Detailed System Requirements

Briefing

It is an application where users can share on their own profiles and view the posts of other users and give interaction such as likes and comments.

Scope

Anyone who has experience about the use of social media can use this application.

Functional Requirements

User registration and profile creation: The application should allow users to register for an account and create a profile that includes personal information such as name, username, birthday, and location.

Posting and sharing content: Users should be able to create and share posts with other users.

User engagement: The application should support user engagement features such as liking and commenting on posts, following other users, and messaging other users directly.

System Features

Create an account: Users can create their own profile with their personal information. There are shares that he will make on this profile, interactions that he will receive and send.

Share a Post: Users can share the content they want in their profile in the form of a post.

Follow: Users can follow them to be able to follow the posts of other users.

Like: Users can like posts on other profiles.

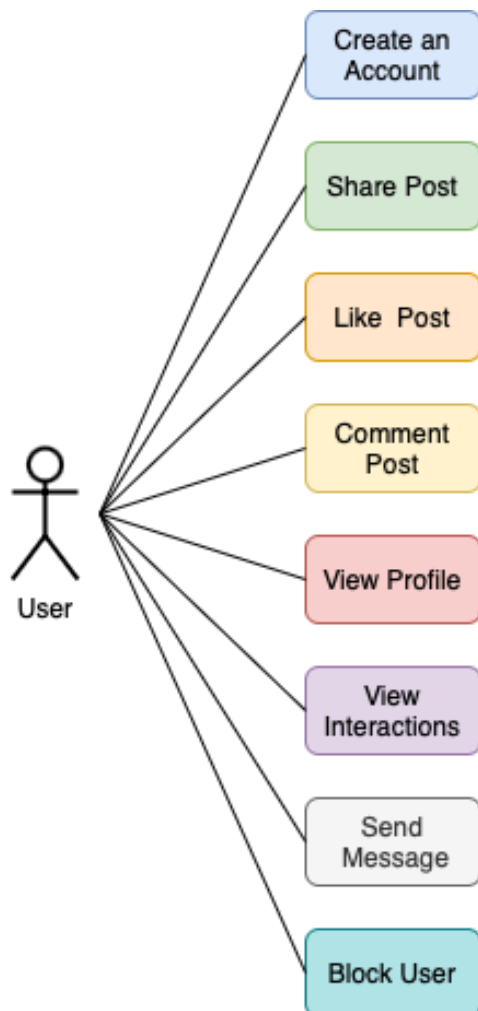Comment: Users can leave comments on posts on other profiles.

View Profile: Users can view other profiles.

View Interactions: Users can view the interactions of other profiles.

Send Message: Users can send messages to each other.

Block User: Users can block them in order to protect themselves from unwanted interactions.

Use Case Diagram

Problem Solution Approach

First of all, I created classes according to the features of the application. I created data fields in accordance with the characteristics of these classes. I have adjusted the inheritance status of the classes Decoupled from each other. I have created methods according to the features that the application should contain. I also tested the methods and how the application works with a test file.

Running Command and Results

Result 1

```
enesaysu@Enes-Aysu-MacBook-Air 1901042671_hw1 % cd homework1
enesaysu@Enes-Aysu-MacBook-Air homework1 % javac *.java
enesaysu@Enes-Aysu-MacBook-Air homework1 % java TestClass1

 logging into account (username: sibelgulmez)

 logging out from account (username: sibelgulmez)

 logging into account (username: gokhankaya)

 ... Viewing sibelgulmez's profile...
 User ID: 2
 Username: sibelgulmez
 Location: izmir
 Birth Date: 20.07.1994
 sibelgulmez is following 2 account(s) and has 0 follower(s)
 sibelgulmez is following: gizemsungu gokhankaya
 sibelgulmez has 2 post(s)

 ... Viewing sibelgulmez's posts...
 (PostID: 1) sibelgulmez: I like Java.
 (PostID: 2) sibelgulmez: Java the coffee...

 logging out from account (username: gokhankaya)

 logging into 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 inbox...
 Message ID: 1
 From: gokhankaya
 ... Viewing sibelgulmez's posts...
 (PostID: 1) sibelgulmez: I like Java.
 (PostID: 2) sibelgulmez: Java the coffee...

 ... Viewing sibelgulmez's posts' interactions...
 (PostID: 1): I like Java.
 The post was liked by the following account(s): gokhankaya
 The post has 1 comment(s)...
 Comment 1: gokhankaya said me too!
 (PostID: 2): Java the coffee...
 The post has no likes
 The post has no comments

 ... Viewing sibelgulmez's posts' interactions...
 (PostID: 1): I like Java.
 The post was liked by the following account(s): gokhankaya gizemsungu
 The post has 1 comment(s)...
 Comment 1: gokhankaya said me too!
 (PostID: 2): Java the coffee...
 The post was liked by the following account(s): gizemsungu
 The post has no comments
```

Result 2

```
enesaysu@Enes-Aysu-MacBook-Air homework1 % java TestClass2

 logging into account (username: sibelgulmez)

 logging out from account (username: sibelgulmez)

 logging into account (username: gokhankaya)

 ... Viewing sibelgulmez's profile...
 User ID: 2
 Username: sibelgulmez
 Location: izmir
 Birth Date: 20.07.1994
 sibelgulmez is following 2 account(s) and has 0 follower(s)
 sibelgulmez is following: gizemsungu gokhankaya
 sibelgulmez has 2 post(s)

 ... Viewing sibelgulmez's posts...
 (PostID: 1) sibelgulmez: I like Java.
 (PostID: 2) sibelgulmez: Java the coffee...

 logging out from account (username: gokhankaya)

 logging into 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 inbox...
 Message ID: 1
 From: gokhankaya
 To: gizemsungu
 Message: This homework is too easy!

 ... Viewing sibelgulmez's profile...
 User ID: 2
 Username: sibelgulmez
 Location: izmir
 Birth Date: 20.07.1994
 sibelgulmez is following 2 account(s) and has 1 follower(s)
 sibelgulmez is following: gizemsungu gokhankaya
 The followers of sibelgulmez are: gokhankaya
 sibelgulmez has 2 post(s)

 ... Viewing sibelgulmez's posts...
 (PostID: 1) sibelgulmez: I like Java.
 (PostID: 2) sibelgulmez: Java the coffee...

 ... Viewing sibelgulmez's posts' interactions...
 (PostID: 1): I like Java.
 The post was liked by the following account(s): gokhankaya
 The post has 1 comment(s)...
 Comment 1: gokhankaya said me too!
 (PostID: 2): Java the coffee...
 The post has no likes
 The post has no comments

 ... Viewing sibelgulmez's posts' interactions...
 (PostID: 1): I like Java.
 The post was liked by the following account(s): gokhankaya gizemsungu
 The post has 1 comment(s)...
 Comment 1: gokhankaya said me too!
 (PostID: 2): Java the coffee...
 The post was liked by the following account(s): gizemsungu
 The post has no comments

 logging out from account (username: gizemsungu)

 logging into account (username: sibelgulmez)

 ... Viewing gizemsungu's profile...
 User ID: 1
 Username: gizemsungu
 Location: istanbul
 Birth Date: 10.04.1995
 gizemsungu is following 0 account(s) and has 2 follower(s)

 The followers of gizemsungu are: sibelgulmez gokhankaya
 gizemsungu has 2 post(s)

 logging out from account (username: sibelgulmez)

 logging into account (username: gokhankaya)

 ... Viewing gizemsungu's profile...
 User ID: 1
 Username: gizemsungu
 Location: istanbul
 Birth Date: 10.04.1995
 gizemsungu is following 0 account(s) and has 2 follower(s)

 The followers of gizemsungu are: sibelgulmez gokhankaya
 gizemsungu has 2 post(s)

 logging out from account (username: gokhankaya)

 logging into account (username: gizemsungu)
```

```
 ... Viewing gizemsungu's profile...
 User ID: 1
 Username: gizemsungu
 Location: istanbul
 Birth Date: 10.04.1995
 gizemsungu is following 0 account(s) and has 2 follower(s)

 The followers of gizemsungu are: sibelgulmez gokhankaya
 gizemsungu has 2 post(s)

 ... Checking inbox...
 There is/are 2 message(s) in the inbox

 ... Viewing inbox...
 Message ID: 1
 From: gokhankaya
 To: gizemsungu
 Message: This homework is too easy!

 Message ID: 2
 From: gokhankaya
 To: gizemsungu
 Message: Hello!
```

Test Cases

Test Case 1

```
/* Step 1 */
    Account gizemsungu = new Account(1, "gizemsungu", "10.04.1995",
"istanbul");
    Account sibelgulmez = new Account(2, "sibelgulmez", "20.07.1994",
"izmir");
    Account gokhankaya = new Account(3, "gokhankaya", "30.10.1987",
"ankara");

    /* Step 2 */
    sibelgulmez.login();

    /* Step 3 */
    Post post1 = new Post(1, "I like Java.");
    sibelgulmez.addpost(post1);
    Post post2 = new Post(2, "Java the coffee...");
    sibelgulmez.addpost(post2);

    /* Step 4 */
    sibelgulmez.follow("gizemsungu");
    gizemsungu.follower("sibelgulmez");
    sibelgulmez.follow("gokhankaya");
    gokhankaya.follower("sibelgulmez");

    /* Step 5 */
    sibelgulmez.logout();

    /* Step 6 */
    gokhankaya.login();

    /* Step 7 */
    gokhankaya.viewProfile(sibelgulmez);
```

```
/* Step 8 */
gokhankaya.viewPosts(sibelgulmez);

/* Step 9 */
Like like1 = new Like(post1, "gokhankaya", 1);
post1.addLike(like1);

/* Step 10 */
Comment comment1 = new Comment(post1, 1, "gokhankaya", "me
too!");
post1.addComment(comment1);

/* Step 11 */
gokhankaya.follow("sibelgulmez");
sibelgulmez.follower("gokhankaya");
gokhankaya.follow("gizemsungu");
gizemsungu.follower("gokhankaya");

/* Step 12 */
Message message1 = new Message(1, "gokhankaya", "gizemsungu",
"This homework is too easy!");
gizemsungu.addInbox(message1);
gokhankaya.addOutbox(message1);

/* Step 13 */
gokhankaya.logout();

/* Step 14 */
gizemsungu.login();

/* Step 15 */
gizemsungu.checkOutbox();
```

```
/* Step 16 */
gizemsungu.checkInbox();

/* Step 17 */
gizemsungu.viewInbox();

/* Step 18 */
gizemsungu.viewProfile(sibelgulmez);

/* Step 19 */
gizemsungu.viewPosts(sibelgulmez);

/* Step 20 */
gizemsungu.viewPostInteraction(sibelgulmez);

/* Step 21 */
Like like2 = new Like(post1, "gizemsungu", 2);
post1.addLike(like2);
Like like3 = new Like(post2, "gizemsungu", 3);
post2.addLike(like3);

/* Step 22 */
gizemsungu.viewPostInteraction(sibelgulmez);
```

Test Case 2

```java
/* Step 1 */
    Account gizemsungu = new Account(1, "gizemsungu", "10.04.1995",
"istanbul");
    Account sibelgulmez = new Account(2, "sibelgulmez", "20.07.1994",
"izmir");
    Account gokhankaya = new Account(3, "gokhankaya", "30.10.1987",
"ankara");

    /* Step 2 */
    sibelgulmez.login();

    /* Step 3 */
    Post post1 = new Post(1, "I like Java.");
    sibelgulmez.addpost(post1);
    Post post2 = new Post(2, "Java the coffee...");
    sibelgulmez.addpost(post2);

    /* Step 4 */
    sibelgulmez.follow("gizemsungu");
    gizemsungu.follower("sibelgulmez");
    sibelgulmez.follow("gokhankaya");
    gokhankaya.follower("sibelgulmez");

    /* Step 5 */
    sibelgulmez.logout();

    /* Step 6 */
    gokhankaya.login();

    /* Step 7 */
```

```java
    gokhankaya.viewProfile(sibelgulmez);

    /* Step 8 */
    gokhankaya.viewPosts(sibelgulmez);

    /* Step 9 */
    Like like1 = new Like(post1, "gokhankaya", 1);
    post1.addLike(like1);

    /* Step 10 */
    Comment comment1 = new Comment(post1, 1, "gokhankaya", "me
too!");
    post1.addComment(comment1);

    /* Step 11 */
    gokhankaya.follow("sibelgulmez");
    sibelgulmez.follower("gokhankaya");
    gokhankaya.follow("gizemsungu");
    gizemsungu.follower("gokhankaya");

    /* Step 12 */
    Message message1 = new Message(1, "gokhankaya", "gizemsungu",
"This homework is too easy!");
    gizemsungu.addInbox(message1);
    gokhankaya.addOutbox(message1);

    /* Step 13 */
    gokhankaya.logout();

    /* Step 14 */
    gizemsungu.login();

    /* Step 15 */
    gizemsungu.checkOutbox();
```

```java
/* Step 16 */
gizemsungu.checkInbox();

/* Step 17 */
gizemsungu.viewInbox();

/* Step 18 */
gizemsungu.viewProfile(sibelgulmez);

/* Step 19 */
gizemsungu.viewPosts(sibelgulmez);

/* Step 20 */
gizemsungu.viewPostInteraction(sibelgulmez);

/* Step 21 */
Like like2 = new Like(post1, "gizemsungu", 2);
post1.addLike(like2);
Like like3 = new Like(post2, "gizemsungu", 3);
post2.addLike(like3);

/* Step 22 */
gizemsungu.viewPostInteraction(sibelgulmez);

/* Step 23 */
Post post3 = new Post(3, "I like Java.");
gizemsungu.addpost(post3);
Post post4 = new Post(4, "Java the coffee...");
gizemsungu.addpost(post4);
gizemsungu.logout();

/* Step 24 */
sibelgulmez.login();
```

```java
    sibelgulmez.viewProfile(gizemsungu);
    Like like4 = new Like(post3, "sibelgulmez", 4);
    post3.addLike(like4);
    sibelgulmez.logout();

    /* Step 25 */
    gokhankaya.login();
    gokhankaya.viewProfile(gizemsungu);
    Comment comment2 = new Comment(post4, 2, "gokhankaya",
"Nice!");
    post4.addComment(comment2);
    Message message2 = new Message(2, "gokhankaya", "gizemsungu",
"Hello!");
    gizemsungu.addInbox(message2);
    gokhankaya.addOutbox(message2);
    gokhankaya.logout();

    /* Step 26 */
    gizemsungu.login();
    gizemsungu.viewProfile(gizemsungu);
    gizemsungu.checkInbox();
    gizemsungu.viewInbox();
```