

Phase 1 Report

CSCI3280 Introduction to Multimedia Systems

Group 01

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1 Group Information

Following are members from our group,

- Sunny, Wong Ho Ching *1155000534*
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2 Features

2.1 Basic Features

We have, first, implemented the following basic features: E

- **WAV Playback** with stop, pause and resume
- **Volume Control**
- **Media Library** based on SQLite databse

2.2 Enhanced Features

In addition, we have the following enhanced features:

- **MP3 Playback** with stop, pause and resume
- **Progress Bar** with realtime progress showing and progress seek
- **MP3 Tag** reading and import to media library

- User defined **Playlist** and proceed within playlist
- **Simple Equalizer** allow separate volume for each channel

3 Third Party Library

Regarding the third party library, we have used **MP3 SPI** based on JLayer as well as Tritonus. This library is responsible for MP3 file decoding, playback as well as tag decoding.

Using this library, we can directly use `AudioInputStream` as well as `AudioSystem` classes as well as those related class for handling MP3.

We only use `AudioInputStream` for handling MP3; and using `RandomAccessFile` and `FileInputStream` for handling WAV.

4 Division of Labour

- User Interface Design: **Sunny**
 - Database and Media Management: **Jack**
 - Media Decoding: **Eeyore**
 - Media Playback and Playlist: **Jimmy**
 - Equalizer: **Steve**
- Evaluation of other third party libraries such as Java Stereo Equalizer, JEQ*

5 User Manual

5.1 Media Library



Media Library

Search Media

Title

Artist

Album

ID	Title	Artist	Album	File Path	Thumbnail P...
1	十年	陳奕迅	黑白灰	D:\JavaWork...	
2	可惜不是你	梁靜茹	絲路	D:\JavaWork...	
3	我們的歌	王力宏	改變自己	D:\JavaWork...	
4	可惜不是你	胡夏	N/A	D:\JavaWork...	

5.1.1 Add New Media

1. Click the "Add to library" button, a file chooser will be prompted
2. Only directories, file in WAV or MP3 format will be displayed and allowed to choose
3. Choose a music file to proceed
4. The media library will show the newly added item
Tag information from MP3 files is automatically added

5.1.2 Edit

Except the ID column, all other info are allowed to be modified

1. Double click on any fields which are going to be modified
2. Key in the new values
3. Press Enter, data will be updated

5.1.3 Delete

1. Highlight the record(s) to be removed
2. Click "Delete Record" button
3. Done

5.1.4 Clear Library

- Click "Clear Library" button
- Note that the media library will be clear immediately after clicking this button

5.1.5 Demo Data

This function is only for smooth demo.

- It would clear the media library and insert hard-code demo media data for demo.

5.1.6 Search

1. Enter any keywords regarding the title, artist or album.
2. Click "Search" button
3. The searching result will be displayed at the table below.
4. Click the "Reset" button to clear the searching data and display all record previously imported to the media library

5.2 Playlist



5.2.1 Add Media to Playlist

Media items are added from the media library

1. Highlight media record(s) in media library
2. Click "Add to Playlist" button
3. Selected media items will be appended to the end of playlist, if the playlist is initially blank and there is no music loaded, the first item of the playlist will be played.

5.2.2 Delete Media from Playlist

1. Highlight media record(s) in playlist
2. Click "Remove from Playlist" button
3. Selected media items will be removed

5.3 Media Player



5.3.1 Play

Music will be play once media is added input playlist.

5.3.2 Jump to Media

To play music files, they have to be added to the playlist first. Refer to "Playlist" section of this user menu.

1. Double click on the title of the music in the playlist
2. The music will be started

5.3.3 Playback Control

When a music is playing, the following controlling items are available

- Play/Pause — To Play/Pause the music
- Stop — To Stop the music
- Volume Control — Control the volume (for both left and right channels) of the current playing music
- L/R Channel Volume Control — Control the volume of separate speaker channel
- Progress bar — Seek the music progress