

프로젝트명: BankProject
수행과제1 : fCustomer.java

```
import java.awt.EventQueue;
import java.awt.SystemColor;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Statement;

import javax.swing.DefaultComboBoxModel;
import javax.swing.ImageIcon;
import javax.swing.JButton;
import javax.swing.JComboBox;
import javax.swing.JFrame;
import javax.swing.JLabel;
import javax.swing.JOptionPane;
import javax.swing.JPanel;
import javax.swing.JTextField;

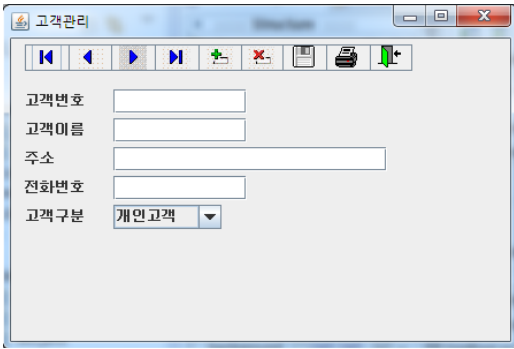
public class fCustomer implements ActionListener{

    private JFrame frame;
    private JTextField tf1;
    private JTextField tf2;
    private JTextField tf4;
    private JTextField tf3;

    JComboBox jcb1;
    JPanel panel;
    JButton btnMoveFirst, btnMovePrev, btnMoveNext, btnMoveLast;
    JButton btnInsertItem, btnDeleteItem, btnSaveItem, btnPrintItem, btnCloseWindow;

    String strCno, strCname, strCaddr, strCphone, strDist ;
    static String customer_dist[] = { "개인고객", "기업고객" };
    boolean bInsertFlag = false;

    static Connection conn = null;
    static ResultSet rs = null;
    static Statement stmt = null;
```



```
static String strQuery = "Select c_no, c_name, c_addr, c_phone, c_dist from customer";
```

```
private String driver="com.mysql.jdbc.Driver";
```

```
private String url="jdbc:mysql://localhost:3306/test";
```

```
private String user="root";
```

```
private String pwd="123456";
```

```
/**
```

```
 * Launch the application.
```

```
*/
```

```
public static void main(String[] args) {
```

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

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

```
            try {
```

```
                fCustomer window = new fCustomer();
```

```
                window.frame.setVisible(true);
```

```
            } catch (Exception e) {
```

```
                e.printStackTrace();
```

```
            }
```

```
        }
```

```
    });
```

```
}
```

```
/**
```

```
 * Create the application.
```

```
*/
```

```
public fCustomer() {
```

```
    initialize();
```

```
    dbConnect();
```

```
    initResultSet(strQuery);
```

```
}
```

```
private void dbConnect(){
```

```
    try{
```

```
        Class.forName(driver);
```

```
        conn=DriverManager.getConnection(url, user, pwd);
```

```
    }catch(Exception e){
```

```
        e.printStackTrace();
```

```
    }
```

```
}
```

```

public void initResultSet(String strQuery)
{
    try {
        stmt = conn.createStatement(ResultSet.TYPE_SCROLL_SENSITIVE, ResultSet.CONCUR_UPDATABLE);

        rs = stmt.executeQuery(strQuery);
    } catch (SQLException se) {
        JOptionPane.showMessageDialog(null, "SQLException");
    }
}

/**
 * Initialize the contents of the frame.
 */
private void initialize() {
    frame = new JFrame();
    frame.setTitle("\uACE0\uAC1D\uAD00\uB9AC");
    frame.setBounds(100, 100, 450, 300);
    frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
    frame.getContentPane().setLayout(null);

    JLabel lblNewLabel = new JLabel("\uACE0\uAC1D\uBC88uD638");
    lblNewLabel.setBounds(12, 47, 57, 15);
    frame.getContentPane().add(lblNewLabel);

    JLabel lblNewLabel_1 = new JLabel("\uACE0\uAC1D\uC774\uB984");
    lblNewLabel_1.setBounds(12, 72, 57, 15);
    frame.getContentPane().add(lblNewLabel_1);

    JLabel lblNewLabel_2 = new JLabel("\uC8FCuC18C");
    lblNewLabel_2.setBounds(12, 97, 57, 15);
    frame.getContentPane().add(lblNewLabel_2);

    JLabel lblNewLabel_3 = new JLabel("\uC804\uD654\uBC88uD638");
    lblNewLabel_3.setBounds(12, 122, 57, 15);
    frame.getContentPane().add(lblNewLabel_3);

    JLabel lblNewLabel_4 = new JLabel("\uACE0\uAC1D\uAD6C\uB8D4");
    lblNewLabel_4.setBounds(12, 147, 57, 15);
    frame.getContentPane().add(lblNewLabel_4);

    tf1 = new JTextField();
    tf1.setBounds(89, 44, 116, 21);
    frame.getContentPane().add(tf1);
    tf1.setColumns(10);
}

```

```
tf2 = new JTextField();
tf2.setBounds(89, 69, 116, 21);
frame.getContentPane().add(tf2);
tf2.setColumns(10);
```

```
tf4 = new JTextField();
tf4.setBounds(89, 119, 116, 21);
frame.getContentPane().add(tf4);
tf4.setColumns(10);
```

```
tf3 = new JTextField();
tf3.setBounds(89, 94, 238, 21);
frame.getContentPane().add(tf3);
tf3.setColumns(10);
```

```
jcb1 = new JComboBox();
```

```
for(int i=0; i<customer_dist.length; i++) {
    jcb1.addItem(customer_dist[i]);
}
```

```
jcb1.setBounds(89, 144, 94, 21);
frame.getContentPane().add(jcb1);
```

```
panel = new JPanel();
panel.setBounds(0, 0, 371, 33);
frame.getContentPane().add(panel);
panel.setLayout(null);
```

```
btnMoveFirst = new JButton("");
btnMoveFirst.setBackground(SystemColor.menu);
btnMoveFirst.setIcon(new ImageIcon("C:\\TOOLBAR\\FIRST.GIF"));
btnMoveFirst.setBounds(12, 5, 39, 23);
panel.add(btnMoveFirst);
```

```
btnMovePrev = new JButton("");
btnMovePrev.setBackground(SystemColor.menu);
btnMovePrev.setIcon(new ImageIcon("C:\\TOOLBAR\\PREV.GIF"));
btnMovePrev.setBounds(49, 5, 39, 23);
panel.add(btnMovePrev);
btnMoveNext = new JButton("");
btnMoveNext.setBackground(SystemColor.menu);
btnMoveNext.setIcon(new ImageIcon("C:\\TOOLBAR\\NEXT.GIF"));
btnMoveNext.setBounds(87, 5, 39, 23);
```

```

panel.add(btnMoveNext);

btnMoveLast = new JButton("");
btnMoveLast.setIcon(new ImageIcon("C:\\TOOLBAR\\LAST.GIF"));
btnMoveLast.setBackground(SystemColor.menu);
btnMoveLast.setBounds(125, 5, 39, 23);

panel.add(btnMoveLast);

btnInsertItem = new JButton("");
btnInsertItem.setBackground(SystemColor.menu);
btnInsertItem.setIcon(new ImageIcon("C:\\TOOLBAR\\INSERT.GIF"));
btnInsertItem.setBounds(162, 5, 39, 23);
panel.add(btnInsertItem);

btnDeleteItem = new JButton("");
btnDeleteItem.setBackground(SystemColor.menu);
btnDeleteItem.setIcon(new ImageIcon("C:\\TOOLBAR\\DELETE.GIF"));
btnDeleteItem.setBounds(198, 5, 39, 23);
panel.add(btnDeleteItem);

btnSaveItem = new JButton("");
btnSaveItem.setBackground(SystemColor.menu);
btnSaveItem.setIcon(new ImageIcon("C:\\TOOLBAR\\SAVE.GIF"));
btnSaveItem.setBounds(236, 5, 39, 23);
panel.add(btnSaveItem);

btnPrintItem = new JButton("");
btnPrintItem.setBackground(SystemColor.menu);
btnPrintItem.setIcon(new ImageIcon("C:\\TOOLBAR\\PRINT.GIF"));
btnPrintItem.setBounds(274, 5, 39, 23);
panel.add(btnPrintItem);

btnCloseWindow = new JButton("");
btnCloseWindow.setBackground(SystemColor.menu);
btnCloseWindow.setIcon(new ImageIcon("C:\\TOOLBAR\\EXIT.GIF"));
btnCloseWindow.setBounds(310, 5, 39, 23);
panel.add(btnCloseWindow);
btnMoveFirst.addActionListener(this);
btnMovePrev.addActionListener(this);
btnMoveNext.addActionListener(this);
btnMoveLast.addActionListener(this);
btnInsertItem.addActionListener(this);
btnDeleteItem.addActionListener(this);

```

```

        btnSaveItem.addActionListener(this);
        btnPrintItem.addActionListener(this);
        btnCloseWindow.addActionListener(this);
    }

```

@Override

```

public void actionPerformed(ActionEvent e) {
    if(e.getSource() == btnSaveItem) {
        subSaveItem();
    } else if(e.getSource() == btnInsertItem) {
        subInsertItem();
    } else if(e.getSource() == btnDeleteItem) {
        subDeleteItem();
    } else if(e.getSource() == btnMoveFirst) {
        subMoveFirst();
    } else if(e.getSource() == btnMovePrev) {
        subMovePrev();
    } else if(e.getSource() == btnMoveNext) {
        subMoveNext();
    } else if(e.getSource() == btnMoveLast) {
        subMoveLast();
    } else if(e.getSource() == btnPrintItem) {
        subPrintItem();
    } else if(e.getSource() == btnCloseWindow) {
        subCloseWindow();
    }
}

public void clearItems() {
    tf1.setText("");
    tf2.setText("");
    tf3.setText("");
    tf4.setText("");
}

public void setItems() {
    try {
        strCno = rs.getString(1).trim(); // c_no
        strCname = rs.getString(2).trim(); // c_name
        strCaddr = rs.getString(3); // c_addr
        strCphone = rs.getString(4); // c_phone
        strCdist = rs.getString(5).trim(); // c_dist
        System.out.println(strCno+","+strCname+","+strCaddr+","+strCphone+","+strCdist);
    }
}

```

```

        tf1.setText(strCno);
        tf2.setText(strCname);
        tf3.setText(strCaddr);
        tf4.setText(strCphone);
        /* 고객구분코드의 값에 따라 setting
        00 : 개인고객 , 11 : 기업고객
        */
        if (strDist.equals("00")) {
            jcb1.setSelectedIndex(0);
        } else if (strDist.equals("11")) {
            jcb1.setSelectedIndex(1);
        }
    } catch (SQLException e) {
        e.printStackTrace();
    }
}

public boolean getItems() {
    int intIndex;
    strCno = tf1.getText().trim();
    strCname = tf2.getText().trim();
    strCaddr = tf3.getText().trim();
    strCphone = tf4.getText().trim();
    intIndex = jcb1.getSelectedIndex();
    if (strCno == null) {
        JOptionPane.showMessageDialog(null, "고객번호가 누락되었습니다.");
        return false;
    }
    if (strCno.length() < 12 ) {
        JOptionPane.showMessageDialog(null, "잘못된 고객번호입니다.");
        return false;
    }
    if (strCname == null) {
        JOptionPane.showMessageDialog(null, "고객성명이 누락되었습니다.");
        return false;
    }
    switch(intIndex) {
        case 0 : strDist = "00";
        case 1 : strDist = "11";
    }
    return true;
}
}

```

```

public void subMoveFirst() { // cursor의 위치를 처음으로 이동
    try {
        if(!rs.isFirst()) {
            rs.first();
            setItems();
        }
    } catch(SQLException se) {
        JOptionPane.showMessageDialog(null, se);
    }
}

public void subMovePrev() { // cursor의 위치를 현재에서 이전으로 이동
    try {
        if(!rs.isFirst()) {
            rs.previous();
            setItems();
        }
    } catch(SQLException se) {
        JOptionPane.showMessageDialog(null, se);
    }
}

public void subMoveNext() { // cursor의 위치를 현재에서 다음으로 이동
    try {
        if(!rs.isLast()) {
            rs.next();
            setItems();
        }
    } catch(SQLException se) {
        JOptionPane.showMessageDialog(null, se);
    }
}

public void subMoveLast() { // cursor의 위치를 마지막으로 이동
    try {
        if(!rs.isLast()) {
            rs.last();
            setItems();
        }
    } catch(SQLException se) {
        JOptionPane.showMessageDialog(null, se);
    }
}

public void subSaveItem() { //새로운 데이터인지, 현재 데이터의 수정인지

```



```

if (bInsertFlag == true) { // Insert버튼이 눌렀다면..
if (getItems()) {
try {
rs.moveToInsertRow(); // cursor의 위치를 insert buffer로 이동
rs.updateString(1, strCno.trim()); // cursor의 내용을 클래스 변수로 setting
rs.updateString(2, strCname.trim());
rs.updateString(3, strCaddr.trim());
rs.updateString(4, strCphone.trim());
rs.updateString(5, strCdist.trim());
rs.insertRow(); // setting된 insert buffer내용을 데이터베이스에 반영
bInsertFlag = false
conn.commit();
rs.moveToCurrentRow();
} catch (SQLException se) {
JOptionPane.showMessageDialog(null, se);
}
}
} else { // insert 버튼이 눌리지 않았다면
if(getItems()) {
try {
rs.updateString(1, strCno.trim()); // 클래스 변수의 내용을 cursor에 반영
rs.updateString(2, strCname.trim());
rs.updateString(3, strCaddr.trim());
rs.updateString(4, strCphone.trim());
rs.updateString(5, strCdist.trim());
rs.updateRow(); // cursor의 변경사항을 데이터베이스에 반영
conn.commit();
} catch(SQLException se) {
JOptionPane.showMessageDialog(null, se);
se.printStackTrace();
}
}
}
}

public void subInsertItem() { // Insert버튼이 눌렀을 경우 처리
clearItems();
bInsertFlag = true
}

public void subDeleteItem() { // Delete버튼이 눌렀을 경우 처리
int rtnValue;
rtnValue = JOptionPane.showConfirmDialog(null, "현재 데이터를 삭제 합니다.", "확인",
JOptionPane.OK_CANCEL_OPTION, JOptionPane.QUESTION_MESSAGE);

```

```

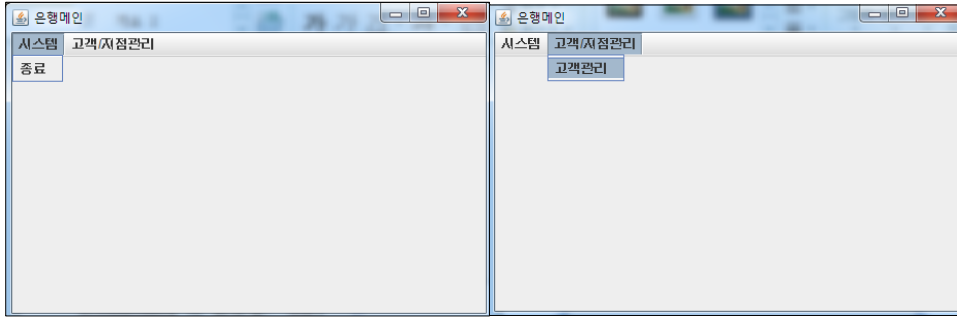
    try {
        if (rtnValue == 0) {
            rs.deleteRow();
            subMoveNext(); // 다음행으로 이동
            conn.commit();
        }
    } catch (SQLException se) {
        JOptionPane.showMessageDialog(null, se);
    }
}

public void subPrintItem() // 인쇄버튼이 눌렀을 경우 처리
{
    // 인쇄모듈 구성
}

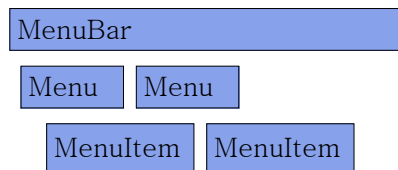
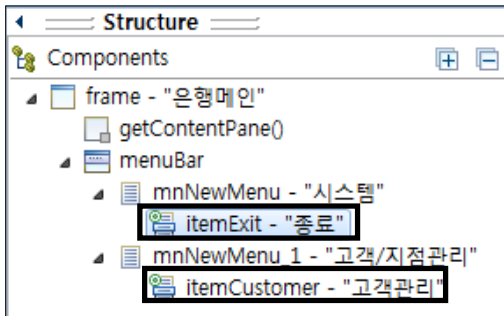
public void subCloseWindow() { // 닫기버튼이 눌렀을 경우 처리
    try {
        stmt.close();
    } catch (SQLException e) {
        e.printStackTrace();
    }
    frame.dispose();
}
}

```

수행과제2 : mainBank.java



JMenuItem 들의 변수명 : JMenuItem itemExit, itemCustomer;
삽입할 클래스명 선언 : fCustomer ifCustomer;



수행과제1(fCustomer.java) 수정

- 1) public class fCustomer **extends JInternalFrame** implements ActionListener { //추가
- 2) main()메소드 삭제 및 주석처리
- 3) frame = new JFrame(); 삭제 및 주석처리
- 4) frame. 부분을 this. 으로 수정후 잘못 바뀐 Jthis.EXIT_ON_CLOSE 부분은 JFrame.EXIT_ON_CLOSE으로 수정해둘것

수행과제2(mainBank.java) 수정

```

public void actionPerformed(ActionEvent e) {
    if(e.getSource()== itemCustomer) menuCustomer();
    if(e.getSource()== itemExit) menuExit();
}
private void menuCustomer() {
    ifCustomer=new fCustomer();
    ifCustomer.pack();
    ifCustomer.setVisible(true);
    frame.getContentPane().add(ifCustomer);
    try {
        ifCustomer.setSelected(true);
    } catch (PropertyVetoException e) {
        e.printStackTrace();
    }
}
private void menuExit() {
    System.exit(0);
}
}
    
```

만약 (fCustomer)가 삽입이 안되면 **frame.getContentPane().setLayout(null);**이부분이 포함되어 있을 경우가 있음 삭제하시오

```

import java.awt.EventQueue;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import java.beans.PropertyVetoException;

import javax.swing.JFrame;
    
```

```

import javax.swing.JMenu;
import javax.swing.JMenuBar;
import javax.swing.JMenuItem;

public class mainBank implements ActionListener{

    private JFrame frame;
    fCustomer ifCustomer;
    JMenuItem itemExit, itemCustomer;

    /**
     * Launch the application.
     */
    public static void main(String[] args) {
        EventQueue.invokeLater(new Runnable() {
            public void run() {
                try {
                    mainBank window = new mainBank();
                    window.frame.setVisible(true);
                } catch (Exception e) {
                    e.printStackTrace();
                }
            }
        });
    }

    /**
     * Create the application.
     */
    public mainBank() {
        initialize();
    }

    /**
     * Initialize the contents of the frame.
     */
    private void initialize() {
        frame = new JFrame();
        frame.setTitle("\u7400\u589\uBA54\uC778");
        frame.setBounds(100, 100, 450, 300);
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
    }

```

```

JMenuBar menuBar = new JMenuBar();
frame.setJMenuBar(menuBar);

JMenu mnNewMenu = new JMenu("\uC2DC\uC2A4\uD15C");
menuBar.add(mnNewMenu);

itemExit = new JMenuItem("\uC885\uB8CC");
mnNewMenu.add(itemExit);

JMenu mnNewMenu_1 = new JMenu("\uACE0\uAC1D/\uC9C0\uC810\uAD00\uB9AC");
menuBar.add(mnNewMenu_1);

itemCustomer = new JMenuItem("\uACE0\uAC1D\uAD00\uB9AC");

mnNewMenu_1.add(itemCustomer);
itemExit.addActionListener(this);
itemCustomer.addActionListener(this);
}

@Override
public void actionPerformed(ActionEvent e) {
    if(e.getSource()== itemCustomer) menuCustomer();
    if(e.getSource()== itemExit) menuExit();
}

private void menuCustomer() {
    ifCustomer=new fCustomer();
    ifCustomer.pack();
    ifCustomer.setVisible(true);
    frame.getContentPane().add(ifCustomer);
    try {
        ifCustomer.setSelected(true);
    } catch (PropertyVetoException e) {
        e.printStackTrace();
    }
}

private void menuExit() {
    System.exit(0);
}
}

```