Python 2024 Competition

Library Intake

Description

Your local library has been severely mismanaging its intake process for all media it receives to be made available to the public. You have been asked to come in and streamline the process. You will be building an application that allows a user to manually enter information for a piece of media. This information must be added to a new file or an existing primary file that is designated by the user. In addition, the user should be able to enter a .csv file to upload this information in bulk.

If at any point a user uploads or inputs incomplete/invalid information, you as the designer of this application must find a solution to clean up the incoming data for storage in the library.

You are to provide users a clean interface either in console or in a GUI. If possible, you are to help the library transition from storing its data in .csv files to a database of your choosing.

Application Criteria:

1. User Interface – Users must be able to interact with the program either through the console or a GUI with relevant interactions/commands provided to the user.
2. Users must be able to upload from a .csv file to intake media in bulk.
3. Users must be able to engage with manual entry in the event of no file available for bulk intake.
4. The application must be able to manage incoming data that is either complete or incomplete.
5. The application must be able to update a primary file if one exists. If able, the application will update a database instead.

Basic Requirements (40%)

- Comments, whitespace, and inclusion of references are present.
- method(s) used to take in direct user input or the ability to import ```.csv``` files for bulk intake.
- method(s) used to clean up potentially incomplete data.
- storing clean data into appropriate objects
- proper string representation of class objects
- A clean interface for users to use directly.

Intermediate Requirements (30%)

- Effective use of classes to demonstrate object-oriented design principles.
- effective use of exception handling when necessary
- Sufficiently export clean data to a readable file
- Provide the user with the ability to view the contents of the media library.

Advanced Requirements (10%)
- Export data to a database.
- Usable graphical user interface in place of console commands.

Documentation Requirements for Code (10%)
- Usage of industry standard documentation (i.e., PEP 8)
- Comments where necessary

Documentation Requirements for the Application (10%)
- Documentation of any dependencies.
- Documentation on how to us the application
  - If using console interaction, a description of various commands and how to use them.
  - If using a GUI, write a brief tutorial for the GUI.

Rubric

Tier 1	
Description	**Points**
Method(s) to manually enter a single piece of media stored in an object.	**/10pts**
Method(s) to read a .csv file data into objects	**/10pts**
Method(s) to ensure that incoming data is either complete or incomplete information is managed appropriately	**/15pts**
Proper string representation of data objects	**/5pts**
	Total:

Tier 2	
Description	**Points**
Effective use of classes to demonstrate object-oriented design principles	**/10pts**
Use of exception handling	**/5pts**
A clean interface in which users can use the application effectively	**/5pts**
Sufficiently export clean data to an external file	**/10pts**
	Total:

Tier 3	
Description	**Points**
Upload clean data to a database for the proper handling of future data	**/5pts**
Implementation of a GUI to create a more user friendly	**/5pts**
	Total:

Documentation & Usability	
Description	**Points**
Proper documentation of any dependencies required to run the application	**/5pts**
Proper documentation of how to use and run the provided application	**/5pts**
Proper usage of comments, white space, and references	**/10pts**
	Total:

Grand Total: _____/100pts