



Mathematics and Algorithms for Computing

Mini Project #2

Topic

Music4Life Music Player App

Project Owner

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SCHOOL OF INFORMATION TECHNOLOGY
IN COMPUTER ENGINEERING

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Signature

A handwritten signature in black ink, appearing to read 'Arunwat Moonbung'.

(ARUNWAT MOONBUNG)

Project Title

Music4Life Music Player App

Background and Rationale

Nowadays, most people are no longer listening to music from the record. Instead, they tend to listen to music on their phone, computer, and other digital devices. This means digital audio has been mostly used for music listening behavior.

There are a various of music player applications available for us to download and use, for example, GOM Audio, Window Media Player, AIMP etc. These music player applications have served us well since digital audio was invented.

From the story above, an application called “**Music4Life Music Player App**” was developed in order to study about Music Player application and queue implementation as a data structure. This application comes with basic functions of Music Player application which allows users to play, pause, loop, add music to queue playlist, remove music from queue playlist and control the volume of the music. This application mainly focuses on playing digital audio format MPEG-1 Audio Layer 3 as known as MP3.

Objectives of the study

- To implement **Doubly Link list** as the data structure for real-world application.
- To implement **Queue** as the data structure for real-world application
- To create a Music Player application that allows users to interact with.

Scope of study

There are three user's roles

1. Administrator
 - Login / Logout

- Switch between User panel and Admin Panel
- Manage the music library, Add / Remove Link List
- Observe the music library
- Play, Pause and Loop music from the music library or queue music playlist when using User Panel
- Add(enqueue) / remove(dequeue) the music into the queue playlist when using User Panel
- Increase / Decrease volume of the music when using User Panel

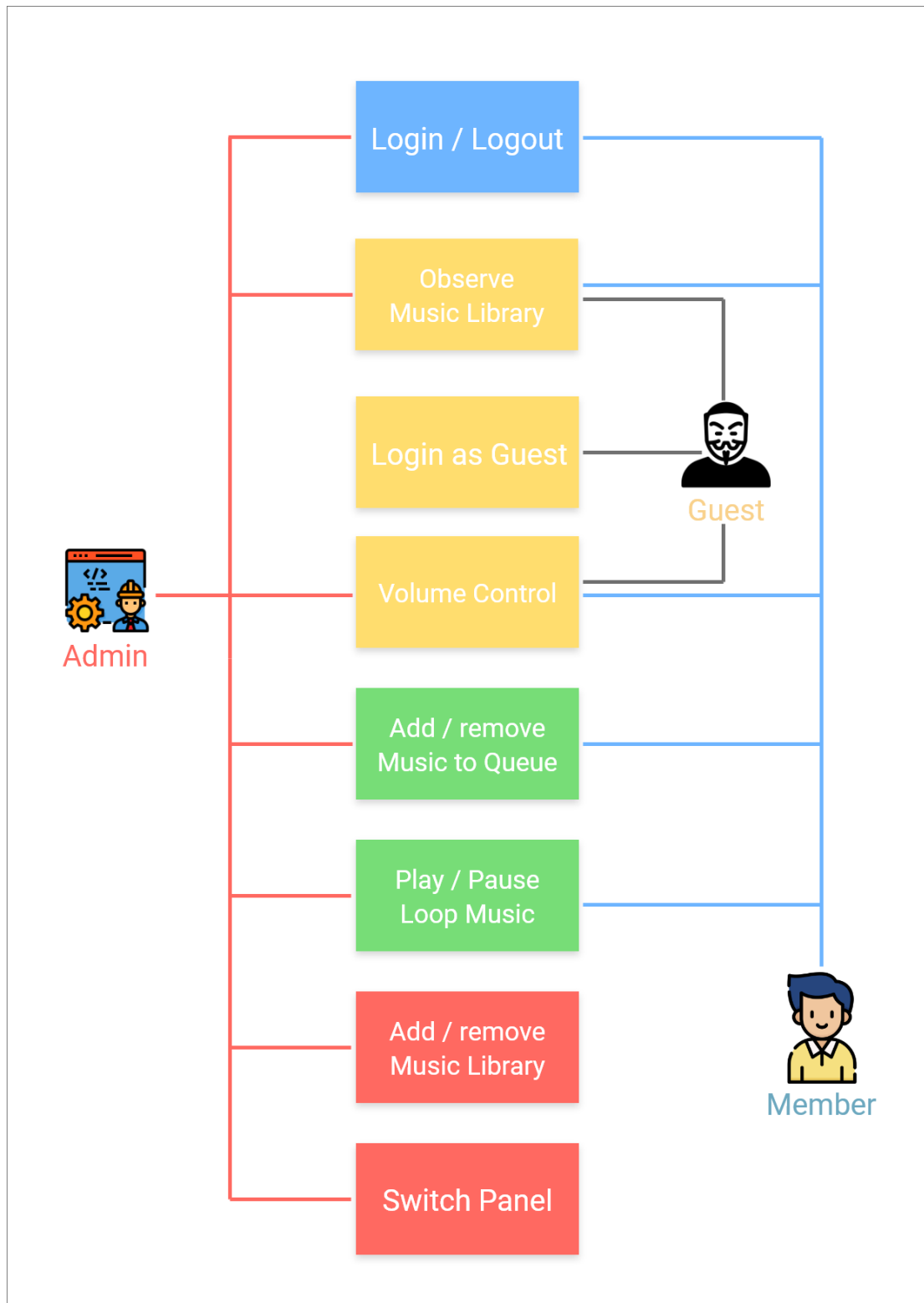
2. Members

- Login / Logout
- Observe the music library
- Add(enqueue) / remove (dequeue) the music into the queue playlist.
- Play, Pause and Loop music from Queue music playlist
- Increase / Decrease volume of the music

3. Guest

- Logout
- Observe the music library
- Increase / Decrease volume of the music

Use case Diagram



Node Class

```
package Music4LifebyThM;  
//@author Shoichi | NODE V2.0 IMPROVED!  
public class Node {  
    private String element;  
    private Node prev;  
    private Node next;  
    public Node(String data){  
        element = data;  
        prev = null;  
        next = null;  
    }  
    public void linkPrev(Node newNode){  
        prev = newNode;  
    }  
    public void linkNext(Node newNode){  
        next = newNode;  
    }  
    public Node getPrevNode(){  
        return prev;  
    }  
    public Node getNextNode(){  
        return next;  
    }  
    public String getElement(){  
        return element;  
    }  
}
```

DLL Class

```
package Music4LifebyThM;
//@author Shoichi | DLL IMPROVE 2.0
public class DLL
{
    private Node head = null;
    private Node tail = null;
    private int size = 0;

    public DLL(){
        //build an empty link list
        head = new Node("[Head]--> ");
        tail = new Node("<--[tail]");
        head.linkNext(tail);
        tail.linkPrev(head);
    }
    public void addFirst(String data){
        //create new node
        Node newNode = new Node (data);
        newNode.linkPrev(head);
        newNode.linkNext(head.getNextNode());
        head.getNextNode().linkPrev(newNode);
        head.linkNext(newNode);
        size++;
    }
    public void addLast(String data){
        Node newNode = new Node(data);
        newNode.linkNext(tail);
        newNode.linkPrev(tail.getPrevNode());
        tail.getPrevNode().linkNext(newNode);
        tail.linkPrev(newNode);
        size++;
    }
}
```

```
public void removeFirst(){
    if(size==1)
    {
        head.linkNext(tail);
        tail.linkPrev(head);
        size--;
    }
    else if (size>1)
    {
        head.linkNext(head.getNextNode().getNextNode());
        head.getNextNode().linkPrev(head);
        size--;
    }
}

public void removeLast(){
    //if(size==0) do nothing
    if(size==1)
    {
        head.linkNext(tail);
        tail.linkPrev(head);
        size--;
    }
    else if (size>1)
    {
        tail.linkPrev(tail.getPrevNode().getPrevNode());
        tail.getPrevNode().linkNext(tail);
        size--;
    }
}
```



```
public String iterateForward(){
    String str = "";
    Node tmp = head;
    while(tmp != null)
    {
        str = str.concat((tmp.getElement()+" , "));
        tmp = tmp.getNextNode();
    }
    return str;
}
```

```
public String iterateBackward(){
    String str = "";
    Node tmp = tail;
    while(tmp != null)
    {
        str = str.concat((tmp.getElement()+" , "));
        tmp = tmp.getPrevNode();
    }
    return str;
}
```

```
public String getElementByIndex(int index){
    //node that index start with 0 to size -1
    String element = "NONE";
    if((size > 0) && (index <= size))
    {
        Node p = head;
        for (int i=0; i<index; i++)
        {
            p = p.getNextNode();
        }
        element = p.getElement();
    }
}
```

```
        return element;
    }
    public int getSize(){
        return size;
    }
}
```

QueueArray Class

```
package Music4LifebyThM;
//Shoichi | Queue Improve 2.0
public class QueueArray {
    private final int CAPACITY = 5;
    String [] data;
    int front = 0;
    int size = 0;
    int capacity;

    public QueueArray(){
        data = new String[CAPACITY];
    }
    public String peek(){
        if (isEmpty())
        {
            return "Queue of the song is empty";
        }
        return data[front];
    }
    public void old_enqueue(String element){
        if (size == data.length)
        {
            System.out.println("Queue is Full!");
        }
    }
}
```

```
else
{
    // add new element at the rear
    int rear = (front+size) % data.length;
    data[rear] = element;
    size++;
    System.out.println("Inserting " + element);
    System.out.println("Queue size is : " + getSize());
    System.out.println("Front Element : " + peek());
    System.out.println("All List Queue : " + printQueue());
}
}

public void enqueue(String element) {
    if (size == data.length) {
        resize();
    }
    // add new element at the rear
    int tail = (front + size) % data.length;
    data[tail] = element;
    size++;

    System.out.println("Inserting : " + element);
    System.out.println("Queue size is : " + getSize());
    System.out.println("Capacity is : " + getCapacity());
    System.out.println("Front Element : " + peek());
    System.out.println("All List Queue : " + printQueue());
    System.out.println("");
}

public String dequeue(){
    if (isEmpty())
    {
        return "There is no song in Queue";
    }

    String element = data[front];
    front = (front + 1) % data.length;
```

```
        size--;  
        return element;  
    }  
  
    public int getCapacity(){  
        return data.length;  
    }  
    public int getSize(){  
        return size;  
    }  
  
    public boolean isEmpty(){  
        return (getSize() == 0);  
    }  
  
    public String printQueue(){  
        String queuelist = "";  
        if (size == 0)  
        {  
            queuelist = "Queue is empty!";  
        }  
        else  
        {  
            for (int i = front; i < (front + size); i++)  
            {  
                queuelist = queuelist.concat(data[i % data.length] + " -> ");  
            }  
        }  
        return queuelist;  
    }  
}
```

```
public void resize() {  
    // create a temp array of double size  
    String[] temp = new String[data.length * 2];  
    // copy old array and rearrange to the new array  
    int indexNew = 0;  
    int indexOld = front;  
    for (int i = 0; i < size; i++) {  
        temp[indexNew] = data[indexOld];  
        indexOld = (indexOld + 1) % data.length;  
        indexNew++;  
    }  
    // assign data to new array  
    data = temp;  
    front = 0;  
}
```

ThMxMusicPlayer Class

This Class provide simple functions of Music Player such as Play Music, Stop Music, Pause Music, Loop Music and etc. In term of creating this class, external library called JLayer has been used in this class.

```
package Music4LifebyThM;  
//Shoichi | ThM Empire | 6131501066  
import java.io.BufferedInputStream;  
import java.io.FileInputStream;  
import java.io.FileNotFoundException;  
import java.io.IOException;  
import java.io.InputStream;  
import java.util.logging.Level;  
import java.util.logging.Logger;  
import javazoom.jl.decoder.JavaLayerException;  
import javazoom.jl.player.Player;
```

```
public class ThMxMusicPlayer {

    //FileInputStream FIS;
    //BufferedInputStream BIS;
    private InputStream IS;
    public static Player player;
    public long pauseLocation;
    public long songTotalLength;
    public String fileLocation;
    private String musicFilePath;
    ThMxUser ThMxUser;

    public void StopMusic()
    {
        if(player != null)
        {
            player.close();
            /*pauseLocation = 0;
            songTotalLength = 0;*/
        }
    }

    public void PauseMusic()
    {
        if(player != null)
        {
            try {
                pauseLocation = IS.available();
                player.close();
            }
            catch (IOException ex)
            {

            }
        }
    }
}
```

```
    }  
}  
  
public void PlayMusic(String path)  
{  
    try  
    {  
        this.musicFilePath = path;  
        IS = this.getClass().getResourceAsStream(path);  
        //FIS = new FileInputStream(path);  
        //BIS = new BufferedInputStream(FIS);  
        player = new Player(IS);  
        songTotalLength = IS.available();  
        fileLocation = this.getClass().getResourceAsStream(path)+"";  
    }  
    catch (FileNotFoundException | JavaLayerException ex)  
    {  
  
    }  
    catch (IOException ex)  
    {  
        //Logger.getLogger(ThMxMusicPlayer.class.getName()).log(Level.SEVERE, null, ex);  
    }  
    new Thread()  
    {  
        @Override  
        public void run()  
        {  
            try  
            {  
                player.play();  
                if(player.isComplete() && ThMxUser.switchloop == 1)  
                {  
                    PlayMusic(musicFilePath);  
                }  
            }  
            catch (Exception ex)  
            {  
                //Logger.getLogger(ThMxMusicPlayer.class.getName()).log(Level.SEVERE, null, ex);  
            }  
        }  
    }  
}
```

```
        }  
        else if(player.isComplete())  
        {  
            ThMxUser.songDequeue();  
        }  
    }  
    catch (JavaLayerException ex)  
    {  
  
    }  
}  
  
private void Play(String fileLocation) {  
    throw new UnsupportedOperationException("Not supported yet."); //To change body of  
generated methods, choose Tools | Templates.  
}  
}.start();  
}  
  
public void adminPlayMusic(String path)  
{  
    try  
    {  
        this.musicFilePath = path;  
        IS = this.getClass().getResourceAsStream(path);  
        //FIS = new FileInputStream(path);  
        //BIS = new BufferedInputStream(FIS);  
        player = new Player(IS);  
        songTotalLength = IS.available();  
        fileLocation = this.getClass().getResourceAsStream(path)+"";  
    }  
    catch (FileNotFoundException | JavaLayerException ex)  
    {  

```



```
}  
catch (IOException ex)  
{  
    //Logger.getLogger(ThMxMusicPlayer.class.getName()).log(Level.SEVERE, null, ex);  
}  
new Thread()  
{  
    @Override  
    public void run()  
    {  
        try  
        {  
            player.play();  
        }  
        catch (JavaLayerException ex)  
        {  
  
        }  
    }  
}  
  
private void Play(String fileLocation) {  
    throw new UnsupportedOperationException("Not supported yet."); //To change body of  
generated methods, choose Tools | Templates.  
}  
}.start();  
}  
  
public void ResumeMusic()  
{  
    try  
    {  
        IS = this.getClass().getResourceAsStream( musicFilePath );  
        IS.skip(songTotalLength - pauseLocation);  
        player = new Player(IS);
```

```
}  
catch (FileNotFoundException | JavaLayerException ex)  
{  
  
}  
catch (IOException ex)  
{  
    //Logger.getLogger(ThMxMusicPlayer.class.getName()).log(Level.SEVERE, null, ex);  
}  
new Thread()  
{  
    @Override  
    public void run()  
    {  
        try  
        {  
            player.play();  
            if(player.isComplete() && ThMxUser.switchloop == 1)  
            {  
                PlayMusic(musicFilePath);  
            }  
            else if(player.isComplete())  
            {  
                ThMxUser.songDequeue();  
            }  
        }  
        catch (JavaLayerException ex)  
        {  
  
        }  
    }  
}.start();  
}
```

```
public void adminResumeMusic()
{
    try
    {
        IS = this.getClass().getResourceAsStream( musicFilePath );
        IS.skip(songTotalLength - pauseLocation);
        player = new Player(IS);
    }
    catch (FileNotFoundException | JavaLayerException ex)
    {


    }
    catch (IOException ex)
    {
        //Logger.getLogger(ThMxMusicPlayer.class.getName()).log(Level.SEVERE, null, ex);
    }
    new Thread()
    {
        @Override
        public void run()
        {
            try
            {
                player.play();
            }
            catch (JavaLayerException ex)
            {

            }
        }
    }.start();
}

public boolean statusMusic()
```

```
{  
    return player.isComplete();  
}  
  
}
```

Login Panel (THMxLoginPanel.java)



Music4Life

Username

admin

Password

Login

Login as Guest

EXIT

When the program has been initialized by users, the program will show the Login Panel which users can type their username and password into the text field and login, or users can log in as a guest if they didn't have an account. In brief, there are three ways that users can log in with login panel

1. Using the administrator account, this will bring you directly to Admin Panel. If the administrator wants to access User Panel, there will be a switch button inside the Admin Panel.
2. Using members account, this will bring you directly to User Panel as a member
3. Log in as Guest will bring you to User Pane, but some functions are restricted

Source Code

```
package Music4LifebyThM;  
import javax.swing.JFrame;  
import java.awt.Color;  
import java.awt.Dimension;  
import java.awt.Toolkit;  
  
public class ThMxLoginPanel extends javax.swing.JFrame {  
    static int xMouse,yMouse;  
    public static int idlogin;  
  
    public void set_id(int id)  
    {  
        idlogin = id;  
    }  
    public int get_idlogin()  
    {  
        return idlogin;  
    }  
    public ThMxLoginPanel() {  
        this.setUndecorated(true);
```

```
initComponents();  
Dimension dim = Toolkit.getDefaultToolkit().getScreenSize();  
this.setLocation(dim.width/2-this.getSize().width/2, dim.height/2-this.getSize().height/2);  
this.setBackground(new Color(0,0,0,0));  
bg_loginpanel.setBackground(new Color(0,0,0,0));  
txtf_username.setBackground(new Color(0,0,0,0));  
txtf_password.setBackground(new Color(0,0,0,0));  
}  
  
@SuppressWarnings("unchecked")  
// <editor-fold defaultstate="collapsed" desc="Generated Code">  
private void initComponents() {  
  
    bg_loginpanel = new javax.swing.JPanel();  
    lbl_warning = new javax.swing.JLabel();  
    bt_exitsystem = new javax.swing.JLabel();  
    txtf_username = new javax.swing.JTextField();  
    txtf_password = new javax.swing.JPasswordField();  
    bt_login = new javax.swing.JLabel();  
    bt_loginasguest = new javax.swing.JLabel();  
    bg_loginform = new javax.swing.JLabel();  
    bg_loginstructure = new javax.swing.JLabel();  
  
    setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);  
  
    bg_loginpanel.addMouseListener(new java.awt.event.MouseAdapter() {  
        public void mouseDragged(java.awt.event.MouseEvent evt) {  
            bg_loginpanelMouseDragged(evt);  
        }  
    });  
    bg_loginpanel.addMouseListener(new java.awt.event.MouseAdapter() {  
        public void mousePressed(java.awt.event.MouseEvent evt) {  
            bg_loginpanelMousePressed(evt);  
        }  
    })
```

```
});  
bg_loginpanel.setLayout(new org.netbeans.lib.awtextra.AbsoluteLayout());  
  
lbl_warning.setFont(new java.awt.Font("TH Chakra Petch", 0, 24)); // NOI18N  
lbl_warning.setForeground(new java.awt.Color(255, 51, 0));  
lbl_warning.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);  
bg_loginpanel.add(lbl_warning, new org.netbeans.lib.awtextra.AbsoluteConstraints(30, 420, 450,  
30));  
  
bt_exitsystem.setFont(new java.awt.Font("TH Chakra Petch", 1, 36)); // NOI18N  
bt_exitsystem.setForeground(new java.awt.Color(248, 92, 77));  
bt_exitsystem.setText("EXIT");  
bt_exitsystem.addFocusListener(new java.awt.event.FocusAdapter() {  
    public void focusGained(java.awt.event.FocusEvent evt) {  
        bt_exitsystemFocusGained(evt);  
    }  
    public void focusLost(java.awt.event.FocusEvent evt) {  
        bt_exitsystemFocusLost(evt);  
    }  
});  
bt_exitsystem.addMouseListener(new java.awt.event.MouseAdapter() {  
    public void mouseClicked(java.awt.event.MouseEvent evt) {  
        bt_exitsystemMouseClicked(evt);  
    }  
    public void mouseEntered(java.awt.event.MouseEvent evt) {  
        bt_exitsystemMouseEntered(evt);  
    }  
    public void mouseExited(java.awt.event.MouseEvent evt) {  
        bt_exitsystemMouseExited(evt);  
    }  
});  
bg_loginpanel.add(bt_exitsystem, new org.netbeans.lib.awtextra.AbsoluteConstraints(440, 670, -1,  
-1));
```



```
txtf_username.setFont(new java.awt.Font("TH Baijam", 1, 24)); // NOI18N
txtf_username.setForeground(new java.awt.Color(102, 102, 102));
txtf_username.setText("Enter Username here!");
txtf_username.setBorder(null);
txtf_username.setOpaque(false);
txtf_username.addFocusListener(new java.awt.event.FocusAdapter() {
    public void focusGained(java.awt.event.FocusEvent evt) {
        txtf_usernameFocusGained(evt);
    }
});
txtf_username.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        txtf_usernameActionPerformed(evt);
    }
});
bg_loginpanel.add(txtf_username, new org.netbeans.lib.awtextra.AbsoluteConstraints(100, 270,
310, -1));

txtf_password.setFont(new java.awt.Font("Tahoma", 1, 18)); // NOI18N
txtf_password.setForeground(new java.awt.Color(102, 102, 102));
txtf_password.setText("Password Here");
txtf_password.setToolTipText("");
txtf_password.setBorder(null);
txtf_password.setOpaque(false);
txtf_password.addFocusListener(new java.awt.event.FocusAdapter() {
    public void focusGained(java.awt.event.FocusEvent evt) {
        txtf_passwordFocusGained(evt);
    }
});
txtf_password.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        txtf_passwordActionPerformed(evt);
    }
});
```

```
bg_loginpanel.add(txtf_password, new org.netbeans.lib.awtextra.AbsoluteConstraints(100, 370,
310, 30));

bt_login.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_login.png"))); // NOI18N
bt_login.addMouseListener(new java.awt.event.MouseAdapter() {
    public void mouseReleased(java.awt.event.MouseEvent evt) {
        bt_loginMouseReleased(evt);
    }
});
bg_loginpanel.add(bt_login, new org.netbeans.lib.awtextra.AbsoluteConstraints(150, 480, -1, -1));

bt_loginasguest.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_loginasguest.png"))); //
NOI18N
bt_loginasguest.addMouseListener(new java.awt.event.MouseAdapter() {
    public void mouseReleased(java.awt.event.MouseEvent evt) {
        bt_loginasguestMouseReleased(evt);
    }
});
bg_loginpanel.add(bt_loginasguest, new org.netbeans.lib.awtextra.AbsoluteConstraints(150, 570, -
1, -1));

bg_loginform.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/LoginForm.png"))); // NOI18N
bg_loginpanel.add(bg_loginform, new org.netbeans.lib.awtextra.AbsoluteConstraints(100, 200, 310,
230));

bg_loginstructure.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bg_loginStructure.png"))); //
NOI18N
bg_loginpanel.add(bg_loginstructure, new org.netbeans.lib.awtextra.AbsoluteConstraints(0, 0, -1, -
1));
```

```
        javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
        getContentPane().setLayout(layout);
        layout.setHorizontalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                .addComponent(bg_loginpanel, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
        );
        layout.setVerticalGroup(
            layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                .addComponent(bg_loginpanel, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
        );

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

    private void txtf_usernameFocusGained(java.awt.event.FocusEvent evt) {
        txtf_username.setText("");
    }

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

    }

    private void txtf_passwordFocusGained(java.awt.event.FocusEvent evt) {
        txtf_password.setText("");
    }

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

    }

    private void bt_exitsystemMouseClicked(java.awt.event.MouseEvent evt) {
        System.exit(0);
    }
```

```
}

private void bt_exitsystemFocusGained(java.awt.event.FocusEvent evt) {

}

private void bt_exitsystemFocusLost(java.awt.event.FocusEvent evt) {

}

private void bt_exitsystemMouseEntered(java.awt.event.MouseEvent evt) {
    bt_exitsystem.setForeground(new Color(102, 102, 102));
}

private void bt_exitsystemMouseExited(java.awt.event.MouseEvent evt) {
    bt_exitsystem.setForeground(new Color(248, 92, 77));
}

private void bg_loginpanelMousePressed(java.awt.event.MouseEvent evt) {
    xMouse = evt.getX();
    yMouse = evt.getY();
}

private void bg_loginpanelMouseDragged(java.awt.event.MouseEvent evt) {
    int x = evt.getXOnScreen();
    int y = evt.getYOnScreen();
    this.setLocation(x-xMouse, y-yMouse);
}

private void bt_loginMouseReleased(java.awt.event.MouseEvent evt) {
    String loginusername = txtf_username.getText();
    String loginpassword = txtf_password.getText();
    final String acc_admin = "admin";
    final String acc_admin_password = "1234";
}
```

```
final String acc_customer = "pizchaya";
final String acc_cus_password = "1234";
final String acc_customer1 = "hobo";
final String acc_cus_password1 = "1234";

if(loginusername.equals(acc_admin) && loginpassword.equals(new String(acc_admin_password)))
{
    lbl_warning.setText("Successful Login");
    set_id(0);
    ThMxAdmin ThMxAdmin = new ThMxAdmin();
    ThMxAdmin.setVisible(true);
    ThMxAdmin.pack();
    ThMxAdmin.setLocationRelativeTo(null);
    ThMxAdmin.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
    this.dispose();
}
else if(loginusername.equals(acc_customer) && loginpassword.equals(new
String(acc_cus_password)))
{
    lbl_warning.setText("Successful Login");
    idlogin = 2;
    ThMxUser ThMxUser = new ThMxUser();
    ThMxUser.setVisible(true);
    ThMxUser.pack();
    ThMxUser.setLocationRelativeTo(null);
    ThMxUser.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
    this.dispose();
}
else if(loginusername.equals(acc_customer1) && loginpassword.equals(new
String(acc_cus_password1)))
{
    lbl_warning.setText("Successful Login");
    idlogin = 3;
    ThMxUser ThMxUser = new ThMxUser();
```

```
        ThMxUser.setVisible(true);
        ThMxUser.pack();
        ThMxUser.setLocationRelativeTo(null);
        ThMxUser.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        this.dispose();
    }
    else
    {
        lbl_warning.setText("Incorrect, Try Again or Please Login As Guest");
    }
}

private void bt_loginasguestMouseReleased(java.awt.event.MouseEvent evt) {
    idlogin = 1;
    ThMxUser ThMxUser = new ThMxUser();
    ThMxUser.setVisible(true);
    ThMxUser.pack();
    ThMxUser.setLocationRelativeTo(null);
    ThMxUser.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
    this.dispose();
}

/**
 * @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(ThMxLoginPanel.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
    } catch (InstantiationException ex) {

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

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

java.util.logging.Logger.getLogger(ThMxLoginPanel.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 ThMxLoginPanel().setVisible(true);
    }
});
}
// Variables declaration - do not modify
private javax.swing.JLabel bg_loginform;
private javax.swing.JPanel bg_loginpanel;

```

```
private javax.swing.JLabel bg_loginstructure;  
private javax.swing.JLabel bt_exitsystem;  
private javax.swing.JLabel bt_login;  
private javax.swing.JLabel bt_loginasguest;  
private javax.swing.JLabel lbl_warning;  
private javax.swing.JPasswordField txtf_password;  
private javax.swing.JTextField txtf_username;  
// End of variables declaration  
}
```


Admin Panel (THMxAdmin.java)

SYSTEM CONTROL



Arashi - Love So Sweet

⏮ ⏸ ⏭ ⏪ ⏩

7 of 13

MUSIC NAME

6131501066

MUSIC PATH

6131501066.mp3

ALBLUM PATH

6131501066.png

<- X

USER

ADDFIRST
ADDLAST
REMOVEFIRST REMOVELAST

After logging in as administrator, Admin panel will appear. In this panel, the administrator can add or remove the music library (doubly linked list) using methods **addFirst**, **addLast**, **removeFirst** and **removeLast** buttons. The doubly linked list can be observed by using left and right arrow (**Next**, **Prev methods**). The linked list contains Name, Music file path, and Album cover path. When playing the music from Admin Panel, the file path of the music is kept in Linked list. The purpose of making play and pause functions for Admin panel is to check whether the file is in the correct path or not.

Source Code

```
package Music4LifebyThM;  
  
import java.awt.Color;  
import java.awt.Dimension;  
import java.io.File;  
import java.awt.Toolkit;  
import javax.swing.JFrame;  
  
public class ThMxAdmin extends javax.swing.JFrame {  
  
    public static DLL Music_Name = new DLL();  
    public static DLL Music_Path = new DLL();  
    public static DLL Music_Pic = new DLL();  
    ThMxMusicPlayer adminPlayer = new ThMxMusicPlayer();  
    public int switchcount;  
    static int xMouse,yMouse;  
    int index;  
    String CurrentsongPath;  
  
    public ThMxAdmin() {  
        this.setUndecorated(true);  
        initComponents();  
    }  
}
```

```
Dimension dim = Toolkit.getDefaultToolkit().getScreenSize();
this.setLocation(dim.width/2-this.getSize().width/2, dim.height/2-this.getSize().height/2);
this.setBackground(new Color(0,0,0,0));
bg_adminPanel.setBackground(new Color(0,0,0,0));
txt_mName.setBackground(new Color(0,0,0,0));
txt_mPath.setBackground(new Color(0,0,0,0));
txt_mPic.setBackground(new Color(0,0,0,0));
//
if(Music_Name.getSize() == 0)
{
    initialMS();
}
else
{
}
callNextMusic();
}

public static void initialMS(){

    //1
    Music_Name.addLast("Lil boom - Already dead");
    Music_Path.addLast("AlreadyDead.mp3");
    Music_Pic.addLast("AlreadyDead.png");
    //1.5
    Music_Name.addLast("Heiakim - Darling");
    Music_Path.addLast("Heiakim - Darling.mp3");
    Music_Pic.addLast("02.png");
    //2
    Music_Name.addLast("Jay man - Choral");
    Music_Path.addLast("Choral5sec.mp3");
    Music_Pic.addLast("default.png");
    //2.5
    Music_Name.addLast("How I met your Mother");
```

```
Music_Path.addLast("How I met your Mother Intro.mp3");
Music_Pic.addLast("howimetyourmom.png");
//3
Music_Name.addLast("GUNGUN - Whale Cover by Umechan");
Music_Path.addLast("Umechan - Whale.mp3");
Music_Pic.addLast("MaiySupitcha.png");
//4
Music_Name.addLast("Ichika Nito - I miss you");
Music_Path.addLast("Ichika Nito - I miss you.mp3");
Music_Pic.addLast("imissyou.png");
//5
Music_Name.addLast("Arashi - Love So Sweet");
Music_Path.addLast("Arashi - Love So Sweet.mp3");
Music_Pic.addLast("LoveSoSweet.png");
//6
Music_Name.addLast("Verse One - Real Game");
Music_Path.addLast("Verse One - Real Game.mp3");
Music_Pic.addLast("Realgame.png");
//7
Music_Name.addLast("Breakbot - Baby I'm Yours feat. Irfane");
Music_Path.addLast("Breakbot - Baby I'm Yours.mp3");
Music_Pic.addLast("Breakbot.png");
//8
Music_Name.addLast("Black Coast - TRNDSTTR (Lucian Remix)");
Music_Path.addLast("Black Coast - TRNDSTTR.mp3");
Music_Pic.addLast("TRNDSTTR.png");
//9
Music_Name.addLast("Snail's House x Moe Shop - Pastel");
Music_Path.addLast("Snail's House Moe Shop - Pastel.mp3");
Music_Pic.addLast("SnailHouse.png");
//10
Music_Name.addLast("Snail's House - Lullaby");
Music_Path.addLast("Snail's House - Lullaby.mp3");
Music_Pic.addLast("LullabySnail.png");
```

```
//11
Music_Name.addLast("Earth Patravee - You're mine Cover by Umechan");
Music_Path.addLast("Umechan - You're Mine.mp3");
Music_Pic.addLast("MaiySupitcha.png");
}

private void callPrevMusic(){
    index = index - 1;
    if ((index > 0) && (index <= Music_Name.getSize())) {
        lbl_currentMusic.setText(Music_Name.getElementByIndex(index));
        lbl_currentindex.setText(Integer.toString(index));
        lbl_size.setText(Integer.toString(Music_Name.getSize()));
        lbl_mPic.setIcon(new
javafx.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/AlbumCover/"+Music_Pic.get
ElementByIndex(index))));
        CurrentsongPath = "/Music4LifeByThM/Music/"+Music_Path.getElementByIndex(index);
    } else {
        index = Music_Name.getSize();
        lbl_currentMusic.setText(Music_Name.getElementByIndex(index));
        lbl_currentindex.setText(Integer.toString(index));
        lbl_size.setText(Integer.toString(Music_Name.getSize()));
        lbl_mPic.setIcon(new
javafx.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/AlbumCover/"+Music_Pic.get
ElementByIndex(index))));
        CurrentsongPath = "/Music4LifeByThM/Music/"+Music_Path.getElementByIndex(index);
    }
}

private void callNextMusic(){
    index = index + 1;
    if ((index > 0) && (index <= Music_Name.getSize())) {
        lbl_currentMusic.setText(Music_Name.getElementByIndex(index));
        lbl_currentindex.setText(Integer.toString(index));
        lbl_size.setText(Integer.toString(Music_Name.getSize()));
```

```
        lbl_mPic.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/AlbumCover/"+Music_Pic.get
ElementByIndex(index))));

        CurrentsongPath = "/Music4LifeByThM/Music/"+Music_Path.getElementByIndex(index);
    } else {
        index = 1;
        lbl_currentMusic.setText(Music_Name.getElementByIndex(index));
        lbl_currentindex.setText(Integer.toString(index));
        lbl_size.setText(Integer.toString(Music_Name.getSize()));
        lbl_mPic.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/AlbumCover/"+Music_Pic.get
ElementByIndex(index))));

        CurrentsongPath = "/Music4LifeByThM/Music/"+Music_Path.getElementByIndex(index);
    }
}

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

    bg_adminPanel = new javax.swing.JPanel();
    bt_goUser = new javax.swing.JLabel();
    bt_back = new javax.swing.JLabel();
    bt_exit = new javax.swing.JLabel();
    lbl_currentMusic = new javax.swing.JLabel();
    lbl_currentindex = new javax.swing.JLabel();
    lbl_of = new javax.swing.JLabel();
    lbl_size = new javax.swing.JLabel();
    txt_mPic = new javax.swing.JTextField();
    txt_mPath = new javax.swing.JTextField();
    txt_mName = new javax.swing.JTextField();
    bg_formMusic = new javax.swing.JLabel();
    bg_mPic = new javax.swing.JPanel();
    lbl_mPic = new javax.swing.JLabel();
```

```
bt_prev = new javax.swing.JLabel();
bt_pause = new javax.swing.JLabel();
bt_play = new javax.swing.JLabel();
bt_resume = new javax.swing.JLabel();
bt_next = new javax.swing.JLabel();
bt_addFirst = new javax.swing.JLabel();
bt_addLast = new javax.swing.JLabel();
bt_revFirst = new javax.swing.JLabel();
bt_revLast = new javax.swing.JLabel();
bg_adminStructure = new javax.swing.JLabel();

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

bg_adminPanel.addMouseMotionListener(new java.awt.event.MouseMotionAdapter() {
    public void mouseDragged(java.awt.event.MouseEvent evt) {
        bg_adminPanelMouseDragged(evt);
    }
});
bg_adminPanel.addMouseListener(new java.awt.event.MouseAdapter() {
    public void mousePressed(java.awt.event.MouseEvent evt) {
        bg_adminPanelMousePressed(evt);
    }
});
bg_adminPanel.setLayout(new org.netbeans.lib.awtextra.AbsoluteLayout());

bt_goUser.setFont(new java.awt.Font("TH Baijam", 1, 24)); // NOI18N
bt_goUser.setHorizontalAlignment(javax.swing.SwingConstants.RIGHT);
bt_goUser.setText("USER");
bt_goUser.addMouseListener(new java.awt.event.MouseAdapter() {
    public void mouseEntered(java.awt.event.MouseEvent evt) {
        bt_goUserMouseEntered(evt);
    }

    public void mouseExited(java.awt.event.MouseEvent evt) {
        bt_goUserMouseExited(evt);
    }
});
```

```
    }  
    public void mouseReleased(java.awt.event.MouseEvent evt) {  
        bt_goUserMouseReleased(evt);  
    }  
});  
bg_adminPanel.add(bt_goUser, new org.netbeans.lib.awtextra.AbsoluteConstraints(480, 520, 70, -  
1));  
  
bt_back.setFont(new java.awt.Font("TH Baijam", 1, 24)); // NOI18N  
bt_back.setText("<-");  
bt_back.addMouseListener(new java.awt.event.MouseAdapter() {  
    public void mouseEntered(java.awt.event.MouseEvent evt) {  
        bt_backMouseEntered(evt);  
    }  
    public void mouseExited(java.awt.event.MouseEvent evt) {  
        bt_backMouseExited(evt);  
    }  
    public void mouseReleased(java.awt.event.MouseEvent evt) {  
        bt_backMouseReleased(evt);  
    }  
});  
bg_adminPanel.add(bt_back, new org.netbeans.lib.awtextra.AbsoluteConstraints(500, 490, -1, -1));  
  
bt_exit.setFont(new java.awt.Font("TH Baijam", 1, 24)); // NOI18N  
bt_exit.setText("X");  
bt_exit.addMouseListener(new java.awt.event.MouseAdapter() {  
    public void mouseEntered(java.awt.event.MouseEvent evt) {  
        bt_exitMouseEntered(evt);  
    }  
    public void mouseExited(java.awt.event.MouseEvent evt) {  
        bt_exitMouseExited(evt);  
    }  
    public void mouseReleased(java.awt.event.MouseEvent evt) {  
        bt_exitMouseReleased(evt);  
    }  
});
```



```
    }  
    });  
    bg_adminPanel.add(bt_exit, new org.netbeans.lib.awtextra.AbsoluteConstraints(540, 490, -1, -1));  
  
    lbl_currentMusic.setFont(new java.awt.Font("TH Chakra Petch", 1, 24)); // NOI18N  
    lbl_currentMusic.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);  
    lbl_currentMusic.setText("Clairo - Hello");  
    bg_adminPanel.add(lbl_currentMusic, new org.netbeans.lib.awtextra.AbsoluteConstraints(30, 360,  
520, 50));  
  
    lbl_currentindex.setFont(new java.awt.Font("TH Baijam", 1, 18)); // NOI18N  
    lbl_currentindex.setText("1");  
    bg_adminPanel.add(lbl_currentindex, new org.netbeans.lib.awtextra.AbsoluteConstraints(490, 450,  
-1, -1));  
  
    lbl_of.setFont(new java.awt.Font("TH Baijam", 1, 18)); // NOI18N  
    lbl_of.setText("Of");  
    bg_adminPanel.add(lbl_of, new org.netbeans.lib.awtextra.AbsoluteConstraints(510, 450, 20, -1));  
  
    lbl_size.setFont(new java.awt.Font("TH Baijam", 1, 18)); // NOI18N  
    lbl_size.setText("10");  
    bg_adminPanel.add(lbl_size, new org.netbeans.lib.awtextra.AbsoluteConstraints(540, 450, -1, -1));  
  
    txt_mPic.setFont(new java.awt.Font("TH Baijam", 1, 24)); // NOI18N  
    txt_mPic.setText("default.png");  
    txt_mPic.setBorder(null);  
    txt_mPic.setOpaque(false);  
    txt_mPic.addActionListener(new java.awt.event.ActionListener() {  
        public void actionPerformed(java.awt.event.ActionEvent evt) {  
            txt_mPicActionPerformed(evt);  
        }  
    });  
    bg_adminPanel.add(txt_mPic, new org.netbeans.lib.awtextra.AbsoluteConstraints(100, 750, 380,  
30));
```

```
txt_mPath.setFont(new java.awt.Font("TH Baijam", 1, 24)); // NOI18N
txt_mPath.setText("Name.mp3");
txt_mPath.setBorder(null);
txt_mPath.setOpaque(false);
txt_mPath.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        txt_mPathActionPerformed(evt);
    }
});
bg_adminPanel.add(txt_mPath, new org.netbeans.lib.awtextra.AbsoluteConstraints(100, 650, 380,
30));

txt_mName.setFont(new java.awt.Font("TH Baijam", 1, 24)); // NOI18N
txt_mName.setText("Name Here!");
txt_mName.setBorder(null);
txt_mName.setOpaque(false);
txt_mName.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        txt_mNameActionPerformed(evt);
    }
});
bg_adminPanel.add(txt_mName, new org.netbeans.lib.awtextra.AbsoluteConstraints(100, 560, 380,
30));

bg_formMusic.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/FormMusicDetails.png"))); //
NOI18N
bg_adminPanel.add(bg_formMusic, new org.netbeans.lib.awtextra.AbsoluteConstraints(100, 520,
380, -1));

javax.swing.GroupLayout bg_mPicLayout = new javax.swing.GroupLayout(bg_mPic);
bg_mPic.setLayout(bg_mPicLayout);
bg_mPicLayout.setHorizontalGroup(
```

```
        bg_mPicLayout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(bg_mPicLayout.createSequentialGroup())
        .addComponent(lbl_mPic)
        .addGap(0, 0, Short.MAX_VALUE))
    );

    bg_mPicLayout.setVerticalGroup(
        bg_mPicLayout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(bg_mPicLayout.createSequentialGroup())
        .addComponent(lbl_mPic)
        .addGap(0, 0, Short.MAX_VALUE))
    );

    bg_adminPanel.add(bg_mPic, new org.netbeans.lib.awtextra.AbsoluteConstraints(170, 140, 230,
220));

    bt_prev.setIcon(new
    javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_prev.png"))); // NOI18N
    bt_prev.addMouseListener(new java.awt.event.MouseAdapter() {
        public void mouseClicked(java.awt.event.MouseEvent evt) {
            bt_prevMouseClicked(evt);
        }
        public void mouseEntered(java.awt.event.MouseEvent evt) {
            bt_prevMouseEntered(evt);
        }
        public void mouseExited(java.awt.event.MouseEvent evt) {
            bt_prevMouseExited(evt);
        }
    });

    bg_adminPanel.add(bt_prev, new org.netbeans.lib.awtextra.AbsoluteConstraints(110, 410, -1, -1));

    bt_pause.setIcon(new
    javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_pause.png"))); // NOI18N
    bt_pause.addMouseListener(new java.awt.event.MouseAdapter() {
        public void mouseClicked(java.awt.event.MouseEvent evt) {
```

```
        bt_pauseMouseClicked(evt);
    }
    public void mouseEntered(java.awt.event.MouseEvent evt) {
        bt_pauseMouseEntered(evt);
    }
    public void mouseExited(java.awt.event.MouseEvent evt) {
        bt_pauseMouseExited(evt);
    }
    public void mouseReleased(java.awt.event.MouseEvent evt) {
        bt_pauseMouseReleased(evt);
    }
    });
    bg_adminPanel.add(bt_pause, new org.netbeans.lib.awtextra.AbsoluteConstraints(180, 410, -1, -1));

    bt_play.setIcon(new
    javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_play.png"))); // NOI18N
    bt_play.addMouseListener(new java.awt.event.MouseAdapter() {
        public void mouseClicked(java.awt.event.MouseEvent evt) {
            bt_playMouseClicked(evt);
        }
        public void mouseEntered(java.awt.event.MouseEvent evt) {
            bt_playMouseEntered(evt);
        }
        public void mouseExited(java.awt.event.MouseEvent evt) {
            bt_playMouseExited(evt);
        }
        public void mouseReleased(java.awt.event.MouseEvent evt) {
            bt_playMouseReleased(evt);
        }
    });
    bg_adminPanel.add(bt_play, new org.netbeans.lib.awtextra.AbsoluteConstraints(250, 410, -1, -1));

    bt_resume.setIcon(new
    javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_resume.png"))); // NOI18N
```

```
bt_resume.addMouseListener(new java.awt.event.MouseAdapter() {
    public void mouseEntered(java.awt.event.MouseEvent evt) {
        bt_resumeMouseEntered(evt);
    }
    public void mouseExited(java.awt.event.MouseEvent evt) {
        bt_resumeMouseExited(evt);
    }
    public void mouseReleased(java.awt.event.MouseEvent evt) {
        bt_resumeMouseReleased(evt);
    }
});
bg_adminPanel.add(bt_resume, new org.netbeans.lib.awtextra.AbsoluteConstraints(320, 410, -1, -1));

bt_next.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_next.png"))); // NOI18N
bt_next.addMouseListener(new java.awt.event.MouseAdapter() {
    public void mouseClicked(java.awt.event.MouseEvent evt) {
        bt_nextMouseClicked(evt);
    }
    public void mouseEntered(java.awt.event.MouseEvent evt) {
        bt_nextMouseEntered(evt);
    }
    public void mouseExited(java.awt.event.MouseEvent evt) {
        bt_nextMouseExited(evt);
    }
});
bg_adminPanel.add(bt_next, new org.netbeans.lib.awtextra.AbsoluteConstraints(390, 410, -1, -1));

bt_addFirst.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_addFirst.png"))); //
NOI18N
bt_addFirst.addMouseListener(new java.awt.event.MouseAdapter() {
    public void mouseClicked(java.awt.event.MouseEvent evt) {
```

```
        bt_addFirstMouseClicked(evt);
    }
    public void mouseEntered(java.awt.event.MouseEvent evt) {
        bt_addFirstMouseEntered(evt);
    }
    public void mouseExited(java.awt.event.MouseEvent evt) {
        bt_addFirstMouseExited(evt);
    }
    });
    bg_adminPanel.add(bt_addFirst, new org.netbeans.lib.awtextra.AbsoluteConstraints(50, 800, -1, -
1));

    bt_addLast.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_addLast.png"))); //
NOI18N
    bt_addLast.addMouseListener(new java.awt.event.MouseAdapter() {
        public void mouseClicked(java.awt.event.MouseEvent evt) {
            bt_addLastMouseClicked(evt);
        }
        public void mouseEntered(java.awt.event.MouseEvent evt) {
            bt_addLastMouseEntered(evt);
        }
        public void mouseExited(java.awt.event.MouseEvent evt) {
            bt_addLastMouseExited(evt);
        }
    });
    bg_adminPanel.add(bt_addLast, new org.netbeans.lib.awtextra.AbsoluteConstraints(170, 800, -1, -
1));

    bt_revFirst.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_revFirst.png"))); // NOI18N
    bt_revFirst.addMouseListener(new java.awt.event.MouseAdapter() {
        public void mouseClicked(java.awt.event.MouseEvent evt) {
            bt_revFirstMouseClicked(evt);
```

```
    }  
    public void mouseEntered(java.awt.event.MouseEvent evt) {  
        bt_revFirstMouseEntered(evt);  
    }  
    public void mouseExited(java.awt.event.MouseEvent evt) {  
        bt_revFirstMouseExited(evt);  
    }  
};  
bg_adminPanel.add(bt_revFirst, new org.netbeans.lib.awtextra.AbsoluteConstraints(290, 800, -1, -  
1));  
  
bt_revLast.setIcon(new  
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_revLast.png"))); // NOI18N  
bt_revLast.addMouseListener(new java.awt.event.MouseAdapter() {  
    public void mouseClicked(java.awt.event.MouseEvent evt) {  
        bt_revLastMouseClicked(evt);  
    }  
    public void mouseEntered(java.awt.event.MouseEvent evt) {  
        bt_revLastMouseEntered(evt);  
    }  
    public void mouseExited(java.awt.event.MouseEvent evt) {  
        bt_revLastMouseExited(evt);  
    }  
});  
bg_adminPanel.add(bt_revLast, new org.netbeans.lib.awtextra.AbsoluteConstraints(410, 800, -1, -  
1));  
  
bg_adminStructure.setIcon(new  
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bg_adminStructure.png"))); //  
NOI18N  
bg_adminPanel.add(bg_adminStructure, new org.netbeans.lib.awtextra.AbsoluteConstraints(0, 0,  
570, 900));  
  
javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
```

```
getContentPane().setLayout(layout);
layout.setHorizontalGroup(
    layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addComponent(bg_adminPanel, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
);
layout.setVerticalGroup(
    layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addComponent(bg_adminPanel, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
);

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

private void bt_prevMouseClicked(java.awt.event.MouseEvent evt) {
    bt_prev.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_prevOver.png")));
}

private void bt_prevMouseExited(java.awt.event.MouseEvent evt) {
    bt_prev.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_prev.png")));
}

private void bt_pauseMouseClicked(java.awt.event.MouseEvent evt) {
    bt_pause.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_pauseOver.png")));
}

private void bt_pauseMouseExited(java.awt.event.MouseEvent evt) {
    bt_pause.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_pause.png")));
}
```



```
private void bt_playMouseClicked(java.awt.event.MouseEvent evt) {  
    bt_play.setIcon(new  
    javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_playOver.png")));  
}  
  
private void bt_playMouseExited(java.awt.event.MouseEvent evt) {  
    bt_play.setIcon(new  
    javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_play.png"));  
}  
  
private void bt_nextMouseClicked(java.awt.event.MouseEvent evt) {  
    bt_next.setIcon(new  
    javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_nextOver.png"));  
}  
  
private void bt_nextMouseExited(java.awt.event.MouseEvent evt) {  
    bt_next.setIcon(new  
    javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_next.png"));  
}  
  
private void txt_mNameActionPerformed(java.awt.event.ActionEvent evt) {  
    // TODO add your handling code here:  
}  
  
private void txt_mPathActionPerformed(java.awt.event.ActionEvent evt) {  
    // TODO add your handling code here:  
}  
  
private void txt_mPicActionPerformed(java.awt.event.ActionEvent evt) {  
    // TODO add your handling code here:  
}  
  
private void bt_addFirstMouseClicked(java.awt.event.MouseEvent evt) {
```

```
String name;
String path;
String pic;
name = txt_mName.getText();
Music_Name.addFirst(name);
path = txt_mPath.getText();
Music_Path.addFirst(path);
pic = txt_mPic.getText();
Music_Pic.addFirst(pic);
lbl_size.setText(Integer.toString(Music_Name.getSize()));
}

private void bt_addFirstMouseEntered(java.awt.event.MouseEvent evt) {
    bt_addFirst.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_addFirstOver.png")));
}

private void bt_addFirstMouseExited(java.awt.event.MouseEvent evt) {
    bt_addFirst.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_addFirst.png")));
}

private void bt_addLastMouseClicked(java.awt.event.MouseEvent evt) {
    String name;
    String path;
    String pic;
    name = txt_mName.getText();
    Music_Name.addLast(name);
    path = txt_mPath.getText();
    Music_Path.addLast(path);
    pic = txt_mPic.getText();
    Music_Pic.addLast(pic);
    lbl_size.setText(Integer.toString(Music_Name.getSize()));
}
```

```
private void bt_addLastMouseEntered(java.awt.event.MouseEvent evt) {
    bt_addLast.setIcon(new
    javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_addLastOver.png")));
}

private void bt_addLastMouseExited(java.awt.event.MouseEvent evt) {
    bt_addLast.setIcon(new
    javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_addLast.png")));
}

private void bt_revFirstMouseClicked(java.awt.event.MouseEvent evt) {
    Music_Name.removeFirst();
    Music_Path.removeFirst();
    Music_Pic.removeFirst();
    lbl_size.setText(Integer.toString(Music_Name.getSize()));
}

private void bt_revFirstMouseEntered(java.awt.event.MouseEvent evt) {
    bt_revFirst.setIcon(new
    javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_revFirstOver.png")));
}

private void bt_revFirstMouseExited(java.awt.event.MouseEvent evt) {
    bt_revFirst.setIcon(new
    javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_revFirst.png")));
}

private void bt_revLastMouseClicked(java.awt.event.MouseEvent evt) {
    Music_Name.removeLast();
    Music_Path.removeLast();
    Music_Pic.removeLast();
    lbl_size.setText(Integer.toString(Music_Name.getSize()));
}
```

```
private void bt_revLastMouseEntered(java.awt.event.MouseEvent evt) {
    bt_revLast.setIcon(new
    javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_revLastOver.png")));
}

private void bt_revLastMouseExited(java.awt.event.MouseEvent evt) {
    bt_revLast.setIcon(new
    javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_revLast.png")));
}

private void bt_prevMouseClicked(java.awt.event.MouseEvent evt) {
    index = index - 1;
    if ((index > 0) && (index <= Music_Name.getSize())) {
        lbl_currentMusic.setText(Music_Name.getElementByIndex(index));
        lbl_currentindex.setText(Integer.toString(index));
        lbl_size.setText(Integer.toString(Music_Name.getSize()));
        lbl_mPic.setIcon(new
        javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/AlbumCover/"+Music_Pic.get
        ElementByIndex(index))));
        CurrentsongPath = "/Music4LifeByThM/Music/"+Music_Path.getElementByIndex(index);
    } else {
        index = Music_Name.getSize();
        lbl_currentMusic.setText(Music_Name.getElementByIndex(index));
        lbl_currentindex.setText(Integer.toString(index));
        lbl_size.setText(Integer.toString(Music_Name.getSize()));
        lbl_mPic.setIcon(new
        javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/AlbumCover/"+Music_Pic.get
        ElementByIndex(index))));
        CurrentsongPath = "/Music4LifeByThM/Music/"+Music_Path.getElementByIndex(index);
    }
}

private void bt_nextMouseClicked(java.awt.event.MouseEvent evt) {
```

```

index = index + 1;
if ((index > 0) && (index <= Music_Name.getSize())) {
    lbl_currentMusic.setText(Music_Name.getElementByIndex(index));
    lbl_currentindex.setText(Integer.toString(index));
    lbl_size.setText(Integer.toString(Music_Name.getSize()));
    lbl_mPic.setIcon(new
javafx.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/AlbumCover/"+Music_Pic.get
ElementByIndex(index))));
    CurrentsongPath = "/Music4LifeByThM/Music/"+Music_Path.getElementByIndex(index);
} else {
    index = 1;
    lbl_currentMusic.setText(Music_Name.getElementByIndex(index));
    lbl_currentindex.setText(Integer.toString(index));
    lbl_size.setText(Integer.toString(Music_Name.getSize()));
    lbl_mPic.setIcon(new
javafx.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/AlbumCover/"+Music_Pic.get
ElementByIndex(index))));
    CurrentsongPath = "/Music4LifeByThM/Music/"+Music_Path.getElementByIndex(index);
}
}

private void bt_playMouseClicked(java.awt.event.MouseEvent evt) {
    //player.play();
}

private void bt_pauseMouseClicked(java.awt.event.MouseEvent evt) {
    //player.stop();
    //player.pause();
}

private void bt_pauseMouseReleased(java.awt.event.MouseEvent evt) {
    switchcount = 1;
    adminPlayer.PauseMusic();
}

```

```
private void bg_adminPanelMousePressed(java.awt.event.MouseEvent evt) {  
    xMouse = evt.getX();  
    yMouse = evt.getY();  
}
```

```
private void bg_adminPanelMouseDragged(java.awt.event.MouseEvent evt) {  
    int x = evt.getXOnScreen();  
    int y = evt.getYOnScreen();  
    this.setLocation(x-xMouse,y-yMouse);  
}
```

```
private void bt_playMouseReleased(java.awt.event.MouseEvent evt) {  
    adminPlayer.StopMusic();  
    switchcount = 0;  
    adminPlayer.adminPlayMusic(CurrentsongPath);  
  
}
```

```
private void bt_exitMouseEntered(java.awt.event.MouseEvent evt) {  
    bt_exit.setForeground(new Color(102, 102, 102));  
}
```

```
private void bt_exitMouseExited(java.awt.event.MouseEvent evt) {  
    bt_exit.setForeground(new Color(0, 0, 0));  
}
```

```
private void bt_exitMouseReleased(java.awt.event.MouseEvent evt) {  
    this.dispose();  
}
```

```
private void bt_backMouseEntered(java.awt.event.MouseEvent evt) {  
    bt_back.setForeground(new Color(102, 102, 102));  
}
```

```
private void bt_backMouseExited(java.awt.event.MouseEvent evt) {
    bt_back.setForeground(new Color(0, 0, 0));
}

private void bt_backMouseReleased(java.awt.event.MouseEvent evt) {
    ThMxLoginPanel THMxLoginPanel = new ThMxLoginPanel();
    THMxLoginPanel.setVisible(true);
    THMxLoginPanel.pack();
    THMxLoginPanel.setLocationRelativeTo(null);
    THMxLoginPanel.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
}

private void bt_resumeMouseEntered(java.awt.event.MouseEvent evt) {
    bt_resume.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_resumeOver.png")));
}

private void bt_resumeMouseExited(java.awt.event.MouseEvent evt) {
    bt_resume.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_resume.png")));
}

private void bt_resumeMouseReleased(java.awt.event.MouseEvent evt) {
    switch(switchcount)
    {
        case 0:
            switchcount = 1;
            adminPlayer.PauseMusic();
            break;
        case 1:
            switchcount = 0;
            adminPlayer.StopMusic();
            adminPlayer.adminResumeMusic();
    }
}
```

```
        break;

    }
}

private void bt_goUserMouseEntered(java.awt.event.MouseEvent evt) {
    bt_goUser.setForeground(new Color(102, 102, 102));
}

private void bt_goUserMouseExited(java.awt.event.MouseEvent evt) {
    bt_goUser.setForeground(new Color(0, 0, 0));
}

private void bt_goUserMouseReleased(java.awt.event.MouseEvent evt) {
    ThMxLoginPanel.idlogin = 0;
    ThMxUser ThMxUser = new ThMxUser();
    ThMxUser.setVisible(true);
    ThMxUser.pack();
    ThMxUser.setLocationRelativeTo(null);
    ThMxUser.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
}

public static void main(String args[]) {
    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(ThMxAdmin.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
    } catch (InstantiationException ex) {
```




```
        java.util.logging.Logger.getLogger(ThMxAdmin.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
    } catch (IllegalAccessException ex) {
        java.util.logging.Logger.getLogger(ThMxAdmin.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
    } catch (javax.swing.UnsupportedLookAndFeelException ex) {
        java.util.logging.Logger.getLogger(ThMxAdmin.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 ThMxAdmin().setVisible(true);
    }
});
}

// Variables declaration - do not modify
private javax.swing.JPanel bg_adminPanel;
private javax.swing.JLabel bg_adminStructure;
private javax.swing.JLabel bg_formMusic;
private javax.swing.JPanel bg_mPic;
private javax.swing.JLabel bt_addFirst;
private javax.swing.JLabel bt_addLast;
private javax.swing.JLabel bt_back;
private javax.swing.JLabel bt_exit;
private javax.swing.JLabel bt_goUser;
private javax.swing.JLabel bt_next;
private javax.swing.JLabel bt_pause;
private javax.swing.JLabel bt_play;
private javax.swing.JLabel bt_prev;
private javax.swing.JLabel bt_resume;
```

```
private javax.swing.JLabel bt_revFirst;  
private javax.swing.JLabel bt_revLast;  
private javax.swing.JLabel lbl_currentMusic;  
private javax.swing.JLabel lbl_currentindex;  
private javax.swing.JLabel lbl_mPic;  
private javax.swing.JLabel lbl_of;  
private javax.swing.JLabel lbl_size;  
private javax.swing.JTextField txt_mName;  
private javax.swing.JTextField txt_mPath;  
private javax.swing.JTextField txt_mPic;  
// End of variables declaration  
}
```

User Panel (ThMxUser.java)




USER PANEL


Administrator

<- X






System Control




Song in Library: 1 Of 13




Lil boom - Already dead



ARASHI - LOVE SO SWEET

Queue Capacity : 10

Numbers of Song in Queue : 9

Loop: Off

Artist- Name	[Song] Path
Arashi - Love So Sweet	/Music4LifeByThM/Music/Arashi - Love...
Heiakim - Darling	/Music4LifeByThM/Music/Heiakim - Da...
Ichika Nito - I miss you	/Music4LifeByThM/Music/Ichika Nito - I...
Breakbot - Baby I'm Yours feat. Irfane	/Music4LifeByThM/Music/Breakbot - B...
Black Coast - TRNDSTTR (Lucian Re...	/Music4LifeByThM/Music/Black Coast ...
Snail's House x Moe Shop - Pastel	/Music4LifeByThM/Music/Snail's Hous...
Snail's House - Lullaby	/Music4LifeByThM/Music/Snail's Hous...
Earth Patravee - You're mine Cover by ...	/Music4LifeByThM/Music/Umechan - Y...
Lil boom - Already dead	/Music4LifeByThM/Music/AlreadyDead...

Basically, User Panel is a music player application. It will receive the music library which means user can access the linked list created by Admin Panel. However, playing music in User Panel is different from playing music in Admin Panel. User Panel will receive music name and file path, then contains these data in the Queue which is considered to be the music playlist. After that, the music will be played based on Queue which is arranged by user. To add a music into Queue, method called Enqueue is used which user can perform by using the Enqueue button manually. On the others hand, removing music and play the next song from the Queue can be performed by using method called Dequeue which user can manually click the Dequeue button or waiting until the end of the music and Dequeue function will be executed automatically. Moreover, the function of Loop music and volume control are provided in this panel. There are three ways to access the User Panel. Each access method has a difference in terms of functions restrict.

1. Login as Guest

When login as Guest, Users are permitted to observe the music library and perform a volume control. However, other functions are restricted.

2. Login as Members

When login as a member, Users are permitted to observe the music library, add or remove the music to the Queue. Users can also perform the basic function of music player such as play, pause, loop, and volume control.

3. Login as Administrator

To login as an administrator, User panel must be accessed from Admin Panel only. As the administrator, all functions in user panel are available.

Source Code

```
package Music4LifebyThM;
//Shoichi | The Emperor of ThM Empire | ID : 6131501066
//Copyright claim | For Educational Purposes Only

import static Music4LifebyThM.ThMxAdmin.Music_Name;
import static Music4LifebyThM.ThMxAdmin.Music_Path;
import static Music4LifebyThM.ThMxAdmin.Music_Pic;
import java.awt.Color;
import java.awt.Dimension;
import java.awt.Toolkit;
import javax.sound.sampled.AudioSystem;
import javax.sound.sampled.Clip;
import javax.sound.sampled.FloatControl;
import javax.sound.sampled.Line;
import javax.sound.sampled.LineUnavailableException;
import javax.sound.sampled.Mixer;
import javax.swing.JFrame;
import javax.swing.JOptionPane;
import javax.swing.table.DefaultTableModel;
import javax.sound.sampled.TargetDataLine;

/**
 *
 * @author Shoichi
 */
class ThMxUser extends javax.swing.JFrame {

    static int xMouse,yMouse;
    int index;
    int permission_id;
    int switchcount;
    static int switchloop;
```

```
int numQueueinTable = 0;
ThMxAdmin SongLibrary = new ThMxAdmin();
static ThMxMusicPlayer userPlayer = new ThMxMusicPlayer();
static QueueArray QName = new QueueArray();
static QueueArray QPath = new QueueArray();
String QSong, QPathSong;

public ThMxUser() {
    this.setUndecorated(true);
    initComponents();
    Dimension dim = Toolkit.getDefaultToolkit().getScreenSize();
    this.setLocation(dim.width/2-this.getSize().width/2, dim.height/2-this.getSize().height/2);
    this.setBackground(new Color(0,0,0,0));
    bg_userPanel.setBackground(new Color(0,0,0,0));
    callNextMusic();
    ThMxLoginPanel ThMxLogin = new ThMxLoginPanel();
    if(ThMxLogin.idlogin == 0)
    {
        lbl_account.setText("Administrator");
        lbl_account.setForeground(new java.awt.Color(119, 221, 119));
        permission_id = 999;
    }
    else if(ThMxLogin.idlogin == 1)
    {
        lbl_account.setText("GUEST");
        lbl_account.setForeground(new java.awt.Color(0, 0, 0));
        permission_id = 0;
    }
    else if(ThMxLogin.idlogin == 2)
    {
        lbl_account.setText("Pizchaya");
        lbl_account.setForeground(new java.awt.Color(251, 204, 209));
        permission_id = 1;
    }
}
```

```

else if(ThMxLogin.idlogin == 3)
{
    lbl_account.setText("HOBO");
    lbl_account.setForeground(new java.awt.Color(119, 158, 203));
    permission_id = 1;
}
else
{
    lbl_account.setText("GUEST");
    lbl_account.setForeground(new java.awt.Color(0, 0, 0));
    permission_id = 0;
}
}

private void callPrevMusic(){
    index = index - 1;
    if ((index > 0) && (index <= Music_Name.getSize())) {
        lbl_currentList.setText(Music_Name.getElementByIndex(index));
        lbl_currentindex.setText(Integer.toString(index));
        lbl_size.setText(Integer.toString(Music_Name.getSize()));
        lbl_mPic.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/AlbumCover/"+Music_Pic.get
ElementByIndex(index))));
        QPathSong = "/Music4LifeByThM/Music/"+Music_Path.getElementByIndex(index);
        QSong = Music_Name.getElementByIndex(index);
    } else {
        index = Music_Name.getSize();
        lbl_currentList.setText(Music_Name.getElementByIndex(index));
        lbl_currentindex.setText(Integer.toString(index));
        lbl_size.setText(Integer.toString(Music_Name.getSize()));
        lbl_mPic.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/AlbumCover/"+Music_Pic.get
ElementByIndex(index))));
        QPathSong = "/Music4LifeByThM/Music/"+Music_Path.getElementByIndex(index);
    }
}

```

```
        QSong = Music_Name.getElementByIndex(index);
    }
}

private void callNextMusic(){
    index = index + 1;
    if ((index > 0) && (index <= Music_Name.getSize())) {
        lbl_currentList.setText(Music_Name.getElementByIndex(index));
        lbl_currentindex.setText(Integer.toString(index));
        lbl_size.setText(Integer.toString(Music_Name.getSize()));
        lbl_mPic.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/AlbumCover/"+Music_Pic.get
ElementByIndex(index))));
        QPathSong = "/Music4LifeByThM/Music/"+Music_Path.getElementByIndex(index);
        QSong = Music_Name.getElementByIndex(index);
    } else {
        index = 1;
        lbl_currentList.setText(Music_Name.getElementByIndex(index));
        lbl_currentindex.setText(Integer.toString(index));
        lbl_size.setText(Integer.toString(Music_Name.getSize()));
        lbl_mPic.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/AlbumCover/"+Music_Pic.get
ElementByIndex(index))));
        QPathSong = "/Music4LifeByThM/Music/"+Music_Path.getElementByIndex(index);
        QSong = Music_Name.getElementByIndex(index);
    }
}

public static void songDequeue(){
    DefaultTableModel model = (DefaultTableModel) QueueSongTable.getModel();
    userPlayer.StopMusic();
    QName.dequeue();
    QPath.dequeue();
}
```



```

lbl_numQC.setText(Integer.toString(QName.getCapacity()));
lbl_numSongInQ.setText(Integer.toString(QName.getSize()));
if (!QName.isEmpty()) {
    userPlayer.PlayMusic(QPath.peak());
    lbl_peek.setText(QName.peak());
}
if (QName.getSize() != 0) {
    model.setRowCount(0);
    for (int i = QName.front; i < (QName.front + QName.size); i++) {
        model.addRow(new Object[]{String.valueOf(QName.data[i % QName.data.length]),
String.valueOf(QPath.data[i % QPath.data.length])});
    }
}
if (QName.isEmpty()) {
    model.setRowCount(0);
    lbl_peek.setText("Playlist (Queue) is Empty");
}
}
/**
 * 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() {

    bg_userPanel = new javax.swing.JPanel();
    bt_goAdmin = new javax.swing.JLabel();
    lbl_numSongInQ = new javax.swing.JLabel();
    lbl_songInQ = new javax.swing.JLabel();
    lbl_numQC = new javax.swing.JLabel();
    lbl_QueueCapacity = new javax.swing.JLabel();
    lbl_peek = new javax.swing.JLabel();

```

```
lbl_currentList = new javax.swing.JLabel();
bt_prev = new javax.swing.JLabel();
lbl_loopDetected = new javax.swing.JLabel();
lblt_loopDetected = new javax.swing.JLabel();
bt_loop = new javax.swing.JLabel();
bt_play = new javax.swing.JLabel();
bt_resume = new javax.swing.JLabel();
bt_volumeUP = new javax.swing.JLabel();
bt_volumeDOWN = new javax.swing.JLabel();
bt_next = new javax.swing.JLabel();
bt_enqueue = new javax.swing.JLabel();
bt_dequeue = new javax.swing.JLabel();
lbl_currentindex = new javax.swing.JLabel();
lbl_beforeOf = new javax.swing.JLabel();
lbl_of = new javax.swing.JLabel();
lbl_size = new javax.swing.JLabel();
bt_back = new javax.swing.JLabel();
bt_exit = new javax.swing.JLabel();
lbl_account = new javax.swing.JLabel();
jScrollPane1 = new javax.swing.JScrollPane();
QueueSongTable = new javax.swing.JTable();
lbl_mPic = new javax.swing.JLabel();
bg_userStructure = new javax.swing.JLabel();

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

bg_userPanel.addMouseMotionListener(new java.awt.event.MouseMotionAdapter() {
    public void mouseDragged(java.awt.event.MouseEvent evt) {
        bg_userPanelMouseDragged(evt);
    }
});
bg_userPanel.addMouseListener(new java.awt.event.MouseAdapter() {
    public void mouseClicked(java.awt.event.MouseEvent evt) {
        bg_userPanelMouseClicked(evt);
    }
});
```

```
    }  
    public void mousePressed(java.awt.event.MouseEvent evt) {  
        bg_userPanelMousePressed(evt);  
    }  
});  
bg_userPanel.setLayout(new org.netbeans.lib.awtextra.AbsoluteLayout());  
  
bt_goAdmin.setFont(new java.awt.Font("TH Baijam", 1, 24)); // NOI18N  
bt_goAdmin.setText("System Control");  
bt_goAdmin.addMouseListener(new java.awt.event.MouseAdapter() {  
    public void mouseEntered(java.awt.event.MouseEvent evt) {  
        bt_goAdminMouseEntered(evt);  
    }  
    public void mouseExited(java.awt.event.MouseEvent evt) {  
        bt_goAdminMouseExited(evt);  
    }  
    public void mouseReleased(java.awt.event.MouseEvent evt) {  
        bt_goAdminMouseReleased(evt);  
    }  
});  
bg_userPanel.add(bt_goAdmin, new org.netbeans.lib.awtextra.AbsoluteConstraints(430, 140, -1, -  
1));  
  
lbl_numSongInQ.setFont(new java.awt.Font("TH Baijam", 0, 24)); // NOI18N  
lbl_numSongInQ.setText("0");  
bg_userPanel.add(lbl_numSongInQ, new org.netbeans.lib.awtextra.AbsoluteConstraints(250, 580,  
50, -1));  
  
lbl_songInQ.setFont(new java.awt.Font("TH Baijam", 0, 24)); // NOI18N  
lbl_songInQ.setText("Numbers of Song in Queue : ");  
bg_userPanel.add(lbl_songInQ, new org.netbeans.lib.awtextra.AbsoluteConstraints(30, 580, -1, -1));  
  
lbl_numQC.setFont(new java.awt.Font("TH Baijam", 0, 24)); // NOI18N  
lbl_numQC.setText("0");
```

```
bg_userPanel.add(lbl_numQC, new org.netbeans.lib.awtextra.AbsoluteConstraints(170, 550, 60, -1));

lbl_QueueCapacity.setFont(new java.awt.Font("TH Baijam", 0, 24)); // NOI18N
lbl_QueueCapacity.setText("Queue Capacity : ");
bg_userPanel.add(lbl_QueueCapacity, new org.netbeans.lib.awtextra.AbsoluteConstraints(30, 550, -1, -1));

lbl_peek.setFont(new java.awt.Font("Great Attraction", 0, 36)); // NOI18N
lbl_peek.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);
lbl_peek.setText("Queue is Empty");
bg_userPanel.add(lbl_peek, new org.netbeans.lib.awtextra.AbsoluteConstraints(16, 490, 540, -1));

lbl_currentList.setFont(new java.awt.Font("TH Chakra Petch", 0, 30)); // NOI18N
lbl_currentList.setText("Arashi - Love so Sweet");
bg_userPanel.add(lbl_currentList, new org.netbeans.lib.awtextra.AbsoluteConstraints(60, 370, 470, 30));

bt_prev.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_prev.png"))); // NOI18N
bt_prev.addMouseListener(new java.awt.event.MouseAdapter() {
    public void mouseClicked(java.awt.event.MouseEvent evt) {
        bt_prevMouseClicked(evt);
    }
    public void mouseEntered(java.awt.event.MouseEvent evt) {
        bt_prevMouseEntered(evt);
    }
    public void mouseExited(java.awt.event.MouseEvent evt) {
        bt_prevMouseExited(evt);
    }
});
bg_userPanel.add(bt_prev, new org.netbeans.lib.awtextra.AbsoluteConstraints(50, 410, -1, -1));

lbl_loopDetected.setFont(new java.awt.Font("TH Chakra Petch", 1, 24)); // NOI18N
```

```
lbl_loopDetected.setText("Off");
bg_userPanel.add(lbl_loopDetected, new org.netbeans.lib.awtextra.AbsoluteConstraints(490, 590,
-1, -1));

lblt_loopDetected.setFont(new java.awt.Font("TH Chakra Petch", 1, 24)); // NOI18N
lblt_loopDetected.setText("Loop:");
bg_userPanel.add(lblt_loopDetected, new org.netbeans.lib.awtextra.AbsoluteConstraints(440, 590,
-1, -1));

bt_loop.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_loop.png"))); // NOI18N
bt_loop.addMouseListener(new java.awt.event.MouseAdapter() {
    public void mouseClicked(java.awt.event.MouseEvent evt) {
        bt_loopMouseClicked(evt);
    }
    public void mouseEntered(java.awt.event.MouseEvent evt) {
        bt_loopMouseEntered(evt);
    }
    public void mouseExited(java.awt.event.MouseEvent evt) {
        bt_loopMouseExited(evt);
    }
    public void mouseReleased(java.awt.event.MouseEvent evt) {
        bt_loopMouseReleased(evt);
    }
});
bg_userPanel.add(bt_loop, new org.netbeans.lib.awtextra.AbsoluteConstraints(120, 410, -1, -1));

bt_play.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_play.png"))); // NOI18N
bt_play.addMouseListener(new java.awt.event.MouseAdapter() {
    public void mouseClicked(java.awt.event.MouseEvent evt) {
        bt_playMouseClicked(evt);
    }
    public void mouseEntered(java.awt.event.MouseEvent evt) {
```

```
        bt_playMouseEntered(evt);
    }
    public void mouseExited(java.awt.event.MouseEvent evt) {
        bt_playMouseExited(evt);
    }
    public void mouseReleased(java.awt.event.MouseEvent evt) {
        bt_playMouseReleased(evt);
    }
    });
    bg_userPanel.add(bt_play, new org.netbeans.lib.awtextra.AbsoluteConstraints(190, 410, -1, -1));

    bt_resume.setIcon(new
    javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_resume.png"))); // NOI18N
    bt_resume.addMouseListener(new java.awt.event.MouseAdapter() {
        public void mouseEntered(java.awt.event.MouseEvent evt) {
            bt_resumeMouseEntered(evt);
        }
        public void mouseExited(java.awt.event.MouseEvent evt) {
            bt_resumeMouseExited(evt);
        }
        public void mouseReleased(java.awt.event.MouseEvent evt) {
            bt_resumeMouseReleased(evt);
        }
    });
    bg_userPanel.add(bt_resume, new org.netbeans.lib.awtextra.AbsoluteConstraints(260, 410, -1, -1));

    bt_volumeUP.setIcon(new
    javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_soundup.png"))); //
    NOI18N
    bt_volumeUP.addMouseListener(new java.awt.event.MouseAdapter() {
        public void mouseClicked(java.awt.event.MouseEvent evt) {
            bt_volumeUPMouseClicked(evt);
        }
        public void mouseEntered(java.awt.event.MouseEvent evt) {
```

```

        bt_volumeUPMouseEntered(evt);
    }
    public void mouseExited(java.awt.event.MouseEvent evt) {
        bt_volumeUPMouseExited(evt);
    }
};
bg_userPanel.add(bt_volumeUP, new org.netbeans.lib.awtextra.AbsoluteConstraints(330, 410, -1, -1));

bt_volumeDOWN.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_sounddown.png"))); // NOI18N
bt_volumeDOWN.addMouseListener(new java.awt.event.MouseAdapter() {
    public void mouseClicked(java.awt.event.MouseEvent evt) {
        bt_volumeDOWNMouseClicked(evt);
    }
    public void mouseEntered(java.awt.event.MouseEvent evt) {
        bt_volumeDOWNMouseEntered(evt);
    }
    public void mouseExited(java.awt.event.MouseEvent evt) {
        bt_volumeDOWNMouseExited(evt);
    }
});
bg_userPanel.add(bt_volumeDOWN, new org.netbeans.lib.awtextra.AbsoluteConstraints(400, 410, -1, -1));

bt_next.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_next.png"))); // NOI18N
bt_next.addMouseListener(new java.awt.event.MouseAdapter() {
    public void mouseClicked(java.awt.event.MouseEvent evt) {
        bt_nextMouseClicked(evt);
    }
    public void mouseEntered(java.awt.event.MouseEvent evt) {
        bt_nextMouseEntered(evt);
    }
});

```

```
    }

    public void mouseExited(java.awt.event.MouseEvent evt) {
        bt_nextMouseExited(evt);
    }
});

bg_userPanel.add(bt_next, new org.netbeans.lib.awtextra.AbsoluteConstraints(470, 410, -1, -1));

bt_enqueue.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_enqueue.png"))); //
NOI18N
bt_enqueue.addMouseListener(new java.awt.event.MouseAdapter() {
    public void mouseClicked(java.awt.event.MouseEvent evt) {
        bt_enqueueMouseClicked(evt);
    }
    public void mouseEntered(java.awt.event.MouseEvent evt) {
        bt_enqueueMouseEntered(evt);
    }
    public void mouseExited(java.awt.event.MouseEvent evt) {
        bt_enqueueMouseExited(evt);
    }
});

bg_userPanel.add(bt_enqueue, new org.netbeans.lib.awtextra.AbsoluteConstraints(310, 270, -1, -
1));

bt_dequeue.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_dequeue.png"))); //
NOI18N
bt_dequeue.addMouseListener(new java.awt.event.MouseAdapter() {
    public void mouseClicked(java.awt.event.MouseEvent evt) {
        bt_dequeueMouseClicked(evt);
    }
    public void mouseEntered(java.awt.event.MouseEvent evt) {
        bt_dequeueMouseEntered(evt);
    }
});
```



```
public void mouseExited(java.awt.event.MouseEvent evt) {
    bt_dequeueMouseExited(evt);
}

});
bg_userPanel.add(bt_dequeue, new org.netbeans.lib.awtextra.AbsoluteConstraints(430, 270, -1, -1));

lbl_currentindex.setFont(new java.awt.Font("TH Baijam", 1, 24)); // NOI18N
lbl_currentindex.setHorizontalAlignment(javax.swing.SwingConstants.RIGHT);
lbl_currentindex.setText("0");
bg_userPanel.add(lbl_currentindex, new org.netbeans.lib.awtextra.AbsoluteConstraints(440, 230, 30, -1));

lbl_beforeOf.setFont(new java.awt.Font("TH Baijam", 1, 24)); // NOI18N
lbl_beforeOf.setText("Song in Library: ");
bg_userPanel.add(lbl_beforeOf, new org.netbeans.lib.awtextra.AbsoluteConstraints(310, 230, 140, -1));

lbl_of.setFont(new java.awt.Font("TH Baijam", 1, 24)); // NOI18N
lbl_of.setText("Of");
bg_userPanel.add(lbl_of, new org.netbeans.lib.awtextra.AbsoluteConstraints(480, 230, 20, -1));

lbl_size.setFont(new java.awt.Font("TH Baijam", 1, 24)); // NOI18N
lbl_size.setText("0");
bg_userPanel.add(lbl_size, new org.netbeans.lib.awtextra.AbsoluteConstraints(510, 230, 40, -1));

bt_back.setFont(new java.awt.Font("TH Baijam", 1, 24)); // NOI18N
bt_back.setText("<-");
bt_back.addMouseListener(new java.awt.event.MouseAdapter() {
    public void mouseEntered(java.awt.event.MouseEvent evt) {
        bt_backMouseEntered(evt);
    }

    public void mouseExited(java.awt.event.MouseEvent evt) {
        bt_backMouseExited(evt);
    }
});
```

```

    }

    public void mouseReleased(java.awt.event.MouseEvent evt) {
        bt_backMouseReleased(evt);
    }
});

bg_userPanel.add(bt_back, new org.netbeans.lib.awtextra.AbsoluteConstraints(500, 110, -1, -1));

bt_exit.setFont(new java.awt.Font("TH Baijam", 1, 24)); // NOI18N
bt_exit.setText("X");
bt_exit.addMouseListener(new java.awt.event.MouseAdapter() {
    public void mouseEntered(java.awt.event.MouseEvent evt) {
        bt_exitMouseEntered(evt);
    }

    public void mouseExited(java.awt.event.MouseEvent evt) {
        bt_exitMouseExited(evt);
    }

    public void mouseReleased(java.awt.event.MouseEvent evt) {
        bt_exitMouseReleased(evt);
    }
});

bg_userPanel.add(bt_exit, new org.netbeans.lib.awtextra.AbsoluteConstraints(540, 110, -1, -1));

lbl_account.setFont(new java.awt.Font("TH Baijam", 1, 24)); // NOI18N
lbl_account.setForeground(new java.awt.Color(51, 153, 0));
lbl_account.setHorizontalAlignment(javax.swing.SwingConstants.CENTER);
lbl_account.setText("None");
bg_userPanel.add(lbl_account, new org.netbeans.lib.awtextra.AbsoluteConstraints(70, 110, 220, -
1));

QueueSongTable.setModel(new javax.swing.table.DefaultTableModel(
    new Object [][] {

    },
    new String [] {

```

```

        "Artist - Name", "[Song] Path"

    }

});

jScrollPane1.setViewportViewView(QueueSongTable);

bg_userPanel.add(jScrollPane1, new org.netbeans.lib.awtextra.AbsoluteConstraints(60, 620, 460,
320));

lbl_mPic.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/AlbumCover/AlreadyDead.p
ng"))); // NOI18N
bg_userPanel.add(lbl_mPic, new org.netbeans.lib.awtextra.AbsoluteConstraints(60, 140, 230, -1));

bg_userStructure.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/userStructure.png"))); //
NOI18N
bg_userPanel.add(bg_userStructure, new org.netbeans.lib.awtextra.AbsoluteConstraints(0, 0, -1, -
1));

javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
getContentPane().setLayout(layout);
layout.setHorizontalGroup(
    layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addComponent(bg_userPanel, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
);
layout.setVerticalGroup(
    layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addComponent(bg_userPanel, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
);

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

```

```
private void bg_userPanelMouseClicked(java.awt.event.MouseEvent evt) {  
  
}  
  
private void bg_userPanelMouseDragged(java.awt.event.MouseEvent evt) {  
    int x = evt.getXOnScreen();  
    int y = evt.getYOnScreen();  
    this.setLocation(x-xMouse,y-yMouse);  
}  
  
private void bg_userPanelMousePressed(java.awt.event.MouseEvent evt) {  
    xMouse = evt.getX();  
    yMouse = evt.getY();  
}  
  
private void bt_prevMouseClicked(java.awt.event.MouseEvent evt) {  
    index = index - 1;  
    if ((index > 0) && (index <= Music_Name.getSize())) {  
        lbl_currentList.setText(Music_Name.getElementByIndex(index));  
        lbl_currentindex.setText(Integer.toString(index));  
        lbl_size.setText(Integer.toString(Music_Name.getSize()));  
        lbl_mPic.setIcon(new  
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/AlbumCover/"+Music_Pic.get  
ElementByIndex(index))));  
        QPathSong = "/Music4LifeByThM/Music/"+Music_Path.getElementByIndex(index);  
        QSong = Music_Name.getElementByIndex(index);  
    } else {  
        index = Music_Name.getSize();  
        lbl_currentList.setText(Music_Name.getElementByIndex(index));  
        lbl_currentindex.setText(Integer.toString(index));  
        lbl_size.setText(Integer.toString(Music_Name.getSize()));  
    }  
}
```

```
        lbl_mPic.setIcon(new
    javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/AlbumCover/"+Music_Pic.get
    ElementByIndex(index))));

        QPathSong = "/Music4LifeByThM/Music/"+Music_Path.getElementByIndex(index);
        QSong = Music_Name.getElementByIndex(index);
    }
}

private void bt_prevMouseClicked(java.awt.event.MouseEvent evt) {
    bt_prev.setIcon(new
    javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_prevOver.png")));
}

private void bt_prevMouseExited(java.awt.event.MouseEvent evt) {
    bt_prev.setIcon(new
    javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_prev.png")));
}

private void bt_loopMouseClicked(java.awt.event.MouseEvent evt) {

}

private void bt_loopMouseEntered(java.awt.event.MouseEvent evt) {
    bt_loop.setIcon(new
    javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_loopOver.png")));
}

private void bt_loopMouseExited(java.awt.event.MouseEvent evt) {
    bt_loop.setIcon(new
    javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_loop.png")));
}

private void bt_loopMouseReleased(java.awt.event.MouseEvent evt) {
    if(permission_id >= 1)
```

```
{
    switch(switchloop)
    {
        case 0:
            switchloop = 1;
            System.out.println(switchloop+" -> Loop on");
            lbl_loopDetected.setText("On");
            lbl_loopDetected.setForeground(new Color(255, 0, 0));
            break;
        case 1:
            switchloop = 0;
            System.out.println(switchloop+" -> Loop off");
            lbl_loopDetected.setText("Off");
            lbl_loopDetected.setForeground(new Color(0, 0, 0));
            break;
    }
}
else
{
    JOptionPane.showMessageDialog(this,"Error: You're don't have permission to perform this
action, Please Login first","Error : Unregistered account",JOptionPane.ERROR_MESSAGE);
}
}

private void bt_playMouseClicked(java.awt.event.MouseEvent evt) {

}

private void bt_playMouseEntered(java.awt.event.MouseEvent evt) {
    bt_play.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_playOver.png")));
}

private void bt_playMouseExited(java.awt.event.MouseEvent evt) {
```

```
        bt_play.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_play.png")));
    }

    private void bt_playMouseReleased(java.awt.event.MouseEvent evt) {
        userPlayer.StopMusic();
        switchcount = 0;
        if(!QName.isEmpty()){
            userPlayer.PlayMusic(QPath.peek());
        }
        else{
            JOptionPane.showMessageDialog(this,"Error: Please enqueue song","Error: Empty
Queue",JOptionPane.WARNING_MESSAGE);
        }
    }

    private void bt_nextMouseClicked(java.awt.event.MouseEvent evt) {
        index = index + 1;
        if ((index > 0) && (index <= Music_Name.getSize())) {
            lbl_currentList.setText(Music_Name.getElementByIndex(index));
            lbl_currentindex.setText(Integer.toString(index));
            lbl_size.setText(Integer.toString(Music_Name.getSize()));
            lbl_mPic.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/AlbumCover/"+Music_Pic.get
ElementByIndex(index))));
            QPathSong = "/Music4LifeByThM/Music/"+Music_Path.getElementByIndex(index);
            QSong = Music_Name.getElementByIndex(index);
        } else {
            index = 1;
            lbl_currentList.setText(Music_Name.getElementByIndex(index));
            lbl_currentindex.setText(Integer.toString(index));
            lbl_size.setText(Integer.toString(Music_Name.getSize()));
```

```
        lbl_mPic.setIcon(new
    javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/AlbumCover/"+Music_Pic.get
    ElementByIndex(index))));

        QPathSong = "/Music4LifeByThM/Music/"+Music_Path.getElementByIndex(index);
        QSong = Music_Name.getElementByIndex(index);
    }
}

private void bt_nextMouseEntered(java.awt.event.MouseEvent evt) {
    bt_next.setIcon(new
    javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_nextOver.png")));
}

private void bt_nextMouseExited(java.awt.event.MouseEvent evt) {
    bt_next.setIcon(new
    javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_next.png")));
}

private void bt_resumeMouseEntered(java.awt.event.MouseEvent evt) {
    bt_resume.setIcon(new
    javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_resumeOver.png")));
}

private void bt_resumeMouseExited(java.awt.event.MouseEvent evt) {
    bt_resume.setIcon(new
    javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_resume.png")));
}

private void bt_volumeUPMouseEntered(java.awt.event.MouseEvent evt) {
    bt_volumeUP.setIcon(new
    javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_soundupOver.png")));
}

private void bt_volumeUPMouseExited(java.awt.event.MouseEvent evt) {
```



```
        bt_volumeUP.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_soundup.png")));
    }

    private void bt_volumeDOWNMouseEntered(java.awt.event.MouseEvent evt) {
        bt_volumeDOWN.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_sounddownOver.png")));
    }

    private void bt_volumeDOWNMouseExited(java.awt.event.MouseEvent evt) {
        bt_volumeDOWN.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_sounddown.png")));
    }

    private void bt_enqueueMouseEntered(java.awt.event.MouseEvent evt) {
        bt_enqueue.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_enqueueOver.png")));
    }

    private void bt_enqueueMouseExited(java.awt.event.MouseEvent evt) {
        bt_enqueue.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_enqueue.png")));
    }

    private void bt_dequeueMouseEntered(java.awt.event.MouseEvent evt) {
        bt_dequeue.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_dequeueOver.png")));
    }

    private void bt_dequeueMouseExited(java.awt.event.MouseEvent evt) {
        bt_dequeue.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Music4LifebyThM/images/UI/bt_dequeue.png")));
    }
}
```

```
private void bt_volumeUPMouseClicked(java.awt.event.MouseEvent evt) {  
    volumeUpControl(0.1);  
}  
  
private void bt_volumeDOWNMouseClicked(java.awt.event.MouseEvent evt) {  
    volumeDownControl(0.1);  
}  
  
private void bt_enqueueMouseClicked(java.awt.event.MouseEvent evt) {  
    DefaultTableModel model = (DefaultTableModel) QueueSongTable.getModel();  
    String SongName = QSong;  
    String SongPath = QPathSong;  
  
    if(permission_id >= 1)  
    {  
        QName.enqueue(QSong);  
        QPath.enqueue(QPathSong);  
  
        for(int i = numQueueinTable; i<= numQueueinTable; i++)  
        {  
            model.addRow(new Object[]{String.valueOf(SongName),String.valueOf(SongPath)});  
        }  
        numQueueinTable++;  
  
        lbl_numQC.setText(Integer.toString(QName.getCapacity()));  
        lbl_numSongInQ.setText(Integer.toString(QName.getSize()));  
        lbl_peek.setText(QName.peek());  
    }  
    else  
    {  
        System.out.println("Error : You don't have permission to perform this action, Please Login");  
        JOptionPane.showMessageDialog(this,"Error: You're don't have permission to perform this  
action, Please Login first","Error : Unregistered account",JOptionPane.ERROR_MESSAGE);  
    }  
}
```

```
}

private void bt_dequeueMouseClicked(java.awt.event.MouseEvent evt) {
    DefaultTableModel model = (DefaultTableModel) QueueSongTable.getModel();
    switchcount = 0;
    if(permission_id >= 1)
    {
        userPlayer.StopMusic();
        QName.dequeue();
        QPath.dequeue();

        lbl_numQC.setText(Integer.toString(QName.getCapacity()));
        lbl_numSongInQ.setText(Integer.toString(QName.getSize()));
        if(!QName.isEmpty())
        {
            userPlayer.PlayMusic(QPath.peek());
            lbl_peek.setText(QName.peek());
        }
        if(QName.getSize() != 0)
        {
            model.setRowCount(0);
            for (int i = QName.front; i < (QName.front+QName.size); i++)
            {
                model.addRow(new
Object[]{String.valueOf(QName.data[i%QName.data.length]),String.valueOf(QPath.data[i%QPath.data.leng
th])});
            }
        }
        if(QName.isEmpty())
        {
            model.setRowCount(0);
            lbl_peek.setText("Playlist (Queue) is Empty");
        }
    }
}
```

```
else
{
    System.out.println("Error : You don't have permission to perform this action, Please Login");
    JOptionPane.showMessageDialog(this,"Error: You're don't have permission to perform this
action, Please Login first","Error : Unregistered account",JOptionPane.ERROR_MESSAGE);
}

}

private void bt_resumeMouseReleased(java.awt.event.MouseEvent evt) {
    switch(switchcount)
    {
        case 0:
            switchcount = 1;
            userPlayer.PauseMusic();;
            break;
        case 1:
            switchcount = 0;
            userPlayer.StopMusic();
            if(!QName.isEmpty())
            {
                userPlayer.ResumeMusic();
            }
            else{
                JOptionPane.showMessageDialog(this,"Error: Please enqueue song","Error: Empty
Queue",JOptionPane.WARNING_MESSAGE);
            }
            break;
        }
    }

    private void bt_backMouseEntered(java.awt.event.MouseEvent evt) {
        bt_back.setForeground(new Color(102, 102, 102));
    }
}
```

```
private void bt_backMouseExited(java.awt.event.MouseEvent evt) {  
    bt_back.setForeground(new Color(0, 0, 0));  
}  
  
private void bt_backMouseReleased(java.awt.event.MouseEvent evt) {  
    ThMxLoginPanel THMxLoginPanel = new ThMxLoginPanel();  
    THMxLoginPanel.setVisible(true);  
    THMxLoginPanel.pack();  
    THMxLoginPanel.setLocationRelativeTo(null);  
    THMxLoginPanel.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);  
}  
  
private void bt_exitMouseEntered(java.awt.event.MouseEvent evt) {  
    bt_exit.setForeground(new Color(102, 102, 102));  
}  
  
private void bt_exitMouseExited(java.awt.event.MouseEvent evt) {  
    bt_exit.setForeground(new Color(0, 0, 0));  
}  
  
private void bt_exitMouseReleased(java.awt.event.MouseEvent evt) {  
    this.dispose();  
}  
  
private void bt_goAdminMouseEntered(java.awt.event.MouseEvent evt) {  
    bt_goAdmin.setForeground(new Color(102, 102, 102));  
}  
  
private void bt_goAdminMouseExited(java.awt.event.MouseEvent evt) {  
    bt_goAdmin.setForeground(new Color(0, 0, 0));  
}  
  
private void bt_goAdminMouseReleased(java.awt.event.MouseEvent evt) {
```

```
        if (permission_id == 999)
        {
            ThMxAdmin ThMxAdmin = new ThMxAdmin();
            ThMxAdmin.setVisible(true);
            ThMxAdmin.pack();
            ThMxAdmin.setLocationRelativeTo(null);
            ThMxAdmin.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        }
        else
        {
            JOptionPane.showMessageDialog(this,"Error: You're not administrator.", "Error: Permission
restrict",JOptionPane.ERROR_MESSAGE);
        }
    }

    /**
     * @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(ThMxUser.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
    } catch (InstantiationException ex) {
        java.util.logging.Logger.getLogger(ThMxUser.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
    } catch (IllegalAccessException ex) {
        java.util.logging.Logger.getLogger(ThMxUser.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
    } catch (javax.swing.UnsupportedLookAndFeelException ex) {
        java.util.logging.Logger.getLogger(ThMxUser.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 ThMxUser().setVisible(true);
    }
});
}

private void volumeDownControl(Double valueToPlusMinus)
{
    Mixer.Info[] mixers = AudioSystem.getMixerInfo();
    //for(Mixer.Info mixerInfo : mixers)
    //{
        Mixer mixer = AudioSystem.getMixer(mixers[0]);
        Line.Info[] lineInfos = mixer.getTargetLineInfo();
        for(Line.Info lineInfo : lineInfos)
        {
            Line line = null;
            boolean opened = true;
            try
```

```
{  
    line = mixer.getLine(lineInfo);  
    opened = line.isOpen() || line instanceof Clip;  
    if(!opened)  
    {  
        line.open();  
    }  
    FloatControl volControl = (FloatControl) line.getControl(FloatControl.Type.VOLUME);  
    float currentVolume = volControl.getValue();  
    Double volumeToCut = valueToPlusMinus;  
    float changedCalc = (float) ((float)currentVolume-(double)volumeToCut);  
    volControl.setValue(changedCalc);  
}  
catch (LineUnavailableException lineException)  
{  
}  
catch (IllegalArgumentException illException)  
{  
}  
finally  
{  
    if(line != null && !opened)  
    {  
        line.close();  
    }  
}  
}  
  
//}  
}  
  
private void volumeUpControl(Double valueToPlusMinus)  
{
```



```
Mixer.Info[] mixers = AudioSystem.getMixerInfo();
//for(Mixer.Info mixerInfo : mixers)
//{
    Mixer mixer = AudioSystem.getMixer(mixers[0]); //mixerInfo
    Line.Info[] lineInfos = mixer.getTargetLineInfo();
    for(Line.Info lineInfo : lineInfos)
    {
        Line line = null;
        boolean opened = true;
        try
        {
            line = mixer.getLine(lineInfo);
            opened = line.isOpen() || line instanceof Clip;
            if(!opened){
                line.open();
            }
            FloatControl volControl = (FloatControl) line.getControl(FloatControl.Type.VOLUME);
            float currentVolume = volControl.getValue();
            Double volumeToCut = valueToPlusMinus;
            float changedCalc = (float) ((float)currentVolume+(double)volumeToCut);
            volControl.setValue(changedCalc);
        }
        catch (LineUnavailableException lineException)
        {
        }
        catch (IllegalArgumentException illException)
        {
        }
        finally
        {
            if(line != null && !opened)
            {
                line.close();
            }
        }
    }
}
```

```
    }

    }

    //}
}

private void volumeControl(Double valueToPlusMinus)
{
    Mixer.Info[] mixers = AudioSystem.getMixerInfo();
    //for(Mixer.Info mixerInfo : mixers)
    //{
        Mixer mixer = AudioSystem.getMixer(mixers[0]);
        Line.Info[] lineInfos = mixer.getTargetLineInfo();
        for(Line.Info lineInfo : lineInfos)
        {
            Line line = null;
            boolean opened = true;
            try
            {
                line = mixer.getLine(lineInfo);
                opened = line.isOpen() || line instanceof Clip;
                if(!opened){
                    line.open();
                }
                FloatControl volControl = (FloatControl) line.getControl(FloatControl.Type.VOLUME);
                float currentVolume = volControl.getValue();
                Double volumeToCut = valueToPlusMinus;
                float changedCalc = (float) ((double)volumeToCut);
                volControl.setValue(changedCalc);
            }
            catch (LineUnavailableException lineException)
            {
            }
        }
    }
}
```

```
        catch (IllegalArgumentException illException)
        {
        }
        finally
        {
            if(line != null && !opened)
            {
                line.close();
            }
        }

    }

    //}
}

// Variables declaration - do not modify
private static javax.swing.JTable QueueSongTable;
private javax.swing.JPanel bg_userPanel;
private javax.swing.JLabel bg_userStructure;
private javax.swing.JLabel bt_back;
private javax.swing.JLabel bt_dequeue;
private javax.swing.JLabel bt_enqueue;
private javax.swing.JLabel bt_exit;
private javax.swing.JLabel bt_goAdmin;
private javax.swing.JLabel bt_loop;
private javax.swing.JLabel bt_next;
private javax.swing.JLabel bt_play;
private javax.swing.JLabel bt_prev;
private javax.swing.JLabel bt_resume;
private javax.swing.JLabel bt_volumeDOWN;
private javax.swing.JLabel bt_volumeUP;
private javax.swing.JScrollPane jScrollPane1;
private javax.swing.JLabel lbl_QueueCapacity;
private javax.swing.JLabel lbl_account;
```

```
private javax.swing.JLabel lbl_beforeOf;
private javax.swing.JLabel lbl_currentList;
private javax.swing.JLabel lbl_currentindex;
private javax.swing.JLabel lbl_loopDetected;
private javax.swing.JLabel lbl_mPic;
private static javax.swing.JLabel lbl_numQC;
private static javax.swing.JLabel lbl_numSongInQ;
private javax.swing.JLabel lbl_of;
private static javax.swing.JLabel lbl_peek;
private javax.swing.JLabel lbl_size;
private javax.swing.JLabel lbl_songInQ;
private javax.swing.JLabel lblt_loopDetected;
// End of variables declaration
}
```

Signature



(ARUNWAT MOONBUNG)

Project Owner