

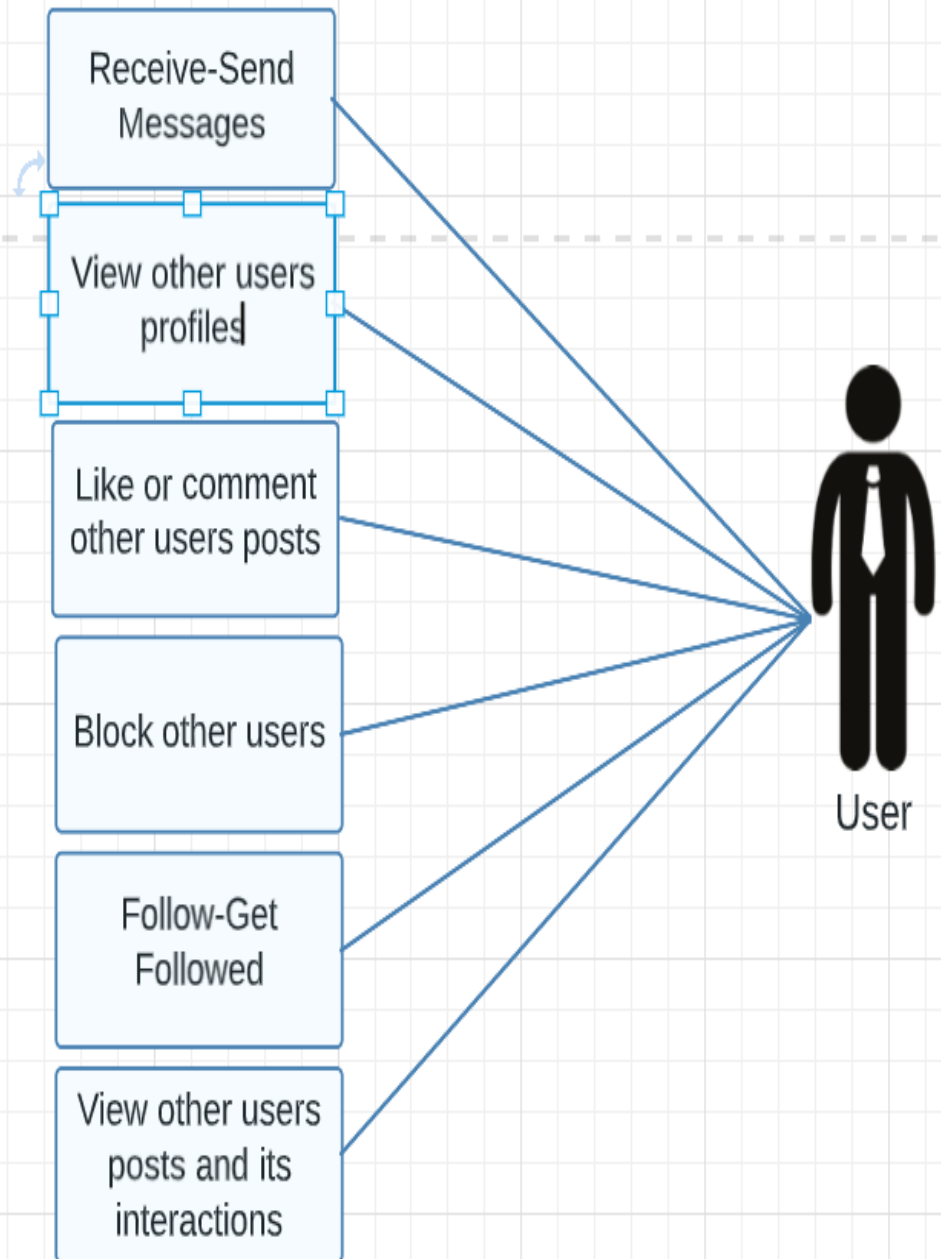
System Requirements:

1. The system should allow users to create an account.
2. Each account should have a username, birth date, location, posts (if exists), follower accounts (if exists), and following accounts (if exists).
3. The system should allow users to follow and unfollow other users.
4. The system should only allow users to send messages to users they are following.
5. The system should have an inbox and outbox for each account to store sent and received messages.
6. Each account should be able to post content.
7. Posts should be able to receive interactions, which have subclasses like and comment.
8. The system should allow users to login and logout, and only one user should be able to be logged in at a time.
9. The system should allow users to block other users. When a block happens, both sides should be unavailable to view each others profile, posts nor send each other messages.
10. The system should allow users to see other people's posts and see the interactions of the posts.

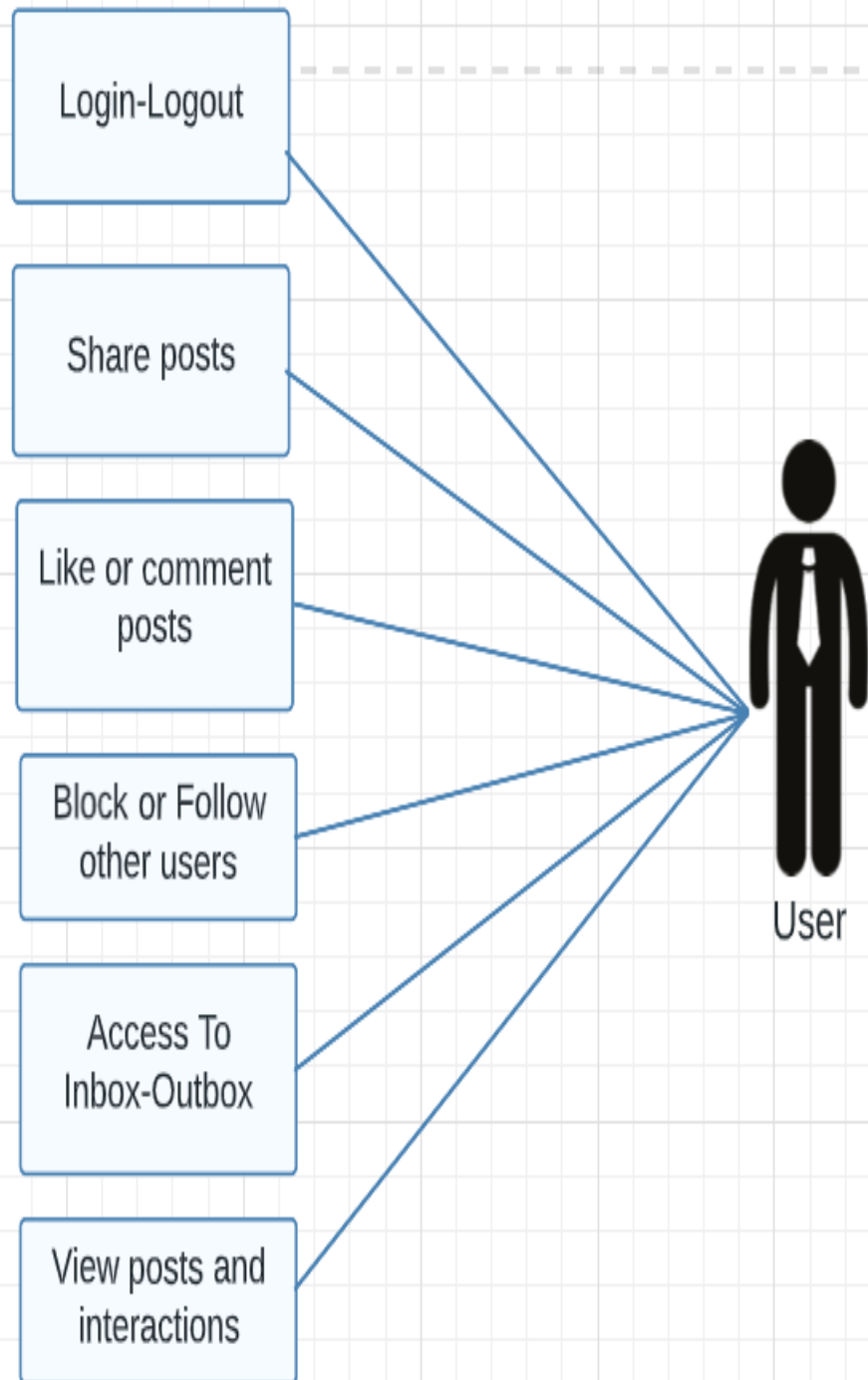
Problem Solution Approach:

- 1- Create the classes based on the ER Diagram.
- 2- Create related functions and variables for one-sided operations
- 3- Create related functions and variables for two-sided operations
- 4- Implement the functions
- 5- Test the given test classes
- 6- Conclusion

User interaction with other users



User Operations



Test Cases 1

```
public class HW1 {  
    Run | Debug  
    public static void main(String[] args) {  
        int useridcount = 1 ,postidcount = 1;  
        Account gizemsungu = new Account(useridcount++, username:"gizemsungu", birthday:"01.01.2001", location:"Adana");  
        Account sibelgulmez = new Account(useridcount++, username:"sibelgulmez", birthday:"03.03.2003", location:"Kayseri");  
        Account gokhankaya = new Account(useridcount++, username:"gokhankaya", birthday:"05.05.2005", location:"Zonguldak");  
        sibelgulmez.login();  
        Post p1 = new Post(content:"Weather is great", postidcount++);  
        Post p2 = new Post(content:"Homework is annoying", postidcount++);  
        sibelgulmez.addPost(p2);  
        sibelgulmez.addPost(p1);  
        sibelgulmez.follow(gokhankaya);  
        sibelgulmez.follow(gizemsungu);  
        sibelgulmez.logout();  
  
        gokhankaya.login();  
        gokhankaya.viewProfile(sibelgulmez);  
        gokhankaya.viewPosts(sibelgulmez);  
        new Like (p1,gokhankaya);  
        new Comment(p2, gokhankaya, cont:"This is sparta.");  
        gokhankaya.follow(sibelgulmez);  
        gokhankaya.follow(gizemsungu);  
        gokhankaya.sendMessage(gizemsungu,message_content:"Hello there.");  
        gokhankaya.logout();  
  
        gizemsungu.login();  
        gizemsungu.checkInbox();  
        gizemsungu.checkOutbox();  
        gizemsungu.getInbox();  
        gizemsungu.viewProfile(sibelgulmez);  
        gizemsungu.viewPosts(sibelgulmez);  
        gizemsungu.viewPostReactions(sibelgulmez);  
        new Like(p1,gizemsungu);  
        gizemsungu.viewPostReactions(sibelgulmez);  
    }  
}
```

Result 1

```
PS C:\Users\lenovo\Desktop\Data222\HW1> javac HW1.java
PS C:\Users\lenovo\Desktop\Data222\HW1> java HW1
You are now following gokhankaya
You are now following gizemsungu
Viewing sibelgulmez's profile...
User ID: 2
Username: sibelgulmez
Location: Kayseri
Birthday: 03.03.2003
sibelgulmez is following 2 account(s) and has 0 follower(s)
sibelgulmez is following gokhankaya , gizemsungu
sibelgulmez has 2 post(s)
Accessing the posts of sibelgulmez
(PostID : 2):Homework is annoying
(PostID : 1):Weather is great
You are now following sibelgulmez
You are now following gizemsungu
There is/are 10message(s) in the inbox.
There is/are 10message(s) in the outbox.
Accessing the inbox of gizemsungu
1:
Sender : gokhankaya
Receiver : gizemsungu
Message :Hello there.
```

```
Viewing sibelgulmez's profile...
User ID: 2
Username: sibelgulmez
Location: Kayseri
Birthday: 03.03.2003
sibelgulmez is following 2 account(s) and has 1 follower(s)
sibelgulmez is being followed by gokhankaya
sibelgulmez is following gokhankaya , gizemsungu
sibelgulmez has 2 post(s)
Accessing the posts of sibelgulmez
(PostID : 2):Homework is annoying
(PostID : 1):Weather is great
Viewing sibelgulmez's post interactions:
-----
(PostID : 2) : Homework is annoying
This post has no likes.

This post is commented by following accounts : gokhankaya
Comment 01 ==> This is sparta.
(PostID : 1) : Weather is great
This post is liked by following accounts : gokhankaya,
This post has no comments.
-----
Viewing sibelgulmez's post interactions:
-----
(PostID : 2) : Homework is annoying
This post has no likes.

This post is commented by following accounts : gokhankaya
Comment 01 ==> This is sparta.
(PostID : 1) : Weather is great
This post is liked by following accounts : gokhankaya,gizemsungu,
This post has no comments.
-----
PS C:\Users\lenovo\Desktop\Data222\HW1> █
```

Test Case 2

```
public class TestClass2 {
    Run | Debug
    public static void main(String[] args) {
        int useridcount = 1 , postidcount = 1;
        Account gizemsungu = new Account(useridcount++, username:"gizemsungu", birthday:"01.01.2001", location:"Adana");
        Account sibelgulmez = new Account(useridcount++, username:"sibelgulmez", birthday:"03.03.2003", location:"Kayseri");
        Account gokhankaya = new Account(useridcount++, username:"gokhankaya", birthday:"05.05.2005", location:"Zonguldak");
        sibelgulmez.login();
        Post p1 = new Post(content:"Weather is great", postidcount++);
        Post p2 = new Post(content:"Homework is annoying", postidcount++);
        sibelgulmez.addPost(p2);
        sibelgulmez.addPost(p1);
        sibelgulmez.follow(gokhankaya);
        sibelgulmez.follow(gizemsungu);
        sibelgulmez.logout();

        gokhankaya.login();
        gokhankaya.viewProfile(sibelgulmez);
        gokhankaya.viewPosts(sibelgulmez);
        new Like (p1,gokhankaya);
        new Comment(p2, gokhankaya, cont:"This is sparta.");
        gokhankaya.follow(sibelgulmez);
        gokhankaya.follow(gizemsungu);
        gokhankaya.sendMessage(gizemsungu,message_content:"Hello there.");
        gokhankaya.logout();

        gizemsungu.login();
        gizemsungu.checkInbox();
        gizemsungu.checkOutbox();
        gizemsungu.getInbox();
        gizemsungu.viewProfile(sibelgulmez);
        gizemsungu.viewPosts(sibelgulmez);
        gizemsungu.viewPostReactions(sibelgulmez);
        new Like(p1,gizemsungu);
        gizemsungu.viewPostReactions(sibelgulmez);

        Post p3 = new Post(content:"I bip bap bup ",postidcount++ );
        gizemsungu.addPost(p3);
        Post p4 = new Post(content:"I dont know ",postidcount++);
        gizemsungu.addPost(p4);
        gizemsungu.logout();

        sibelgulmez.login();
        sibelgulmez.viewProfile(gizemsungu);
        new Like (p3,sibelgulmez);
        sibelgulmez.logout();

        gokhankaya.login();
        gokhankaya.viewProfile(gizemsungu);
        new Comment(p4,gokhankaya,cont:"Nice!");
        gokhankaya.sendMessage(gizemsungu,message_content:"Hello!");
        gokhankaya.logout();

        gizemsungu.login();
        gizemsungu.viewProfile(gizemsungu);
        gizemsungu.getInbox();
    }
}
```

Result 2

```
PS C:\Users\lenovo\Desktop\Data222\HW1> javac TestClass2.java
PS C:\Users\lenovo\Desktop\Data222\HW1> java TestClass2
You are now following gokhankaya
You are now following gizemsungu
Viewing sibelgulmez's profile...
User ID: 2
Username: sibelgulmez
Location: Kayseri
Birthday: 03.03.2003
sibelgulmez is following 2 account(s) and has 0 follower(s)
sibelgulmez is following gokhankaya , gizemsungu
sibelgulmez has 2 post(s)
Accessing the posts of sibelgulmez
(PostID : 2):Homework is annoying
(PostID : 1):Weather is great
You are now following sibelgulmez
You are now following gizemsungu
There is/are 10message(s) in the inbox.
There is/are 10message(s) in the outbox.
Accessing the inbox of gizemsungu
1:
Sender : gokhankaya
Receiver : gizemsungu
Message :Hello there.

Viewing sibelgulmez's profile...
User ID: 2
Username: sibelgulmez
Location: Kayseri
Birthday: 03.03.2003
sibelgulmez is following 2 account(s) and has 1 follower(s)
sibelgulmez is being followed by gokhankaya
sibelgulmez is following gokhankaya , gizemsungu
sibelgulmez has 2 post(s)
Accessing the posts of sibelgulmez
(PostID : 2):Homework is annoying
(PostID : 1):Weather is great
Viewing sibelgulmez's post interactions:
-----
(PostID : 2) : Homework is annoying
This post has no likes.

This post is commented by following accounts : gokhankaya
Comment 01 ==> This is sparta.
(PostID : 1) : Weather is great
This post is liked by following accounts : gokhankaya,
This post has no comments.
-----
Viewing sibelgulmez's post interactions:
-----
(PostID : 2) : Homework is annoying
This post has no likes.

This post is commented by following accounts : gokhankaya
Comment 01 ==> This is sparta.
(PostID : 1) : Weather is great
This post is liked by following accounts : gokhankaya,gizemsungu,
This post has no comments.
-----
Viewing gizemsungu's profile...
```



```
Viewing gizemsungu's profile...
User ID: 1
Username: gizemsungu
Location: Adana
Birthday: 01.01.2001
gizemsungu is following 0 account(s) and has 2 follower(s)
gizemsungu is being followed by sibelgulmez , gokhankaya
gizemsungu has 2 post(s)
Viewing gizemsungu's profile...
User ID: 1
Username: gizemsungu
Location: Adana
Birthday: 01.01.2001
gizemsungu is following 0 account(s) and has 2 follower(s)
gizemsungu is being followed by sibelgulmez , gokhankaya
gizemsungu has 2 post(s)
Viewing gizemsungu's profile...
User ID: 1
Username: gizemsungu
Location: Adana
Birthday: 01.01.2001
gizemsungu is following 0 account(s) and has 2 follower(s)
gizemsungu is being followed by sibelgulmez , gokhankaya
gizemsungu has 2 post(s)
Accessing the inbox of gizemsungu
1:
```

```
Accessing the inbox of gizemsungu
```

```
1:
Sender : gokhankaya
Receiver : gizemsungu
Message :Hello there.
```

```
2:
Sender : gokhankaya
Receiver : gizemsungu
Message :Hello!
```

```
PS C:\Users\lenovo\Desktop\Data222\HW1>
```

Test Case 3

```
public class TestClass3 {
    Run | Debug
    public static void main(String[] args) {
        int useridcount = 1 ,postidcount = 1;
        Account gizemsungu = new Account(useridcount++, username:"gizemsungu", birthday:"01.01.2001", location:"Adana");
        Account sibelgulmez = new Account(useridcount++, username:"sibelgulmez", birthday:"03.03.2003", location:"Kayseri");
        Account gokhankaya = new Account(useridcount++, username:"gokhankaya", birthday:"05.05.2005", location:"Zonguldak");
        sibelgulmez.login();
        Post p1 = new Post(content:"Weather is great", postidcount++);
        Post p2 = new Post(content:"Homework is annoying", postidcount++);
        sibelgulmez.addPost(p2);
        sibelgulmez.addPost(p1);
        sibelgulmez.follow(gokhankaya);
        sibelgulmez.follow(gizemsungu);
        sibelgulmez.logout();

        gokhankaya.login();
        gokhankaya.viewProfile(sibelgulmez);
        gokhankaya.viewPosts(sibelgulmez);
        new Like (p1,gokhankaya);
        new Comment(p2, gokhankaya, cont:"This is sparta.");
        gokhankaya.follow(sibelgulmez);
        gokhankaya.follow(gizemsungu);
        gokhankaya.sendMessage(gizemsungu,message_content:"Hello there.");
        gokhankaya.logout();

        gizemsungu.login();
        gizemsungu.checkInbox();
        gizemsungu.checkOutbox();
        gizemsungu.getInbox();
        gizemsungu.viewProfile(sibelgulmez);
        gizemsungu.viewPosts(sibelgulmez);
        gizemsungu.viewPostReactions(sibelgulmez);
        new Like(p1,gizemsungu);
        gizemsungu.viewPostReactions(sibelgulmez);

        gizemsungu.block(sibelgulmez);
        gizemsungu.logout();

        sibelgulmez.login();
        sibelgulmez.viewProfile(gizemsungu);
        sibelgulmez.viewPostReactions(gizemsungu);
        sibelgulmez.sendMessage(gizemsungu, message_content:"HHH,,");
    }
}
```

Result 3

```
PS C:\Users\lenovo\Desktop\Data222\HW1> javac TestClass3.java
PS C:\Users\lenovo\Desktop\Data222\HW1> java TestClass3
You are now following gokhankaya
You are now following gizemsungu
Viewing sibelgulmez's profile...
User ID: 2
Username: sibelgulmez
Location: Kayseri
Birthday: 03.03.2003
sibelgulmez is following 2 account(s) and has 0 follower(s)
sibelgulmez is following gokhankaya , gizemsungu
sibelgulmez has 2 post(s)
Accessing the posts of sibelgulmez
(PostID : 2):Homework is annoying
(PostID : 1):Weather is great
You are now following sibelgulmez
You are now following gizemsungu
There is/are 10message(s) in the inbox.
There is/are 10message(s) in the outbox.
Accessing the inbox of gizemsungu
1:
Sender : gokhankaya
Receiver : gizemsungu
Message :Hello there.

Viewing sibelgulmez's profile...
User ID: 2
Username: sibelgulmez
Location: Kayseri
Birthday: 03.03.2003
sibelgulmez is following 2 account(s) and has 1 follower(s)
sibelgulmez is being followed by gokhankaya
sibelgulmez is following gokhankaya , gizemsungu
sibelgulmez has 2 post(s)
Accessing the posts of sibelgulmez
sibelgulmez has 2 post(s)
Accessing the posts of sibelgulmez
(PostID : 2):Homework is annoying
(PostID : 1):Weather is great
Viewing sibelgulmez's post interactions:
-----
(PostID : 2) : Homework is annoying
This post has no likes.

This post is commented by following accounts : gokhankaya
Comment 01 ==> This is sparta.
(PostID : 1) : Weather is great
This post is liked by following accounts : gokhankaya,
This post has no comments.
-----
Viewing sibelgulmez's post interactions:
-----
(PostID : 2) : Homework is annoying
This post has no likes.

This post is commented by following accounts : gokhankaya
Comment 01 ==> This is sparta.
(PostID : 1) : Weather is great
This post is liked by following accounts : gokhankaya,gizemsungu,
This post has no comments.
-----
You cant view this targets profile
You cant view this targets posts
You cant send message to this target
PS C:\Users\lenovo\Desktop\Data222\HW1> █
```