

Oleh : Beby Novia Putri Lovenida – 1641720073 – TI3B

```
package praktikum9;

import java.net.DatagramPacket;
import java.net.InetAddress;
import java.net.MulticastSocket;

public class Chatan extends javax.swing.JFrame
{
    static int port = 1237;
    static String ipa = "192.168.1.34", ipm = "234.5.6.7";

    public ChatLab() {
        initComponents();
    }
    @SuppressWarnings("unchecked")
    // <editor-fold defaultstate="collapsed" desc="Generated Code">
    private void initComponents() {

        jScrollPane1 = new javax.swing.JScrollPane();
        txtPesanan = new javax.swing.JTextArea();
        txtKirim = new javax.swing.JTextField();
        btnKirim = new javax.swing.JButton();

        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

        txtPesanan.setEditable(false);
        txtPesanan.setColumns(20);
        txtPesanan.setLineWrap(true);
        txtPesanan.setRows(5);
        jScrollPane1.setViewportView(txtPesanan);

        btnKirim.setText("Kirim");
        btnKirim.addActionListener(new java.awt.event.ActionListener()
        {
            public void actionPerformed(java.awt.event.ActionEvent evt)
            {
                btnKirimActionPerformed(evt);
            }
        });

        javax.swing.GroupLayout layout = new 
javax.swing.GroupLayout(getContentPane());
getContentPane().setLayout(layout);
layout.setHorizontalGroup(

    layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(layout.createSequentialGroup()
            .addContainerGap()
            .addComponent(jScrollPane1)
            .addPreferredGap(nextPage)
```

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```
.addComponent(txtKirim)

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
    .addComponent(btnKirim))
    .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE)
);
layout.setVerticalGroup(

layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(layout.createSequentialGroup()
        .addContainerGap()
        .addComponent(jScrollPane1,
javax.swing.GroupLayout.DEFAULT_SIZE, 145, Short.MAX_VALUE)

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.
BASELINE)
    .addComponent(txtKirim,
javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.PREFERRED_SIZE)
    .addComponent(btnKirim))
    .addContainerGap())
);

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

private void btnKirimActionPerformed(java.awt.event.ActionEvent
evt) {
    try
    {
        MulticastSocket chat = new MulticastSocket(port);
        InetAddress group = InetAddress.getByName(ipm);
        InetAddress ip = InetAddress.getByName(ipa);
        chat.setInterface(ip);
        chat.joinGroup(group);

        String msg = txtKirim.getText().toString();
        DatagramPacket data = new DatagramPacket(msg.getBytes(), 0,
msg.length(), group, port);
        chat.send(data);
        chat.close();
        txtKirim.setText("");
    } catch (Exception e) { e.printStackTrace(); }
}

/**
 * @param args the command line arguments
 */
public static void main(String args[]) throws Exception
{
    /* 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.
```

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```
* For details see
http://download.oracle.com/javase/tutorial/uiswing/lookandfeel/plaf.htm
1
    */
    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(ChatLab.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
    } catch (InstantiationException ex) {

        java.util.logging.Logger.getLogger(ChatLab.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
    } catch (IllegalAccessException ex) {

        java.util.logging.Logger.getLogger(ChatLab.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
    } catch (javax.swing.UnsupportedLookAndFeelException ex) {

        java.util.logging.Logger.getLogger(ChatLab.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 ChatLab().setVisible(true);
        }
    });

    MulticastSocket server = new MulticastSocket(port);
    InetAddress group = InetAddress.getByName(ipm);
    InetAddress ip = InetAddress.getByName(ipa);
    server.setInterface(ip);

    server.joinGroup(group);
    boolean infinite = true;
    /* Server terus-menerus menerima data dan mencetak mereka */

    while(infinite)
    {
        byte buf[] = new byte[1024];
        DatagramPacket data = new DatagramPacket(buf, buf.length);
        server.receive(data);
        String msg = new String(data.getData()).trim();
        String sender = data.getAddress().getHostAddress();
        if(sender.equals(ipa)) { sender = "Saya"; }
        txtPesana.append( sender + " : "+msg+"\n");
    }
    server.close();
}
```

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```
// Variables declaration - do not modify
private javax.swing.JButton btnKirim;
private javax.swing.JScrollPane jScrollPane1;
private javax.swing.JTextField txtKirim;
private static javax.swing.JTextArea txtPesan;
// End of variables declaration
}
```

## 2. SendFile

```
package praktikum9;

import java.io.File;
import java.io.FileInputStream;
import java.io.FileOutputStream;
import java.net.DatagramPacket;
import java.net.InetAddress;
import java.net.MulticastSocket;
import javax.swing.JFileChooser;

public class SendFile extends javax.swing.JFrame
{
    static int port = 1234;
    JFileChooser fileChooser = new JFileChooser();
    static String ipm = "234.5.6.7", ipa = "192.168.62.150";

    public SendFile() {
        initComponents();
    }

    @SuppressWarnings("unchecked")
    // <editor-fold defaultstate="collapsed" desc="Generated Code">
    private void initComponents() {

        txtFile = new javax.swing.JTextField();
        btnFile = new javax.swing.JButton();

        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

        btnFile.setText("Kirim File");
        btnFile.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt)
            {
                btnFileActionPerformed(evt);
            }
        });

        javax.swing.GroupLayout layout = new
        javax.swing.GroupLayout(getContentPane());
        getContentPane().setLayout(layout);
        layout.setHorizontalGroup(
```

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```
layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(layout.createSequentialGroup()
        .addContainerGap()
        .addComponent(txtFile,
            javax.swing.GroupLayout.PREFERRED_SIZE, 290,
            javax.swing.GroupLayout.PREFERRED_SIZE)
        .addGap(18, 18, 18)
        .addComponent(btnFile)
        .addContainerGap())
    );
layout.setVerticalGroup(

layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(layout.createSequentialGroup()
        .addContainerGap()

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.
BASELINE)
    .addComponent(txtFile,
        javax.swing.GroupLayout.PREFERRED_SIZE,
        javax.swing.GroupLayout.DEFAULT_SIZE,
        javax.swing.GroupLayout.PREFERRED_SIZE)
    .addComponent(btnFile))
    .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE))
    );

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

private void btnFileActionPerformed(java.awt.event.ActionEvent evt)
{

    try
    {
        MulticastSocket send = new MulticastSocket(port);
        InetAddress group = InetAddress.getByName(ipm);
        InetAddress ip = InetAddress.getByName(ipa);
        send.setInterface(ip);
        send.joinGroup(group);

        File f2=null;
        if(fileChooser.showOpenDialog(null) ==
JFileChooser.APPROVE_OPTION)
        { f2 = fileChooser.getSelectedFile(); }

        String nama = f2.getName();
        byte[] name = nama.getBytes();
        DatagramPacket kirimNama = new DatagramPacket(name,
name.length,group,port+1);
        send.send(kirimNama);

        FileInputStream bis = new FileInputStream(f2);
        byte[] buf = new byte[63*1024];
        int len;

        DatagramPacket pkg = new DatagramPacket(buf,
buf.length,group,port);
        while((len=bis.read(buf))!=-1)
        {
```

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```
        pkg.setLength(len);
        send.send(pkg);
    }

    //          buf = "end".getBytes();
    //          DatagramPacket endpkg = new DatagramPacket(buf,
buf.length,group,port);
    //          send.send(endpkg);
    //          txtFile.setText("Anda mengirim "+nama);
    //          bis.close();
    //          send.close();
    } catch (Exception e) {e.printStackTrace();}

    }

    public static void main(String args[]) throws Exception {
        /* 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.htm
1
        */
        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(SendFile.class.getName()).log(java.u
til.logging.Level.SEVERE, null, ex);
        } catch (InstantiationException ex) {

java.util.logging.Logger.getLogger(SendFile.class.getName()).log(java.u
til.logging.Level.SEVERE, null, ex);
        } catch (IllegalAccessException ex) {

java.util.logging.Logger.getLogger(SendFile.class.getName()).log(java.u
til.logging.Level.SEVERE, null, ex);
        } catch (javax.swing.UnsupportedLookAndFeelException ex) {

java.util.logging.Logger.getLogger(SendFile.class.getName()).log(java.u
til.logging.Level.SEVERE, null, ex);
        }
        //</editor-fold>

        /* Create and display the form */
        java.awt.EventQueue.invokeLater(new Runnable() {
            public void run() {
                new SendFile().setVisible(true);
            }
        });

        MulticastSocket dsoc = new MulticastSocket(port);
```

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```
InetAddress group = InetAddress.getByName(ipm);
InetAddress ip = InetAddress.getByName(ipa);
dsoc.setInterface(ip);
dsoc.joinGroup(group);

MulticastSocket terima = new MulticastSocket(port+1);
InetAddress groups = InetAddress.getByName(ipm);
InetAddress ips = InetAddress.getByName(ipa);
terima.setInterface(ips);
terima.joinGroup(groups);

while(true)
{
    byte[] name = new byte[63*1024];
    DatagramPacket nama = new DatagramPacket(name,
name.length);
    terima.receive(nama);

    if(!nama.getAddress().getHostAddress().equals(ipa))
    {
        String namaFile = new String(name, "UTF-8").trim();
        System.out.println("1");
        File f1 = new File(namaFile);
        FileOutputStream bos = new FileOutputStream(f1);
        byte[] buf = new byte[63*1024];
        DatagramPacket pkg = new DatagramPacket(buf,
buf.length);
        dsoc.receive(pkg);
        System.out.println("2");
        txtFile.setText("Anda menerima "+namaFile);
        bos.write(pkg.getData(), 0, pkg.getLength());
        bos.flush();
        bos.close();
    }
}

// Variables declaration - do not modify
private javax.swing.JButton btnFile;
private static javax.swing.JTextField txtFile;
// End of variables declaration
}
```

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```

package praktikum9;

import java.io.IOException;
import java.net.DatagramPacket;
import java.net.InetAddress;
import java.net.MulticastSocket;

public class Sniffer extends javax.swing.JFrame
{
    public Sniffer() {
        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() {

        jScrollPane1 = new javax.swing.JScrollPane();
        txtSniff = new javax.swing.JTextArea();

        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

        txtSniff.setColumns(20);
        txtSniff.setRows(5);
        jScrollPane1.setViewportView(txtSniff);

        javax.swing.GroupLayout layout = new
javax.swing.GroupLayout(getContentPane());
        getContentPane().setLayout(layout);
        layout.setHorizontalGroup(

            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                .addGroup(layout.createSequentialGroup()
                    .add(layout.createParallelGroup()
                        .add(new javax.swing.JLabel())
                        .add(jScrollPane1)
                    )
                    .addContainerGap())
        );
        layout.setVerticalGroup(

            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                .addGroup(layout.createSequentialGroup()
                    .add(new javax.swing.JLabel())
                    .add(jScrollPane1)
                    .addContainerGap())
        );

        javax.swing.GroupLayout layout1 = new
javax.swing.GroupLayout(getContentPane());
        getContentPane().setLayout(layout1);
        layout1.setHorizontalGroup(

            layout1.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                .addGroup(layout1.createSequentialGroup()
                    .add(layout1.createParallelGroup()
                        .add(new javax.swing.JLabel())
                        .add(jScrollPane1)
                    )
                    .addContainerGap())
        );
        layout1.setVerticalGroup(

            layout1.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                .addGroup(layout1.createSequentialGroup()
                    .add(new javax.swing.JLabel())
                    .add(jScrollPane1)
                    .addContainerGap())
        );
    }
}

```



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```
.addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE))
);

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

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.htm
1
    */
    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(Sniffer.class.getName()).log(java.ut
il.logging.Level.SEVERE, null, ex);
    } catch (InstantiationException ex) {

java.util.logging.Logger.getLogger(Sniffer.class.getName()).log(java.ut
il.logging.Level.SEVERE, null, ex);
    } catch (IllegalAccessException ex) {

java.util.logging.Logger.getLogger(Sniffer.class.getName()).log(java.ut
il.logging.Level.SEVERE, null, ex);
    } catch (javax.swing.UnsupportedLookAndFeelException ex) {

java.util.logging.Logger.getLogger(Sniffer.class.getName()).log(java.ut
il.logging.Level.SEVERE, null, ex);
    }
} //</editor-fold>

    /* Create and display the form */
    java.awt.EventQueue.invokeLater(new Runnable() {
        public void run() {
            new Sniffer().setVisible(true);
        }
    });

    MulticastSocket ms = null;
    InetAddress group = null;
    try
    {
        group = InetAddress.getByName("234.5.6.7");
        int port = 1234;
        ms = new MulticastSocket(port);
        ms.joinGroup(group);
        byte[] buffer = new byte[1024];
```

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```
while (true)
{
    DatagramPacket dp = new DatagramPacket(buffer,
buffer.length);
    ms.receive(dp);
    String s = new String(dp.getData( ));
    txtSniff.append(dp.getAddress().toString() + " :
"+s+"\n");
}
}
catch (IOException ex) { System.err.println(ex); }
finally
{
    if (ms != null)
    {
        try
        {
            ms.leaveGroup(group);
            ms.close( );
        }
        catch (IOException ex) {}
    }
}

// Variables declaration - do not modify
private javax.swing.JScrollPane jScrollPane1;
private static javax.swing.JTextArea txtSniff;
// End of variables declaration
}
```