JMC Music Player

Application

Student:

Reece Pieri

Student ID:

M087496

Course:

Diploma of Software Development – Java III

Contents

[Introduction 4](#_Toc57972844)

[UML Class Diagram 5](#_Toc57972845)

[Server 5](#_Toc57972846)

[Client 5](#_Toc57972847)

[Third-Party Libraries 6](#_Toc57972849)

[Method Signatures - Server 7](#_Toc57972850)

[JMCServer 7](#_Toc57972851)

[JMCServerController 8](#_Toc57972852)

[Connection 8](#_Toc57972853)

[User 8](#_Toc57972854)

[Password 9](#_Toc57972855)

[Method Signatures - Client 10](#_Toc57972856)

[JMCLogin 10](#_Toc57972857)

[JMCLoginController 11](#_Toc57972858)

[Listener 11](#_Toc57972859)

[JMCMusicPlayer 12](#_Toc57972860)

[JMCMusicPlayerController 13](#_Toc57972861)

[NewPlaylist 14](#_Toc57972862)

[NewPlaylistController 14](#_Toc57972863)

[Player 14](#_Toc57972864)

[Playlist 15](#_Toc57972865)

[Song 15](#_Toc57972866)

[Sort 16](#_Toc57972867)

[Test Data 17](#_Toc57972868)

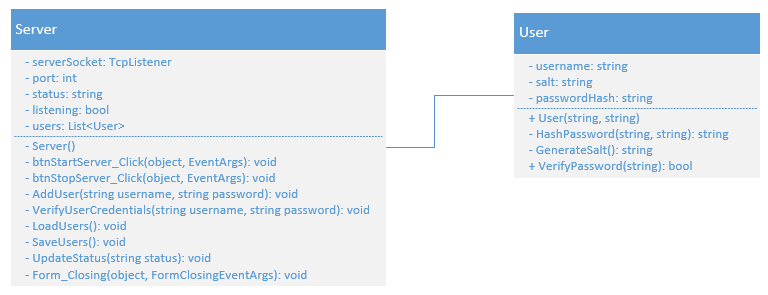
[JUnit Testing 28](#_Toc57972869)

# Introduction

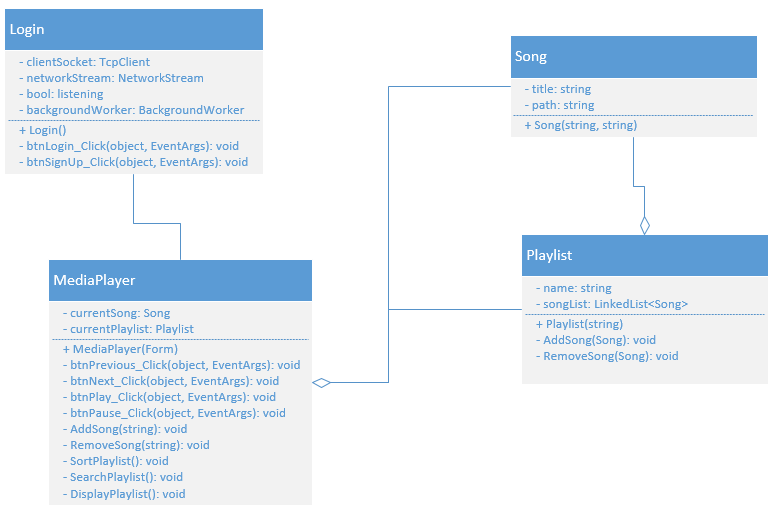
The JMC Music Player application is designed to allow users to login to a music player client and play music. User login credentials are verified on a central server and access is granted to the media player client where they can create playlists and play music.

# UML Class Diagram

Server



Client

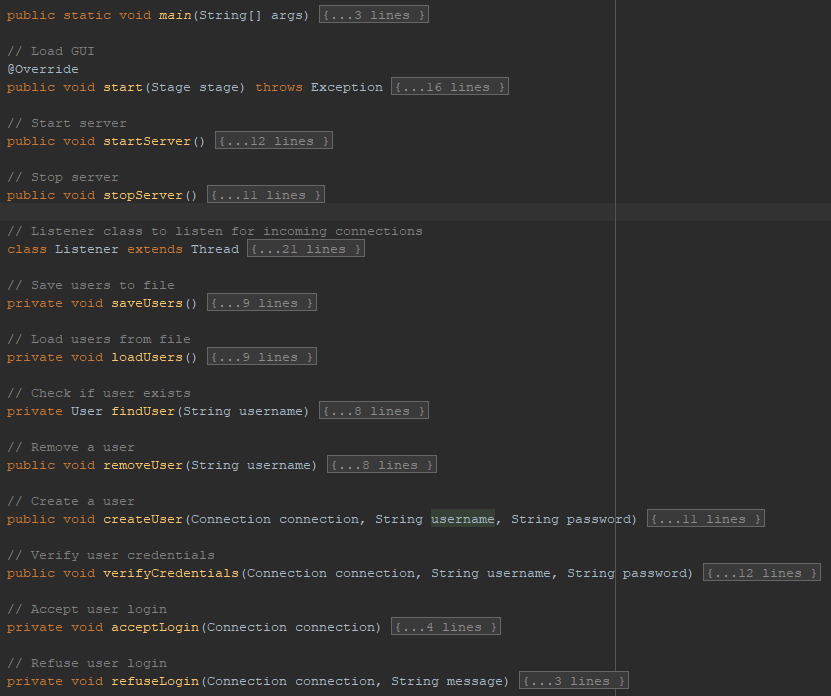


# Third-Party Libraries

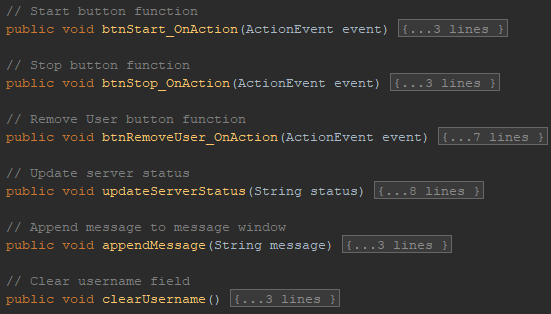
|  |  |
| --- | --- |
| **Name** | **Function** |
| OpenCSV | Reads and parses .csv files. |
| GOXR3PLUS | Music player library including audio visualization |

# Method Signatures - Server

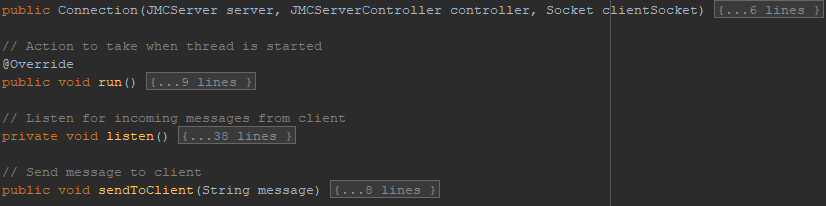
JMCServer



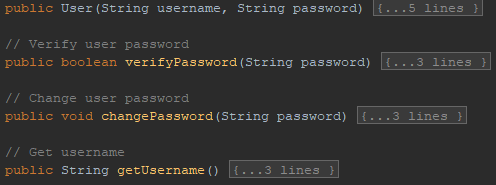
JMCServerController



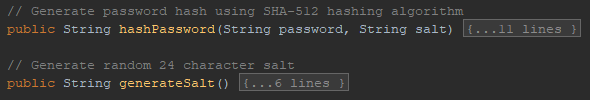
Connection



User

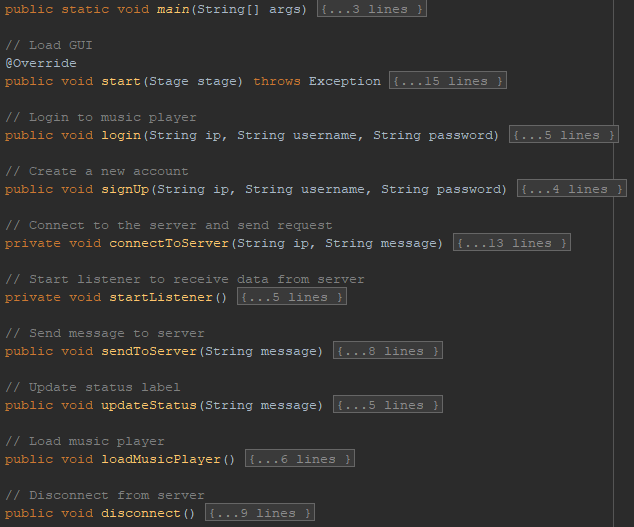


Password

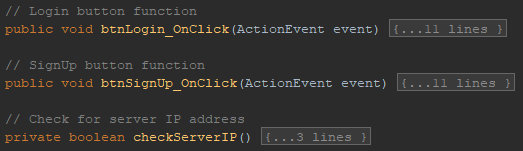


# Method Signatures - Client

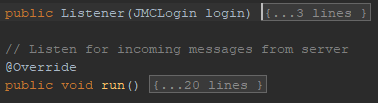
JMCLogin



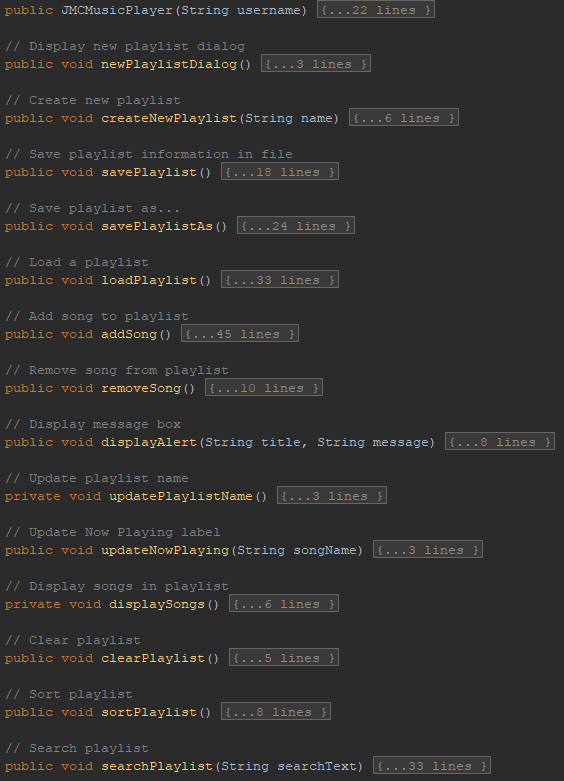
JMCLoginController

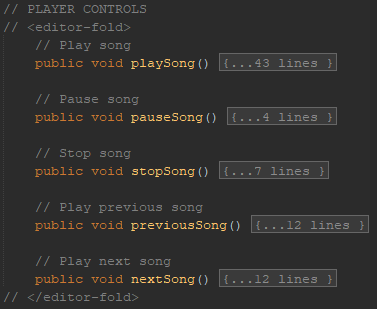


Listener

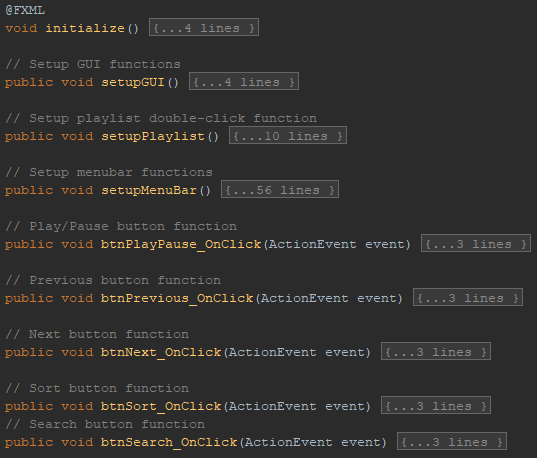


JMCMusicPlayer

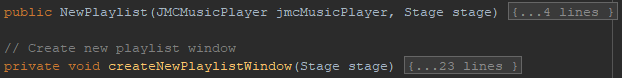




JMCMusicPlayerController



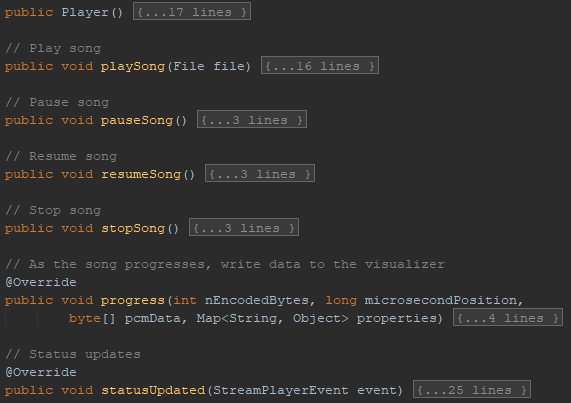
NewPlaylist



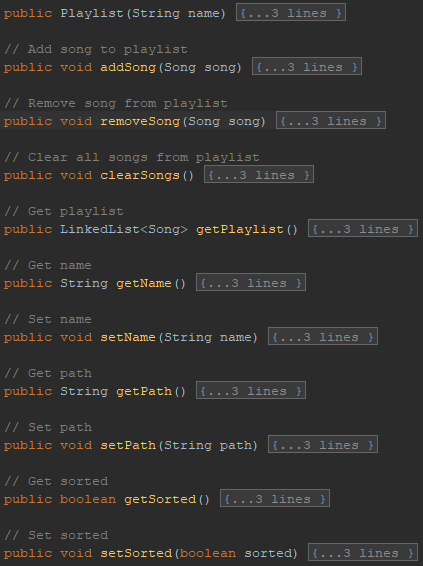
NewPlaylistController



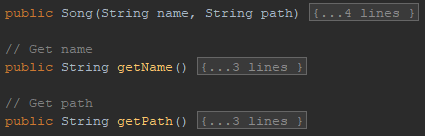
Player



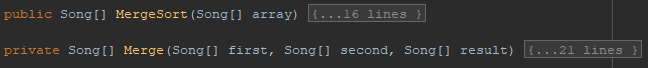
Playlist



Song



Sort



# Test Data

|  |  |  |  |
| --- | --- | --- | --- |
| **Test Case** | **Description** | **Expected Result** | **Actual Result** |
| Case 1 | Start server | Load user information from file and begin listening for incoming connections | As expected. Ref SS1. |
| Case 2 | Stop server | Save user information to file and stop listening for incoming connections | As expected. Ref SS2. |
| Case 3 | Remove user | Remove a registered user from server | As expected. Ref SS3. |
| Case 4 | Login to music player client | Login successful, close login form and open music player client | As expected. Ref SS4. |
| Case 5 | Create a new playlist | Successfully create a new playlist | As expected. Ref SS5. |
| Case 6 | Add songs to playlist | Add multiple songs to playlist via Open File dialog | As expected. Ref SS6. |
| Case 7 | Remove songs from playlist | Song removed from playlist | As expected. Ref SS7. |
| Case 8 | Clear playlist | All songs cleared from playlist | As expected. Ref SS8. |
| Case 9 | Load playlist | Playlist loaded from CSV file | As expected. Ref SS9. |
| Case 10 | Save playlist | Playlist saved to CSV file | As expected. Ref SS10. |
| Case 11 | Play music | Song begins playing | As expected. Ref SS11. |
| Case 12 | Sort playlist | Merge sort performed on playlist successfully | As expected. Ref SS12. |
| Case 13 | Search playlist | Specified song found in playlist | As expected. Ref SS13. |
| Case 14 | About | Display About message box | As expected. Ref SS14. |

|  |  |
| --- | --- |
| SS1 |  |
| SS2 |  |
| SS3 |  |
| SS4 |  |
| SS5 |  |
| SS6 |  |
| SS7 |  |
| SS8 |  |
| SS9 |  |
| SS10 |  |
| SS11 |  |
| SS12 |  |
| SS13 |  |
| SS14 |  |

# JUnit Testing

|  |  |  |
| --- | --- | --- |
| **Class** | **Test** | **Result** |
| Password | hashPassword method returns a hashed password. | Test passed. Ref SS1. |
| Password | generateSalt method returns randomly generated salt. | Test passed. Ref SS2. |
| User | verifyPassword method returns true if password input matches users password. | Test passed. Ref SS3. |
| User | verifyPassword method returns false if password input does NOT match user password. | Test passed. Ref SS4. |

|  |  |
| --- | --- |
| SS1 |  |
| SS2 |  |
| SS3 |  |
| SS4 |  |