

**GIT Department of Computer Engineering
CSE 222/505 - Spring 2023
Homework # Report**

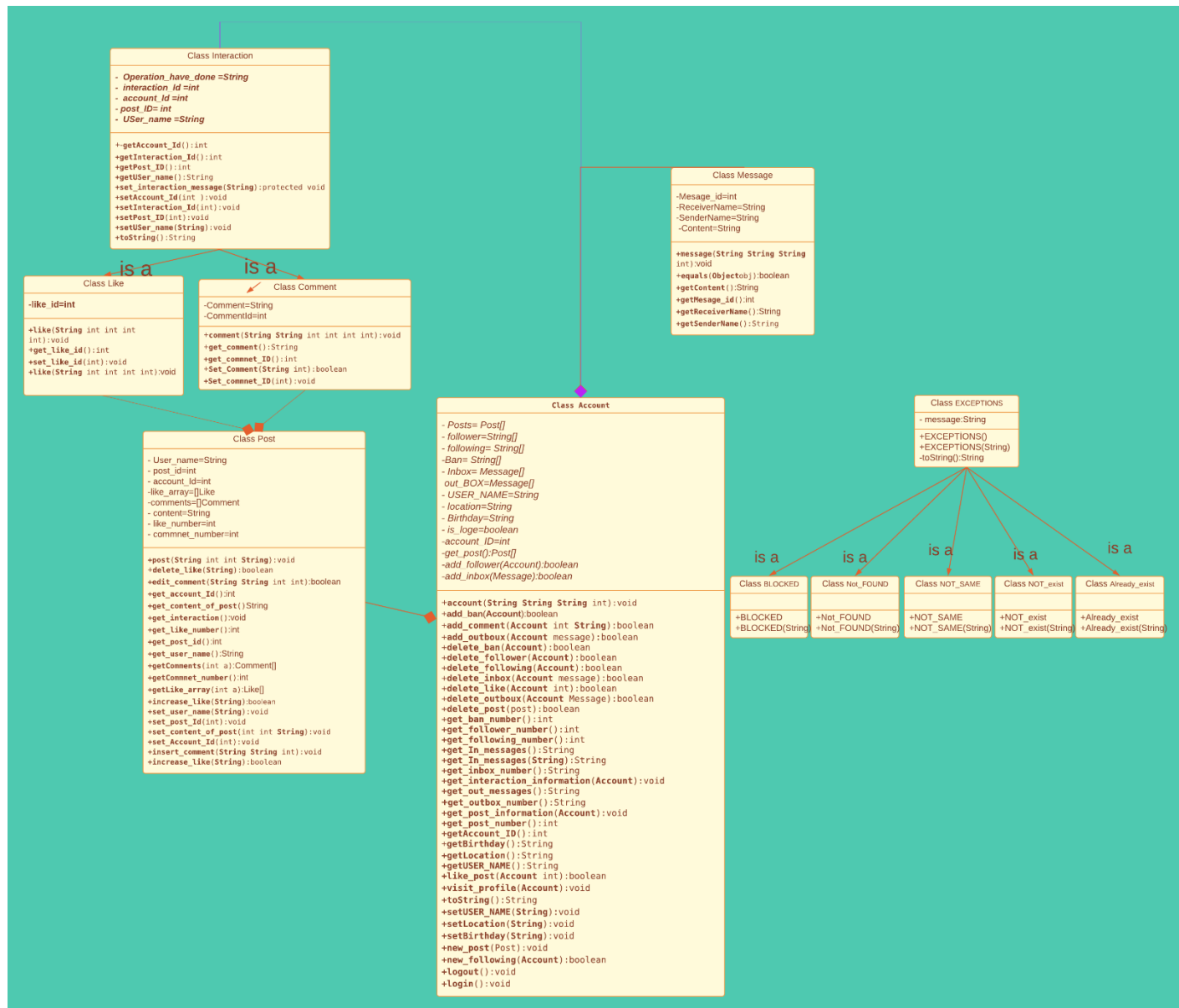
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1. SYSTEM REQUIREMENTS

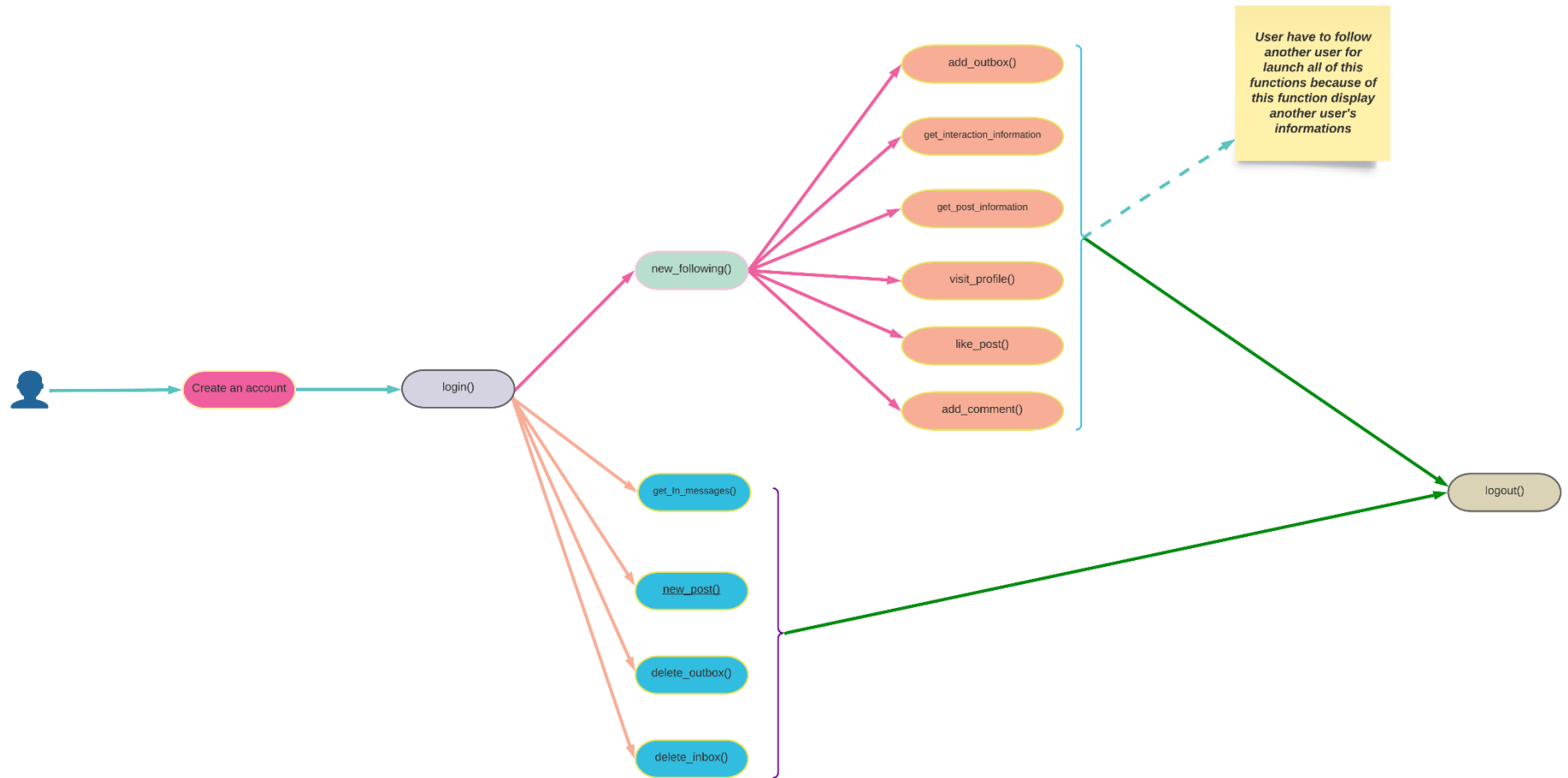
The system is a basic social media application assignment. In this assignment, a user must create an account and he/she can follow other accounts, share posts, view other posts, like or comment on a post that the post's user requires to be found by the user following list. These likes and comments are also interactions. Furthermore, a user can send a message to another account that must be found in the follower list. Finally, a user can block an account that has already existed. System requirements for this assignment are classes of like, comment, message, post, interaction, and account. The Account class will be the main class for launching all accounts together. This class can share posts, send and receive messages, like and comment on a post, and block a user. This class contains arrays of post, message, and interaction classes with arrays of follower, following, and block that have primitive types. The Post class has an array of like and comment classes. These arrays contain likes and comments for each post. For like, comment, and interaction classes, the system needs a basic inheritance. Like and comment classes are derived from the interaction class. Each like and comment will be an interaction at the same time. Therefore, in the basic class that is the interaction class, include an interaction message.

USE CASE AND CLASS DIAGRAMS

Class diagram:



Case diagram:



2. OTHER DIAGRAMS

No need in this homework

3. PROBLEM SOLUTION APPROACH

For account I have created an account class. User can follow another users, send messages, share posts, like or comment post and block another accounts. I have looked step by step. For follow I have declared arrays for all of this information. If user follows someone it inserts the following array's. At this point there is a point we need to care, If an account follows someone, user that has followed follower number must be increased. We need to do this for inbox and outbox. For performing this operation at the same time I take second user's object as an argument and pass it with method that performs operations. In post class there are arrays of like and comment. This class contains Id and username. If user wants to like or comment a post I take post ID and user's account as an argument for method. Firstly I find post for user that has this post. After I add like or comment. For this operation I have to create a like or comment object. This operation comes true in post class. After declaration I add it to the like or comment array. At this point there is one point that we need to care of, each like and comment will be an interaction because of inheritance. We need to save this interaction. Interaction class includes a message that contains username with done operation, id of account and id of post. This interaction is added in interaction array. For post class there is no more operation. Continue with account class. User can send or receive message. So that we need to message class.

Furthermore we need to 2 messages array .one of them will be inbox and another one will be outbox. If user want to send message an user there will be multiple conditions. User must not be blocked and user that want to send message must be in following list.after this condition message objects will be create. After creation , it insert to outbox. After insertion program insert to message receiver inbox.for view profile each account has override method that return the infirmation of the account . if user A want to view user B profile , programe will call toString method for object of B class.To collect interaction I have 2 way.First one is use like and comment arrays.In Pdf sceanario also use this way. First take likes interaction.for do this just use superclass informations.But Have not performed this way .instead of this way I have deleared a String variable.Initiliazation of the this string will be by interaction have done .So if Account A will like account B's post , initialization will be like this " A have liked B's post.post Id is 0.account Id is 1".final operation is block an account .There are 2 array for this operation.one of them name is "Bun" another one name is "Bunned". If account A block account B, account B's will inserted account A's Bun list an Account A's name will be inserted in Account B's Bunned list. With this way program can grasp blocked user and give error message when a blocked user want to acces user that have block this user.

4. TEST CASES

✓ FIRST TEST CASE

- Step 1: Create 3 accounts with usernames “gizemsungu”, “sibelgulmez”, and “gokhankaya”.
- Step 2: Login to the account with username “sibelgulmez”.
 - o Step 3: Share two posts.
 - **“gokhankaya” share post(program give error message)**
 - o Step 4: Follow “gizemsungu” and “gokhankaya”.
 - o Step 5: Log out from the account.
- Step 6: Login to the account with username “gokhankaya”.
 - o Step 7: View “sibelgulmez”’s profile.
 - o Step 8: View “sibelgulmez”’s posts.
 - o Step 9: Like a post of “sibelgulmez”.
 - o Step 10: Comment on a post of “sibelgulmez”.
 - **“gokhankaya” send message to “sibelgulmez” (program give error message)**

- o Step 11: Follow “sibelgulmez” and “gizemsungu”.
- o Step 12: Send a message to “gizemsungu”.
- o Step 13: Log out from the account.
- Step 14: Login to the account with username “gizemsungu”.
 - o Step 15: Check the number of messages in the outbox.
 - **“gokhankaya” view “sibelgulmez” post(programe give error message)**

- o Step 16: Check the number of messages in the inbox.
- o Step 17: View the messages in the inbox.
- o Step 18: View “sibelgulmez”’s profile.
- o Step 19: View “sibelgulmez”’s posts.
- o Step 20: View “sibelgulmez”’s posts’ interactions.
- o Step 21: Like “sibelgulmez”’s posts.
- o Step 22: View “sibelgulmez”’s posts’ interactions.

✓ **SECOND TEST CASE**

- ✓ 1. “gizemsungu” logs in.
 - o a. shares a post (let’s call it Post1).

- b. shares another post (let's call it Post2).
 - c. logs out.
- ✓ 2. "sibelgulmez" logs in.
 - a. views the profile of "gizemsungu".
 - b. likes Post1.
 - c. logs out.
- 3. "gokhankaya" logs in.
 - a. views the profile of "gizemsungu".
 - b. comments on Post2 (ex: Nice!").
 - c. sends a message to "gizemsungu" (ex: "Hello!")
 - d. logs out.
- 4. "gizemsungu" logs in.
 - a. views her own profile.
 - b. reads the message from "gokhankaya"

✓ **THIRD TEST CASE**

1. "gizemsungu" logs in.
 - a. blocks "sibelgulmez".
 - b. logs out.
2. "sibelgulmez" logs in.
 - a. tries to view the profile of "gizemsungu".
 - b. tries to send a message to "gizemsungu".

3. "gizemsungu" logs in.

a. "sibelgulmez" remove "gizemsungu" from blocked account list

b. logs out.

4. "sibelgulmez" logs in.

a. tries to view the profile of "gizemsungu".

5. RUNNING AND RESULTS

SCENARIO 1

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...

--> "gokhankaya" share post(program give error message)

"gokhankaya" NOT LOGGED

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: bitlis

Birth Date: 10.03.2002

sibelgulmez is following 2 account(s) and has 0 follower

sibelgulmez is following gizemsungu gokhankaya

sibelgulmez has followed by

sibelgulmez has 2 post

Step 8... Viewing sibelgulmez's posts...

Post ID :0 gokhankaya: WORK HARD

Post ID :1 gokhankaya: WORK too HARD

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

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

```
-->"gokhankaya" send message to "sibelgulmez" (program give error message)
You don't follow this account so that you can't send message to this profile
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 message in outbox
-->"gokhankaya" view "sibelgulmez" post(program give error message)
"gokhankaya" NOT LOGGED
Step 16... Checking inbox...
There is/are 1 message in Inbox
Step 17... Viewing inbox...
Message ID: 0
From: gokhankaya
To : gizemsungu
Message: slm
```

```
Step 18... Viewing sibelgulmez's profile...
User ID: 1
Username: sibelgulmez
Location: bitlis
Birth Date: 10.03.2002
sibelgulmez is following 2 account(s) and has 1 follower
sibelgulmez is following gizemsungu gokhankaya
sibelgulmez has followed by gokhankaya
sibelgulmez has 2 post
```

```
Step 19... Viewing sibelgulmez's posts...
Post ID :0 gizemsungu: WORK HARD
```

```
Post ID :1 gizemsungu: WORK too HARD
```

```
Step 20... Viewing sibelgulmez's posts' interactions...
(Post ID) : 1 :WORK HARD
gokhankaya has liked this post.Liked post number ID is 0 and it is belong to account that ID is 1
gokhankaya has commented this post.Commented post that number is 0 and it is belong to account that number is 1
Comment content is : java nice data easy
```

```
(Post ID) : 2 :WORK too HARD
There isn't any like for this post
There isn't any comment for this post
Step 21... Liking sibelgulmez's posts...
Step 22... Viewing sibelgulmez's posts' interactions..
(Post ID) : 1 :WORK HARD
```

```
gokhankaya has liked this post.Liked post number ID is 0 and it is belong to account that ID is 1
gokhankaya has commented this post.Commented post that number is 0 and it is belong to account that number is 1
Comment content is : java nice data easy
```

```
(Post ID) : 2 :WORK too HARD
gizemsungu has liked this post.Liked post number ID is 1 and it is belong to account that ID is 1
There isn't any comment for this post
```

SCENARIO 2

1. "gizemsungu" logs in.
 - a. shares a post (let's call it Post1).
 - b. shares another post (let's call it Post2).
 - c. logs out.
2. "sibelgulmez" logs in.
 - a. views the profile of "gizemsungu".

```
User ID: 0
Username: gizemsungu
Location: van
Birth Date: 10.03.2001
gizemsungu is following 0 account(s) and has 2 follower
gizemsungu is following
gizemsungu has followed by sibelgulmez gokhankaya
gizemsungu has 2 post
```

- b. likes Post1.
 - c. log out.
3. "gokhankaya" logs in.
 - a. views the profile of "gizemsungu".

```
User ID: 0
Username: gizemsungu
Location: van
Birth Date: 10.03.2001
gizemsungu is following 0 account(s) and has 2 follower
gizemsungu is following
gizemsungu has followed by sibelgulmez gokhankaya
gizemsungu has 2 post
```

- b. comments on Post2.
- c. sends a message to "gizemsungu"
- d. log out.

1. "gizemsungu" logs in.
 - a. views her own profile.

```
User ID: 0
Username: gizemsungu
Location: van
Birth Date: 10.03.2001
gizemsungu is following 0 account(s) and has 2 follower
gizemsungu is following
gizemsungu has followed by sibelgulmez gokhankaya
gizemsungu has 2 post
```

- b. reads the message from "gokhankaya"

```
Message ID: 0
From: gokhankaya
To : gizemsungu
Message: slm
```

```
Message ID: 1
From: gokhankaya
To : gizemsungu
Message: Hello!
```

SCENARIO 3

1. "gizemsungu" logs in.
 - a.blocks "sibelgulmez"."gizemsungu" NOT LOGGED
- b. logs out.
2. "sibelgulmez" logs in.
 - a. tries to view the profile of "gizemsungu".THIS ACCOUNT HAS NOT ALREADY EXIST!!
- b. tries to send a message to "gizemsungu".THIS ACCOUNT HAS NOT ALREADY EXIST!!
- c. logs out.
3. "gizemsungu" logs in.
 - a. "sibelgulmez" remove "gizemsungu" from blocked account list
 - b. logs out.
4. "sibelgulmez" logs in.
 - a. tries to view the profile of "gizemsungu".

User ID: 0

Username: gizemsungu

Location: van

Birth Date: 10.03.2001

gizemsungu is following 0 account(s) and has 2 follower

gizemsungu is following

gizemsungu has followed by sibelgulmez gokhankaya

gizemsungu has 2 post

- b. tries to send a message to "gizemsungu".(CONTENT:HI!!)

gizemsungu's inbox

Message ID: 0

From: gokhankaya

To : gizemsungu

Message: slm

Message ID: 1

From: gokhankaya

To : gizemsungu

Message: Hello!

Message ID: 2

From: sibelgulmez

To : gizemsungu

Message: HI!!