Lab Exercise Two – CIS*2430 F24

For this lab exercise we will be making some upgrades to our Discussion Board program in Lab Exercise One.

- Our discussion board should be able to handle any number of users with any number of posts. As a result, you need to use two ArrayLists, one for all users and the other for all posts.
- Add 2 classes to the new program:
    - A "User" class:
        - Has a full name and username
        - Username should be all lowercase
    - A "Post" class:
        - Has a title, content, and a reference to the user who created the post
- To post on our discussion board, users must first register with our program by creating a user in the related ArrayList:
    - Prompt for both a fullname and a username. Full name may be multiple words on a single line, and username will be a single word. Note that the username can be optional. If omitted (line with only whitespace), default to the first name (the first word in the fullname input) but normalized to lowercase
    - Before creating a new object for the user, search in the related list to see if a user with the given username already exists. If so, reject the request; otherwise, create an object for the user and add it to the related list.
- For creating a post, prompt for a username first, and if the related user hasn't registered in the program yet, indicate that the user doesn't have a permission and reject the request. Otherwise, prompt for title and content and create a new object for the post and add it to the related ArrayList. Title and content will be multiple words each on a single line.
- For all view options in the command loop, please print the results in the order the post was made (most recent last)

* A word is defined as a set of alpha-numeric characters surrounded by spaces

* All posts will be a single line of words, all fullnames will be a single line of words, and all usernames will be single words

* Keywords are matched by ignoring cases but word-by-word (e.g., "program" and "programming" are not a match), implying that string tokenization is needed

Sample Menu

(1) Create new user
(2) Create new post
(3) View all posts
(4) View all posts with a given username
(5) View all posts with a given keyword
(6) End Program

Sample Post Printout

Created By: <user_full_name> (@<user_name>)

Title: <post_title>

<post_content>

Marking Rubric

10 marks total

> **1 mark** for proper use of User and Post ArrayLists
>
> **2 marks each** for proper implementation of Post and User classes
>
> **1 mark each** for options 1-5

Submission Requirements

Please submit all related java files + optional runnable jar as a zip file on CourseLink. Please place your main method in DiscussionBoard.java with your name, student id, and compile and run commands as comments at the top

Due Dates

Lab Section	Due Date
0101 & 0201	October 12th, 2024 @ 11:59pm
0102 & 0202	October 11th, 2024 @ 11:59pm
0103 & 0203	October 10th, 2024 @ 11:59pm
0104 & 0204	October 13th, 2024 @ 11:59pm
0105 & 0205	October 8th, 2024 @ 11:59pm
0106 & 0206	October 10th, 2024 @ 11:59pm
0107 & 0207	October 8th, 2024 @ 11:59pm