621443906493E7
YES BALCONY
Yes swimming
Connecting to a selected database...
Connected database successfully...
Creating statement...
type: 1BHK, sq: 1200.0, price: 1200.0
type: 2BHK, sq: 2200.0, price: 2200.0
type: 2BHK, sq: 1400.0, price: 200.0

```

type: H, sq: 300.0, price: 4500.0  
type: 1BHK, sq: 1300.0, price: 4000.0  
type: 1BHK, sq: 1234.0, price: 765.0  
type: 1BHK, sq: 134.0, price: 165.0  
type: 1BHK, sq: 1000.0, price: 1500.0  
type: 1BHK, sq: 2000.0, price: 1500.0  
type: 2BHK, sq: 3500.0, price: 5000.0  
type: 3BHK, sq: 1600.0, price: 6400.0  
type: 2BHK, sq: 2300.0, price: 6600.0  
type: 3BHK, sq: 12345.0, price: 2200.0  
type: H, sq: 2500.0, price: 1500.0  
type: H, sq: 1900.0, price: 1600.0  
Goodbye!  
n=15  
1200.0,1200.0,1,1  
2200.0,2200.0,2,0  
1400.0,200.0,2,1  
300.0,4500.0,3,1  
1300.0,4000.0,1,0  
1234.0,765.0,1,1  
134.0,165.0,1,1  
1000.0,1500.0,1,1  
2000.0,1500.0,1,1  
3500.0,5000.0,2,1  
1600.0,6400.0,0,1  
2300.0,6600.0,2,1  
12345.0,2200.0,0,1  
2500.0,1500.0,3,1  
1900.0,1600.0,3,1  
#134.0,165.0,1,1  
#1000.0,1500.0,2,0  
#2000.0,1500.0,2,1  
#3500.0,5000.0,3,1  
#1600.0,6400.0,1,0  
#2300.0,6600.0,1,1



```
#12345.0,2200.0,1,1
#2500.0,1500.0,1,1
#1900.0,1600.0,1,1
y = 0.4343709113340875 * x + 0.0
x=1213.0,y?526.8919154482481
R^2 = 0.2858102162372112
std error of beta_1 = 0.25952527295161465
std error of beta_0 = 1184.1767240939278
std error of beta_0 = 0.0
SSTO = 1.23697225E8
SSE = 8.834329437480704E7
SSR = 3.535393062519297E7
!BHK ONLY
YES BALCONY
Connecting to a selected database...
Connected database successfully...
Creating statement...
type: 1BHK, sq: 1200.0, price: 1200.0
type: 2BHK, sq: 2200.0, price: 2200.0
type: 2BHK, sq: 1400.0, price: 200.0
type: H, sq: 300.0, price: 4500.0
type: 1BHK, sq: 1300.0, price: 4000.0
type: 1BHK, sq: 1234.0, price: 765.0
type: 1BHK, sq: 134.0, price: 165.0
type: 1BHK, sq: 1000.0, price: 1500.0
type: 1BHK, sq: 2000.0, price: 1500.0
type: 2BHK, sq: 3500.0, price: 5000.0
type: 3BHK, sq: 1600.0, price: 6400.0
type: 2BHK, sq: 2300.0, price: 6600.0
type: 3BHK, sq: 12345.0, price: 2200.0
type: H, sq: 2500.0, price: 1500.0
type: H, sq: 1900.0, price: 1600.0
Goodbye!n=15
1200.0,1200.0,1,1
```

2200.0,2200.0,2,0

1400.0,200.0,2,1

300.0,4500.0,3,1

1300.0,4000.0,1,0

1234.0,765.0,1,1

134.0,165.0,1,1

1000.0,1500.0,1,1

2000.0,1500.0,1,1

3500.0,5000.0,2,1

1600.0,6400.0,0,1

2300.0,6600.0,2,1

12345.0,2200.0,0,1

2500.0,1500.0,3,1

1900.0,1600.0,3,1

#1200.0,1200.0,1,1

#1234.0,765.0,2,0

#134.0,165.0,2,1

#2000.0,1500.0,3,1

$y = 0.7744367623245308 * x + 0.0$

$x=1213.0, y=939.3917926996559$

$R^2 = 0.9730962752705767$

std error of beta\_1 = 0.09105404905885048

std error of beta\_0 = 120.28712029042616

std error of beta\_0 = 0.0

SSTO = 4302450.0

SSE = 115751.93046210763

SSR = 4186698.069537893

## **CONCLUSION**

- Our project was house price predection using linear regression.It has been matter of immense pleasure,honour and challenge to complete it successfully.
- While developing this project we have learnt about how to implement the jswing,multithreading ,exception handling and jdbc connection.
- Also how to use the database through phpmyadmin and to access the SQL database thorough it.
- In this project we also learned how the linear regression works and what are its advantages and disadvantages and which are the situation we have to use it.
- This project helped us to have fun with java and also thought us the value of information i.e it can be used to predict inferences.

## **BIBILOGRAPHY**

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