

PRACTICAL-5

Aim: Implement chat application using java.net

Code:chat_client.java

```
package chat;
import static chat.chat_server.dout;
import static chat.chat_server.ss;
import java.io.DataInputStream;
import java.io.DataOutputStream;
import java.net.ServerSocket;
import java.net.Socket;

public class chat_client extends javax.swing.JFrame {
    static Socket s;
    static DataInputStream dis;
    static DataOutputStream dout;
    public chat_client() {
        initComponents();
    }
    @SuppressWarnings("unchecked")
    BEGIN: initComponents
    private void initComponents() {

        jScrollPane1 = new javax.swing.JScrollPane();
        msg_area = new javax.swing.JTextArea();
        msg_text = new javax.swing.JTextField();
        msg_send = new javax.swing.JButton();
        jLabel1 = new javax.swing.JLabel();
        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
        msg_area.setColumns(20);
        msg_area.setRows(5);
        jScrollPane1.setViewportView(msg_area);
        msg_send.setText("send");
        msg_send.addActionListener(new java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent evt) {
                msg_sendActionPerformed(evt);
            }
        });
        jLabel1.setFont(new java.awt.Font("Tahoma", 1, 18)); // NOI18N
        jLabel1.setText("client");
        javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
        getContentPane().setLayout(layout);
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        layout.setHorizontalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                .addGroup(layout.createSequentialGroup())
                .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                    .addComponent(jScrollPane1)
                    .addGroup(layout.createSequentialGroup())
                .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                    .addGroup(layout.createSequentialGroup())
                    .addComponent(msg_text,
                        javax.swing.GroupLayout.PREFERRED_SIZE, 316,
                        javax.swing.GroupLayout.PREFERRED_SIZE)
                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
                    .addComponent(msg_send))
                .addComponent(jLabel1, javax.swing.GroupLayout.PREFERRED_SIZE,
                    127, javax.swing.GroupLayout.PREFERRED_SIZE))
                .addGap(0, 18, Short.MAX_VALUE)))
            .addContainerGap())    );
        layout.setVerticalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                .addGroup(layout.createSequentialGroup())
                .addComponent(jLabel1, javax.swing.GroupLayout.PREFERRED_SIZE, 23,
                    javax.swing.GroupLayout.PREFERRED_SIZE)
                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
                .addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED_SIZE, 224,
                    javax.swing.GroupLayout.PREFERRED_SIZE)
                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)

        .addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addComponent(msg_text)
            .addGroup(layout.createSequentialGroup())
                .addComponent(msg_send)
                .addGap(0, 2, Short.MAX_VALUE)))
            .addContainerGap())
    );
    pack();
} // </editor-fold> //GEN-END:initComponents
private void msg_sendActionPerformed(java.awt.event.ActionEvent evt) { //GEN-
FIRST:event_msg_sendActionPerformed
    try {
        String msg="";
        msg=msg_text.getText();
        dout.writeUTF(msg);
        msg_text.setText("");    }

```

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catch(Exception e)
{    //handle the exception here    }
} //GEN-LAST:event_msg_sendActionPerformed
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.html
    */
    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(chat_client.class.getName()).log(java.util.logging.Level.S
EVERE, null, ex);
    } catch (InstantiationException ex) {
java.util.logging.Logger.getLogger(chat_client.class.getName()).log(java.util.logging.Level.S
EVERE, null, ex);
    } catch (IllegalAccessException ex) {
java.util.logging.Logger.getLogger(chat_client.class.getName()).log(java.util.logging.Level.S
EVERE, null, ex);
    } catch (javax.swing.UnsupportedLookAndFeelException ex) {
java.util.logging.Logger.getLogger(chat_client.class.getName()).log(java.util.logging.Level.S
EVERE, null, ex);
    }
    //</editor-fold>
    /* Create and display the form */
    java.awt.EventQueue.invokeLater(new Runnable() {
        public void run() {
            new chat_client().setVisible(true);
        }
    });
    try {
        String msgin = "";
        s = new Socket("127.0.0.1",1201); // ip address is of localhost because server is
running on the same machine

```

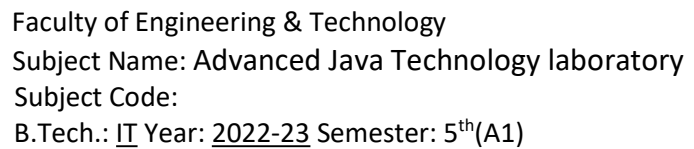
```
dis = new DataInputStream(s.getInputStream());
dout = new DataOutputStream(s.getOutputStream());
while (!msgin.equals("exit")) {
    msgin = dis.readUTF();
    msg_area.setText(msg_area.getText() + "\n Server : " + msgin);
}
} catch (Exception e) { //handle the exception here }
} // Variables declaration - do not modify//GEN-BEGIN:variables
private javax.swing.JLabel jLabel1;
private javax.swing.JScrollPane jScrollPane1;
private static javax.swing.JTextArea msg_area;
private javax.swing.JButton msg_send;
private javax.swing.JTextField msg_text;
// End of variables declaration//GEN-END:variables }
```

chat_server.java

```
package chat;
import java.io.DataInputStream;
import java.io.DataOutputStream;
import java.net.ServerSocket;
import java.net.Socket;

public class chat_server extends javax.swing.JFrame {
    static ServerSocket ss;
    static Socket s;
    static DataInputStream dis;
    static DataOutputStream dout;
    /** * Creates new form chat_server */
    public chat_server() {
        initComponents();
    }
    @SuppressWarnings("unchecked")
    // <editor-fold defaultstate="collapsed" desc="Generated Code">//GEN-BEGIN: initComponents
    private void initComponents() {

        jScrollPane1 = new javax.swing.JScrollPane();
        msg_area = new javax.swing.JTextArea();
        msg_text = new javax.swing.JTextField();
        msg_send = new javax.swing.JButton();
        jLabel1 = new javax.swing.JLabel();
        setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
        msg_area.setColumns(20);
        msg_area.setRows(5);
```



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        .addComponent(msg_send, javax.swing.GroupLayout.DEFAULT_SIZE, 28,
Short.MAX_VALUE))
        .addContainerGap()
    );
    pack();
} // </editor-fold> // GEN-END: initComponents
private void msg_sendActionPerformed(java.awt.event.ActionEvent evt) { // GEN-
FIRST:event_msg_sendActionPerformed
    try {
        String msg="";
        msg=msg_text.getText();
        dout.writeUTF(msg);
        msg_text.setText("");
    }
    catch (Exception e)
    { //handle the exception here }
} // GEN-LAST:event_msg_sendActionPerformed
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.html */
    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(chat_server.class.getName()).log(java.util.logging.Level.
SEVERE, null, ex);
    } catch (InstantiationException ex) {
java.util.logging.Logger.getLogger(chat_server.class.getName()).log(java.util.logging.Level.
SEVERE, null, ex);
    } catch (IllegalAccessException ex) {
java.util.logging.Logger.getLogger(chat_server.class.getName()).log(java.util.logging.Level.
SEVERE, null, ex);
    } catch (javax.swing.UnsupportedLookAndFeelException ex) {
java.util.logging.Logger.getLogger(chat_server.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 chat_server().setVisible(true);
    }
});
try {
    String msgin = "";
    ss = new ServerSocket(1201);
    s = ss.accept();
    dis = new DataInputStream(s.getInputStream());
    dout = new DataOutputStream(s.getOutputStream());

    while (!msgin.equals("exit")) {
        msgin = dis.readUTF();
        msg_area.setText(msg_area.getText() + "\n Client : " + msgin);
    }
} catch (Exception e) {          //handle the exception here      }
}
// Variables declaration - do not modify//GEN-BEGIN:variables
private javax.swing.JLabel jLabel1;
private javax.swing.JScrollPane jScrollPane1;
private static javax.swing.JTextArea msg_area;
private javax.swing.JButton msg_send;
private javax.swing.JTextField msg_text;
// End of variables declaration//GEN-END:variables    }

```

Output:

