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Project Statement

- The Chat/IM client is a program which can be used as a medium of communication between two or more computers in the same network sharing a common MYSQL server.
- When the program starts up the user will be asked to enter their username once, they click Login, they will be able to chat.
- A user can register by clicking the link in the login window. Once registered, they can login and chat.
- The chat window shows the users who are currently.
- Users can also personalize the chat window by changing its background color.

Back-end Details

3 tables are used in the back-end:

1. Mess Table (Message table)

Field	Type	Null	Key	Default	Extra
id	int(11)	NO	PRI	(NULL)	auto_increment
Message	longtext	NO		(NULL)	
Username	varchar(50)	NO		(NULL)	

It is used for storing and displaying the messages.

Command:

```
CREATE TABLE IF NOT EXISTS `mess` (  
  `id` int(11) NOT NULL AUTO_INCREMENT,  
  `Message` longtext NOT NULL,  
  `Username` varchar(50) NOT NULL,  
  PRIMARY KEY (`id`)  
)
```

2. Reg Table (Register table)

Field	Type	Null	Key	Default	Extra
Username	varchar(50)	YES		(NULL)	
Password	varchar(50)	YES		(NULL)	

This table is used for storing the usernames and password of the users.

Command:

```
CREATE TABLE IF NOT EXISTS `reg` (
  `Username` varchar(50) DEFAULT NULL,
  `Password` varchar(50) DEFAULT NULL
)
```

3. Online Table

Field	Type	Null	Key	Default	Extra
id	int(10)	NO	PRI	(NULL)	auto_increment
un	varchar(50)	NO		(NULL)	

This table is used for displaying the number of people online. When a user logs in, the name gets stored here and when the user logs out, that users name is deleted.

Command:

```
CREATE TABLE IF NOT EXISTS `online` (
  `id` int(10) NOT NULL AUTO_INCREMENT,
  `un` varchar(50) NOT NULL,
  PRIMARY KEY (`id`)
)
```

Java Source code:

Main.java:

```
/*
 * To change this template, choose Tools | Templates
 * and open the template in the editor.
 */

/**
 *
 * @author user
 */
import javax.swing.*;
public class Main {
    public static void main(String[] args) {
        try {
            Class.forName("java.sql.DriverManager");
        }
        catch (Exception e) {
            JOptionPane.showMessageDialog(null, e.getMessage());
        }
        String url,db,pas;
        url="jdbc:mysql://localhost/psdb";
        db="root";
        pas="";
        new LoginGUI(url,db).setVisible(true);
    }
}
```

SignupGUI.java:

```
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.ResultSet;
import java.sql.Statement;
import javax.swing.JOptionPane;

/*
 * To change this template, choose Tools | Templates
 * and open the template in the editor.
 */

/**
 * @author user
 */
public class SignUpGUI extends javax.swing.JFrame {
    Connection conn,co = null;
    Statement st,s = null;

    ResultSet rset = null;
    ResultSet rs = null;
    static String url,db,pas;
    /**
     * Creates new form SignUpGUI
     */
    public SignUpGUI(String abc,String cdf) {
        initComponents();
        url=abc;
        db=cdf;
        pas="";
        setLocationRelativeTo(null);
    }

    /**
     * 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() {

        jPanel1 = new javax.swing.JPanel();
        jLabel1 = new javax.swing.JLabel();
        jLabel2 = new javax.swing.JLabel();
    }
}
```

```

jTextField1 = new javax.swing.JTextField();
jLabel3 = new javax.swing.JLabel();
jPasswordField1 = new javax.swing.JPasswordField();
jButton1 = new javax.swing.JButton();
jLabel4 = new javax.swing.JLabel();
jLabel5 = new javax.swing.JLabel();
jLabel6 = new javax.swing.JLabel();

setDefaultCloseOperation(javax.swing.WindowConstants.DISPOSE_ON_CLOSE);
setTitle("Chat Client");

jPanel1.setLayout(null);

jLabel1.setFont(new java.awt.Font("Roboto", 1, 14)); // NOI18N
jLabel1.setForeground(new java.awt.Color(255, 255, 255));
jLabel1.setText("Sign Up");
jPanel1.add(jLabel1);
jLabel1.setBounds(176, 20, 54, 19);

jLabel2.setFont(new java.awt.Font("Roboto", 0, 13)); // NOI18N
jLabel2.setForeground(new java.awt.Color(255, 255, 255));
jLabel2.setText("Username");
jPanel1.add(jLabel2);
jLabel2.setBounds(75, 76, 59, 18);
jPanel1.add(jTextField1);
jTextField1.setBounds(176, 76, 128, 20);

jLabel3.setFont(new java.awt.Font("Roboto", 0, 13)); // NOI18N
jLabel3.setForeground(new java.awt.Color(255, 255, 255));
jLabel3.setText("Password");
jPanel1.add(jLabel3);
jLabel3.setBounds(77, 130, 57, 18);
jPanel1.add(jPasswordField1);
jPasswordField1.setBounds(176, 130, 128, 20);

jButton1.setFont(new java.awt.Font("Roboto Cn", 0, 14)); // NOI18N
jButton1.setText("Sign Up");
jButton1.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jButton1ActionPerformed(evt);
    }
});
jPanel1.add(jButton1);
jButton1.setBounds(170, 200, 93, 49);

jLabel4.setForeground(new java.awt.Color(255, 51, 51));

```

```

jPanel1.add(jLabel4);
jLabel4.setBounds(176, 105, 128, 19);

jLabel5.setForeground(new java.awt.Color(255, 51, 51));
jPanel1.add(jLabel5);
jLabel5.setBounds(176, 161, 200, 20);

jLabel6.setIcon(new javax.swing.ImageIcon(getClass().getResource("/images/login and
sign.jpg"))); // NOI18N
jPanel1.add(jLabel6);
jLabel6.setBounds(0, -10, 400, 310);

javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
getContentPane().setLayout(layout);
layout.setHorizontalGroup(
    layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED_SIZE, 399,
javax.swing.GroupLayout.PREFERRED_SIZE)
);
layout.setVerticalGroup(
    layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addComponent(jPanel1, javax.swing.GroupLayout.DEFAULT_SIZE, 283,
Short.MAX_VALUE)
);

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

private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    try {
        co = DriverManager.getConnection(url,db,pas);
        String SiQL = "SELECT * from reg WHERE Username=" + jTextField1.getText() + "";

        s = co.createStatement();
        rset = s.executeQuery(SiQL);
        if (rset.next()) {
            jLabel4.setText("");
            String chk = rset.getString("Username");
            if (chk.equals(jTextField1.getText()) ) {
                jLabel5.setText("");
                jLabel4.setText("Username Exists");
            }
            if (jTextField1.getText().equals("")) )
            {
                jLabel4.setText("");
            }
        }
    }
}

```



```

        jLabel5.setText("Please do not leave the fields empty");
    }

    } else {
        if (jPasswordField1.getText().equals("")){
            jLabel4.setText("");
            jLabel5.setText("Please do not leave fields empty!!");
        }
        else{
            conn = DriverManager.getConnection(url,db,pas);
            String SQL = "INSERT INTO REG (Username>Password) "
                + "VALUES(" + jTextField1.getText() + ", " + jPasswordField1.getText() + ")
";

            st = conn.createStatement();
            int n = st.executeUpdate(SQL);
            JOptionPane.showMessageDialog(null, "Registered,you may now login");
            this.setVisible(false);
            this.dispose();
        }
    }
} catch (Exception e) {
    JOptionPane.showMessageDialog(null, e.getMessage());
}

}
}

/**
 * @param args the command line arguments
 */
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(SignUpGUI.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
    } catch (InstantiationException ex) {

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

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

java.util.logging.Logger.getLogger(SignUpGUI.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 SignUpGUI(url,db).setVisible(true);
    }
});
}
// Variables declaration - do not modify
private javax.swing.JButton jButton1;
private javax.swing.JLabel jLabel1;
private javax.swing.JLabel jLabel2;
private javax.swing.JLabel jLabel3;
private javax.swing.JLabel jLabel4;
private javax.swing.JLabel jLabel5;
private javax.swing.JLabel jLabel6;
private javax.swing.JPanel jPanel1;
private javax.swing.JPasswordField jPasswordField1;
private javax.swing.JTextField jTextField1;
// End of variables declaration
}

```

LoginGUI.java:

```

import java.awt.Color;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.ResultSet;
import java.sql.Statement;
import javax.swing.JOptionPane;

/*
 * To change this template, choose Tools | Templates
 * and open the template in the editor.
 */

/**
 *
 * @author user
 */
public class LoginGUI extends javax.swing.JFrame {
    Connection conn,co = null;
    Statement st,s = null;

    ResultSet rset = null;
    ResultSet rs =null;
    static String url,db,pas,xx;
    /**
     * Creates new form LoginGUI
     */
    public LoginGUI(String abc,String cdf) {
        initComponents();
        url=abc;
        db=cdf;
        pas="";
        setLocationRelativeTo(null);
    }

    /**
     * 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() {

```

```
jPanel1 = new javax.swing.JPanel();
jLabel1 = new javax.swing.JLabel();
jLabel2 = new javax.swing.JLabel();
jLabel3 = new javax.swing.JLabel();
jTextField1 = new javax.swing.JTextField();
jPasswordField1 = new javax.swing.JPasswordField();
jButton1 = new javax.swing.JButton();
jLabel4 = new javax.swing.JLabel();
jLabel5 = new javax.swing.JLabel();
jLabel6 = new javax.swing.JLabel();

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
setTitle("Chat Client");
setResizable(false);
setType(java.awt.Window.Type.POPUP);

jPanel1.setLayout(null);

jLabel1.setFont(new java.awt.Font("Roboto", 1, 17)); // NOI18N
jLabel1.setForeground(new java.awt.Color(255, 255, 255));
jLabel1.setText("Login");
jPanel1.add(jLabel1);
jLabel1.setBounds(180, 10, 44, 27);

jLabel2.setFont(new java.awt.Font("Roboto", 0, 13)); // NOI18N
jLabel2.setForeground(new java.awt.Color(255, 255, 255));
jLabel2.setText("Username");
jPanel1.add(jLabel2);
jLabel2.setBounds(99, 56, 59, 18);

jLabel3.setFont(new java.awt.Font("Roboto", 0, 13)); // NOI18N
jLabel3.setForeground(new java.awt.Color(255, 255, 255));
jLabel3.setText("Password");
jPanel1.add(jLabel3);
jLabel3.setBounds(99, 94, 57, 18);
jPanel1.add(jTextField1);
jTextField1.setBounds(193, 56, 148, 20);
jPanel1.add(jPasswordField1);
jPasswordField1.setBounds(193, 94, 148, 20);

jButton1.setFont(new java.awt.Font("Roboto", 0, 13)); // NOI18N
jButton1.setText("Login");
jButton1.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jButton1ActionPerformed(evt);
    }
});
```

```

    }
});
jPanel1.add(jButton1);
jButton1.setBounds(260, 145, 85, 40);

jLabel4.setFont(new java.awt.Font("Roboto Cn", 0, 13)); // NOI18N
jLabel4.setForeground(new java.awt.Color(255, 255, 255));
jLabel4.setText("Don't have an account ? Click here");
jLabel4.addMouseListener(new java.awt.event.MouseAdapter() {
    public void mouseClicked(java.awt.event.MouseEvent evt) {
        jLabel4MouseClicked(evt);
    }
    public void mouseEntered(java.awt.event.MouseEvent evt) {
        jLabel4MouseEntered(evt);
    }
    public void mouseExited(java.awt.event.MouseEvent evt) {
        jLabel4MouseExited(evt);
    }
});
jPanel1.add(jLabel4);
jLabel4.setBounds(99, 203, 214, 18);

jLabel5.setForeground(new java.awt.Color(255, 51, 51));
jPanel1.add(jLabel5);
jLabel5.setBounds(193, 120, 200, 19);

jLabel6.setIcon(new javax.swing.ImageIcon(getClass().getResource("/images/login and
sign.jpg"))); // NOI18N
jLabel6.setAlignmentY(0.0F);
jPanel1.add(jLabel6);
jLabel6.setBounds(0, -40, 410, 370);

javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
getContentPane().setLayout(layout);
layout.setHorizontalGroup(
    layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addComponent(jPanel1, javax.swing.GroupLayout.DEFAULT_SIZE, 399,
Short.MAX_VALUE)
);
layout.setVerticalGroup(
    layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addComponent(jPanel1, javax.swing.GroupLayout.DEFAULT_SIZE, 281,
Short.MAX_VALUE)
);

pack();

```

```
// </editor-fold>
```

```
private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:String
    String user=jTextField1.getText();
    try{
        co = DriverManager.getConnection(url,db,pas);
        String SIQL ="SELECT Max(ID) from Mess ";
        s = co.createStatement();
        rset=s.executeQuery(SIQL);
        if(rset.next()){
            xx=rset.getString("Max(ID)");
        }
    }
    catch(Exception e){

    }
    try{
        co = DriverManager.getConnection(url,db,pas);
        String SIQL ="SELECT * from reg WHERE Username='"+jTextField1.getText()+"' ";
        s = co.createStatement();
        rset=s.executeQuery(SIQL);
        if(rset.next()){
            String pass=rset.getString("Password");

            if(pass.equals(jPasswordField1.getText())){
                this.setVisible(false);
                this.dispose();
                new MainGUI(user,url,db,xx).setVisible(true);
                conn = DriverManager.getConnection(url,db,pas);
                String SQL = "INSERT INTO Online (un) "+
                    "VALUES('"+user+"')";
                st = conn.createStatement();
                int n = st.executeUpdate(SQL);
            }

            else {
                jLabel5.setText("");
                jLabel5.setText("Username or Password incorrect");
            }
        }
        else{
            jLabel5.setText("");
            jLabel5.setText("Username doesn't exist");
        }
    }
}
```

```

        catch(Exception e){
            System.out.println(e.getMessage());
        }
    }

    private void jLabel4MouseClicked(java.awt.event.MouseEvent evt) {
        // TODO add your handling code here:
        new SignUpGUI(url,db).setVisible(true);
    }

    private void jLabel4MouseEntered(java.awt.event.MouseEvent evt) {
        // TODO add your handling code here:
        jLabel4.setForeground(Color.red);
    }

    private void jLabel4MouseExited(java.awt.event.MouseEvent evt) {
        // TODO add your handling code here:
        jLabel4.setForeground(Color.white);
    }

    /**
     * @param args the command line arguments
     */
    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(LoginGUI.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);

```

```

    } catch (InstantiationException ex) {

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

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

java.util.logging.Logger.getLogger(LoginGUI.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 LoginGUI(url,db).setVisible(true);
    }
});
}
// Variables declaration - do not modify
private javax.swing.JButton jButton1;
private javax.swing.JLabel jLabel1;
private javax.swing.JLabel jLabel2;
private javax.swing.JLabel jLabel3;
private javax.swing.JLabel jLabel4;
private javax.swing.JLabel jLabel5;
private javax.swing.JLabel jLabel6;
private javax.swing.JPanel jPanel1;
private javax.swing.JPasswordField jPasswordField1;
private javax.swing.JTextField jTextField1;
// End of variables declaration
}

```


MainGUI.java:

```

import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.ResultSet;
import java.sql.Statement;
import javax.swing.JOptionPane;

/*
 * To change this template, choose Tools | Templates
 * and open the template in the editor.
 */

/**
 *
 * @author user
 */
public class MainGUI extends javax.swing.JFrame implements Runnable {
    Connection conn,co,c = null;
    Statement st,s,ss,sst = null;

    ResultSet rset = null;
    ResultSet rs,r=null;
    private static int old=-1;
    private static int o=-1;
    static String url;
    static String db;
    static String pas;
    static String user;
    static String cd;
    /**
     * Creates new form MainGUI
     */
    public MainGUI(String us,String abc,String cdf,String xx) {
        initComponents();
        jLabel3.setText(us);
        user=us;
        url=abc;
        db=cdf;
        pas="";
        update();
        cd = xx;
        setLocationRelativeTo(null);
    }
    public void update() {

```

```

new Thread(this).start();

}

/**
 * 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() {

    jPanel1 = new javax.swing.JPanel();
    jButton1 = new javax.swing.JButton();
    jScrollPane1 = new javax.swing.JScrollPane();
    jTextArea1 = new javax.swing.JTextArea();
    jScrollPane2 = new javax.swing.JScrollPane();
    jTextArea2 = new javax.swing.JTextArea();
    jScrollPane3 = new javax.swing.JScrollPane();
    jTextArea3 = new javax.swing.JTextArea();
    jButton2 = new javax.swing.JButton();
    jLabel2 = new javax.swing.JLabel();
    jLabel3 = new javax.swing.JLabel();
    jLabel5 = new javax.swing.JLabel();
    jLabel6 = new javax.swing.JLabel();
    jComboBox1 = new javax.swing.JComboBox();
    jLabel1 = new javax.swing.JLabel();

    setDefaultCloseOperation(javax.swing.WindowConstants.DO_NOTHING_ON_CLOSE);
    setTitle("Chat Client");
    setCursor(new java.awt.Cursor(java.awt.Cursor.DEFAULT_CURSOR));
    setResizable(false);
    setType(java.awt.Window.Type.POPUP);

    jPanel1.setBackground(new java.awt.Color(0, 153, 153));
    jPanel1.setLayout(null);

    jButton1.setFont(new java.awt.Font("Roboto Cn", 0, 12)); // NOI18N
    jButton1.setText("Logout");
    jButton1.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            jButton1ActionPerformed(evt);
        }
    }

```

```
});
jPanel1.add(jButton1);
jButton1.setBounds(320, 10, 110, 22);

jTextArea1.setColumns(20);
jTextArea1.setEditable(false);
jTextArea1.setFont(new java.awt.Font("Roboto", 0, 12)); // NOI18N
jTextArea1.setRows(5);
jScrollPane1.setViewportView(jTextArea1);

jPanel1.add(jScrollPane1);
jScrollPane1.setBounds(10, 60, 297, 420);

jTextArea2.setColumns(20);
jTextArea2.setFont(new java.awt.Font("Roboto", 0, 12)); // NOI18N
jTextArea2.setRows(5);
jScrollPane2.setViewportView(jTextArea2);

jPanel1.add(jScrollPane2);
jScrollPane2.setBounds(10, 490, 297, 40);

jTextArea3.setColumns(20);
jTextArea3.setEditable(false);
jTextArea3.setRows(5);
jScrollPane3.setViewportView(jTextArea3);

jPanel1.add(jScrollPane3);
jScrollPane3.setBounds(320, 60, 110, 420);

jButton2.setFont(new java.awt.Font("Roboto", 0, 13)); // NOI18N
jButton2.setText("Send");
jButton2.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        jButton2ActionPerformed(evt);
    }
});
jPanel1.add(jButton2);
jButton2.setBounds(320, 490, 110, 40);

jLabel2.setFont(new java.awt.Font("Roboto", 0, 12)); // NOI18N
jLabel2.setText("Online");
jPanel1.add(jLabel2);
jLabel2.setBounds(320, 40, 36, 20);

jLabel3.setFont(new java.awt.Font("Tahoma", 0, 18)); // NOI18N
jPanel1.add(jLabel3);
```

```

jLabel3.setBounds(20, 10, 200, 20);
jPanel1.add(jLabel5);
jLabel5.setBounds(150, 10, 0, 0);
jPanel1.add(jLabel6);
jLabel6.setBounds(160, 10, 0, 0);

jComboBox1.setModel(new javax.swing.DefaultComboBoxModel(new String[] { "Green",
"Red", "Blue", "Yellow" }));
jComboBox1.setSelectedIndex(2);
jPanel1.add(jComboBox1);
jComboBox1.setBounds(224, 12, 78, 20);

jLabel1.setIcon(new javax.swing.ImageIcon(getClass().getResource("/images/main.jpg")));
// NOI18N
jPanel1.add(jLabel1);
jLabel1.setBounds(0, 0, 450, 540);

javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
getContentPane().setLayout(layout);
layout.setHorizontalGroup(
    layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED_SIZE, 444,
javax.swing.GroupLayout.PREFERRED_SIZE)
);
layout.setVerticalGroup(
    layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(layout.createSequentialGroup()
            .addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED_SIZE, 534,
javax.swing.GroupLayout.PREFERRED_SIZE)
            .addGap(0, 0, Short.MAX_VALUE))
);

pack();
} // </editor-fold>
@Override
public void run() {

    int i=1;
    int a=100;

    while (i<=a){

        try {
            //for online list

            c = DriverManager.getConnection(url,db,pas);

```

```

String SiiQL = "SELECT MAX(id) FROM online ";
ss = c.createStatement();
r = ss.executeQuery(SiiQL);
if(r.next()){

    String oid=r.getString("MAX(id)");
    int y=Integer.parseInt(oid);
    if(y != o){

        try{
            jTextArea3.setText("");
            SiiQL = "SELECT * FROM online ";
            sst = c.createStatement();
            r = sst.executeQuery(SiiQL);

            while (r.next()){

                jTextArea3.append(r.getString("un")+"\n");

            }
        }
        catch(Exception e) {
            System.out.println("err 1");
        }

        o=y;
    }

}

//for getting message
try{
    conn = DriverManager.getConnection(url,db,pas);
    String SQL = "SELECT MAX(ID) FROM Mess ";
    st = conn.createStatement();
    rset = st.executeQuery(SQL);
    //Setting colour
    String colour=jComboBox1.getSelectedItem().toString();
    if (colour.equals("Green")){

        jLabel1.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/images/Main.jpg")));
    }
    if (colour.equals("Red")){

```

```

        jLabel1.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/images/Main_r.jpg")));
    }
    if (colour.equals("Blue")){

        jLabel1.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/images/Main_b.jpg")));
    }
    if (colour.equals("Yellow")){

        jLabel1.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/images/Main_y.jpg")));
    }

    //Setting colour ends
    if(rset.next()){
        String id=rset.getString("MAX(id)");
        int x=Integer.parseInt(id);

        if(x != old){
            try{
                jTextArea1.setText("");

                String SiQL = "SELECT * FROM Mess WHERE ID>"+cd ;
                s = conn.createStatement();
                rs = s.executeQuery(SiQL);
                while (rs.next()){

jTextArea1.append(rs.getString("Username").toUpperCase()+":"+rs.getString("Message")+"\n")
;

                jTextArea1.setCaretPosition(jTextArea1.getText().length() - 1);

                }
            }
            catch(Exception e){
                System.out.println("error 2");
            }
        }
        old=x;
    }
}

```

```

        }
    }
    catch(Exception e){
        System.out.println("");
    }

}

catch(Exception e) {
    System.out.println();
}

}

}

private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    try{

        co = DriverManager.getConnection(url,db,pas);
        String SQL = "DELETE FROM online where un="+jLabel3.getText()+"";
        s = co.createStatement();
        int n = s.executeUpdate(SQL);
        System.exit(0);

    }
    catch(Exception e) {

    }

}

private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    try {

        //For Inserting

        conn = DriverManager.getConnection(url,db,pas);
        String SIQL = "INSERT INTO Mess (Username,Message) "+
            "VALUES("+jLabel3.getText()+", "+jTextArea2.getText()+")";

        s = conn.createStatement();
        int n = s.executeUpdate(SIQL);
        jTextArea2.setText("");
    }
}

```

```

        if (n<0) {
            JOptionPane.showMessageDialog(null, "Message not sent");
        }

    }
    catch (Exception e) {
        JOptionPane.showMessageDialog(null, e.getMessage());
    }
}

/**
 * @param args the command line arguments
 */
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(MainGUI.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
    } catch (InstantiationException ex) {

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

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

```

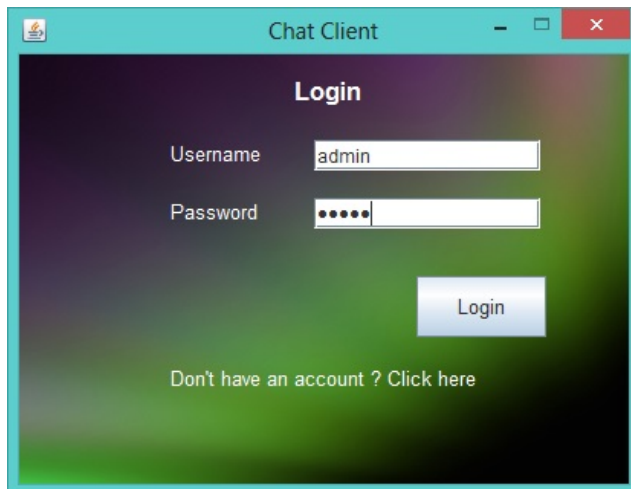


```
java.util.logging.Logger.getLogger(MainGUI.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
    }
    //</editor-fold>

    /*
     * Create and display the form
     */
    MainGUI may = new MainGUI(user,url,db,cd);
    may.setVisible(true);
    may.update();
}
// Variables declaration - do not modify
private javax.swing.JButton jButton1;
private javax.swing.JButton jButton2;
private javax.swing.JComboBox jComboBox1;
private javax.swing.JLabel jLabel1;
private javax.swing.JLabel jLabel2;
private javax.swing.JLabel jLabel3;
private javax.swing.JLabel jLabel5;
private javax.swing.JLabel jLabel6;
private javax.swing.JPanel jPanel1;
private javax.swing.JScrollPane jScrollPane1;
private javax.swing.JScrollPane jScrollPane2;
private javax.swing.JScrollPane jScrollPane3;
private javax.swing.JTextArea jTextArea1;
private javax.swing.JTextArea jTextArea2;
private javax.swing.JTextArea jTextArea3;
// End of variables declaration
}
```

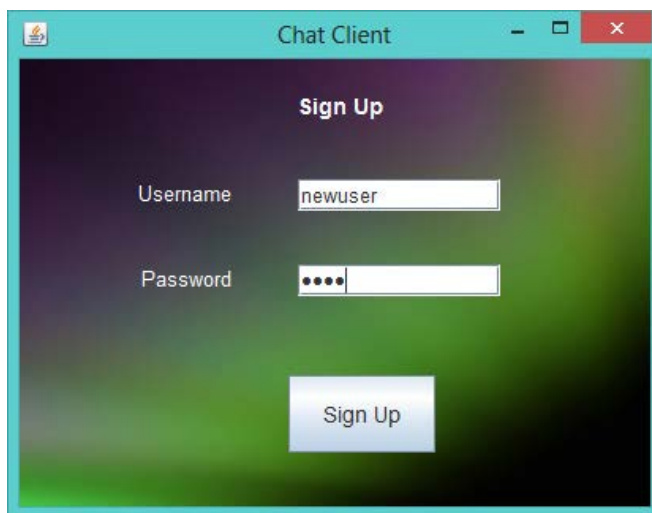
Output screens:

1. LoginGUI



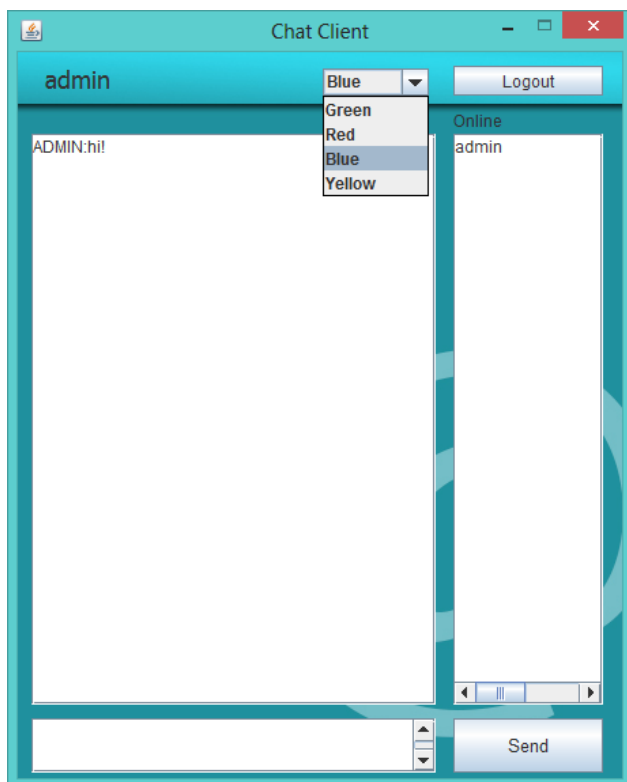
When the login button is clicked, the username and password are checked in the Reg Table, if the username and password match, then MainGUI(main chat window) opens up. It also inserts the username in the Online table. If the "Don't have an account? Click here" link is clicked, the RegisterGUI will open up.

2. SignupGUI



A new user account can be created in this window. When sign up button is clicked , it checks if the username exists, if not ,then the username and password of the new user will be stored in the Reg table.

3. MainGUI



Users can chat using this window. On the right, the usernames of the people who are online is displayed. In the center, the messages are displayed in a JTextarea. Users can change the color of the background image using the JComboBox. When a message is entered in the jtextfield at the bottom and the Send button is clicked. The message is inserted in the Mess Table, and displayed in the JTextarea. When the Logout button is clicked, the windows is closed and the username is deleted from the Online table.

Limitations

1. Our project is not an advanced type of instant messaging software and has its own limitations.
2. This chat client cannot be used to chat with users over the internet.
3. It also provides only typing based chatting and excludes Video/Voice chat.
4. It can only used to chat between computers which share the same database over a network.

Conclusion

This chat client enable user interactive typing based instant messaging and allows one to exchange messages avidly. The real-time updating process in this software provides quick user-interactive messaging. The convenient “Send” button allows people to send their important information to be exchanged promptly. Moreover the lightweight and small file size of this software also commands quick processing and running. The commodious and user-friendly graphical user interface also enables the users to use this client conveniently.

Bibliography

1. Java Documentation

URL: <http://docs.oracle.com/javase/7/docs/api>

2. Other references

URL: <http://docs.oracle.com/javase/1.4.2/docs/api/java/lang/Thread.html>

URL: <http://netbeans.org/kb/docs/java/gui-image-display.html>