

# CS 60 254 Data Structures and Algorithms

*Assignment 5 Due date (11:59 PM Friday December 1)*

You are hired to build a mobile app called the **circle of trust** or CoT. Every CoT user could build only one group or circle of 10 users. The users can post messages to circle if the user is subscribed to this circle. The users in the same circle could see the ten most recent messages in the circle. The users are added to or removed from the circle by the circle owner. Any user could leave the circle at any time. If the owner leaves the circle, the first member added to this circle by the circle owner become the new owner of this circle. If all the user leave the circle the circle automatically delete.

*Identify and design the data structure required for this app. The app should support the following methods provide **pseudocode** description for these functions :*

1. posting(userID, msg, circle): Compose a new tweet.
2. getMessages(userID, circleID ): Retrieve the 10 most recent messages in the user's circles. Msg must be ordered from most recent to least recent.
3. joinCircle(userID, circleID): user joins a circle created by another user.
4. leaveCricle(userID, circleID): user leaves a circle to create by him or by another user.

**NOTE:** This is not a programming assignment you only need to select and design the app data structures and describe how you will use these data structures to provide the app functionalities

**You will submit the assignment to blackboard at most by Friday Dec 1 at 11:59 PM**