GTU DEPARTMENT OF COMPUTER ENGINERRING

CSE 222/505 – SPRING 2023

HOMEWORK #01 REPORT

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1. **SYSTEM REQUIREMENTS**
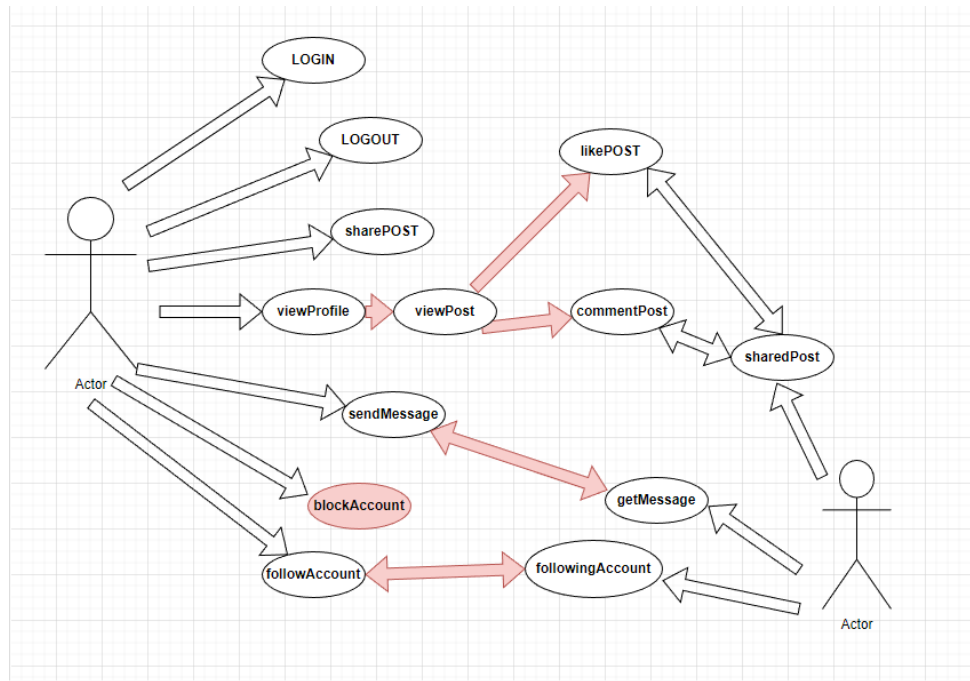
   a. **OS/Device Requirements**

      i. This is a social media platform software. To run of this app, the system has a JDK which now as a Java Development Kit (JDK).

      ii. Every operating system which has JDK can run this app

      iii. Memory: >1GB memory

      iv. Space: The java classes don't need any extra spaces.

      v. This app does not need any external library.

      vi. There is no need to internet connection.

   b. **Social Media Platform Requirements**

      i. Each account must have a profile containing the following information:

         1. Username
         2. Birth Date
         3. Location
         4. Posts (if they exist)
         5. Follower Accounts (if they exist)
         6. Following Accounts (if they exist)

      ii. Each account must be logged into their account for to perform certain actions.

         1. Following another account.
         2. Viewing the profile of another account (no need to follow the account in order to view the profile)
         3. Sharing a post
         4. Interacting with a post which belongs to another account.
         5. Sending a message to another account (the account must be followed in order to send a message)

2. USE CASE DIAGRAM

3. PROBLEM SOLUTION APPROACH

a. First, Account class defined and created as described in homework folder.
b. Next step is creating other classes.
c. Created getter/setters.
d. Implemented Account class function with tracking steps in homework folder.
  i. Blocking actions
    1. blockUsername function is created.
    2. getBlockedCount function is created.
    3. isBlocked function is created
    4. deleteUserFromFollowers function is created.
    5. deleteUserFromFollowing function is created.
  ii. Viewing Profile/Post actions
    1. viewProfile function is created.
    2. viewPost i function is created.
    3. viewPostsInteractions function is created.
    4. Follow function is created.
    5. isFollowing function is created.
    6. addFollowers function is created.
    7. getFollowingCount function is created.
    8. getFollowersCount function is created.
    9. sharePost function is created.
    10. likePost function is created.
    11. commentPost function is created.

12. getPostCount function is created.
        iii. Message Actions
                1. sendMessage function is created.
                2. getMessage function is created.
                3. showInbox function is created.
                4. showOutbox function is created.
                5. showCountInbox function is created.
                6. showCountOutbox function is created.
                7. getCountInbox function is created.
                8. getCountOutbox function is created.
                9. get MessageCount function is created.
        iv. Helper Functions
                1. idToUsername function is created.
                2. Login function is created.
                3. Logout function is created.
                4. isLogin function is created.
    e. Implemented other class functions.
        i. Post actions
                1. addLike function is created.
                2. getLike function is created.
                3. showLikes function is created.
                4. showComments function is created.
                5. getCommentCount function is created.
                6. addComment function is created.
                7. showInteractions function is created.
    f. Adding control mechanisms.
    g. Adding try-catch mechanisms.
    h. Testing with homework examples.

4. TEST CASES

a. Default Test Case [testClass1]

```
Step 1... Creating accounts...
An account with username gizemsungu has been created.
An account with username sibelgulmez has been created.
An account with username gokhankaya has been created.

Step 2... Logging into an account (username: sibelgulmez)...

Step 3... Sharing two posts...

Step 4... Following gizemsungu and gokhankaya...

Step 5... Logging out from account 'sibelgulmez'...

Step 6... Logging into another account (username: gokhankaya)...

Step 7... Viewing sibelgulmez's profile...
User ID: 1
Username : sibelgulmez
Location: Istanbul
Birth Date: 12/12/1980
sibelgulmez is following 2 account(s) and has 0 follower(s).
sibelgulmez is following gizemsungu, gokhankaya,
sibelgulmez has 2 post(s).


Step 8... Viewing sibelgulmez's posts
( PostID: 0) sibelgulmez: I like the java...
( PostID: 1) sibelgulmez: Java the coffee..

Step 9... Liking a post of sibelgulmez...
```

```
Step 10... Adding a comment on a post of sibelgulmez...

Step 11... Following sibelgulmez and gizemsungu..

Step 12... Sending a message to gizemsungu

Step 13... Logging out from account 'gokhankaya'...

Step 14... Logging into another account (username: gizemsungu)...

Step 15... Checking outbox...
There is/are 0 int the outbox.

Step 16... Checking inbox...
There is/are 1 int the inbox.
Step 17... Viewing inbox...
-------------------------
Viewing inbox...
Message ID: 0
From: gokhankaya
To: gizemsungu
Message: This homework so easy...
-----
-------------------------

Step 18... Viewing sibelgulmez's profile...
User ID: 1
Username : sibelgulmez
Location: Istanbul
Birth Date: 12/12/1980
sibelgulmez is following 2 account(s) and has 1 follower(s).
The followers of sibelgulmez are: gokhankaya,
sibelgulmez is following gizemsungu, gokhankaya,
sibelgulmez has 2 post(s).


Step 19... Viewing sibelgulmez's posts...
( PostID: 0) sibelgulmez: I like the java...
( PostID: 1) sibelgulmez: Java the coffee..

Step 20... Viewing sibelgulmez's posts interactions...
-------------
( PostID: 0) sibelgulmez: I like the java...
The post was liked by the following account(s): gokhankaya,
The post has 1 comment(s) ...
Comment 1: gokhankaya said 'said 'me too!' .
-------------
( PostID: 1) sibelgulmez: Java the coffee..
The post has no likes.
The post has no comment.

Step 21... Liking sibelgulmez's posts...

Step 22... Viewing sibelgulmez's posts interactions...
-------------
( PostID: 0) sibelgulmez: I like the java...
The post was liked by the following account(s): gokhankaya, gizemsungu,
The post has 1 comment(s) ...
Comment 1: gokhankaya said 'said 'me too!' .
-------------
( PostID: 1) sibelgulmez: Java the coffee..
The post was liked by the following account(s): gizemsungu,
The post has no comment.
cse312@ubuntu:~/Desktop/homework1/teslim$ █
```

b. Test Case [testClass2]

```
Before steps done exactly same as TEST DRIVER 1...
Starting TEST DRIVER 2 with STEP 23

Step 23... gizemsungu logs in...
You are already Log in!

Step 23... Sharing post...

Step 24... Sharing post...

Step 25... gizemsungu logs out...

Step 26... sibelgulmez logs in...

Step 27... sibelgulmez views gizemsungu profile...
User ID: 0
Username : gizemsungu
Location: Ankara
Birth Date: 21/01/1990
gizemsungu is following 0 account(s) and has 2 follower(s).
The followers of gizemsungu are: sibelgulmez, gokhankaya,
gizemsungu has 2 post(s).


Step 28... sibelgulmez likes post1...

Step 29... sibelgulmez logs out...

Step 30... gokhankaya log in...

Step 31... gokhankaya views gizemsungu profile...
User ID: 0
Username : gizemsungu
Location: Ankara
Birth Date: 21/01/1990
gizemsungu is following 0 account(s) and has 2 follower(s).
The followers of gizemsungu are: sibelgulmez, gokhankaya,
gizemsungu has 2 post(s).


Step 32... gokhankaya comments post2 profile...

Step 33... gokhankaya sends message to gizemsungu Hello! ...
```

```
Step 34... gokhankaya logs out...

Step 35... gizemsungu logs in...

Step 36... gizemsungu views her own profile...
You are viewing own profile!
User ID: 0
Username : gizemsungu
Location: Ankara
Birth Date: 21/01/1990
gizemsungu is following 0 account(s) and has 2 follower(s).
The followers of gizemsungu are: sibelgulmez, gokhankaya,
gizemsungu has 2 post(s).


Step 37... gizemsungu reads message from gokhankaya...
-------------------------
Viewing inbox...
Message ID: 0
From: gokhankaya
To: gizemsungu
Message: Gizem ben gokhan
-----
Message ID: 2
From: gokhankaya
To: gizemsungu
Message: Hello!
-----
-------------------------
cse312@ubuntu:~/Desktop/homework1/teslim$ █
```

c. Extra Test Case [testClass3]

```
cse312@ubuntu:~/Desktop/homework1/teslim$ java homework1.TestClass3

Before steps done exactly same as TEST DRIVER 1...
Starting TEST DRIVER 3 with STEP 23

Step 23... gizemsungu logs in...
You are already Log in!

Step 24... gizemsungu blocks sibelgulmez...

Step 25... gizemsungu logs out...

Step 26... sibelgulmez log in...

Step 27... sibelgulmez tries to view the profile of 'gizemsungu' ...
You cannot view this page because you are blocked!

Step 28... sibelgulmez tries to send message to 'gizemsungu' ...
You are not following gizemsungu, please follow it or maybe s/he has blocked you!
cse312@ubuntu:~/Desktop/homework1/teslim$ █
```

5. RUNNING COMMAND and RESULTS

a. Testing Account Constructor / Creating Account

```
Account myAccount = new Account( accountId: 0,  username: "mens1s", birthdate: "21/01/2002", location: "Ankara",accounts);
Account guestAccount = new Account( accountId: 0,  username: "otherAccount", birthdate: "21/01/2002", location: "Ankara",accounts);
```

```
An account with username mens1s has been created.
An account with username otherAccount has been created.
```

b. Login, View and Follow Functions [without login , user can not follow account]

```
myAccount.follow(accounts, username: "otherAccount");
myAccount.viewProfile(accounts, viewedProfileUsername: "otherAccount");

myAccount.login(accounts);
myAccount.follow(accounts, username: "otherAccount");
myAccount.viewProfile(accounts, viewedProfileUsername: "otherAccount");
```

```
User ID: 0
Username : otherAccount
Location: Ankara
Birth Date: 21/01/2002
otherAccount is following 0 account(s) and has 0 follower(s).
otherAccount has 0 post(s).

User ID: 0
Username : otherAccount
Location: Ankara
Birth Date: 21/01/2002
otherAccount is following 0 account(s) and has 1 follower(s).
The followers of otherAccount are: mens1s,
otherAccount has 0 post(s).
```

Without login you can not follow any account!

c. SharePost, LikePost and CommentPost

```
myAccount.sharePost(accounts, content: "this is my first post");
myAccount.sharePost(accounts, content: "this is my second post");

myAccount.likePost(accounts, postID: 0);
myAccount.viewProfile(accounts, viewedProfileUsername: "mens1s");
myAccount.likePost(accounts, postID: 0);
myAccount.viewProfile(accounts, viewedProfileUsername: "mens1s");

myAccount.logout();
guestAccount.login(accounts);

guestAccount.viewProfile(accounts, viewedProfileUsername: "mens1s");
guestAccount.likePost(accounts, postID: 0);
guestAccount.likePost(accounts, postID: 1);

guestAccount.commentPost(accounts, postID: 0, content: "this is my first comment to first post");
guestAccount.commentPost(accounts, postID: 1, content: "this is my second comment to second post");

guestAccount.viewProfile(accounts, viewedProfileUsername: "mens1s");
guestAccount.viewPostsInteractions(accounts);
```

Without view the page, you cannot like or comment to post

```
You have to view the user!
You have to view the user!
-------------
-------------
( PostID: 0) mens1s: this is my first post
The post was liked by the following account(s): mens1s,
The post has 1 comment(s) ...
Comment 1: mens1s said 'this is my first comment to first post' .
-------------
( PostID: 1) mens1s: this is my second post
The post was liked by the following account(s): mens1s,
The post has 1 comment(s) ...
Comment 1: mens1s said 'this is my second comment to second post' .
```

d. Message Function

```
guestAccount.sendMessage(accounts, receiverUsername: "mens1s", content: "mens1s I don't follow you!");

guestAccount.logout();
myAccount.login(accounts);
myAccount.showInbox(accounts);

myAccount.logout();
guestAccount.login(accounts);
guestAccount.follow(accounts, username: "mens1s");
guestAccount.sendMessage(accounts, receiverUsername: "mens1s", content: "now I follow you!");
guestAccount.showOutbox(accounts);

guestAccount.logout();
myAccount.login(accounts);
myAccount.showInbox(accounts);
```

```
-------------------------------------------
You are not following mens1s, please follow it or maybe s/he has blocked you!
-------------------------
Viewing outbox...
Message ID: 0
From: otherAccount
To: mens1s
Message: now I follow you!
------
-------------------------
-------------------------
Viewing inbox...
Message ID: 0
From: otherAccount
To: mens1s
Message: now I follow you!
-----
-------------------------
```

e. Block Function

```
guestAccount.login(accounts);
System.out.println("Before Blocking...");
guestAccount.viewProfile(accounts, viewedProfileUsername: "otherAccount");

guestAccount.blockUsername(accounts, blockedUsername: "mens1s");

System.out.println("After Blocking...");
guestAccount.viewProfile(accounts, viewedProfileUsername: "otherAccount");

guestAccount.logout();
myAccount.login(accounts);

myAccount.viewProfile(accounts, viewedProfileUsername: "mens1s");
myAccount.viewProfile(accounts, viewedProfileUsername: "otherAccount");
```

```
--------------------------
Before Blocking...
You are viewing own profile!
User ID: 1
Username : otherAccount
Location: Ankara
Birth Date: 21/01/2002
otherAccount is following 1 account(s) and has 1 follower(s).
The followers of otherAccount are: mens1s,
otherAccount is following mens1s,
otherAccount has 0 post(s).

After Blocking...
You are viewing own profile!
User ID: 1
Username : otherAccount
Location: Ankara
Birth Date: 21/01/2002
otherAccount is following 0 account(s) and has 0 follower(s).
otherAccount has 0 post(s).

You are viewing own profile!
User ID: 0
Username : mens1s
Location: Ankara
Birth Date: 21/01/2002
mens1s is following 0 account(s) and has 0 follower(s).
mens1s has 2 post(s).

You cannot view this page because you are blocked!
```