

CSE314 Bash Scripting Online - Section A

May 04, 2025

Media Library Catalog & Report

Time: 35 minutes

Overview

You have accumulated a collection of media files in a directory named `media/`. These files are of various types, including `.mp3`, `.flac`, `.mp4`, and `.mkv`. The filenames follow inconsistent naming conventions, such as:

- `Artist - Title.mp3`
- `Title (Year) - Artist.mkv`
- `Unknown.mp4`

Your task is to write a Bash script that processes these files to generate a catalog.

Objectives

1. Scan the `media/` directory for files with the extensions: `.mp3`, `.flac`, `.mp4`, and `.mkv`.
2. For each file, extract the **Artist** and **Title**:
 - If the filename follows `Artist - Title`, extract accordingly.
 - If the filename follows `Title (Year) - Artist`, extract accordingly.
 - If the pattern doesn't match, set both Artist and Title as **Unknown**.
3. Build an associative array mapping each Artist to a list of their Titles.
4. Generate a `catalog.txt` file with the following format:

```
Artist1
  Title1
  Title2
Artist2
  Title3
...
```

5. Sort the artists alphabetically, and under each artist, sort their titles alphabetically.

Sample Directory Structure

```
media/  
├── Radiohead - Karma Police.mp3  
├── Bohemian Rhapsody (1975) - Queen.flac  
├── Interstellar.mp4  
└── Pink Floyd - Time.mkv
```

Command

```
./script.sh media/ catalog.txt
```

Instructions

- Ensure your script handles filenames with spaces and special characters.
- Use only Bash built-in commands and standard Unix utilities.

Submission Guidelines

Important Notes

- Please note that any usage of the internet is strictly prohibited during the assignment.
- Use of any unfair means will be duly punished.
- Submit the source code in Moodle. Failure to submit in Moodle will result in a mark deduction.
- The filename should be `online-StudentID.sh` (e.g., `online-2105XXX.sh`).
- Make sure your script is executable.