1 – Running Command And Results

A – ArrayList

Scenario 1:

```
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3$ cd ArrayList/
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3/ArrayList$ javac *.java
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3/ArrayList$ cd ..
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3$ java ArrayList.TestClass1
```

```
Account created: sibelgulmez
Account created: gokhankaya
Account created: gizemsungu
Logged in-> sibelgulmez
Post added! -> I like Java...
Post added! -> Java the coffee...
You are now following gokhankaya
You are now following gizemsungu
Logged out-> sibelgulmez
Logged in-> gokhankaya
ID: 0
Username: sibelgulmez
Birthdate: 01.01.2000
Location: Sofia
sibelgulmez is following 2 account(s) and has 0 follower(s)
Followers: 0
Following: gokhankaya gizemsungu
sibelgulmez has 2 post(s)
(PostID: 1) sibelgulmez: I like Java...
(PostID: 2) sibelgulmez: Java the coffee...
You liked post 1 in your timeline.
You commented post 1 in your timeline.
You are now following gizemsungu
You are now following sibelgulmez
You sent a message to gizemsungu.
Logged out-> gokhankaya
Logged in-> gizemsungu
Outbox is empty!
Inbox -> This homework is too easy... (from gokhankaya)
ID: 0
Username: sibelgulmez
Birthdate: 01.01.2000
Location: Sofia
sibelgulmez is following 2 account(s) and has 1 follower(s)
Followers: gokhankaya
Following: gokhankaya gizemsungu
sibelgulmez has 2 post(s)
(PostID: 1) sibelgulmez: I like Java...
(PostID: 2) sibelgulmez: Java the coffee...
(PostId: 1) I like Java...
Likes: gokhankaya
Comments:
gokhankaya: me too!
(PostId: 2) Java the coffee...
Likes: 0
Comments: 0
You liked post 1 in your timeline.
You liked post 2 in your timeline.
(PostId: 1) I like Java...
Likes: gokhankaya, gizemsungu
Comments:
gokhankaya: me too!
(PostId: 2) Java the coffee...
Likes: gizemsungu
Comments: 0
```

Scenario 2:

```
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3$ cd ArrayList/
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3/ArrayList$ javac *.java
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3/ArrayList$ cd ..
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3$ java ArrayList.TestClass2
```

```
TESTING 2
Logged in-> gizemsungu
Post added! -> Java the programming language...
Post added! -> Java the island...
Logged out-> gizemsungu
Logged in-> sibelgulmez
ID: 2
Username: gizemsungu
Birthdate: 03.03.2000
Location: Berlin
gizemsungu is following 0 account(s) and has 2 follower(s)
Followers: sibelgulmez gokhankaya
Following: 0
gizemsungu has 2 post(s)
(PostID: 3) gizemsungu: Java the programming language...
(PostID: 4) gizemsungu: Java the island...
You liked post 3 in your timeline.
Logged out-> sibelgulmez
Logged in-> gokhankaya
ID: 2
Username: gizemsungu
Birthdate: 03.03.2000
Location: Berlin
gizemsungu is following 0 account(s) and has 2 follower(s)
Followers: sibelgulmez gokhankaya
Following: 0
gizemsungu has 2 post(s)
(PostID: 3) gizemsungu: Java the programming language...
(PostID: 4) gizemsungu: Java the island...
You commented post 4 in your timeline.
You sent a message to gizemsungu.
Logged out-> gokhankaya
Logged in-> gizemsungu
Outbox is empty!
Inbox -> This homework is too easy... (from gokhankaya)
Inbox -> Hello! (from gokhankaya)
ID: 2
Username: gizemsungu
Birthdate: 03.03.2000
Location: Berlin
gizemsungu is following 0 account(s) and has 2 follower(s)
Followers: sibelgulmez gokhankaya
Following: 0
gizemsungu has 2 post(s)
(PostID: 3) gizemsungu: Java the programming language...
(PostID: 4) gizemsungu: Java the island...
(PostId: 3) Java the programming language...
Likes: sibelgulmez
Comments: 0
(PostId: 4) Java the island...
Likes: 0
Comments:
gokhankaya: Nice!
Logged out-> gizemsungu
```

Scenario 3:

```
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3$ cd ArrayList/
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3/ArrayList$ javac *.java
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3/ArrayList$ cd ..
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3$ java ArrayList.TestClass3
```

```
TESTING 3
Logged in-> gizemsungu
You have blocked sibelgulmez
Logged out-> gizemsungu
Logged in-> sibelgulmez
You are blocked by this account!
You can't send message to gizemsungu because you blocked him/her.
Logged out-> sibelgulmez
Logged in-> gizemsungu
Inbox -> This homework is too easy... (from gokhankaya)
Outbox is empty!
```

Scenario 4:

```
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3$ cd ArrayList/
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3/ArrayList$ javac *.java
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3/ArrayList$ cd ..
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3$ java ArrayList.TestClass4
```

```
Account created: sibelgulmez
Account created: gokhankaya
Account created: gizemsungu
Account created: ahmetcebeci
Account created: yilmazcebeci
Account created: mehmetcebeci
Account created: aysecebeci
Account created: receptayyiperdogan
Account created: kemalkiliclaroglu
Account created: muharremince
Logged in-> sibelgulmez
Post added! -> I like Java...
Post added! -> Java the coffee...
Post added! -> Java the programming language...
Post added! -> Java the island...
Post added! -> Java the tea...
Post added! -> I love C++
Post added! -> I love C#
Post added! -> I love Python
Post added! -> I love Ruby
Post added! -> I love JavaScript
You are now following gokhankaya
You are now following gizemsungu
You are now following ahmetcebeci
You are now following yilmazcebeci
You are now following mehmetcebeci
You are now following aysecebeci
You are now following receptayyiperdogan
You are now following kemalkiliclaroglu
You are now following muharremince
You have no followers!
sibelgulmez Following -> : gokhankaya
sibelgulmez Following -> : gizemsungu
sibelgulmez Following -> : ahmetcebeci
sibelgulmez Following -> : yilmazcebeci
sibelgulmez Following -> : mehmetcebeci
sibelgulmez Following -> : aysecebeci
sibelgulmez Following -> : receptayyiperdogan
sibelgulmez Following -> : kemalkiliclaroglu
sibelgulmez Following -> : muharremince
You are not following muharremince anymore
You are not following kemalkiliclaroglu anymore
You have no followers!
sibelgulmez Following -> : gokhankaya
sibelgulmez Following -> : gizemsungu
sibelgulmez Following -> : ahmetcebeci
sibelgulmez Following -> : yilmazcebeci
sibelgulmez Following -> : mehmetcebeci
sibelgulmez Following -> : aysecebeci
sibelgulmez Following -> : receptayyiperdogan
You sent a message to gokhankaya.
Inbox is empty!
Outbox -> Hello, how are you? (to gokhankaya)
```

```
History:
Logged in-> sibelgulmez
Post added! -> I like Java...
Post added! -> Java the coffee...
Post added! -> Java the programming language...
Post added! -> Java the island...
Post added! -> Java the tea...
Post added! -> I love C++
Post added! -> I love C#
Post added! -> I love Python
Post added! -> I love Ruby
Post added! -> I love JavaScript
You are now following gokhankaya
You are now following gizemsungu
You are now following ahmetcebeci
You are now following yilmazcebeci
You are now following mehmetcebeci
You are now following aysecebeci
You are now following receptayyiperdogan
You are now following kemalkiliclaroglu
You are now following muharremince
You are not following muharremince anymore
You are not following kemalkiliclaroglu anymore
You sent a message to gokhankaya.
Logged out-> sibelgulmez
-------------------------------------------------------------------------
Logged in-> gokhankaya
ID: 0
Username: sibelgulmez
Birthdate: 01.01.2000
Location: Sofia
sibelgulmez is following 7 account(s) and has 0 follower(s)
Followers: 0
Following: gokhankaya gizemsungu ahmetcebeci yilmazcebeci mehmetcebeci aysecebeci receptayyiperdogan
sibelgulmez has 10 post(s)
(PostID: 1) sibelgulmez: I like Java...
(PostID: 2) sibelgulmez: Java the coffee...
(PostID: 3) sibelgulmez: Java the programming language...
(PostID: 4) sibelgulmez: Java the island...
(PostID: 5) sibelgulmez: Java the tea...
(PostID: 6) sibelgulmez: I love C++
(PostID: 7) sibelgulmez: I love C#
(PostID: 8) sibelgulmez: I love Python
(PostID: 9) sibelgulmez: I love Ruby
(PostID: 10) sibelgulmez: I love JavaScript
You liked post 1 in your timeline.
You liked post 2 in your timeline.
You liked post 3 in your timeline.
You liked post 4 in your timeline.
You liked post 5 in your timeline.
You liked post 6 in your timeline.
You liked post 7 in your timeline.
You liked post 8 in your timeline.
You liked post 9 in your timeline.
You liked post 10 in your timeline.
```

```
Liked Posts ID: 1 -> 2 -> 3 -> 4 -> 5 -> 6 -> 7 -> 8 -> 9 -> 10
Liked Posts ID: 2 -> 3 -> 4 -> 5 -> 6 -> 7 -> 8 -> 9 -> 10
Liked Posts ID: 3 -> 4 -> 5 -> 6 -> 7 -> 8 -> 9 -> 10
-------------------------------------------------------
You commented post 1 in your timeline.
You commented post 2 in your timeline.
You commented post 3 in your timeline.
You commented post 4 in your timeline.
Make Comments ID:
PostID: 1 -> me too!
PostID: 2 -> <3
PostID: 3 -> I like it too
PostID: 4 -> I love it too
Make Comments ID:
PostID: 2 -> <3
PostID: 3 -> I like it too
PostID: 4 -> I love it too
Make Comments ID:
PostID: 3 -> I like it too
PostID: 4 -> I love it too
-------------------------------------------------------
You are now following sibelgulmez
You are now following gizemsungu
You are now following ahmetcebeci
You are now following yilmazcebeci
You are now following mehmetcebeci
You are now following aysecebeci
You are now following receptayyiperdogan
You are now following kemalkiliclaroglu
You are now following muharremince
gokhankaya Followers -> : sibelgulmez
gokhankaya Following -> : sibelgulmez
gokhankaya Following -> : gizemsungu
gokhankaya Following -> : ahmetcebeci
gokhankaya Following -> : yilmazcebeci
gokhankaya Following -> : mehmetcebeci
gokhankaya Following -> : aysecebeci
gokhankaya Following -> : receptayyiperdogan
gokhankaya Following -> : kemalkiliclaroglu
gokhankaya Following -> : muharremince
You have blocked gizemsungu
gokhankaya Followers -> : sibelgulmez
gokhankaya Following -> : sibelgulmez
gokhankaya Following -> : ahmetcebeci
gokhankaya Following -> : yilmazcebeci
gokhankaya Following -> : mehmetcebeci
gokhankaya Following -> : aysecebeci
gokhankaya Following -> : receptayyiperdogan
gokhankaya Following -> : kemalkiliclaroglu
gokhankaya Following -> : muharremince
You have blocked ahmetcebeci
gokhankaya Followers -> : sibelgulmez
gokhankaya Following -> : sibelgulmez
gokhankaya Following -> : yilmazcebeci
gokhankaya Following -> : mehmetcebeci
```

```
gokhankaya Following -> : aysecebeci
gokhankaya Following -> : receptayyiperdogan
gokhankaya Following -> : kemalkiliclaroglu
gokhankaya Following -> : muharremince
gokhankaya Following -> : gizemsungu
gokhankaya Following -> : ahmetcebeci
-------------------------------------------------------
Inbox -> Hello, how are you? (from sibelgulmez)
Outbox is empty!
You sent a message to sibelgulmez.
-------------------------------------------------------
History:
Logged in-> gokhankaya
viewProfile: sibelgulmez
viewPost: sibelgulmez: I like Java...
viewPost: sibelgulmez: Java the coffee...
viewPost: sibelgulmez: Java the programming language...
viewPost: sibelgulmez: Java the island...
viewPost: sibelgulmez: Java the tea...
viewPost: sibelgulmez: I love C++
viewPost: sibelgulmez: I love C#
viewPost: sibelgulmez: I love Python
viewPost: sibelgulmez: I love Ruby
viewPost: sibelgulmez: I love JavaScript
You liked post 1 in your timeline.
You liked post 2 in your timeline.
You liked post 3 in your timeline.
You liked post 4 in your timeline.
You liked post 5 in your timeline.
You liked post 6 in your timeline.
You liked post 7 in your timeline.
You liked post 8 in your timeline.
You liked post 9 in your timeline.
You liked post 10 in your timeline.
You unliked post 1 in your timeline.
You unliked post 2 in your timeline.
You commented post 1 in your timeline.
You commented post 2 in your timeline.
You commented post 3 in your timeline.
You commented post 4 in your timeline.
You removed your comment from post 1 in your timeline.
You removed your comment from post 2 in your timeline.
You are now following sibelgulmez
You are now following gizemsungu
You are now following ahmetcebeci
You are now following yilmazcebeci
You are now following mehmetcebeci
You are now following aysecebeci
You are now following receptayyiperdogan
You are now following kemalkiliclaroglu
You are now following muharremince
You have blocked gizemsungu
You have blocked ahmetcebeci
You unblocked gizemsungu
You unblocked ahmetcebeci
```

```
viewPost: sibelgulmez: Java the programming language...
viewPost: sibelgulmez: Java the island...
viewPost: sibelgulmez: Java the tea...
viewPost: sibelgulmez: I love C++
viewPost: sibelgulmez: I love C#
viewPost: sibelgulmez: I love Python
viewPost: sibelgulmez: I love Ruby
viewPost: sibelgulmez: I love JavaScript
You liked post 1 in your timeline.
You liked post 2 in your timeline.
You liked post 3 in your timeline.
You liked post 4 in your timeline.
You liked post 5 in your timeline.
You liked post 6 in your timeline.
You liked post 7 in your timeline.
You liked post 8 in your timeline.
You liked post 9 in your timeline.
You liked post 10 in your timeline.
You unliked post 1 in your timeline.
You unliked post 2 in your timeline.
You commented post 1 in your timeline.
You commented post 2 in your timeline.
You commented post 3 in your timeline.
You commented post 4 in your timeline.
You removed your comment from post 1 in your timeline.
You removed your comment from post 2 in your timeline.
You are now following sibelgulmez
You are now following gizemsungu
You are now following ahmetcebeci
You are now following yilmazcebeci
You are now following mehmetcebeci
You are now following aysecebeci
You are now following receptayyiperdogan
You are now following kemalkiliclaroglu
You are now following muharremince
You have blocked gizemsungu
You have blocked ahmetcebeci
You unblocked gizemsungu
You unblocked ahmetcebeci
You are now following gizemsungu
You are now following ahmetcebeci
You sent a message to sibelgulmez.
-----------------------------------------------------
(PostId: 1) I like Java...
Likes: 0
Comments: 0
(PostId: 2) Java the coffee...
Likes: 0
Comments: 0
(PostId: 3) Java the programming language...
Likes: gokhankaya
Comments:
gokhankaya: I like it too
Logged out-> gokhankaya
```

B – Linked List

Scenario 1:

```
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3$ cd LinkedList/
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3/LinkedList$ javac *.java
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3/LinkedList$ cd ..
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3$ java LinkedList.TestClass1
```

```
Account created: sibelgulmez
Account created: gokhankaya
Account created: gizemsungu
Logged in-> sibelgulmez
Post added! -> I like Java...
Post added! -> Java the coffee...
You are now following gokhankaya
You are now following gizemsungu
Logged out-> sibelgulmez
Logged in-> gokhankaya
ID: 0
Username: sibelgulmez
Birthdate: 01.01.2000
Location: Sofia
sibelgulmez is following 2 account(s) and has 0 follower(s)
Followers: 0
Following: gokhankaya gizemsungu
sibelgulmez has 2 post(s)
(PostID: 1) sibelgulmez: I like Java...
(PostID: 2) sibelgulmez: Java the coffee...
You liked post 1 in your timeline.
You commented post 1 in your timeline.
You are now following gizemsungu
You are now following sibelgulmez
You sent a message to gizemsungu.
Logged out-> gokhankaya
Logged in-> gizemsungu
Outbox is empty!
Inbox -> This homework is too easy... (from gokhankaya)
ID: 0
Username: sibelgulmez
Birthdate: 01.01.2000
Location: Sofia
sibelgulmez is following 2 account(s) and has 1 follower(s)
Followers: gokhankaya
Following: gokhankaya gizemsungu
sibelgulmez has 2 post(s)
(PostID: 1) sibelgulmez: I like Java...
(PostID: 2) sibelgulmez: Java the coffee...
(PostId: 1) I like Java...
Likes: gokhankaya
Comments:
gokhankaya: me too!
(PostId: 2) Java the coffee...
Likes: 0
Comments: 0
You liked post 1 in your timeline.
You liked post 2 in your timeline.
(PostId: 1) I like Java...
Likes: gokhankaya, gizemsungu
Comments:
gokhankaya: me too!
(PostId: 2) Java the coffee...
Likes: gizemsungu
Comments: 0
```

Scenario 2:

```
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3$ cd LinkedList/
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3/LinkedList$ javac *.java
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3/LinkedList$ cd ..
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3$ java LinkedList.TestClass2
```

```
TESTING 2
Logged in-> gizemsungu
Post added! -> Java the programming language...
Post added! -> Java the island...
Logged out-> gizemsungu
Logged in-> sibelgulmez
ID: 2
Username: gizemsungu
Birthdate: 03.03.2000
Location: Berlin
gizemsungu is following 0 account(s) and has 2 follower(s)
Followers: sibelgulmez gokhankaya
Following: 0
gizemsungu has 2 post(s)
(PostID: 3) gizemsungu: Java the programming language...
(PostID: 4) gizemsungu: Java the island...
You liked post 3 in your timeline.
Logged out-> sibelgulmez
Logged in-> gokhankaya
ID: 2
Username: gizemsungu
Birthdate: 03.03.2000
Location: Berlin
gizemsungu is following 0 account(s) and has 2 follower(s)
Followers: sibelgulmez gokhankaya
Following: 0
gizemsungu has 2 post(s)
(PostID: 3) gizemsungu: Java the programming language...
(PostID: 4) gizemsungu: Java the island...
You commented post 4 in your timeline.
You sent a message to gizemsungu.
Logged out-> gokhankaya
Logged in-> gizemsungu
Outbox is empty!
Inbox -> This homework is too easy... (from gokhankaya)
Inbox -> Hello! (from gokhankaya)
ID: 2
Username: gizemsungu
Birthdate: 03.03.2000
Location: Berlin
gizemsungu is following 0 account(s) and has 2 follower(s)
Followers: sibelgulmez gokhankaya
Following: 0
gizemsungu has 2 post(s)
(PostID: 3) gizemsungu: Java the programming language...
(PostID: 4) gizemsungu: Java the island...
(PostId: 3) Java the programming language...
Likes: sibelgulmez
Comments: 0
(PostId: 4) Java the island...
Likes: 0
Comments:
gokhankaya: Nice!
Logged out-> gizemsungu
```

Scenario 3:

```
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3$ cd LinkedList/
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3/LinkedList$ javac *.java
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3/LinkedList$ cd ..
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3$ java LinkedList.TestClass3
```

```
TESTING 3
Logged in-> gizemsungu
You have blocked sibelgulmez
Logged out-> gizemsungu
Logged in-> sibelgulmez
You are blocked by this account!
You can't send message to gizemsungu because you blocked him/her.
Logged out-> sibelgulmez
Logged in-> gizemsungu
Inbox -> This homework is too easy... (from gokhankaya)
Outbox is empty!
```

Scenario 4:

```
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3$ cd LinkedList/
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3/LinkedList$ javac *.java
^[[Aahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3/LinkedList$ cd ..
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3$ java LinkedList.TestClass4
```

```
Account created: sibelgulmez
Account created: gokhankaya
Account created: gizemsungu
Account created: ahmetcebeci
Account created: yilmazcebeci
Account created: mehmetcebeci
Account created: aysecebeci
Account created: receptayyiperdogan
Account created: kemalkiliclaroglu
Account created: muharremince
Logged in-> sibelgulmez
Post added! -> I like Java...
Post added! -> Java the coffee...
Post added! -> Java the programming language...
Post added! -> Java the island...
Post added! -> Java the tea...
Post added! -> I love C++
Post added! -> I love C#
Post added! -> I love Python
Post added! -> I love Ruby
Post added! -> I love JavaScript
You are now following gokhankaya
You are now following gizemsungu
You are now following ahmetcebeci
You are now following yilmazcebeci
You are now following mehmetcebeci
You are now following aysecebeci
You are now following receptayyiperdogan
You are now following kemalkiliclaroglu
You are now following muharremince
You have no followers!
sibelgulmez Following -> : gokhankaya
sibelgulmez Following -> : gizemsungu
sibelgulmez Following -> : ahmetcebeci
sibelgulmez Following -> : yilmazcebeci
sibelgulmez Following -> : mehmetcebeci
sibelgulmez Following -> : aysecebeci
sibelgulmez Following -> : receptayyiperdogan
sibelgulmez Following -> : kemalkiliclaroglu
sibelgulmez Following -> : muharremince
You are not following muharremince anymore
You are not following kemalkiliclaroglu anymore
You have no followers!
sibelgulmez Following -> : gokhankaya
sibelgulmez Following -> : gizemsungu
sibelgulmez Following -> : ahmetcebeci
sibelgulmez Following -> : yilmazcebeci
sibelgulmez Following -> : mehmetcebeci
sibelgulmez Following -> : aysecebeci
sibelgulmez Following -> : receptayyiperdogan
You sent a message to gokhankaya.
Inbox is empty!
Outbox -> Hello, how are you? (to gokhankaya)
```

```
History:
Logged in-> sibelgulmez
Post added! -> I like Java...
Post added! -> Java the coffee...
Post added! -> Java the programming language...
Post added! -> Java the island...
Post added! -> Java the tea...
Post added! -> I love C++
Post added! -> I love C#
Post added! -> I love Python
Post added! -> I love Ruby
Post added! -> I love JavaScript
You are now following gokhankaya
You are now following gizemsungu
You are now following ahmetcebeci
You are now following yilmazcebeci
You are now following mehmetcebeci
You are now following aysecebeci
You are now following receptayyiperdogan
You are now following kemalkiliclaroglu
You are now following muharremince
You are not following muharremince anymore
You are not following kemalkiliclaroglu anymore
You sent a message to gokhankaya.
Logged out-> sibelgulmez
------------------------------------------------------------------------
Logged in-> gokhankaya
ID: 0
Username: sibelgulmez
Birthdate: 01.01.2000
Location: Sofia
sibelgulmez is following 7 account(s) and has 0 follower(s)
Followers: 0
Following: gokhankaya gizemsungu ahmetcebeci yilmazcebeci mehmetcebeci aysecebeci receptayyiperdogan
sibelgulmez has 10 post(s)
(PostID: 1) sibelgulmez: I like Java...
(PostID: 2) sibelgulmez: Java the coffee...
(PostID: 3) sibelgulmez: Java the programming language...
(PostID: 4) sibelgulmez: Java the island...
(PostID: 5) sibelgulmez: Java the tea...
(PostID: 6) sibelgulmez: I love C++
(PostID: 7) sibelgulmez: I love C#
(PostID: 8) sibelgulmez: I love Python
(PostID: 9) sibelgulmez: I love Ruby
(PostID: 10) sibelgulmez: I love JavaScript
You liked post 1 in your timeline.
You liked post 2 in your timeline.
You liked post 3 in your timeline.
You liked post 4 in your timeline.
You liked post 5 in your timeline.
You liked post 6 in your timeline.
You liked post 7 in your timeline.
You liked post 8 in your timeline.
You liked post 9 in your timeline.
You liked post 10 in your timeline.
```

```
Liked Posts ID: 1 -> 2 -> 3 -> 4 -> 5 -> 6 -> 7 -> 8 -> 9 -> 10
Liked Posts ID: 2 -> 3 -> 4 -> 5 -> 6 -> 7 -> 8 -> 9 -> 10
Liked Posts ID: 3 -> 4 -> 5 -> 6 -> 7 -> 8 -> 9 -> 10
----------------------------------------------------------------
You commented post 1 in your timeline.
You commented post 2 in your timeline.
You commented post 3 in your timeline.
You commented post 4 in your timeline.
Make Comments ID:
PostID: 1 -> me too!
PostID: 2 -> <3
PostID: 3 -> I like it too
PostID: 4 -> I love it too
Make Comments ID:
PostID: 2 -> <3
PostID: 3 -> I like it too
PostID: 4 -> I love it too
Make Comments ID:
PostID: 3 -> I like it too
PostID: 4 -> I love it too
----------------------------------------------------------------
You are now following sibelgulmez
You are now following gizemsungu
You are now following ahmetcebeci
You are now following yilmazcebeci
You are now following mehmetcebeci
You are now following aysecebeci
You are now following receptayyiperdogan
You are now following kemalkiliclaroglu
You are now following muharremince
gokhankaya Followers -> : sibelgulmez
gokhankaya Following -> : sibelgulmez
gokhankaya Following -> : gizemsungu
gokhankaya Following -> : ahmetcebeci
gokhankaya Following -> : yilmazcebeci
gokhankaya Following -> : mehmetcebeci
gokhankaya Following -> : aysecebeci
gokhankaya Following -> : receptayyiperdogan
gokhankaya Following -> : kemalkiliclaroglu
gokhankaya Following -> : muharremince
You have blocked gizemsungu
gokhankaya Followers -> : sibelgulmez
gokhankaya Following -> : sibelgulmez
gokhankaya Following -> : ahmetcebeci
gokhankaya Following -> : yilmazcebeci
gokhankaya Following -> : mehmetcebeci
gokhankaya Following -> : aysecebeci
gokhankaya Following -> : receptayyiperdogan
gokhankaya Following -> : kemalkiliclaroglu
gokhankaya Following -> : muharremince
You have blocked ahmetcebeci
gokhankaya Followers -> : sibelgulmez
gokhankaya Following -> : sibelgulmez
gokhankaya Following -> : yilmazcebeci
gokhankaya Following -> : mehmetcebeci
```

```
gokhankaya Following -> : aysecebeci
gokhankaya Following -> : receptayyiperdogan
gokhankaya Following -> : kemalkiliclaroglu
gokhankaya Following -> : muharremince
gokhankaya Following -> : gizemsungu
gokhankaya Following -> : ahmetcebeci
------------------------------------------------------------
Inbox -> Hello, how are you? (from sibelgulmez)
Outbox is empty!
You sent a message to sibelgulmez.
------------------------------------------------------------
History:
Logged in-> gokhankaya
viewProfile: sibelgulmez
viewPost: sibelgulmez: I like Java...
viewPost: sibelgulmez: Java the coffee...
viewPost: sibelgulmez: Java the programming language...
viewPost: sibelgulmez: Java the island...
viewPost: sibelgulmez: Java the tea...
viewPost: sibelgulmez: I love C++
viewPost: sibelgulmez: I love C#
viewPost: sibelgulmez: I love Python
viewPost: sibelgulmez: I love Ruby
viewPost: sibelgulmez: I love JavaScript
You liked post 1 in your timeline.
You liked post 2 in your timeline.
You liked post 3 in your timeline.
You liked post 4 in your timeline.
You liked post 5 in your timeline.
You liked post 6 in your timeline.
You liked post 7 in your timeline.
You liked post 8 in your timeline.
You liked post 9 in your timeline.
You liked post 10 in your timeline.
You unliked post 1 in your timeline.
You unliked post 2 in your timeline.
You commented post 1 in your timeline.
You commented post 2 in your timeline.
You commented post 3 in your timeline.
You commented post 4 in your timeline.
You removed your comment from post 1 in your timeline.
You removed your comment from post 2 in your timeline.
You are now following sibelgulmez
You are now following gizemsungu
You are now following ahmetcebeci
You are now following yilmazcebeci
You are now following mehmetcebeci
You are now following aysecebeci
You are now following receptayyiperdogan
You are now following kemalkiliclaroglu
You are now following muharremince
You have blocked gizemsungu
You have blocked ahmetcebeci
You unblocked gizemsungu
You unblocked ahmetcebeci
```

```
viewPost: sibelgulmez: Java the programming language...
viewPost: sibelgulmez: Java the island...
viewPost: sibelgulmez: Java the tea...
viewPost: sibelgulmez: I love C++
viewPost: sibelgulmez: I love C#
viewPost: sibelgulmez: I love Python
viewPost: sibelgulmez: I love Ruby
viewPost: sibelgulmez: I love JavaScript
You liked post 1 in your timeline.
You liked post 2 in your timeline.
You liked post 3 in your timeline.
You liked post 4 in your timeline.
You liked post 5 in your timeline.
You liked post 6 in your timeline.
You liked post 7 in your timeline.
You liked post 8 in your timeline.
You liked post 9 in your timeline.
You liked post 10 in your timeline.
You unliked post 1 in your timeline.
You unliked post 2 in your timeline.
You commented post 1 in your timeline.
You commented post 2 in your timeline.
You commented post 3 in your timeline.
You commented post 4 in your timeline.
You removed your comment from post 1 in your timeline.
You removed your comment from post 2 in your timeline.
You are now following sibelgulmez
You are now following gizemsungu
You are now following ahmetcebeci
You are now following yilmazcebeci
You are now following mehmetcebeci
You are now following aysecebeci
You are now following receptayyiperdogan
You are now following kemalkiliclaroglu
You are now following muharremince
You have blocked gizemsungu
You have blocked ahmetcebeci
You unblocked gizemsungu
You unblocked ahmetcebeci
You are now following gizemsungu
You are now following ahmetcebeci
You sent a message to sibelgulmez.
----------------------------------------------------
(PostId: 1) I like Java...
Likes: 0
Comments: 0
(PostId: 2) Java the coffee...
Likes: 0
Comments: 0
(PostId: 3) Java the programming language...
Likes: gokhankaya
Comments:
gokhankaya: I like it too
Logged out-> gokhankaya
```

C – LDLinked List

Scenario 1:

```
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3$ cd LDLinkedList/
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3/LDLinkedList$ javac *.java
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3/LDLinkedList$ cd ..
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3$ java LDLinkedList.TestClass1
```

```
Account created: sibelgulmez
Account created: gokhankaya
Account created: gizemsungu
Logged in-> sibelgulmez
Post added! -> I like Java...
Post added! -> Java the coffee...
You are now following gokhankaya
You are now following gizemsungu
Logged out-> sibelgulmez
Logged in-> gokhankaya
ID: 0
Username: sibelgulmez
Birthdate: 01.01.2000
Location: Sofia
sibelgulmez is following 2 account(s) and has 0 follower(s)
Followers: 0
Following: gokhankaya gizemsungu
sibelgulmez has 2 post(s)
(PostID: 1) sibelgulmez: I like Java...
(PostID: 2) sibelgulmez: Java the coffee...
You liked post 1 in your timeline.
You commented post 1 in your timeline.
You are now following gizemsungu
You are now following sibelgulmez
You sent a message to gizemsungu.
Logged out-> gokhankaya
Logged in-> gizemsungu
Outbox is empty!
Inbox -> This homework is too easy... (from gokhankaya)
ID: 0
Username: sibelgulmez
Birthdate: 01.01.2000
Location: Sofia
sibelgulmez is following 2 account(s) and has 1 follower(s)
Followers: gokhankaya
Following: gokhankaya gizemsungu
sibelgulmez has 2 post(s)
(PostID: 1) sibelgulmez: I like Java...
(PostID: 2) sibelgulmez: Java the coffee...
(PostId: 1) I like Java...
Likes: gokhankaya
Comments:
gokhankaya: me too!
(PostId: 2) Java the coffee...
Likes: 0
Comments: 0
You liked post 1 in your timeline.
You liked post 2 in your timeline.
(PostId: 1) I like Java...
Likes: gokhankaya, gizemsungu
Comments:
gokhankaya: me too!
(PostId: 2) Java the coffee...
Likes: gizemsungu
Comments: 0
```

Scenario 2:

```
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3$ cd LDLinkedList/
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3/LDLinkedList$ javac *.java
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3/LDLinkedList$ cd ..
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3$ java LDLinkedList.TestClass2
```

```
TESTING 2
Logged in-> gizemsungu
Post added! -> Java the programming language...
Post added! -> Java the island...
Logged out-> gizemsungu
Logged in-> sibelgulmez
ID: 2
Username: gizemsungu
Birthdate: 03.03.2000
Location: Berlin
gizemsungu is following 0 account(s) and has 2 follower(s)
Followers: sibelgulmez gokhankaya
Following: 0
gizemsungu has 2 post(s)
(PostID: 3) gizemsungu: Java the programming language...
(PostID: 4) gizemsungu: Java the island...
You liked post 3 in your timeline.
Logged out-> sibelgulmez
Logged in-> gokhankaya
ID: 2
Username: gizemsungu
Birthdate: 03.03.2000
Location: Berlin
gizemsungu is following 0 account(s) and has 2 follower(s)
Followers: sibelgulmez gokhankaya
Following: 0
gizemsungu has 2 post(s)
(PostID: 3) gizemsungu: Java the programming language...
(PostID: 4) gizemsungu: Java the island...
You commented post 4 in your timeline.
You sent a message to gizemsungu.
Logged out-> gokhankaya
Logged in-> gizemsungu
Outbox is empty!
Inbox -> This homework is too easy... (from gokhankaya)
Inbox -> Hello! (from gokhankaya)
ID: 2
Username: gizemsungu
Birthdate: 03.03.2000
Location: Berlin
gizemsungu is following 0 account(s) and has 2 follower(s)
Followers: sibelgulmez gokhankaya
Following: 0
gizemsungu has 2 post(s)
(PostID: 3) gizemsungu: Java the programming language...
(PostID: 4) gizemsungu: Java the island...
(PostId: 3) Java the programming language...
Likes: sibelgulmez
Comments: 0
(PostId: 4) Java the island...
Likes: 0
Comments:
gokhankaya: Nice!
Logged out-> gizemsungu
```

Scenario 3:

```
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3$ cd LDLinkedList/
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3/LDLinkedList$ javac *.java
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3/LDLinkedList$ cd ..
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3$ java LDLinkedList.TestClass3
```

```
TESTING 3
Logged in-> gizemsungu
You have blocked sibelgulmez
Logged out-> gizemsungu
Logged in-> sibelgulmez
You are blocked by this account!
You can't send message to gizemsungu because you blocked him/her.
Logged out-> sibelgulmez
Logged in-> gizemsungu
Inbox -> This homework is too easy... (from gokhankaya)
Outbox is empty!
```

Scenario 4:

```
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3$ cd LDLinkedList/
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3/LDLinkedList$ javac *.java
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3/LDLinkedList$ cd ..
ahmet@MSI:/mnt/c/Users/ahmet/OneDrive/Masaüstü/DataHomework/Homework3$ java LDLinkedList.TestClass4
```

```
Account created: sibelgulmez
Account created: gokhankaya
Account created: gizemsungu
Account created: ahmetcebeci
Account created: yilmazcebeci
Account created: mehmetcebeci
Account created: aysecebeci
Account created: receptayyiperdogan
Account created: kemalkiliclaroglu
Account created: muharremince
Logged in-> sibelgulmez
Post added! -> I like Java...
Post added! -> Java the coffee...
Post added! -> Java the programming language...
Post added! -> Java the island...
Post added! -> Java the tea...
Post added! -> I love C++
Post added! -> I love C#
Post added! -> I love Python
Post added! -> I love Ruby
Post added! -> I love JavaScript
You are now following gokhankaya
You are now following gizemsungu
You are now following ahmetcebeci
You are now following yilmazcebeci
You are now following mehmetcebeci
You are now following aysecebeci
You are now following receptayyiperdogan
You are now following kemalkiliclaroglu
You are now following muharremince
You have no followers!
sibelgulmez Following -> : gokhankaya
sibelgulmez Following -> : gizemsungu
sibelgulmez Following -> : ahmetcebeci
sibelgulmez Following -> : yilmazcebeci
sibelgulmez Following -> : mehmetcebeci
sibelgulmez Following -> : aysecebeci
sibelgulmez Following -> : receptayyiperdogan
sibelgulmez Following -> : kemalkiliclaroglu
sibelgulmez Following -> : muharremince
You are not following muharremince anymore
You are not following kemalkiliclaroglu anymore
You have no followers!
sibelgulmez Following -> : gokhankaya
sibelgulmez Following -> : gizemsungu
sibelgulmez Following -> : ahmetcebeci
sibelgulmez Following -> : yilmazcebeci
sibelgulmez Following -> : mehmetcebeci
sibelgulmez Following -> : aysecebeci
sibelgulmez Following -> : receptayyiperdogan
You sent a message to gokhankaya.
Inbox is empty!
Outbox -> Hello, how are you? (to gokhankaya)
----------------------------------------
```

```
History:
Logged in-> sibelgulmez
Post added! -> I like Java...
Post added! -> Java the coffee...
Post added! -> Java the programming language...
Post added! -> Java the island...
Post added! -> Java the tea...
Post added! -> I love C++
Post added! -> I love C#
Post added! -> I love Python
Post added! -> I love Ruby
Post added! -> I love JavaScript
You are now following gokhankaya
You are now following gizemsungu
You are now following ahmetcebeci
You are now following yilmazcebeci
You are now following mehmetcebeci
You are now following aysecebeci
You are now following receptayyiperdogan
You are now following kemalkiliclaroglu
You are now following muharremince
You are not following muharremince anymore
You are not following kemalkiliclaroglu anymore
You sent a message to gokhankaya.
Logged out-> sibelgulmez
------------------------------------------------------------------------
Logged in-> gokhankaya
ID: 0
Username: sibelgulmez
Birthdate: 01.01.2000
Location: Sofia
sibelgulmez is following 7 account(s) and has 0 follower(s)
Followers: 0
Following: gokhankaya gizemsungu ahmetcebeci yilmazcebeci mehmetcebeci aysecebeci receptayyiperdogan
sibelgulmez has 10 post(s)
(PostID: 1) sibelgulmez: I like Java...
(PostID: 2) sibelgulmez: Java the coffee...
(PostID: 3) sibelgulmez: Java the programming language...
(PostID: 4) sibelgulmez: Java the island...
(PostID: 5) sibelgulmez: Java the tea...
(PostID: 6) sibelgulmez: I love C++
(PostID: 7) sibelgulmez: I love C#
(PostID: 8) sibelgulmez: I love Python
(PostID: 9) sibelgulmez: I love Ruby
(PostID: 10) sibelgulmez: I love JavaScript
You liked post 1 in your timeline.
You liked post 2 in your timeline.
You liked post 3 in your timeline.
You liked post 4 in your timeline.
You liked post 5 in your timeline.
You liked post 6 in your timeline.
You liked post 7 in your timeline.
You liked post 8 in your timeline.
You liked post 9 in your timeline.
You liked post 10 in your timeline.
```

```
Liked Posts ID: 1 -> 2 -> 3 -> 4 -> 5 -> 6 -> 7 -> 8 -> 9 -> 10
Liked Posts ID: 1 -> 2 -> 3 -> 4 -> 5 -> 6 -> 7 -> 8 -> 9 -> 10
Liked Posts ID: 3 -> 4 -> 5 -> 6 -> 7 -> 8 -> 9 -> 10
----------------------------------------------------------------
You commented post 1 in your timeline.
You commented post 2 in your timeline.
You commented post 3 in your timeline.
You commented post 4 in your timeline.
Make Comments ID:
PostID: 1 -> me too!
PostID: 2 -> <3
PostID: 3 -> I like it too
PostID: 4 -> I love it too
Make Comments ID:
PostID: 1 -> me too!
PostID: 2 -> <3
PostID: 3 -> I like it too
PostID: 4 -> I love it too
Make Comments ID:
PostID: 3 -> I like it too
PostID: 4 -> I love it too
----------------------------------------------------------------
You are now following sibelgulmez
You are now following gizemsungu
You are now following ahmetcebeci
You are now following yilmazcebeci
You are now following mehmetcebeci
You are now following aysecebeci
You are now following receptayyiperdogan
You are now following kemalkiliclaroglu
You are now following muharremince
gokhankaya Followers -> : sibelgulmez
gokhankaya Following -> : sibelgulmez
gokhankaya Following -> : gizemsungu
gokhankaya Following -> : ahmetcebeci
gokhankaya Following -> : yilmazcebeci
gokhankaya Following -> : mehmetcebeci
gokhankaya Following -> : aysecebeci
gokhankaya Following -> : receptayyiperdogan
gokhankaya Following -> : kemalkiliclaroglu
gokhankaya Following -> : muharremince
You have blocked gizemsungu
gokhankaya Followers -> : sibelgulmez
gokhankaya Following -> : sibelgulmez
gokhankaya Following -> : gizemsungu
gokhankaya Following -> : ahmetcebeci
gokhankaya Following -> : yilmazcebeci
gokhankaya Following -> : mehmetcebeci
gokhankaya Following -> : aysecebeci
gokhankaya Following -> : receptayyiperdogan
gokhankaya Following -> : kemalkiliclaroglu
gokhankaya Following -> : muharremince
You have blocked ahmetcebeci
gokhankaya Followers -> : sibelgulmez
gokhankaya Following -> : sibelgulmez
```

```
gokhankaya Following -> : yilmazcebeci
gokhankaya Following -> : mehmetcebeci
gokhankaya Following -> : aysecebeci
gokhankaya Following -> : receptayyiperdogan
gokhankaya Following -> : kemalkiliclaroglu
gokhankaya Following -> : muharremince
You unblocked gizemsungu
You unblocked ahmetcebeci
You are now following gizemsungu
You are now following ahmetcebeci
gokhankaya Followers -> : sibelgulmez
gokhankaya Following -> : sibelgulmez
gokhankaya Following -> : yilmazcebeci
gokhankaya Following -> : mehmetcebeci
gokhankaya Following -> : aysecebeci
gokhankaya Following -> : receptayyiperdogan
gokhankaya Following -> : kemalkiliclaroglu
gokhankaya Following -> : muharremince
gokhankaya Following -> : gizemsungu
gokhankaya Following -> : ahmetcebeci
------------------------------------------------
Inbox -> Hello, how are you? (from sibelgulmez)
Outbox is empty!
You sent a message to sibelgulmez.
------------------------------------------------
History:
Logged in-> gokhankaya
viewProfile: sibelgulmez
viewPost: sibelgulmez: I like Java...
viewPost: sibelgulmez: Java the coffee...
viewPost: sibelgulmez: Java the programming language...
viewPost: sibelgulmez: Java the island...
viewPost: sibelgulmez: Java the tea...
viewPost: sibelgulmez: I love C++
viewPost: sibelgulmez: I love C#
viewPost: sibelgulmez: I love Python
viewPost: sibelgulmez: I love Ruby
viewPost: sibelgulmez: I love JavaScript
You liked post 1 in your timeline.
You liked post 2 in your timeline.
You liked post 3 in your timeline.
You liked post 4 in your timeline.
You liked post 5 in your timeline.
You liked post 6 in your timeline.
You liked post 7 in your timeline.
You liked post 8 in your timeline.
You liked post 9 in your timeline.
You liked post 10 in your timeline.
You unliked post 1 in your timeline.
You unliked post 2 in your timeline.
You commented post 1 in your timeline.
You commented post 2 in your timeline.
You commented post 3 in your timeline.
You commented post 4 in your timeline.
You removed your comment from post 1 in your timeline.
```

```
viewPost: sibelgulmez: Java the tea...
viewPost: sibelgulmez: I love C++
viewPost: sibelgulmez: I love C#
viewPost: sibelgulmez: I love Python
viewPost: sibelgulmez: I love Ruby
viewPost: sibelgulmez: I love JavaScript
You liked post 1 in your timeline.
You liked post 2 in your timeline.
You liked post 3 in your timeline.
You liked post 4 in your timeline.
You liked post 5 in your timeline.
You liked post 6 in your timeline.
You liked post 7 in your timeline.
You liked post 8 in your timeline.
You liked post 9 in your timeline.
You liked post 10 in your timeline.
You unliked post 1 in your timeline.
You unliked post 2 in your timeline.
You commented post 1 in your timeline.
You commented post 2 in your timeline.
You commented post 3 in your timeline.
You commented post 4 in your timeline.
You removed your comment from post 1 in your timeline.
You removed your comment from post 2 in your timeline.
You are now following sibelgulmez
You are now following gizemsungu
You are now following ahmetcebeci
You are now following yilmazcebeci
You are now following mehmetcebeci
You are now following aysecebeci
You are now following receptayyiperdogan
You are now following kemalkiliclaroglu
You are now following muharremince
You have blocked gizemsungu
You have blocked ahmetcebeci
You unblocked gizemsungu
You unblocked ahmetcebeci
You are now following gizemsungu
You are now following ahmetcebeci
You sent a message to sibelgulmez.
---------------------------------------------------
(PostId: 1) I like Java...
Likes: gokhankaya
Comments:
gokhankaya: me too!
(PostId: 2) Java the coffee...
Likes: gokhankaya
Comments:
gokhankaya: <3
(PostId: 3) Java the programming language...
Likes: gokhankaya
Comments:
gokhankaya: I like it too
Logged out-> gokhankaya
```

2 – Time Complexity analysis

For ADD:

- The time Complexity for uses Array: O(1)
- The time Complexity for uses ArrayList: O(1)
- The time Complexity for uses LinkedList: O(n)
- The time Complexity for uses LDLinked List: O(n)

Using an Array:

The time complexity for using an array is O(1). This is because accessing an element in an array takes constant time, i.e., O(1). Therefore, iterating over all the elements in the array takes O(1) time.

Using an ArrayList:

In Java, adding an element to an array has a constant time complexity of O(1), while adding an element to an ArrayList is also constant time complexity using the add() method. However, when the capacity is full, ArrayList automatically increases its size, which can result in a time complexity of O(n), where n is the size of the ArrayList.

Using a LinkedList:

In a standard singly linked list, adding an element to the end of the list involves traversing the list from the head to the tail, which takes O(n) time in the worst case, where n is the number of elements in the list. This is because the new element must be added to the end of the list, and the entire list must be traversed to find the end.

Using a LDLinked List:

In a standard singly LDLinked list, adding an element to the end of the list involves traversing the list from the head to the tail, which takes O(n) time in the worst case, where n is the number of elements in the list. This is because the new element must be added to the end of the list, and the entire list must be traversed to find the end.

FOR REMOVE:

- The time Complexity for uses Array: O(n)
- The time Complexity for uses ArrayList: O(n)
- The time Complexity for uses LinkedList: O(n)
- The time Complexity for uses LDLinked List: O(n)

Using an Array:

The time complexity of deleting an element in an array depends on where the element to be deleted is located in the array. If the element is in the middle or at the beginning of the array, the operation takes O(n) time, since all subsequent elements must be shifted to fill the space.

Using an ArrayList:

The time complexity of the remove function in an ArrayList is O(n) because it may need to shift all subsequent elements if the element to be removed is located at the beginning or middle of the list.

Using a LinkedList:

The linked list, the time complexity of the remove operation is also O(n), regardless of where the element to be removed is located within the list. This is because, in a singly linked list, each node only has a reference to the next node, so to remove a node, we have to traverse the list from the beginning to find the node before the one to be removed and update its reference to skip over the node to be removed. This traversal takes O(n) time in the worst case, where n is the number of nodes in the list.

Using a LDLinked List:

LD Linked list is a type of linked list that uses lazy deletion, where nodes marked as deleted are not removed immediately, but their removal is deferred until a later time. This can reduce the time complexity of consecutive removal operations, as links are updated in batches during subsequent traversals. However, the worst-case time complexity of the remove operation is still O(n), where n is the number of nodes in the list, as all deleted nodes may need to be traversed to be removed.

3 - Experimental running time analysis

Implementation Type	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Basic Array Structure (HW1)	0m0,228s	0m0,253s	0m0,242s	Not available
Array List Structure (a)	0m0.252s	0m0,268s	0m0,260s	0m0,311s
Linked List Structure (b)	0m0,252s	0m0,273s	0m0,263s	0m0,317s
LD Linked List Structure (c)	0m0,291s	0m0,320s	0m0,288s	0m0,326s

4 - Problem solution approach for LDLinkedList

The LDLinked List data structure can be useful in scenarios where you need to delete elements from a linked list frequently, but you don't want to incur the overhead of physically removing elements from the list each time. Here are some possible approaches to working with old Linked List:

1-When you delete an element from the list, mark it as deleted instead of physically removing it. This allows for faster deletion operations.

2-When traversing the list, ignore any marked deleted elements.

3-Periodically remove marked deleted elements from the list to prevent clutter.

4-Use pre-built lazy deletion methods to simplify working with LD Linked List.

Following these steps will help you work with LD LinkedList effectively and take advantage of its lazy deletion feature.