

## JDBC

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

public class App implements ActionListener {
    private Connection connection;
    private JFrame frame;
    private JTextField idField, nameField, markField;
    private JTextArea displayArea;

    public App() {
        // Initialize the database connection
        try {
            connection =
DriverManager.getConnection("jdbc:mysql://localhost:3306/jdbc", "root",
"Sancse@2003");
        } catch (SQLException e) {
            e.printStackTrace();
        }

        // Create the GUI
        frame = new JFrame("User Database App");
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

        JMenuBar menuBar = new JMenuBar();
        JMenu menu = new JMenu("Menu");
        JMenuItem saveMenuItem = new JMenuItem("Save");
        JMenuItem displayMenuItem = new JMenuItem("Display");

        saveMenuItem.addActionListener(this);
        displayMenuItem.addActionListener(this);

        menu.add(saveMenuItem);
        menu.add(displayMenuItem);
        menuBar.add(menu);

        frame.setJMenuBar(menuBar);

        JPanel savePanel = new JPanel();
        savePanel.setLayout(new GridLayout(4, 2));

        JLabel idLabel = new JLabel("ID:");
        idField = new JTextField(20);

        JLabel nameLabel = new JLabel("Name:");
        nameField = new JTextField(20);

        JLabel markLabel = new JLabel("Mark:");
```

```

markField = new JTextField(20);

JButton saveButton = new JButton("Save");
saveButton.addActionListener(this);

savePanel.add(idLabel);
savePanel.add(idField);
savePanel.add(nameLabel);
savePanel.add(nameField);
savePanel.add(markLabel);
savePanel.add(markField);
savePanel.add(saveButton);

displayArea = new JTextArea(15, 30);
displayArea.setEditable(false);

frame.getContentPane().add(savePanel, BorderLayout.NORTH);
frame.getContentPane().add(new JScrollPane(displayArea),
BorderLayout.CENTER);

frame.setSize(400, 400);
frame.setVisible(true);
}

public void actionPerformed(ActionEvent e) {
    if (e.getActionCommand().equals("Save")) {
        saveUser();
    } else if (e.getActionCommand().equals("Display")) {
        displayUsers();
    }
}

public void saveUser() {
    String id = idField.getText();
    String name = nameField.getText();
    String mark = markField.getText();

    try {
        PreparedStatement ps = connection.prepareStatement("INSERT INTO Sheet
(id, name, mark) VALUES (?, ?, ?)");
        ps.setString(1, id);
        ps.setString(2, name);
        ps.setString(3, mark);
        ps.executeUpdate();
    } catch (SQLException e) {
        e.printStackTrace();
    }
}

public void displayUsers() {

```

```

displayArea.setText(""); // Clear the text area

try {
    Statement statement = connection.createStatement();
    ResultSet resultSet = statement.executeQuery("SELECT * FROM Sheet");

    while (resultSet.next()) {
        int id = resultSet.getInt("id");
        String name = resultSet.getString("name");
        int mark = resultSet.getInt("mark");
        displayArea.append("ID: " + id + ", Name: " + name + ", Mark: " +
mark + "\n");
    }
} catch (SQLException e) {
    e.printStackTrace();
}

}

public static void main(String[] args) {
    SwingUtilities.invokeLater(() -> new App());
}
}

```

```

mysql> use jdbc;
Database changed
mysql> create table Sheet( id int primary key,name varchar(200),mark int);
Query OK, 0 rows affected (3.92 sec)

```

```

mysql> desc Sheet;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| id    | int           | NO   | PRI | NULL    |       |
| name  | varchar(200)  | YES  |     | NULL    |       |
| mark  | int           | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (2.45 sec)

```

DBMS

```

mysql> select*from Sheet;
+----+-----+-----+
| id | name | mark |
+----+-----+-----+
|  1 | san  |   98 |
+----+-----+-----+
1 row in set (0.00 sec)

```

ID: 1, Name: san, Mark: 98