EMERTXE TRAINING PROJECT DOCUMENTATION FRAMEWORK
REQUIREMENTS & DESIGN DOCUMENT

Module – Advanced C

MP3 Tag Reader

ΣMERTXE

Contents

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1 Abstract

MP3 tag reader is a software which will read and display MP3 (ID3) tag information from MP3 files. The software will be desktop based and not web based. All operations will be performed using command line interface

The application would be useful to individuals who wish to view and collect mp3 tag data. This project can be extended to implement a tag editor, wherein users can modify mp3 tag information
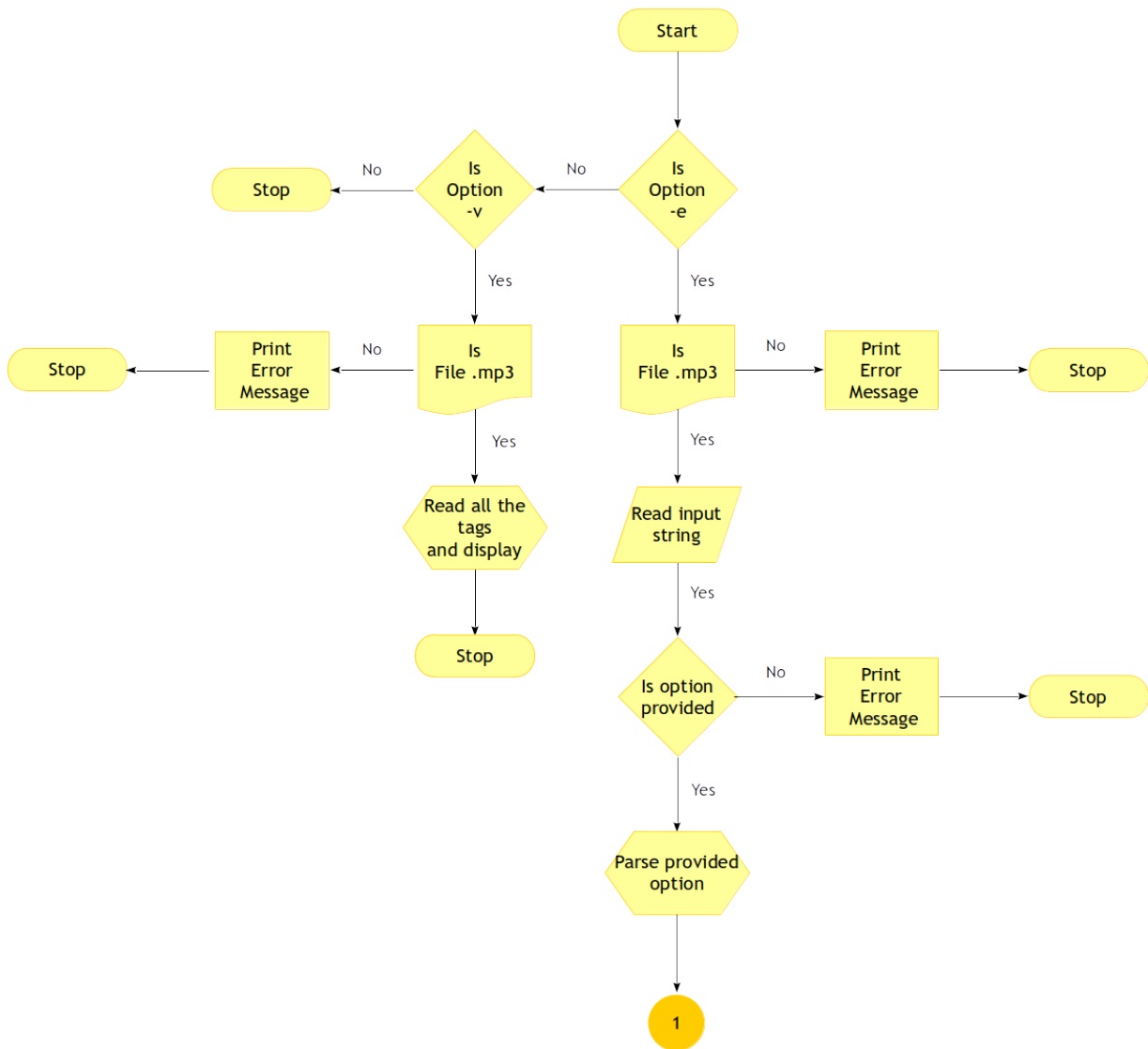
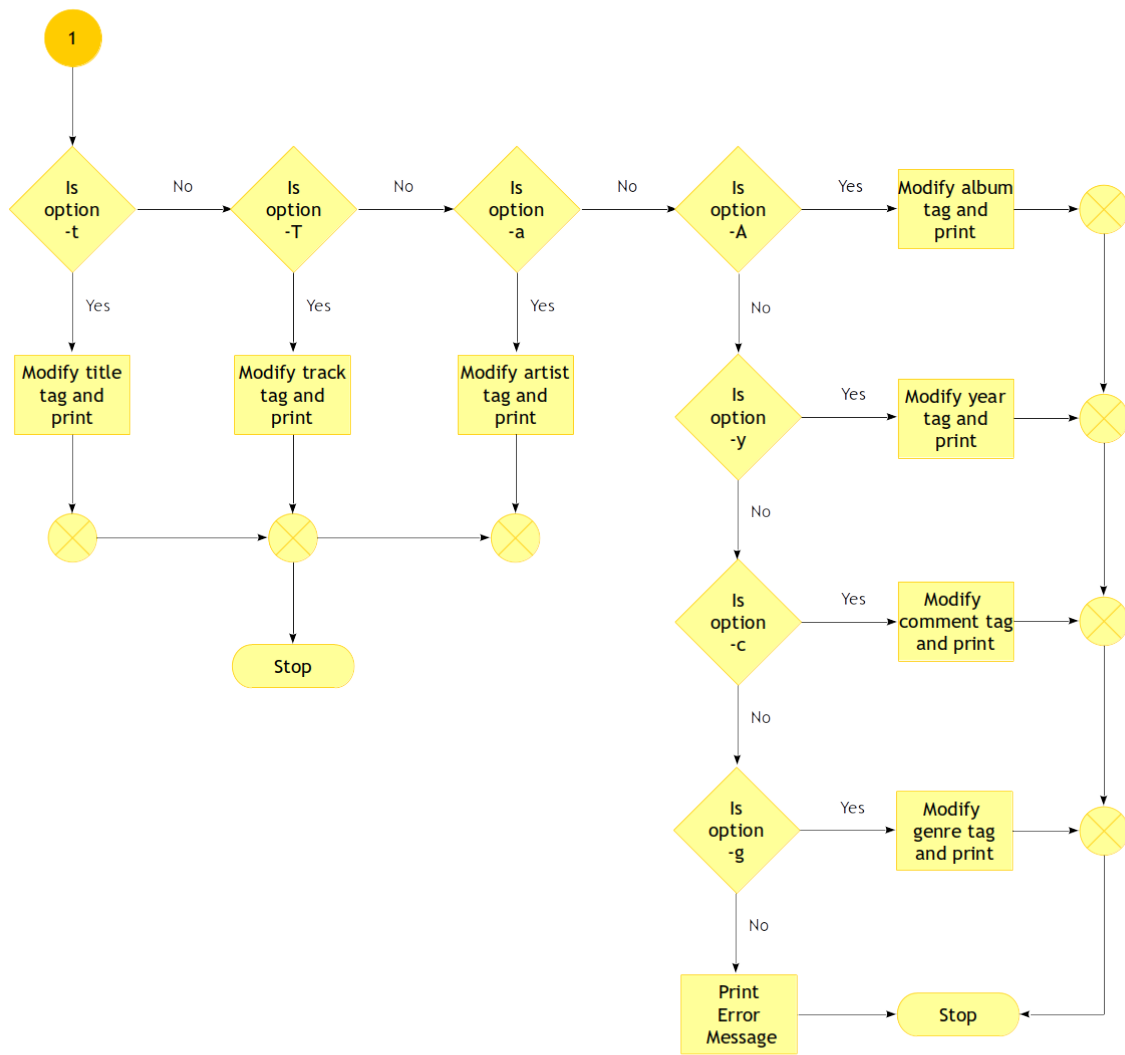ΣMERTXE

2 Requirements

- Mandatory Features:

    ◦ This application, should able to handle all ID3 versions (Except v2.4) tags.

    ◦ Display which version of ID3 tag is used.

    ◦ Display all the metadata information from ID3 tag.

    ◦ User should able to change tags according to options given (Refer: Fig 5 2).

    ◦ Should display a help screen on request (-h option).

    ◦ If any image embedded in file, display details about image (Type, path and size).

    ◦ If ID3 tag not found display proper error messages.

- Additional Features:

    ◦ Add an option to extract the album art (image) from file .

    ◦ Add an option to delete all tag data from the file.

    ◦ In corporate ID3v2.4 version .

    ◦ It should be possible to delete a selected tag by options.

3 Prerequisites

- Knowledge of ID3 tags

- File I/O

- String Handling

- Pointers

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4 Design

```
                                                          Start
                                                            │
                                                            ▼
         No           Is              No              Is
 Stop ◄──────── Option ◄──────────── Option
                  -v                     -e
                   │                      │
                  Yes                    Yes
                   ▼                      ▼
       Print  No   Is               Is    No   Print
 Stop ◄ Error ◄─ File .mp3        File .mp3 ─► Error ──► Stop
       Message                              Message
                   │                      │
                  Yes                    Yes
                   ▼                      ▼
              Read all the          Read input
                 tags                  string
              and display                │
                   │                    Yes
                   ▼                      ▼
                 Stop            Is option   No   Print
                                 provided ──────► Error ──► Stop
                                                 Message
                                      │
                                     Yes
                                      ▼
                                 Parse provided
                                    option
                                      │
                                      ▼
                                     (1)
```

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5 Sample Output

```
user@emertxe] ./mp3_tag_reader
ERROR: Incorrect format of command line arguments.
Use "./mp3_tag_reader -h" for help
user@emertxe]
```

Fig 5 1: Usage

```
user@emertxe] ./mp3_tag_reader -h
Help menu for Mp3 Tag Reader and Editor:

For viewing the tags-   ./mp3_tag_reader -v <filename.mp3>

For editing the tags-   ./mp3_tag_reader -e <filename.mp3> <modifier>

Modifier Function
-t      Modify Title Tag
-T      Modify Track Tag
-a      Modify Artist Tag
-A      Modify Album Tag
-y      Modify Year Tag
-c      Modify Comment Tag
-g      Modify Genre Tag
user@emertxe]
```

Fig 5 2: Help

```
user@emertxe] ./mp3_tag_reader -v you_wont_get_what_this_is.mp3
Mp3 Tag Reader & Editor:
-----------------------
Version ID : 2.3
Title : you_wont_get_what_this_is
Album : Hey You
Year : 2017
Track : 7/8
Genre : Soundtrack
Artist : It's Me
Comment : Get me if you can!!

Extracting Album Art - Done
user@emertxe]
```

Fig 5 3: Print MP3 Tag

```
user@emertxe] ./mp3_tag_reader -e you_wont_get_what_this_is.mp3 -t "YO YO BOYs"
Mp3 Tag Reader & Editor:
-----------------------
Version ID : 2.3
Title : YO YO BOYs
Album : Hey You
Year : 2017
Track : 7/8
Genre : Soundtrack
Artist : It's Me
Comment : Get me if you can!!

Title Modification - Done
user@emertxe]
```

Fig 5 4: Edit Title Tag

```
user@emertxe] ./mp3_tag_reader -e you_wont_get_what_this_is.mp3 -a "Blue Bucks"
Mp3 Tag Reader & Editor:
-----------------------
Version ID : 2.3
Title : YO YO BOYs
Album : Hey You
Year : 2017
Track : 7/8
Genre : Soundtrack
Artist : Blue Bucks
Comment : Get me if you can!!

Artist Modification - Done
user@emertxe]
```

Fig 5 5: Edit Artist Tag

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6 Artifacts

6.1 Skeleton Code

- TBD

6.2 References

- http://en.wikipedia.org/wiki/ID3

- http://id3.org

- http://id3.org/id3v2.3.0

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```
#######  Address Book  #######
#######  Features:

0. Exit
1. Add Contact
2. Search Contact
3. Edit Contact
4. Delete Contact
5. List Contacts
6. Save

Please select an option: 4
```

Fig 6 1: Selecting Delete Contact

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```
#######  Address Book  #######
#######  Features:

0. Exit
1. Add Contact
2. Search Contact
3. Edit Contact
4. Delete Contact
5. List Contacts
6. Save

Please select an option: 6
Done. Please enter key to continue:
```
Fig 6 2: Selecting Save option to save the entries. Note if the program is terminated the unsaved entries will be lost

```
#######  Address Book  #######
#######  Features:

0. Exit
1. Add Contact
2. Search Contact
3. Edit Contact
4. Delete Contact
5. List Contacts
6. Save

Please select an option: 0
```
Fig 6 3: Selecting Exit option to Quit the application

```
#######  Address Book  #######
#######  Features:

0. Exit
1. Add Contact
2. Search Contact
3. Edit Contact
4. Delete Contact
5. List Contacts
6. Save

Enter 'N' to Ignore and 'Y' to Save: Y
Exiting. Data saved in address_book.csv
user@emertxe]
```
Fig 6 4: Pressing 'Y' to Save