Northern Michigan University (Marquette Co, MI)
CS 498-50-23W: Practical Kotlin Programming

Program 1

Library

Create a folder called "PG1" in the top level of your CS345-01-23W folder. Place all files pertaining to this assignment into the top level of your PG4 folder. Place a (possibly empty) file called "DONE" into this folder when you are ready to have your programs graded. The only files you need to turn in are the .kt files. Please don't turn in any files other than these!!

Write the following program in Kotlin:

You are to write a program that adds book titles to a library. The library must be stored in a linked list with the book titles appearing in alphabetical order within the linked list. There are to be no loops in your linked list and linked list node classes; these classes must use recursion only. Loops are allowed in your main. Your main may reference the linked list class, but it may not reference the linked list node class in any way.

Your program will accept a series of commands for you to process.

ADD "Book Title"

This adds a title to the linked list. The title is allowed to contain spaces. The title will begin and end with quotes, but the quotes are NOT part of the title. If the book is already present, it will not be added to the linked list. Titles are case-insensitive. If the list already contains "DOG," you should not be allowed to add "dog"

PRINT

Prints out all books in the linked list in alphabetical order, case insensitive. "A" comes before "b" and "a" comes before "B".

REMOVE "substring"

Removes all books whose title contains the substring. For example, REMOVE "the" removes all books that have "the" somewhere in the title, beginning, middle, or end, as a whole word or as a partial word. Again, this is case insensitive. REMOVE "the" removes all titles with "The","THE","ThE", etc.

EXIT

Ends the program.

The commands themselves are case insensitive. For example, Exit, eXit, exit, etc. should all exit the program.