Media Managing Application

For this assignment we are going to be developing an application that manages the media on your machine. We will be using concepts derived from our previous assignments such as abstraction and FileIO, so make sure to look back at your previous work for examples.

This project is going to have two sets of project requirements. One set is the requirements as they would be delivered to a development team from a client, basically stating what they want the program to do. The second set will be a set of class requirements that puts you in a position to want to develop this application using the techniques we have been learning in class. Remember, many concepts in this class are completely optional to software development, but my goal is to put you in a position where you really see the benefits of developing this way.

Client Requirements

Description: We want an application that will serve as a portal to manage all media on our computers. The term media, in this case, includes video, audio, and images, of type MP3, WAV, MP4, AVI, PNG, or JPG. This application should offer the following interface features/options for our users:

1. User can input into the main menu with the following options
   1. Scan for videos
   2. Scan for audio
   3. Scan for images
   4. Scan for all
   5. Access video library
   6. Access audio library
   7. Access image library
   8. Close program
2. Scan for \_\_\_\_\_
   1. Scanning functions should all ask the user for the directory to search
   2. During the scan, display a message saying:
      1. JPG found - C://users/desktop/myjpg.jpg
      2. etc
3. Access \_\_\_\_\_ library
   1. The library should be displayed with the following information
      1. Index
      2. File name
      3. File extension
      4. Date last accessed
   2. The library should have a menu with the following options
      1. Sort by name
      2. Sort by extension
      3. Sort by Date last accessed
      4. Touch file
         1. User inputs an index to touch a file
      5. Remove file
         1. Remove the file from the library, not disk
      6. Back to main menu

Class Requirements

You need to store collections of files for this project, and I would like it done in a way that demonstrates your knowledge of generic classes and interfaces. Remember, this entire project can be fairly easily done without generics and interfaces, but we want to use this as an opportunity to learn!

1. You should have a generic collection class that handles all media types
2. You should have a specific class for each media type
   1. You can have these classes inherit from an abstract, or just an interface
3. You should have interfaces so you don’t have to cast anything
4. Collection should be sortable by all fields (don’t try to do with generics or interfaces)
5. EC 5%: User can input multiple directories to search.
6. EC 10%: Add an option to select a file from a library.
   1. For video, ignore this. (Cudos if you implement this)
   2. For audio, play it through the console.
   3. For image, print it in the console.

Demonstration file coming before Saturday.