

CSPP Week - 7 Exam

Section - II

Time: 3 hours

Max Score: 25 pts

Simple Social Media Platform

Overview:

In this project, you will be developing a basic text-based version of a social media platform. Users should be able to create posts, view a timeline of posts, and interact with posts by liking or commenting on them.

Function 1: initializePlatform() - 3 pts

Write a function named `initializePlatform()` that doesn't take any arguments. This should set up an empty platform (represented as a list of posts). Each post is a dictionary with keys for the content, likes, and comments. Return the initialized platform.

Function 2: createPost(platform, content) - 4 pts

Write a function named `createPost()` that takes the platform and the content of the post as arguments. This should add a new post to the platform with the given content, initialized with 0 likes and an empty list of comments. The function should return the updated platform.

Function 3: viewTimeline(platform) - 3 pts

Write a function named `viewTimeline()` that takes the platform as its argument. This function should display all the posts on the platform, along with the number of likes and comments for each post. The function should return `None`.

Function 4: likePost(platform, postIndex) - 4 pts

Write a function named `likePost()` that takes the platform and the index of the post to be liked as arguments. Increase the like count of the post by one. If the post index is invalid, display a warning. The function should return the updated platform.

Function 5: `commentOnPost(platform, postIndex, comment)` - 5 pts

Write a function named ``commentOnPost()`` that takes the platform, the index of the post to comment on, and the comment content as arguments. Add the comment to the selected post. If the post index is invalid, display a warning. The function should return the updated platform.

Function 6: `startPlatform()` - 6 pts

Write a function named ``startPlatform()`` that initializes the platform and then provides a menu for the user to interact with it. The steps are:

1. Setup: Welcome the user and initialize the platform using ``initializePlatform()``.
2. Menu Loop: Display a menu where the user can choose to:
 - a. Create a new post.
 - b. View the timeline.
 - c. Like a post (prompt for post index).
 - d. Comment on a post (prompt for post index and comment content).
 - e. Exit.
3. User Input: Depending on the user's choice:
 - a. Create a post using ``createPost()``.
 - b. View the timeline using ``viewTimeline()``.
 - c. Like a post using ``likePost()``.
 - d. Comment on a post using ``commentOnPost()``.
4. Continue looping until the user chooses to exit.

Example Session:

- The user starts the application and sees a welcome message and a menu.
- The user decides to create a post with the content "Hello, world!".
- The user then views the timeline and sees their post with 0 likes and no comments.
- Another post is created with content "It's a sunny day!".
- The user decides to like the first post.
- The user then adds a comment "Indeed it is!" to the second post.
- Viewing the timeline again, they see the updated likes and comments.
- The user exits the application.