The examples shown below are taken from the web without being tested. Its aim is to give you how to use different elements of the GUI Object in Java. You should develop your own code.

CONNECTION

https://www.geeksforgeeks.org/java-database-connectivity-with-mysql/

```java
import java.sql.*;
public class GFG {
        public static void main(String arg[])          {
                Connection connection = null;
                try {
                        Class.forName("com.mysql.cj.jdbc.Driver");
                connection = DriverManager.getConnection("jdbc:mysql://localhost:3306/mydb",
                                "mydbuser", "mydbuser");
                        Statement statement = connection.createStatement();
                        ResultSet resultSet = statement.executeQuery("select * from designation");
                        int code;
                        String title;
                        while (resultSet.next()) {
                                code = resultSet.getInt("code");
                                title = resultSet.getString("title").trim();
                                System.out.println("Code : " + code + " Title : " + title);
                        }
                        resultSet.close();
                        statement.close();
                        connection.close();
                }
                catch (Exception exception) {
                        System.out.println(exception);
                }
        } // function ends
} // class ends
```
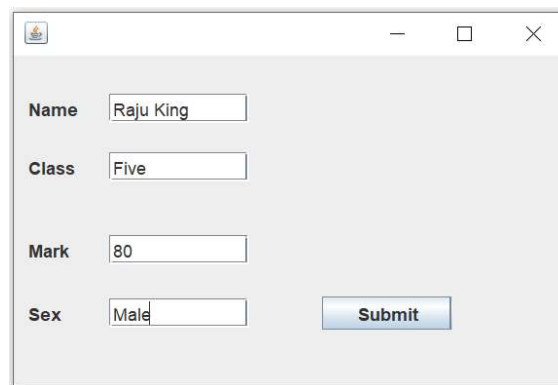
INSERT with GUI

```
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.ResultSet;
import java.sql.Statement;

public class my_update{

  void  my_db_update(String str1, String str2,String str3,String str4) {
    try{
        Class.forName("com.mysql.jdbc.Driver");
        Connection con=DriverManager.getConnection(
        "jdbc:mysql://localhost:3306/my_tutorial","root","password");
        Statement st=con.createStatement();
        int mark = Integer.parseInt(str3); // Mark is an integer

        // Adding record
        String query1="INSERT INTO `student`"
         + " (`name`, `class`, `mark`, `sex`)"
         + "VALUES('" +str1+"','"+str2+"','"+mark+",'"+str4+"')";
        st.executeUpdate(query1); // record added.
        con.close();
    }catch(Exception e){ System.out.println(e);}
  }
}
```

```
public void actionPerformed(ActionEvent e) {
        String name=t1.getText();
        String class1=t2.getText();
        String mark=t3.getText();
        String sex=t4.getText();
        // creating one object
        my_update obj=new my_update();
        obj.my_db_update(name, class1, mark, sex);
}
```

```java
stat1=dbcon1.prepareStatement("insert into records(stname,mobile,course) values(?,?,?)");

public void actionPerformed(ActionEvent e) {


        String Sname=text1.getText();
        String mobil=text2.getText();
        String course=(String)box1.getSelectedItem();
        try{
                stat1.setString(1, Sname);
                stat1.setString(2, mobil);
                stat1.setString(3, course);
                int k=stat1.executeUpdate();
                text1.setText("");
                text2.setText("");
                box1.setSelectedIndex(-1);
                text1.requestFocus();
                if(k==1) {
        JOptionPane.showMessageDialog(this,"Insertion Successfully");
                }
                else
                    JOptionPane.showMessageDialog(this,"Insertion Failed");
                }catch(SQLException sqe){
                        JOptionPane.showMessageDialog(this,sqe.toString());
                }

        }
```

Dealing with FK

1- filling combobox

```java
import javax.swing.*;
import java.sql.*;

public class Test extends JFrame{
    JComboBox jc = new JComboBox();
    JPanel panel = new JPanel();
    Connection con;
    Statement st;
    ResultSet rs;
    public Test()
    {
    try{
       con =
DriverManager.getConnection("jdbc:mysql://localhost/test_db","root"
,"");
       st = con.createStatement();
       String s = "select * from users";
       rs = st.executeQuery(s);
         while(rs.next())
         {
             jc.addItem(rs.getString(1)+" === "+rs.getString(2));
         }
    }catch(Exception e){
        JOptionPane.showMessageDialog(null, "ERROR");
    }
```

Another example

```java
private void employeeID(){
        try {
            Class.forName("com.mysql.jdbc.Driver");
            con =
DriverManager.getConnection("jdbc:mysql://localhost/melwa","root","");
            pst = con.prepareStatement("select * from employee");
            ResultSet rs = pst.executeQuery();
            txtemp.removeAllItems();
            while(rs.next()) {
                txtemp.addItem(rs.getString(1) );
            }
        } catch (ClassNotFoundException ex) {
          } catch (SQLException ex) {
        }
    }
```

2- Selecting from combobox:

```java
private void txtempItemStateChanged(java.awt.event.ItemEvent evt) {
    try {
        Class.forName("com.mysql.jdbc.Driver");
        con =
DriverManager.getConnection("jdbc:mysql://localhost/melwa","root","");
        String id = txtemp.getSelectedItem().toString();
        pst = con.prepareStatement("select fname,title,address from
employee where empid = ?");
        pst.setString(1, id);
        ResultSet rs = pst.executeQuery();
        if(rs.next()==true){
            String firstname = rs.getString(1);
            String title = rs.getString(2);
            String address = rs.getString(3);
            txtname.setText(firstname);
            txtaddress.setText(address);
            txttitle.setText(title);
        }
    } catch (ClassNotFoundException ex) {
            JOptionPane.showMessageDialog(this, ex);
        } catch (SQLException ex) {
            JOptionPane.showMessageDialog(this, ex);
        }
    }
```

Other GUI elements are to discovered such as grid, jtable, jframe, jbutton, etc.