Computer Engineering
CSE 222/505 - Spring 2023
Homework # Report

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1. Introduction

Purpose of Document

This document is report for this project. The report is going to explain you what stages the homework was going through.

Purpose of Project

The aim of this project is to create a simple social media demo using object orianted programming rules.

What you can do in the demo

1) You can create an account.
2) You can share post.
3) You can send a message.
4) You can follow other person.
5) You can leave a comment to other posts.
6) You can like to other posts.

2. SYSTEM REQUIREMENTS

a) Non functional:

Back - end software : Java 11
Software shold be able to compile with "javac" on a linux distribution

b) Functional

There is not any user moving in this project
Use object orianted rules

3. Problem Solution Approach

I created my classes in accordance with the given class diagram and made up my mind about the relationship between them. Some general variables that should be used in classes were also reported to us through a diagram. In accordance with this diagram, I added my variables to my classes as private.

While creating the object for the account class, I got the necessary information to create the account directly from the user and used it through the constructor.

```java
System.out.println("1) An acoount with username gizemsungu has bee
    created.");
account[0] = new Account(1, "gizemsungu", "13.01.1993", "Antalya")
```

After the account is created, the user can log in to the account thanks to the Login() method. In the login method, I checked whether another account has been logged in before, and I ensured that no action can be taken related that account without the login process.

I wrote a method so that the user logged into her account can view the profiles.

```java
public void ViewProfile(Account person)
```

I wrote a method to view Posts of a specific account.

```java
public void ViewingPosts(Account person)
```

I wrote a method that displays the interactions of the posts.

```java
public void ViewingPostInteractions(Account person, Account[] people
    int numberPeople)
```

I wrote a method to share a post.

```java
public void SharePost(String postContext)
```

I wrote a method to like and comment on the post.

```
public void CommentPost(Account person, int index, String content)
public void LikePost(Account person, int index)
```

I wrote simple methods to follow and message.

```
public void FollowPerson(Account person)
public void SendMessage(Account person, String content)
```

As extra this program, I created an account blocking method.

```
public void BlockUsers(String name)
```
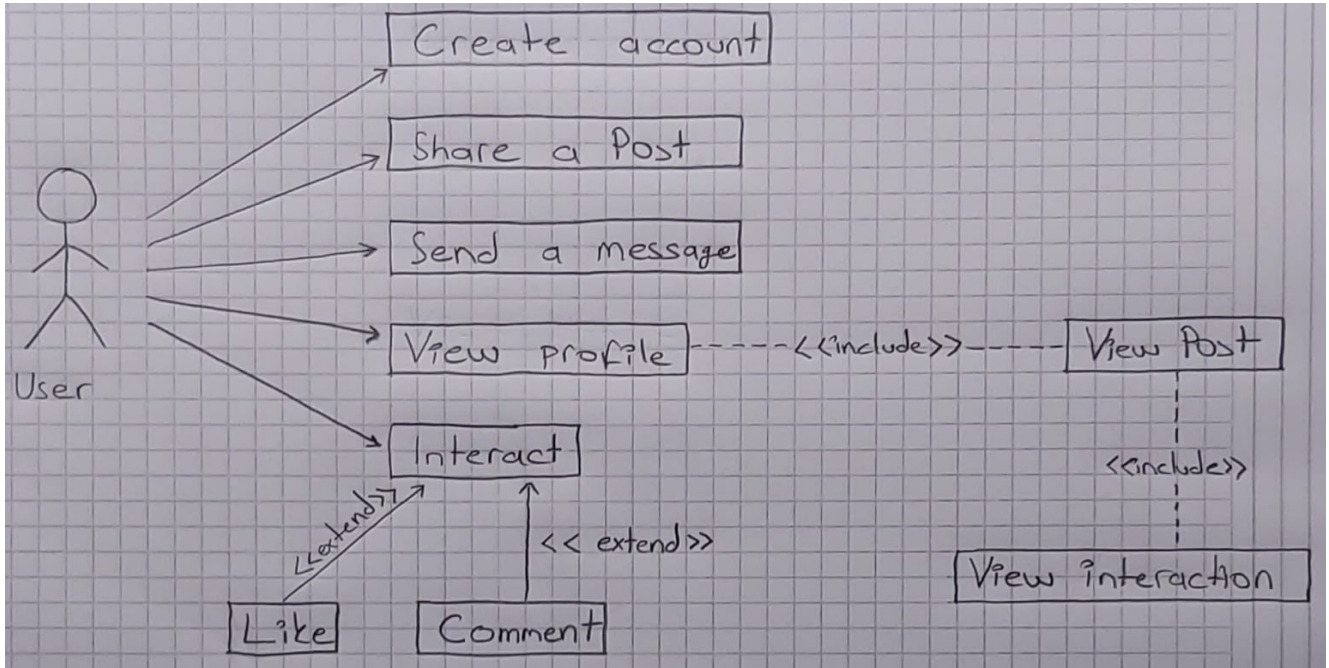
And in addition to these, I created a social media demo by writing a few more simple methods.

Error Handling
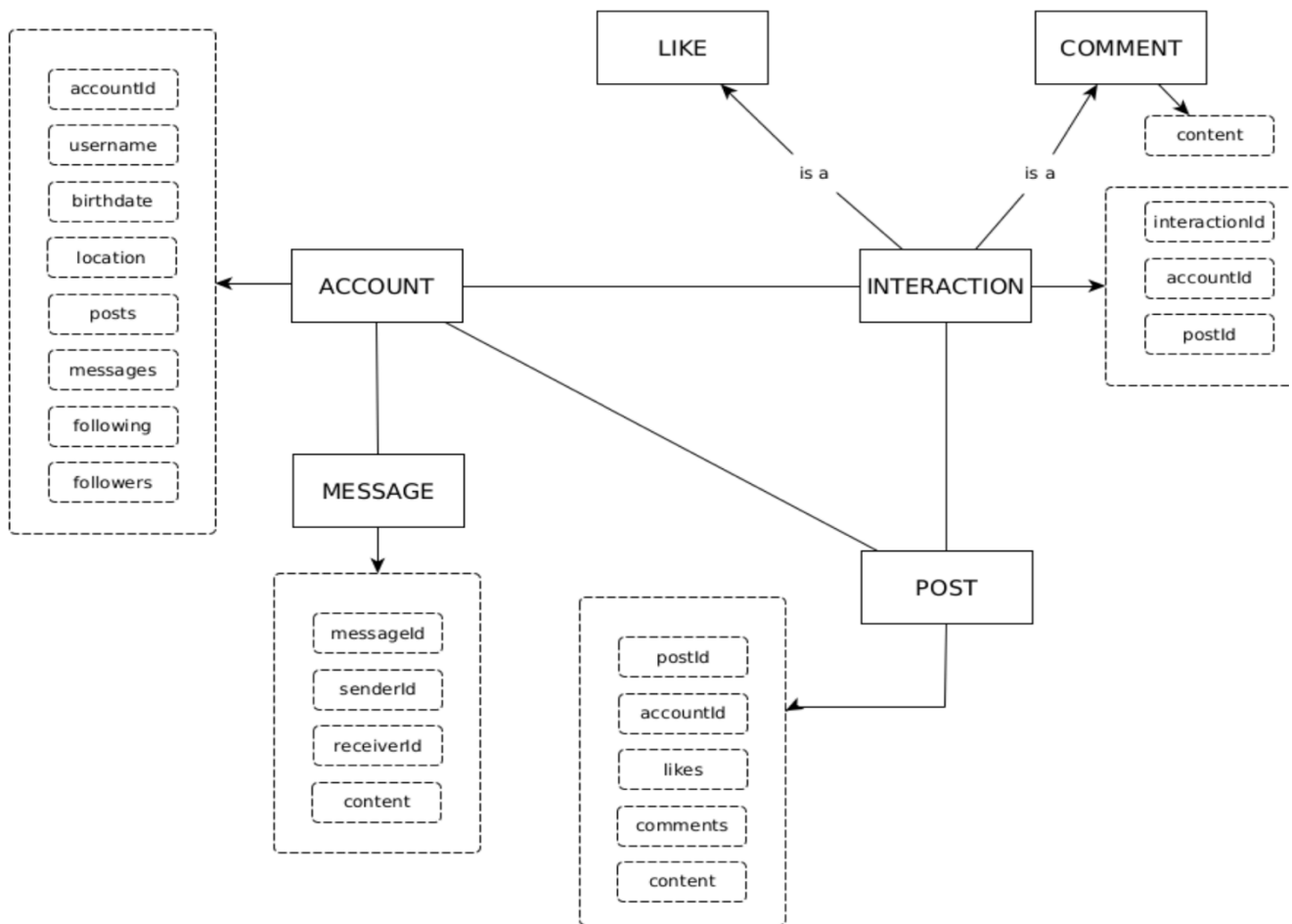
While writing this project, I also took precautions against some possible error situations that may occur.

1) Have you logged into the account you want to trade ?
2) If you're not logged into a user's profile, you won't be able to view their posts.
3) If you haven't entered the user's posts, you can not comment or like the posts.
4) Multiple users cannot login to the account at the same time.
5) Blocked users are removed from followers and unfollowed.
6) Profile of blocked accounts cannot be viewed and messages can not be sent or received.
7) When an account is logged out, that account cannot take any action.

4) Use Case Diagram

5) General ER Diagram

6) Running and Results

I started to the main program with creating some accounts.

```
Account[] account = new Account[3];
System.out.println("1) An acoount with username gizemsungu has been created.")
account[0] = new Account(1, "gizemsungu", "13.01.1993", "Antalya");
System.out.println("   An acoount with username sibelgulmez has been created."
account[1] = new Account(2, "sibelgulmez", "10.03.1995", "Istanbul");
System.out.println("   An acoount with username gokhankaya has been created.")
account[2] = new Account(3, "gokhankaya", "10.23.1984", "Erzincan");
```

I went into one of the accounts I created and did a few simple transactions. The codes are below;

```
System.out.println("2)  Logging into an account (username: sibelgulmez)
account[1].Login(account, 3);
System.out.println("\n");

System.out.println("3)  Sharing two posts...\n");
account[1].SharePost("BESIKTAS");
account[1].SharePost("LOVE");
System.out.println("4)  Following gizemsungu and gokhankaya\n\n");
account[1].FollowPerson(account[2]);
account[1].FollowPerson(account[0]);
System.out.println("5)  Logging out from account 'sibelgulmez'\n\n");
account[1].Logout();
```

Then I login with another account and want to view sibelgulmez's profile. Then I will another other transactions.

```
System.out.println("6)  Logging into another account (username: gokhankaya)
account[2].Login(account, 3);
System.out.println("7)  Viewing sibelgulmez's profile ...\n");
account[2].ViewProfile(account[1]);
System.out.println("8)  Viewing sibelgulmez's posts ...\n");
account[2].ViewingPosts(account[1]);
System.out.println("9)  Liking a post of sibelgulmez ...\n");
account[2].LikePost(account[1], 0);
System.out.println("10)  Adding a comment on a post of sibelgulmez...\n");
account[2].CommentPost(account[1], 0, "The club is really amazing...");
System.out.println("11)  Following sibelgulmez and gizemsungu...\n");
account[2].FollowPerson(account[0]);
account[2].FollowPerson(account[1]);
System.out.println("12)  Sending a message to gizemsungu...\n");
account[2].SendMessage(account[0], "Hi Gizem..");
System.out.println("13)  Logging out from account 'gokhankaya'...\n");
account[2].Logout();
```

Main method codes like these. I am going to share with you
some outputs.

```
1) An acoount with username gizemsungu has been created.
   An acoount with username sibelgulmez has been created.
   An acoount with username gokhankaya has been created.


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


3)  Sharing two posts...

4)  Following gizemsungu and gokhankaya


5)  Logging out from account 'sibelgulmez'


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

7)  Viewing sibelgulmez's profile ...

User ID: 2
Username: sibelgulmez
Location: Istanbul
Birth Date: 10.03.1995
sibelgulmez is following 2 account(s) and has 0 follower(s)
sibelgulmez is following: gokhankaya, gizemsungu,
sibelgulmez has 2 post(s)
8)  Viewing sibelgulmez's posts ...

(PostID: 1)    sibelgulmez: BESIKTAS
(PostID: 2)    sibelgulmez: LOVE



9)  Liking a post of sibelgulmez ...

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

11)  Following sibelgulmez and gizemsungu...

12)  Sending a message to gizemsungu...
```

```
13)   Logging out from account 'gokhankaya'...

14)   Logging into another account (username: gizemsungu)

-----   Checking outbox  -----
There is/are 0 message(s) in the outbox.

-----  Checking inbox  -----
There is/are 1 message(s) in the inbox.

          Viewing outbox
-------------------------------
-------------------------------
          Viewing inbox
-------------------------------
Message ID: 1
Message: Hi Gizem..
To: gizemsungu
From: gokhankaya
-------------------------------



18)   Viewing sibelgulmez's profile...

User ID: 2
Username: sibelgulmez
Location: Istanbul
Birth Date: 10.03.1995
sibelgulmez is following 2 account(s) and has 1 follower(s)
sibelgulmez is following: gokhankaya, gizemsungu,
The followers of sibelgulmez are: gokhankaya,
sibelgulmez has 2 post(s)



19)   Viewing sibelgulmez's posts...

(PostID: 1)    sibelgulmez: BESIKTAS
(PostID: 2)    sibelgulmez: LOVE
```

Outputs is like this as general. Finally, I will show the outputs when a person is blocked.

```
49)   Logging into account of 'gizemsungu'
50)   Block 'sibelgulmez'...

51)   Logging out from account of 'gizemsungu'

52)   Logging into account of 'sibelgulmez'

53)   Try to enter view the profile of 'gizemsungu'

This account is blocked...

54)   Try to send message to 'gizemsungu'

This account is blocked...

55)   Try to logging to another account..
You can not Login because There is another account now...

56)   Logging out from account of 'sibelgulmez'
```