



2022

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Software Construction and Development

Lab 04

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Section: SE – A

TASK 01

- Done and marked in Lab.

TASK 02

CODE

```
package Task02;

import java.awt.EventQueue;

import javax.swing.JFrame;
import javax.swing.JTabbedPane;
import javax.swing.JPanel;
import javax.swing.ImageIcon;
import javax.swing.JLabel;
import javax.swing.JOptionPane;
import javax.swing.JTextField;
import javax.swing.JButton;
import java.awt.event.ActionListener;
import java.awt.event.ActionEvent;

public class Task2 {

    private JFrame frame;
    private JTextField Add_No_of_Customers;
    private JTextField Add_Name;
    private JTextField Add_AreaCode;
    private JTextField Add_PhoneNo;
    private JTextField Add_CustomerID;
    private JTextField Display_PhoneNo;
    private JTextField Display_CustID;
    private JTextField Display_AreaCode;
    private JTextField Display_Name;
    private JTextField Update_CustomerID;
    private JTextField Update_Name;
    private JTextField Update_AreaCode;
    private JTextField Update_PhoneNo;
    int i =0;
    String[] Array_Name = new String[10];
    String[] Array_AreaCode = new String[10];
    String[] Array_PhoneNo = new String[10];
    int count = 0;
```

```

public static void main(String[] args) {
    EventQueue.invokeLater(new Runnable() {
        public void run() {
            try {
                Task2 window = new Task2();
                window.frame.setVisible(true);
            } catch (Exception e) {
                e.printStackTrace();
            }
        }
    });
}

class Customers{
    String name,areacode,phoneno;
    public void setdetails(String name, String ac, String pn)
    {
        this.name = name;
        this.areacode = ac;
        this.phoneno = pn;
    }
    public String get_name()
    {
        return this.name;
    }
    public String get_areacode()
    {
        return this.areacode;
    }
    public String get_phoneno()
    {
        return this.phoneno;
    }
}

/**
 * Create the application.
 */
public Task2() {
    initialize();
}

/**
 * Initialize the contents of the frame.
 */
private void initialize() {

```

```

frame = new JFrame();
frame.setBounds(100, 100, 550, 314);
frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
frame.getContentPane().setLayout(null);
frame.setUndecorated(true);
JTabbedPane tabbedPane = new JTabbedPane(JTabbedPane.TOP);
tabbedPane.setBounds(10, 11, 514, 253);
frame.getContentPane().add(tabbedPane);

JPanel panel = new JPanel();
tabbedPane.addTab("Main", new ImageIcon("C:\\Users\\Amman Soomro\\SCD_Lab-workspace\\Lab04\\src\\Task02\\icons8_star_24px.png"), panel, null);
panel.setLayout(null);

JLabel lblNewLabel = new JLabel("No of Customers");
lblNewLabel.setIcon(new ImageIcon("C:\\Users\\Amman Soomro\\SCD_Lab-workspace\\Lab04\\src\\Task02\\icons8_customer_22px.png"));
lblNewLabel.setBounds(75, 80, 130, 28);
panel.add(lblNewLabel);

Add_No_of_Customers = new JTextField();
Add_No_of_Customers.setBounds(221, 84, 220, 20);
panel.add(Add_No_of_Customers);
Add_No_of_Customers.setBorder(null);
Add_No_of_Customers.setColumns(10);

JButton btnNewButton = new JButton("Submit");
btnNewButton.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent e) {
        i = Integer.parseInt(Add_No_of_Customers.getText());
        JOptionPane.showMessageDialog(frame, "Object for " + i + " Customers Created.\nUse Customer ID's as [0,1,..., "+i+"]");
    }
});
btnNewButton.setBounds(185, 158, 89, 23);
panel.add(btnNewButton);

JPanel panel_1 = new JPanel();
tabbedPane.addTab("Add", new ImageIcon("C:\\Users\\Amman Soomro\\SCD_Lab-workspace\\Lab04\\src\\Task02\\icons8_add_30px.png"), panel_1, null);
panel_1.setLayout(null);

JLabel lblNewLabel_1 = new JLabel("Name");
lblNewLabel_1.setBounds(111, 51, 81, 14);

```

```

panel_1.add(lblNewLabel_1);

JLabel lblNewLabel_1_1 = new JLabel("Area Code");
lblNewLabel_1_1.setBounds(111, 76, 81, 14);
panel_1.add(lblNewLabel_1_1);

JLabel lblNewLabel_1_2 = new JLabel("Phone No");
lblNewLabel_1_2.setBounds(111, 101, 81, 14);
panel_1.add(lblNewLabel_1_2);

Add_Name = new JTextField();
Add_Name.setBounds(240, 51, 175, 20);
panel_1.add(Add_Name);
Add_Name.setColumns(10);
Add_Name.setBorder(null);

Add_AreaCode = new JTextField();
Add_AreaCode.setColumns(10);
Add_AreaCode.setBounds(240, 76, 175, 20);
Add_AreaCode.setBorder(null);
panel_1.add(Add_AreaCode);

Add_PhoneNo = new JTextField();
Add_PhoneNo.setColumns(10);
Add_PhoneNo.setBounds(240, 101, 175, 20);
Add_PhoneNo.setBorder(null);

panel_1.add(Add_PhoneNo);

JButton AddCustomerButton = new JButton("Add");
AddCustomerButton.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent e) {
        Add_CustomerID.setText(String.valueOf(count));
        if(count > i)
        {
            JOptionPane.showMessageDialog(frame, "Cannot add any more
Customers.", "Warning", JOptionPane.WARNING_MESSAGE);
        }
        else
        {
            Array_Name[count] = Add_Name.getText();
            Array_PhoneNo[count] = Add_PhoneNo.getText();
            Array_AreaCode[count] = Add_AreaCode.getText();
            count++;
        }
    }
}

```

```

});
AddCustomerButton.setIcon(new ImageIcon("C:\\Users\\Amman
Soomro\\SCD_Lab-workspace\\Lab04\\src\\Task02\\icons8_add_18px.png"));
AddCustomerButton.setSelectedIcon(new ImageIcon("C:\\Users\\Amman
Soomro\\SCD_Lab-workspace\\Lab04\\src\\Task02\\icons8_add_18px.png"));
AddCustomerButton.setBounds(218, 175, 89, 23);
panel_1.add(AddCustomerButton);

JLabel lblNewLabel_1_2_1 = new JLabel("Customer ID");
lblNewLabel_1_2_1.setBounds(111, 132, 81, 14);
panel_1.add(lblNewLabel_1_2_1);

Add_CustomerID = new JTextField();
Add_CustomerID.setColumns(10);
Add_CustomerID.setBounds(240, 129, 175, 20);
Add_CustomerID.setBorder(null);
panel_1.add(Add_CustomerID);

JPanel panel_2 = new JPanel();
tabbedPane.addTab("Display", new ImageIcon("C:\\Users\\Amman
Soomro\\SCD_Lab-workspace\\Lab04\\src\\Task02\\icons8_display_26px.png"),
panel_2, null);
panel_2.setLayout(null);

Display_PhoneNo = new JTextField();
Display_PhoneNo.setEnabled(false);
Display_PhoneNo.setColumns(10);
Display_PhoneNo.setBorder(null);
Display_PhoneNo.setBounds(246, 121, 175, 20);
panel_2.add(Display_PhoneNo);

Display_CustID = new JTextField();
Display_CustID.setColumns(10);
Display_CustID.setBorder(null);
Display_CustID.setBounds(246, 30, 175, 20);
panel_2.add(Display_CustID);

Display_AreaCode = new JTextField();
Display_AreaCode.setEnabled(false);
Display_AreaCode.setColumns(10);
Display_AreaCode.setBorder(null);
Display_AreaCode.setBounds(246, 96, 175, 20);
panel_2.add(Display_AreaCode);

Display_Name = new JTextField();

```

```

Display_Name.setEnabled(false);
Display_Name.setColumns(10);
Display_Name.setBorder(null);
Display_Name.setBounds(246, 71, 175, 20);
panel_2.add(Display_Name);

JLabel lblNewLabel_1_3 = new JLabel("Name");
lblNewLabel_1_3.setBounds(117, 71, 81, 14);
panel_2.add(lblNewLabel_1_3);

JLabel lblNewLabel_1_1_1 = new JLabel("Area Code");
lblNewLabel_1_1_1.setBounds(117, 96, 81, 14);
panel_2.add(lblNewLabel_1_1_1);

JLabel lblNewLabel_1_2_2 = new JLabel("Phone No");
lblNewLabel_1_2_2.setBounds(117, 121, 81, 14);
panel_2.add(lblNewLabel_1_2_2);

JLabel lblNewLabel_1_2_1_1 = new JLabel("Customer ID");
lblNewLabel_1_2_1_1.setBounds(117, 33, 81, 14);
panel_2.add(lblNewLabel_1_2_1_1);

JButton Display_Button = new JButton("Display");
Display_Button.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent e) {
        int getid=0;
        getid = Integer.parseInt(Display_CustID.getText());
        if(getid>i)
        {
            JOptionPane.showMessageDialog(frame, "Invalid Customer ID.",
"Warning", JOptionPane.WARNING_MESSAGE);
        }
        else {
            Display_Name.setText(Array_Name[getid]);
            Display_AreaCode.setText(Array_AreaCode[getid]);
            Display_PhoneNo.setText(Array_PhoneNo[getid]);
        }
    }
});
Display_Button.setBounds(202, 164, 89, 23);
panel_2.add(Display_Button);

JPanel panel_3 = new JPanel();

```

```
tabbedPane.addTab("Update", new ImageIcon("C:\\Users\\Amman
Soomro\\SCD_Lab-workspace\\Lab04\\src\\Task02\\icons8_update_24px.png"), panel_3,
null);
panel_3.setLayout(null);

JLabel lblNewLabel_1_2_1_1_1 = new JLabel("Customer ID");
lblNewLabel_1_2_1_1_1.setBounds(106, 31, 81, 14);
panel_3.add(lblNewLabel_1_2_1_1_1);

Update_CustomerID = new JTextField();
Update_CustomerID.setColumns(10);
Update_CustomerID.setBorder(null);
Update_CustomerID.setBounds(235, 28, 175, 20);
panel_3.add(Update_CustomerID);

Update_Name = new JTextField();
Update_Name.setColumns(10);
Update_Name.setBorder(null);
Update_Name.setBounds(235, 69, 175, 20);
panel_3.add(Update_Name);

JLabel lblNewLabel_1_3_1 = new JLabel("Name");
lblNewLabel_1_3_1.setBounds(106, 69, 81, 14);
panel_3.add(lblNewLabel_1_3_1);

JLabel lblNewLabel_1_1_1_1 = new JLabel("Area Code");
lblNewLabel_1_1_1_1.setBounds(106, 94, 81, 14);
panel_3.add(lblNewLabel_1_1_1_1);

Update_AreaCode = new JTextField();
Update_AreaCode.setColumns(10);
Update_AreaCode.setBorder(null);
Update_AreaCode.setBounds(235, 94, 175, 20);
panel_3.add(Update_AreaCode);

Update_PhoneNo = new JTextField();
Update_PhoneNo.setColumns(10);
Update_PhoneNo.setBorder(null);
Update_PhoneNo.setBounds(235, 119, 175, 20);
panel_3.add(Update_PhoneNo);

JLabel lblNewLabel_1_2_2_1 = new JLabel("Phone No");
lblNewLabel_1_2_2_1.setBounds(106, 119, 81, 14);
panel_3.add(lblNewLabel_1_2_2_1);
```



```

JButton Update_Button = new JButton("Update");
Update_Button.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent e) {
        int getid=0;
        getid = Integer.parseInt(Update_CustomerID.getText());
        if(getid > i)
        {
            JOptionPane.showMessageDialog(frame, "Invalid Customer ID.",
"Warning", JOptionPane.WARNING_MESSAGE);
        }
        else
        {
            Array_Name[getid] = Update_Name.getText();
            Array_PhoneNo[getid] = Update_PhoneNo.getText();
            Array_AreaCode[getid] = Update_AreaCode.getText();
            JOptionPane.showMessageDialog(frame, "Updated Successfully.");
        }
    }
});
Update_Button.setBounds(191, 163, 89, 23);
panel_3.add(Update_Button);
}
}

```

```
package Task02;

import java.awt.EventQueue;

import javax.swing.JFrame;
import javax.swing.JTabbedPane;
import javax.swing.JPanel;
import javax.swing.ImageIcon;
import javax.swing.JLabel;
import javax.swing.JOptionPane;
import javax.swing.JTextField;
import javax.swing.JButton;
import java.awt.event.ActionListener;
import java.awt.event.ActionEvent;

public class Task2 {

    private JFrame frame;
    private JTextField Add_No_of_Customers;
    private JTextField Add_Name;
    private JTextField Add_AreaCode;
    private JTextField Add_PhoneNo;
    private JTextField Add_CustomerID;
    private JTextField Display_PhoneNo;
    private JTextField Display_CustID;
    private JTextField Display_AreaCode;
    private JTextField Display_Name;
    private JTextField Update_CustomerID;
    private JTextField Update_Name;
    private JTextField Update_AreaCode;
    private JTextField Update_PhoneNo;
    int i =0;
    String[] Array_Name = new String[10];
    String[] Array_AreaCode = new String[10];
    String[] Array_PhoneNo = new String[10];
    int count = 0;

    public static void main(String[] args) {
        EventQueue.invokeLater(new Runnable() {
            public void run() {
                try {
                    Task2 window = new Task2();
                    window.frame.setVisible(true);
                } catch (Exception e) {
```

OUTPUT

The screenshot shows a web application interface with a top navigation bar containing four tabs: 'Main' (with a star icon), 'Add' (with a plus icon), 'Display' (with a grid icon), and 'Update' (with a circular arrow icon). The 'Main' tab is currently selected. Below the navigation bar, there is a form with a label 'No of Customers' and a text input field containing the number '3'. A 'Submit' button is located below the input field. A message dialog box is overlaid on the right side of the form, titled 'Message'. It contains an information icon (i) and the text: 'Object for 3 Customers Created. Use Customer ID's as [0,1,...,3]'. An 'OK' button is at the bottom of the dialog box.

The screenshot shows the same web application interface as the first screenshot, but with the 'Add' tab selected. The form contains four labeled input fields: 'Name' with the value 'Amman', 'Area Code' with the value '78100', 'Phone No' with the value '031395729941', and 'Customer ID' with the value '0'. Below these fields is an 'Add' button with a green plus icon.

★ Main

⊕ Add

⌘ Display

↻ Update

Customer ID

0

Name

Amman

Area Code

78100

Phone No

031395729941

Display

★ Main

⊕ Add

⌘ Display

↻ Update

Customer ID

5

Name

Amman

Area Code

78100

Phone No

031395729941

Display

Warning

⚠ Invalid Customer ID.

OK

★ Main

⊕ Add

⌘ Display

↻ Update

Customer ID

0

Name

Arasd

Area Code

12412

Phone No

61234124

Update

Message

ⓘ Updated Successfully.

OK

★ Main

⊕ Add

⌘ Display

↻ Update

Customer ID

0

Name

Arasd

Area Code

12412

Phone No

61234124

Display

TASK 03

CODE

MAIN FRAME

```
package Task03;

import java.awt.BorderLayout;
import java.awt.EventQueue;

import javax.swing.JFrame;
import javax.swing.JPanel;
import javax.swing.border.EmptyBorder;
import javax.swing.JButton;
import java.awt.Color;
import java.awt.event.ActionListener;
import java.awt.event.ActionEvent;

public class MainFrame extends JFrame {

    private JPanel contentPane;
    public int i =0;
    public String[] Array_Name = new String[10];
    public String[] Array_AreaCode = new String[10];
    public String[] Array_PhoneNo = new String[10];
    public int count = 0;
    /**
     * Launch the application.
     */
    public static void main(String[] args) {
        EventQueue.invokeLater(new Runnable() {
            public void run() {
                try {
                    MainFrame frame = new MainFrame();
                    frame.setVisible(true);
                } catch (Exception e) {
                    e.printStackTrace();
                }
            }
        });
    }

    public MainFrame() {
        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        setBounds(100, 100, 450, 300);
    }
}
```

```

contentPane = new JPanel();
contentPane.setBorder(new EmptyBorder(5, 5, 5, 5));
setContentPane(contentPane);
contentPane.setLayout(null);

JButton btnNewButton = new JButton("No of Customer");
btnNewButton.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent e) {
        No_of_Records F = new No_of_Records();
        F.setVisible(true);
    }
});
btnNewButton.setBounds(139, 48, 162, 23);
contentPane.add(btnNewButton);

JButton btnAddCustomer = new JButton("Add Customer");
btnAddCustomer.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent e) {
        Add_Customer AddFrame = new Add_Customer();
        AddFrame.setVisible(true);
    }
});
btnAddCustomer.setBounds(139, 90, 162, 23);
contentPane.add(btnAddCustomer);

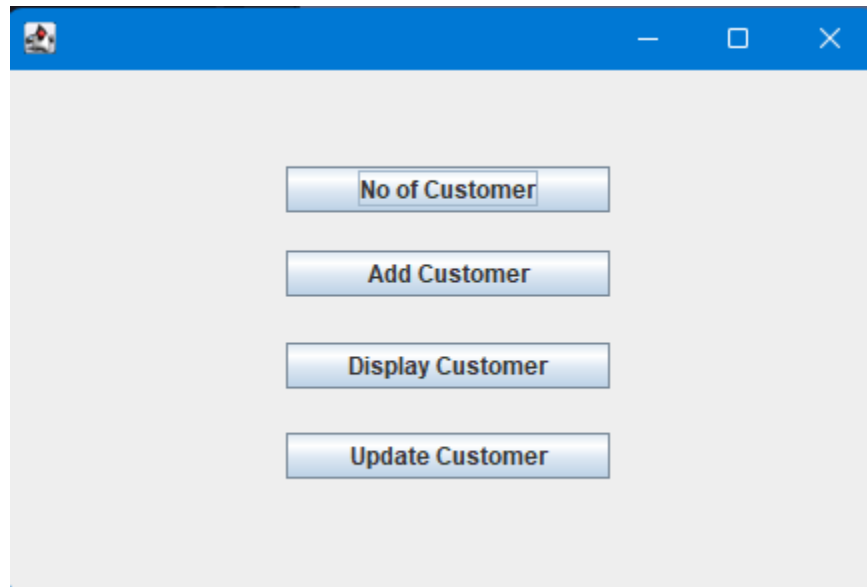
JButton btnDisplayCustomer = new JButton("Display Customer");
btnDisplayCustomer.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent e) {
        Display_Customer DisplayFrame = new Display_Customer();
        DisplayFrame.setVisible(true);
    }
});
btnDisplayCustomer.setBounds(139, 136, 162, 23);
contentPane.add(btnDisplayCustomer);

JButton btnUpdateCustomer = new JButton("Update Customer");
btnUpdateCustomer.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent e) {
        Update_Customer UpdateFrame = new Update_Customer();
        UpdateFrame.setVisible(true);
    }
});
btnUpdateCustomer.setBounds(139, 181, 162, 23);
contentPane.add(btnUpdateCustomer);
}

```

```
}
```

OUTPUT



NO OF RECORDS

```
package Task03;
import java.awt.BorderLayout;
import java.awt.EventQueue;

import javax.swing.JFrame;
import javax.swing.JPanel;
import javax.swing.border.EmptyBorder;
import javax.swing.JLabel;
import javax.swing.JOptionPane;
import javax.swing.JTextField;
import javax.swing.JButton;
import java.awt.event.ActionListener;
import java.awt.event.ActionEvent;

public class No_of_Records extends JFrame {

    private JPanel contentPane;
    private JTextField Records_Field;
    MainFrame Main_Frame = new MainFrame();
    private JButton btnNewButton;
    private JButton btnBack;
    /**
     * Launch the application.
     */
}
```



```

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

    /**
     * Create the frame.
     */
    public No_of_Records() {
        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        setBounds(100, 100, 450, 300);
        contentPane = new JPanel();
        contentPane.setBorder(new EmptyBorder(5, 5, 5, 5));
        setContentPane(contentPane);
        contentPane.setLayout(null);

        JLabel lblNewLabel = new JLabel("No of Records:");
        lblNewLabel.setBounds(45, 120, 117, 14);
        contentPane.add(lblNewLabel);

        Records_Field = new JTextField();
        Records_Field.setBounds(138, 117, 203, 20);
        contentPane.add(Records_Field);
        Records_Field.setColumns(10);

        btnNewButton = new JButton("Submit");
        btnNewButton.addActionListener(new ActionListener() {
            public void actionPerformed(ActionEvent e) {
                Main_Frame.i = Integer.parseInt(Records_Field.getText());
                JOptionPane.showMessageDialog(Main_Frame, "Object for " +
Main_Frame.i + " Customers Created.\nUse Customer ID's as
[0,1,...,"+Main_Frame.i+"]");
            }
        });
        btnNewButton.setBounds(98, 206, 89, 23);
        contentPane.add(btnNewButton);
    }

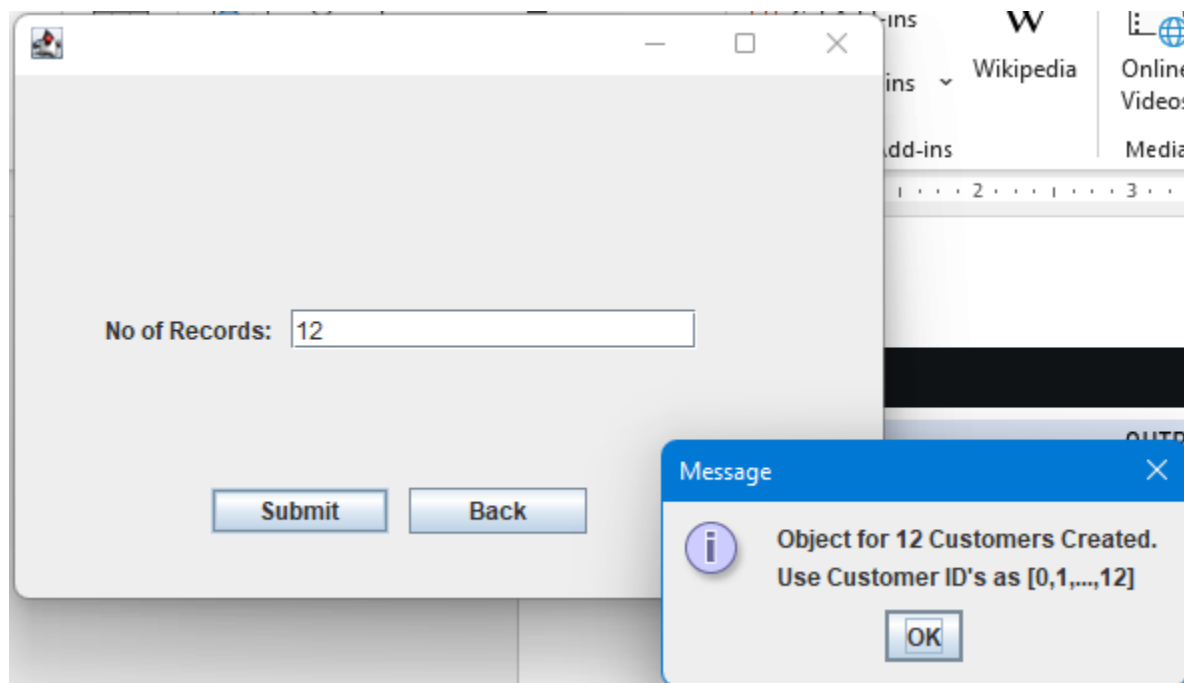
```

```

        btnBack = new JButton("Back");
        btnBack.addActionListener(new ActionListener() {
            public void actionPerformed(ActionEvent e) {
                dispose();
            }
        });
        btnBack.setBounds(197, 206, 89, 23);
        contentPane.add(btnBack);
    }
}

```

OUTPUT



ADD CUSTOMER

```

package Task03;

import java.awt.BorderLayout;
import java.awt.EventQueue;

import javax.swing.JFrame;
import javax.swing.JPanel;
import javax.swing.border.EmptyBorder;

```

```

import javax.swing.JLabel;
import javax.swing.JOptionPane;
import javax.swing.JTextField;
import javax.swing.JButton;
import java.awt.event.ActionListener;
import java.awt.event.ActionEvent;

public class Add_Customer extends JFrame {

    private JPanel contentPane;
    private JTextField Add_Id;
    private JTextField Add_Name;
    private JTextField Add_AreaCode;
    private JTextField Add_PhoneNo;
    MainFrame Main_Frame = new MainFrame();
    int count = 0;

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

    /**
     * Create the frame.
     */
    public Add_Customer() {
        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        setBounds(100, 100, 450, 300);
        contentPane = new JPanel();
        contentPane.setBorder(new EmptyBorder(5, 5, 5, 5));
        setContentPane(contentPane);
        contentPane.setLayout(null);
    }

```

```

JLabel lblNewLabel = new JLabel("Customer ID");
lblNewLabel.setBounds(74, 41, 88, 14);
contentPane.add(lblNewLabel);

JLabel lblName = new JLabel("Name");
lblName.setBounds(74, 87, 88, 14);
contentPane.add(lblName);

JLabel lblAreaCode = new JLabel("Area Code");
lblAreaCode.setBounds(74, 115, 88, 14);
contentPane.add(lblAreaCode);

JLabel lblPhoneNo = new JLabel("Phone No");
lblPhoneNo.setBounds(74, 141, 88, 14);
contentPane.add(lblPhoneNo);

Add_Id = new JTextField();
Add_Id.setBounds(169, 38, 176, 17);
contentPane.add(Add_Id);
Add_Id.setColumns(10);

Add_Name = new JTextField();
Add_Name.setColumns(10);
Add_Name.setBounds(169, 84, 176, 17);
contentPane.add(Add_Name);

Add_AreaCode = new JTextField();
Add_AreaCode.setColumns(10);
Add_AreaCode.setBounds(169, 113, 176, 17);
contentPane.add(Add_AreaCode);

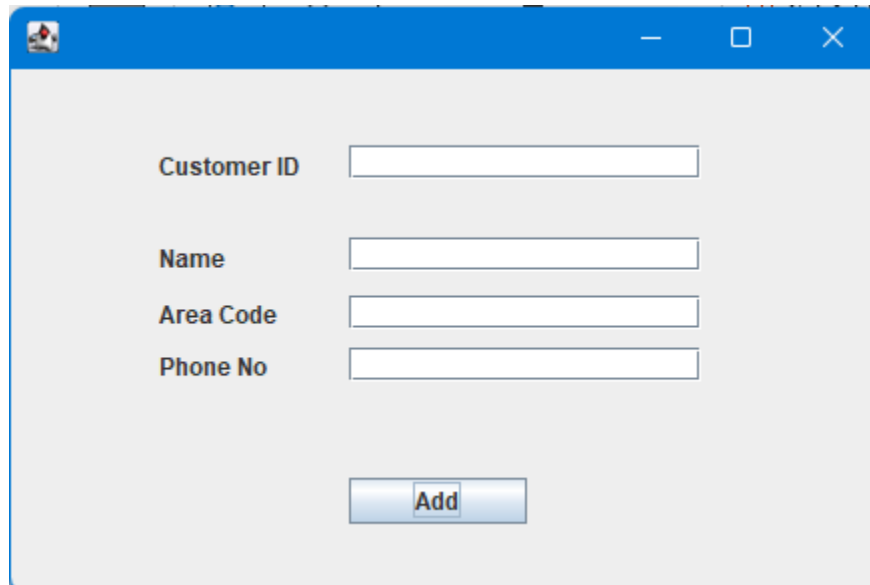
Add_PhoneNo = new JTextField();
Add_PhoneNo.setColumns(10);
Add_PhoneNo.setBounds(169, 139, 176, 17);
contentPane.add(Add_PhoneNo);

JButton btnNewButton = new JButton("Add");
btnNewButton.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent e) {
        Add_Id.setText(String.valueOf(count));
        if(count > Main_Frame.i)
        {
            JOptionPane.showMessageDialog(Main_Frame, "Cannot add any
more Customers.", "Warning", JOptionPane.WARNING_MESSAGE);
        }
        else

```

```
        {  
            Main_Frame.Array_Name[count] = Add_Name.getText();  
            Main_Frame.Array_PhoneNo[count] = Add_PhoneNo.getText();  
            Main_Frame.Array_AreaCode[count] = Add_AreaCode.getText();  
            count++;  
        }  
    }  
});  
btnNewButton.setBounds(169, 204, 89, 23);  
contentPane.add(btnNewButton);  
}  
}
```

OUTPUT



A screenshot of a Java Swing window titled "Customer Information". The window has a blue title bar with standard Windows window controls (minimize, maximize, close). The main content area is light gray and contains a form with four text input fields. The labels "Customer ID", "Name", "Area Code", and "Phone No" are positioned to the left of their respective input fields. Below the input fields is a blue button with the text "Add".

DISPLAY CUSTOMER

```
package Task03;

import java.awt.BorderLayout;
import java.awt.EventQueue;

import javax.swing.JFrame;
import javax.swing.JPanel;
import javax.swing.border.EmptyBorder;
import javax.swing.JLabel;
import javax.swing.JOptionPane;
import javax.swing.JTextField;
import javax.swing.JButton;
import java.awt.event.ActionListener;
import java.awt.event.ActionEvent;

public class Display_Customer extends JFrame {

    private JPanel contentPane;
    private JTextField Display_ID;
    private JTextField Display_Name;
    private JTextField Display_AreaCode;
    private JTextField Display_PhoneNo;
    MainFrame Main_Frame = new MainFrame();
    int count = 0;

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

    /**
     * Create the frame.
     */
}
```

```
public Display_Customer() {
    setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
    setBounds(100, 100, 450, 300);
    contentPane = new JPanel();
    contentPane.setBorder(new EmptyBorder(5, 5, 5, 5));
    setContentPane(contentPane);
    contentPane.setLayout(null);

    JLabel lblNewLabel = new JLabel("Customer ID");
    lblNewLabel.setBounds(83, 38, 88, 14);
    contentPane.add(lblNewLabel);

    Display_ID = new JTextField();
    Display_ID.setColumns(10);
    Display_ID.setBounds(178, 35, 176, 17);
    contentPane.add(Display_ID);

    Display_Name = new JTextField();
    Display_Name.setColumns(10);
    Display_Name.setBounds(178, 81, 176, 17);
    contentPane.add(Display_Name);

    JLabel lblName = new JLabel("Name");
    lblName.setBounds(83, 84, 88, 14);
    contentPane.add(lblName);

    JLabel lblAreaCode = new JLabel("Area Code");
    lblAreaCode.setBounds(83, 112, 88, 14);
    contentPane.add(lblAreaCode);

    Display_AreaCode = new JTextField();
    Display_AreaCode.setColumns(10);
    Display_AreaCode.setBounds(178, 110, 176, 17);
    contentPane.add(Display_AreaCode);

    Display_PhoneNo = new JTextField();
    Display_PhoneNo.setColumns(10);
    Display_PhoneNo.setBounds(178, 136, 176, 17);
    contentPane.add(Display_PhoneNo);

    JLabel lblPhoneNo = new JLabel("Phone No");
    lblPhoneNo.setBounds(83, 138, 88, 14);
    contentPane.add(lblPhoneNo);

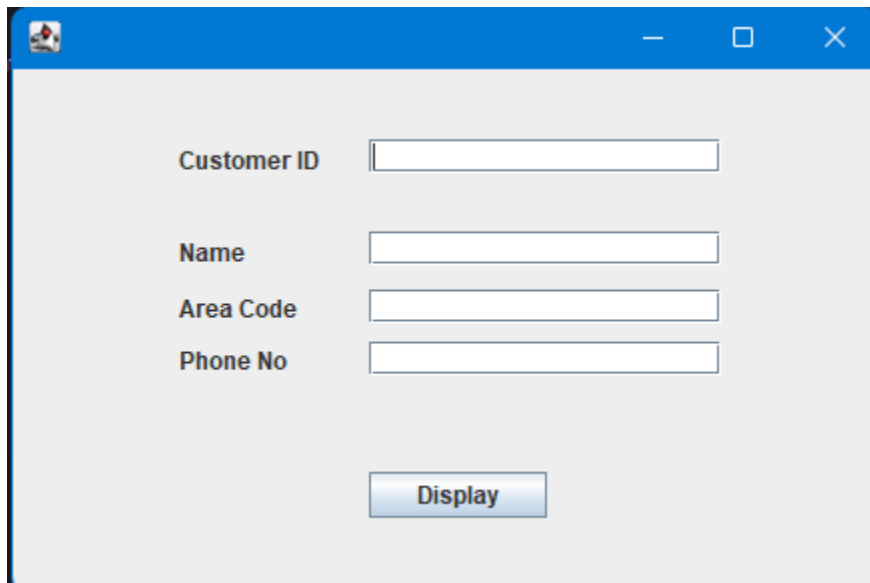
    JButton btnUpdate = new JButton("Display");
```

```

        btnUpdate.addActionListener(new ActionListener() {
            public void actionPerformed(ActionEvent e) {
                int getid=0;
                getid = Integer.parseInt(Display_ID.getText());
                if(getid>Main_Frame.i)
                {
                    JOptionPane.showMessageDialog(Main_Frame, "Invalid Customer ID.",
"Warning", JOptionPane.WARNING_MESSAGE);
                }
                else {
                    Display_Name.setText(Main_Frame.Array_Name[getid]);
                    Display_AreaCode.setText(Main_Frame.Array_AreaCode[getid]);
                    Display_PhoneNo.setText(Main_Frame.Array_PhoneNo[getid]);
                }
            }
        });
        btnUpdate.setBounds(178, 201, 89, 23);
        contentPane.add(btnUpdate);
    }
}

```

OUTPUT



The screenshot shows a Java Swing window with a blue title bar. Inside the window, there are four text input fields arranged vertically, each with a label to its left: 'Customer ID', 'Name', 'Area Code', and 'Phone No'. Below these fields is a single button labeled 'Display'.

UPDATE CUSTOMER

```

package Task03;

import java.awt.BorderLayout;

```



```

import java.awt.EventQueue;

import javax.swing.JFrame;
import javax.swing.JPanel;
import javax.swing.border.EmptyBorder;
import javax.swing.JLabel;
import javax.swing.JOptionPane;
import javax.swing.JTextField;
import javax.swing.JButton;
import java.awt.event.ActionListener;
import java.awt.event.ActionEvent;

public class Update_Customer extends JFrame {

    private JPanel contentPane;
    private JTextField Update_ID;
    private JTextField Update_Name;
    private JTextField Update_AreaCode;
    private JTextField Update_PhoneNo;
    MainFrame Main_Frame = new MainFrame();
    int count = 0;
    /**
     * Launch the application.
     */
    public static void main(String[] args) {
        EventQueue.invokeLater(new Runnable() {
            public void run() {
                try {
                    Update_Customer frame = new Update_Customer();
                    frame.setVisible(true);
                } catch (Exception e) {
                    e.printStackTrace();
                }
            }
        });
    }

    /**
     * Create the frame.
     */
    public Update_Customer() {
        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        setBounds(100, 100, 450, 300);
        contentPane = new JPanel();
        contentPane.setBorder(new EmptyBorder(5, 5, 5, 5));
    }

```

```

setContentPane(contentPane);
contentPane.setLayout(null);

JLabel lblNewLabel = new JLabel("Customer ID");
lblNewLabel.setBounds(91, 32, 88, 14);
contentPane.add(lblNewLabel);

Update_ID = new JTextField();
Update_ID.setColumns(10);
Update_ID.setBounds(186, 29, 176, 17);
contentPane.add(Update_ID);

Update_Name = new JTextField();
Update_Name.setColumns(10);
Update_Name.setBounds(186, 75, 176, 17);
contentPane.add(Update_Name);

JLabel lblName = new JLabel("Name");
lblName.setBounds(91, 78, 88, 14);
contentPane.add(lblName);

JLabel lblAreaCode = new JLabel("Area Code");
lblAreaCode.setBounds(91, 106, 88, 14);
contentPane.add(lblAreaCode);

Update_AreaCode = new JTextField();
Update_AreaCode.setColumns(10);
Update_AreaCode.setBounds(186, 104, 176, 17);
contentPane.add(Update_AreaCode);

Update_PhoneNo = new JTextField();
Update_PhoneNo.setColumns(10);
Update_PhoneNo.setBounds(186, 130, 176, 17);
contentPane.add(Update_PhoneNo);

JLabel lblPhoneNo = new JLabel("Phone No");
lblPhoneNo.setBounds(91, 132, 88, 14);
contentPane.add(lblPhoneNo);

JButton btnUpdate = new JButton("Update");
btnUpdate.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent e) {
        int getid=0;
        getid = Integer.parseInt(Update_ID.getText());
        if(getid > Main_Frame.i)

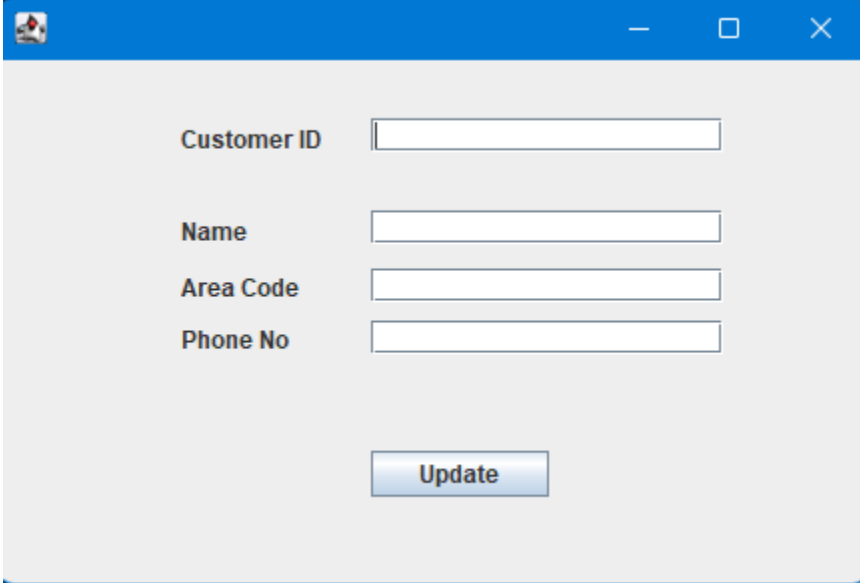
```

```

        {
            JOptionPane.showMessageDialog(Main_Frame, "Invalid Customer
ID.", "Warning", JOptionPane.WARNING_MESSAGE);
        }
        else
        {
            Main_Frame.Array_Name[getid] = Update_Name.getText();
            Main_Frame.Array_PhoneNo[getid] = Update_PhoneNo.getText();
            Main_Frame.Array_AreaCode[getid] = Update_AreaCode.getText();
            JOptionPane.showMessageDialog(Main_Frame, "Updated
Successfully.");
        }
    }
});
btnUpdate.setBounds(186, 195, 89, 23);
contentPane.add(btnUpdate);
}
}

```

OUTPUT



The screenshot shows a Java Swing window with a blue title bar and standard window controls (minimize, maximize, close). The window contains a light gray panel with the following elements:

- A label "Customer ID" followed by a text input field.
- A label "Name" followed by a text input field.
- A label "Area Code" followed by a text input field.
- A label "Phone No" followed by a text input field.
- An "Update" button centered below the input fields.