Assignment 2

CIS 2168 (Section 001)

Fall 2023

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Objective

Quick overview of Linked List, files, and strings in Java.

Problem Description

In the quiet town of Dataville, Lisa was given an intriguing assignment by her uncle Mark! Uncle Mark got two movie lists from his colleagues. He is interested in merging these two movie lists into a single list containing unique movie names only, so that he can pick one of them to arrange a show for the school kids. However, Uncle Mark is so busy organizing the movie show, he asked for help from Lisa regarding this. Uncle Mark does want the merged movie list with the following characteristics:

- Movie list will contain unique movie names only
- Order of movie names does not matter
- Movie names are not case-sensitive

Lisa knows you are a good programmer and can automate the entire process for her. Lisa is asking for help from her programmer friend (which is you!)! Please do the following tasks to help her.

Task 1 (35 pts)

Given two movie lists, print a merged movie list with the characteristics mentioned above.

Task 2 (20 pts)

Print the oldest and the latest movie names from the merged movie list.

Task 3: (25 pts)

Delete all the movies starting with the word "the".

Assume "the" is not case sensitive.

Task 4: (10)

Print the current old movie after all the steps (Task 1-3) are done.

Details

There will be two input files, movieListA.txt and movieListB.txt. We assume that each movie consists of a name and the release year. Your Movie class should be like the following.

public class Movie{

      String movieName;

      int movieYear;

}

Use the Movie class to implement your solutions.

Note that:

- The order of movie presented in the output does not matter.
- Movie names are not case sensitive. That said, a and A represent the same movie!
- You may use console output.

Sample Input

movieListA.txt

The A

1987

the B

2022

C

1985

D

1999

movieListB.txt

The a

1987

The B

2022

E

1977

Sample Input Output

Merged movie list: The A, The B, C, D, E

Oldest Movie: E (1977)

Latest Movie: the B (2022)

After removing "the" movies: C, D, E

Now the oldest movie is E (1977)

Submission Instruction

The assignment should be submitted through the available link on course Canvas shell. The assignment rubric is as follows:

1. Source code and demonstration [90 points]:

Provide the source code in zip file. Each file should have proper comments (e.g., explanations for methods, class and so on). It will be graded based on accuracy (e.g., program execution), clarity of the necessary comments, and short demonstration as instructed by TA or instructor.

2. Status.txt [10 points]:

In this text file, you need to report:

- The status of your program (completed or not; partial credit will be given even if the program is not completed).
- The design of your program (what and how the objectives have been accomplished.
- Support and advice (if any) you get from TA and/or your classmates.
- Comments and suggestions to improve this assignment.
- If you are doing late submission, you should mention the number of days you are late since the due date. According to our policy, for N days of late submission, you get a deduction of Nx3 points per day even if your submission completes all the requirements. That said, if you are late for 5 days, your maximum point can be up to 85 out of 100.

Please have the source codes and status files zipped into a single file DSAssign2-LastnameFirstname.zip and upload the file on Canvas.