# Social Media App

## Objectives

Apply ArrayList to solve a problem

## Problem

Create a social media app to connect people. Your social media app allows you to create a list of the people you can follow. Also, you can follow your followers if you want to. The functionality for this app is somewhat similar to the Instagram app. Here is the list I have created. Feel free to be creative by adding more functionalities.

* Add a follower
* Unfollow someone
* Follow someone
* Search the list of followers
* Update followers
* List all the followers
* Display the number of the followers
* Display the number of the people following

## Classes

You are required to implement the following classes in the given order

1. User class
2. SociaMedia class
3. Driver class

Implement the classes in the given order, compile as you go

### User class

Here is the UML diagram for the User class. User class must implement the **comparable** interface. The methods in this class are pretty straight forward. The order of implementing the methods is not important

| Person |
| --- |
| -String first  -String last  -String username  -boolean followBack |
| +User(String first, String last, String username, Boolean followBack)  +getFirst() : String  +getLast(): String  +getFollow(): boolean  +setFirst(String newFirst): void  +setLast(String newLast) : void  +toString() : String  +follow(): void  +unfollow(): void  +equals(User other): Boolean  +compareTo(User other) : int //compare two usersbased on the last name. |

**Descriptions of the methods in the User class**

**public User (String first, String last, String username, boolean followBack)**: this constructor initializes the instance variables

**getFirst():** returns the first name

**getLast() :** returns the last name

**getFollow():** returns the followBack variable

**public void setFirst(String first)**: allows to modify the first name

**public void setLast(String last)**: allows to modify the last name

**public void unfollow():** sets the followBack to false

**public void follow():** set followBack variable to true

**public boolean equals(User other)** : compares the first and the last name of the object this, with the first and last name of the object other. Here is the code:

return this.first.equalsIgnoreCase(other.first) && this.last.equalsIgnoreCase(other.last);

**public String toString():** creates a String representing the User object in the following forma, this is a sample output

User name : TrevorS  
Name: Trevor  
Last name: Schlulz "You are not following this person

**public int compareTo(Object o):** compares the two users based on their username. You need to use compareTo method from the string class in this method. If two users have the same username, then they are the same people. This method gets Object o so don’t forget to type case it to the User object. Refer to the lecture videos

### SocialMedia class

| Directory |
| --- |
| -ArrayList<Person> app |
| +SocialMedia ()  +followBack(String first, String last) : void  +follow (String name, String last, String username, Boolean followBack) : Boolean  +remove(String first, String last): boolean  +search(String first, String last) : boolean  \_getList(): ArrayList<User>  +followerCounts(): int  +followingCounts(): int  +toString() : String |

SocialMedia class methods

1. **Public SocialMedia()** : This constructor instantiates the ArrayList called app
2. followBack(String first, String last): this method goes through the arraylits app and finds the person with the given first and last name, once the person is found, call the method follow from the User class.

Here is the code that you can use:

String s = first + " " + last; for(int i = 0; i < app.size(); i++) { String s1 = app.get(i).getFirst() + " " + app.get(i).getLast(); if(s1.equalsIgnoreCase(s1)) { app.get(i).follow(); } }

1. **Public boolean follow(String name, String last, String username, Boolean followback):** This method gets the information for a User, creates a User object and adds it to the proper location in the list to keep the state of the list sorted. Don’t add it to the end of the list. Make sure to also check whether or not the User is already in the list using the search method. Refer to the sample program posted on Canvas (PlayList). This method should return a boolean. Returning true means the follower was added, returning false means the follower is already in the list
2. **Public boolean remove(String first, String last)** : Use sequential search to find the follower in the list and delete it. The first name and the last name of the follower should be passed to this method. This method should return true if the follower is found and deleted, returning false otherwise
3. **Public boolean serach(String first, String last):** This method gets the follower’s first and last name and returns true if the person was found. Search the list based on the first and last name. return type for this method is boolean. If the follower is not in the list return false. This is a linear search
4. getList(): this method returns the Arraylist app
5. followerCounts(): this method returns the size of the Arraylist app which represents the number of the followers.
6. followingCounts(): this method returns the number of the people this person is following. We need to iterate through the ArrayList app :
   1. declare a variable of int
   2. create a for loop to go through the arraylist
      1. if app.get(i).getFollow() == true
         1. increment the count by 1
7. **public String toString():** returns a string representing all the followers in the list. A for loop is needed to go through the list .

### Driver class

Once you have all the classes implemented, uncomment the Driver class to run your code.

### yourDriver class

* Create your own Driver and your own list of followers.
* Add followers to the list you created
* Show the updated list
* Search for a follower that isn’t in the list
* Remove a follower from your list
* Show the updated list
* Follow a person in your list of followers

# Sample output



