

Ερωτηση 1:

START SERVER1 IN PORT 3980 IN KIWI COMPUTER

The screenshot shows four terminal windows side-by-side. The top-left window (Kiwi Computer) has the title "File Edit View Bookmarks Settings Help" and the command "java WebServer". It outputs: "Server port(3980): Server Started". The top-right window (Kiwi Computer) has the title "File Edit View Bookmarks Settings Help" and the command "java WebServer2". It outputs: "Server port(3981): Server Started". The bottom-left window (Frapa Computer) has the title "File Edit View Bookmarks Settings Help" and the command "java WebServer". It outputs: "Server port(3980): New request JOIN from server 3981". The bottom-right window (Frapa Computer) has the title "File Edit View Bookmarks Settings Help" and the command "java WebServer2". It outputs: "Server port(3981): I send request JOIN to server 3980".

```
File Edit View Bookmarks Settings Help
csd3980@kiwi:~/hy335/assignment2/WebServer$ java WebServer
Server port(3980): Server Started
Server port(3980): New request JOIN from server 3981
Server port(3980): List updated: 3980 3981
Server port(3980): Names updated: kiwi.csd.uoc.gr frapa.csd.uoc.gr
Server port(3980): I send request UPDATERLIST to server 3981
File Edit View Bookmarks Settings Help
csd3980@frapa:~/hy335/assignment2/WebServer2$ java WebServer2
Server port(3981): Server Started
Server port(3981): I send request JOIN to server 3980
Server port(3981): Accepted to join servers group
Server port(3981): New request UPDATERLIST from server 3980
Server port(3981): List updated: 3980 3981
Server port(3981): Names updated: kiwi.csd.uoc.gr frapa.csd.uoc.gr
File Edit View Bookmarks Settings Help
csd3980@firiki:~/hy335/assignment2/WebServer$ java WebServer
File Edit View Bookmarks Settings Help
csd3980@thanatos:~/hy335/assignment2/Clients$
```

START SERVER2 IN PORT 3981 IN FRAPA COMPUTER

The screenshot shows four terminal windows side-by-side. The top-left window (Kiwi Computer) has the title "File Edit View Bookmarks Settings Help" and the command "java WebServer". It outputs: "Server port(3980): Server Started". The top-right window (Kiwi Computer) has the title "File Edit View Bookmarks Settings Help" and the command "java WebServer2". It outputs: "Server port(3981): Server Started". The bottom-left window (Frapa Computer) has the title "File Edit View Bookmarks Settings Help" and the command "java WebServer". It outputs: "Server port(3980): New request JOIN from server 3981". The bottom-right window (Frapa Computer) has the title "File Edit View Bookmarks Settings Help" and the command "java WebServer2". It outputs: "Server port(3981): I send request JOIN to server 3980".

```
File Edit View Bookmarks Settings Help
csd3980@kiwi:~/hy335/assignment2/WebServer$ java WebServer
Server port(3980): Server Started
Server port(3980): New request JOIN from server 3981
Server port(3980): List updated: 3980 3981
Server port(3980): Names updated: kiwi.csd.uoc.gr frapa.csd.uoc.gr
Server port(3980): I send request UPDATERLIST to server 3981
File Edit View Bookmarks Settings Help
csd3980@frapa:~/hy335/assignment2/WebServer2$ java WebServer2
Server port(3981): Server Started
Server port(3981): I send request JOIN to server 3980
Server port(3981): Accepted to join servers group
Server port(3981): New request UPDATERLIST from server 3980
Server port(3981): List updated: 3980 3981
Server port(3981): Names updated: kiwi.csd.uoc.gr frapa.csd.uoc.gr
File Edit View Bookmarks Settings Help
csd3980@firiki:~/hy335/assignment2/WebServer$ java WebServer
File Edit View Bookmarks Settings Help
csd3980@thanatos:~/hy335/assignment2/Clients$
```

START SERVER3 IN PORT 3982 IN FIRIKI COMPUTER

The image shows four terminal windows. Top-left: csd3980@kwli:~/hy335/assignment2/WebServer1\$ java WebServer. Top-right: csd3980@frapa:~/hy335/assignment2/WebServer2\$ java WebServer. Bottom-left: csd3980@firiki:~/hy335/assignment2/WebServer3\$ java WebServer. Bottom-right: csd3980@thanatos:~/hy335/assignment2/Clients\$. The clients are sending JOIN requests to the servers.

```
File Edit View Bookmarks Settings Help
csd3980@kwli:~/hy335/assignment2/WebServer1$ java WebServer
Server port(3980): Server Started
Server port(3980): New request JOIN from server 3981
Server port(3980): List updated: 3980 3981
Server port(3980): Names updated: kwli.csd.uoc.gr frapa.csd.uoc.gr
Server port(3980): I send request UPDATERLIST to server 3981
Server port(3980): New request UPDATERLIST from server 3982
Server port(3980): List updated: 3980 3981 3982
Server port(3980): Names updated: kwli.csd.uoc.gr frapa.csd.uoc.gr firiki.csd.uoc.gr
File Edit View Bookmarks Settings Help
csd3980@frapa:~/hy335/assignment2/WebServer2$ java WebServer
Server port(3981): Server Started
Server port(3981): I send request JOIN to server 3980
Server port(3981): Accepted to join servers group
Server port(3981): New request UPDATERLIST from server 3980
Server port(3981): Names updated: kwli.csd.uoc.gr frapa.csd.uoc.gr
Server port(3981): New request JOIN from server 3982
Server port(3981): List updated: 3980 3981 3982
Server port(3981): Names updated: kwli.csd.uoc.gr frapa.csd.uoc.gr firiki.csd.uoc.gr
File Edit View Bookmarks Settings Help
csd3980@firiki:~/hy335/assignment2/WebServer3$ java WebServer
Server port(3982): Server Started
Server port(3982): I send request JOIN to server 3981
Server port(3982): Accepted to join servers group
Server port(3982): New request UPDATERLIST from server 3981
Server port(3982): I send request UPDATERLIST to server 3980
Server port(3982): New request UPDATERLIST from server 3982
Server port(3982): List updated: 3980 3981 3982
Server port(3982): Names updated: kwli.csd.uoc.gr frapa.csd.uoc.gr firiki.csd.uoc.gr
File Edit View Bookmarks Settings Help
csd3980@thanatos:~/hy335/assignment2/Clients$ 
```

CLOSE SERVER2

The image shows four terminal windows. Top-left: csd3980@kwli:~/hy335/assignment2/WebServer1\$ java WebServer. Top-right: csd3980@frapa:~/hy335/assignment2/WebServer2\$ java WebServer. Bottom-left: csd3980@firiki:~/hy335/assignment2/WebServer3\$ java WebServer. Bottom-right: csd3980@thanatos:~/hy335/assignment2/Clients\$. The clients are sending JOIN requests to the servers. In the top-right window, the server has been closed.

```
File Edit View Bookmarks Settings Help
csd3980@kwli:~/hy335/assignment2/WebServer1$ java WebServer
Server port(3980): Server Started
Server port(3980): New request JOIN from server 3981
Server port(3980): List updated: 3980 3981
Server port(3980): Names updated: kwli.csd.uoc.gr frapa.csd.uoc.gr
Server port(3980): I send request UPDATERLIST to server 3981
Server port(3980): New request UPDATERLIST from server 3982
Server port(3980): List updated: 3980 3981 3982
Server port(3980): Names updated: kwli.csd.uoc.gr frapa.csd.uoc.gr firiki.csd.uoc.gr
Server port(3980): I lost the connection with server in port 3981
Server port(3980): I send request UPDATERLIST to server 3982
File Edit View Bookmarks Settings Help
csd3980@frapa:~/hy335/assignment2/WebServer2$ java WebServer
Server port(3981): Server Started
Server port(3981): I send request JOIN to server 3980
Server port(3981): Accepted to join servers group
Server port(3981): New request UPDATERLIST from server 3980
Server port(3981): List updated: 3980 3981
Server port(3981): Names updated: kwli.csd.uoc.gr frapa.csd.uoc.gr
Server port(3981): New request JOIN from server 3982
Server port(3981): List updated: 3980 3981 3982
Server port(3981): Names updated: kwli.csd.uoc.gr frapa.csd.uoc.gr firiki.csd.uoc.gr
File Edit View Bookmarks Settings Help
csd3980@firiki:~/hy335/assignment2/WebServer3$ java WebServer
Server port(3982): Server Started
Server port(3982): I send request JOIN to server 3981
Server port(3982): Accepted to join servers group
Server port(3982): New request UPDATERLIST from server 3981
Server port(3982): List updated: 3980 3981 3982
Server port(3982): Names updated: kwli.csd.uoc.gr frapa.csd.uoc.gr firiki.csd.uoc.gr
File Edit View Bookmarks Settings Help
csd3980@thanatos:~/hy335/assignment2/Clients$ 
```

CLOSE SERVER3

```
File Edit View Bookmarks Settings Help
csd3980@kwli:~/hy335/assignment2/WebServer1$ java WebServer
Server port(3980): Server Started
Server port(3980): New request JOIN from server 3981
Server port(3980): Accepted to join servers group
Server port(3980): Names updated: kiwi.csd.uoc.gr frapa.csd.uoc.gr
Server port(3980): I send request UPDATERLIST from server 3981
Server port(3980): New request UPDATERLIST from server 3982
Server port(3980): List updated: 3980 3981 3982
Server port(3980): Names updated: kiwi.csd.uoc.gr frapa.csd.uoc.gr firiki.csd.uoc.gr
Server port(3980): I lost the connection with server 3981
Server port(3980): I send request UPDATERLIST to server 3982
Server port(3980): I lost the connection with server 3982
File Edit View Bookmarks Settings Help
csd3980@frapa:~/hy335/assignment2/WebServer2$ java WebServer
Server port(3981): Server Started
Server port(3981): I send request JOIN to server 3980
Server port(3981): Accepted to join servers group
Server port(3981): New request UPDATERLIST from server 3980
Server port(3981): List updated: 3980 3981
Server port(3981): Names updated: Kiwi.csd.uoc.gr frapa.csd.uoc.gr
Server port(3981): New request JOIN from server 3982
Server port(3981): List updated: 3980 3981 3982
Server port(3981): Names updated: Kiwi.csd.uoc.gr frapa.csd.uoc.gr firiki.csd.uoc.gr
Server port(3981): I send request UPDATERLIST to server 3982
File Edit View Bookmarks Settings Help
csd3980@firiki:~/hy335/assignment2/WebServer3$ java WebServer
Server port(3982): Server Started
Server port(3982): I send request JOIN to server 3981
Server port(3982): Accepted to join servers group
Server port(3982): New request UPDATERLIST from server 3981
Server port(3982): List updated: 3980 3981 3982
Server port(3982): Names updated: kiwi.csd.uoc.gr frapa.csd.uoc.gr firiki.csd.uoc.gr
Server port(3982): I lost the connection with server 3981
Server port(3982): New request UPDATERLIST from server 3980
Server port(3982): List updated: 3980 3982
Server port(3982): Names updated: kiwi.csd.uoc.gr firiki.csd.uoc.gr
File Edit View Bookmarks Settings Help
csd3980@thanatos:~/hy335/assignment2/Clients$
```

START AGAIN SERVER2 IN PORT 3981 AND SERVER3 IN PORT 3982

```
File Edit View Bookmarks Settings Help
csd3980@kwli:~/hy335/assignment2/WebServer1$ java WebServer
Server port(3980): Server Started
Server port(3980): New request JOIN from server 3981
Server port(3980): Accepted to join servers group
Server port(3980): Names updated: kiwi.csd.uoc.gr frapa.csd.uoc.gr
Server port(3980): I send request UPDATERLIST from server 3981
Server port(3980): New request UPDATERLIST from server 3982
Server port(3980): List updated: 3980 3981 3982
Server port(3980): Names updated: kiwi.csd.uoc.gr frapa.csd.uoc.gr firiki.csd.uoc.gr
Server port(3980): I lost the connection with server 3981
Server port(3980): New request UPDATERLIST to server 3982
Server port(3980): I lost the connection with server 3982
Server port(3980): New request JOIN from server 3982
Server port(3980): List updated: 3980 3981
Server port(3980): Names updated: kiwi.csd.uoc.gr frapa.csd.uoc.gr
Server port(3980): I send request UPDATERLIST to server 3981
Server port(3980): New request UPDATERLIST from server 3982
Server port(3980): List updated: 3980 3981 3982
Server port(3980): Names updated: kiwi.csd.uoc.gr frapa.csd.uoc.gr firiki.csd.uoc.gr
File Edit View Bookmarks Settings Help
csd3980@frapa:~/hy335/assignment2/WebServer2$ java WebServer
Server port(3981): Server Started
Server port(3981): I send request JOIN to server 3980
Server port(3981): Accepted to join servers group
Server port(3981): New request UPDATERLIST from server 3980
Server port(3981): List updated: 3980 3981
Server port(3981): Names updated: Kiwi.csd.uoc.gr frapa.csd.uoc.gr
Server port(3981): New request JOIN from server 3982
Server port(3981): List updated: 3980 3981 3982
Server port(3981): Names updated: Kiwi.csd.uoc.gr frapa.csd.uoc.gr firiki.csd.uoc.gr
Server port(3981): I send request UPDATERLIST to server 3982
File Edit View Bookmarks Settings Help
csd3980@firiki:~/hy335/assignment2/WebServer3$ java WebServer
Server port(3982): Server Started
Server port(3982): I send request JOIN to server 3981
Server port(3982): Accepted to join servers group
Server port(3982): New request UPDATERLIST from server 3981
Server port(3982): List updated: 3980 3981 3982
Server port(3982): Names updated: kiwi.csd.uoc.gr frapa.csd.uoc.gr firiki.csd.uoc.gr
Server port(3982): I lost the connection with server 3981
Server port(3982): New request UPDATERLIST from server 3980
Server port(3982): List updated: 3980 3982
Server port(3982): Names updated: kiwi.csd.uoc.gr firiki.csd.uoc.gr
File Edit View Bookmarks Settings Help
csd3980@thanatos:~/hy335/assignment2/Clients$
```

ΕΡΩΤΗΣΗ 2:

START ALL SERVERS AND CLIENT

The image shows four terminal windows side-by-side. The top-left window shows the start of WebServer1 at port 3980. The top-right window shows the start of WebServer2 at port 3981. The bottom-left window shows the start of WebServer3 at port 3982. The bottom-right window shows the start of Client1 at port 3980.

```
File Edit View Bookmarks Settings Help
csd3980@frapa:~/hy335/assignment2/WebServer1$ java WebServer
Server port(3980): Server Started
Server port(3980): New request JOIN from server 3981
Server port(3980): List updated: 3980 3981
Server port(3980): Names updated: kiwi.cs.uoc.gr frapa.cs.uoc.gr
Server port(3980): I send request UPDATERLIST to server 3981
Server port(3980): New request UPDATERLIST from server 3981
Server port(3980): List updated: 3980 3981 3982
Server port(3980): Names updated: ktwl.cs.uoc.gr frapa.cs.uoc.gr firiki.cs.uoc.gr
[...]
```

```
File Edit View Bookmarks Settings Help
csd3980@frapa:~/hy335/assignment2/WebServer2$ java WebServer
Server port(3981): Server Started
Server port(3981): I send request JOIN to server 3980
Server port(3981): Accepted to join servers group
Server port(3981): New request UPDATERLIST from server 3980
Server port(3981): List updated: 3980 3981
Server port(3981): Names updated: ktwl.cs.uoc.gr frapa.cs.uoc.gr
Server port(3981): I send request UPDATERLIST to server 3980
[...]
```

```
File Edit View Bookmarks Settings Help
csd3980@frapa:~/hy335/assignment2/WebServer3$ java WebServer
Server port(3982): Server Started
Server port(3982): I send request JOIN to server 3981
Server port(3982): Accepted to join servers group
Server port(3982): New request UPDATERLIST from server 3981
Server port(3982): List updated: 3980 3981 3982
Server port(3982): Names updated: ktwl.cs.uoc.gr frapa.cs.uoc.gr firiki.cs.uoc.gr
Server port(3982): I send request UPDATERLIST to server 3980
[...]
```

```
File Edit View Bookmarks Settings Help
csd3980@thanatos:~/hy335/assignment2/Clients$ java Client
Computer: [ ]
```

SEND PUT REQUEST TO SERVER2

The image shows four terminal windows side-by-side. The top-left window shows the start of WebServer1 at port 3980. The top-right window shows the start of WebServer2 at port 3981. The bottom-left window shows the start of WebServer3 at port 3982. The bottom-right window shows a Client sending a PUT request to Server2 at port 3981, which then responds with the storage update.

```
File Edit View Bookmarks Settings Help
csd3980@frapa:~/hy335/assignment2/WebServer1$ java WebServer
Server port(3980): Server Started
Server port(3980): New request JOIN from server 3981
Server port(3980): List updated: 3980 3981
Server port(3980): Names updated: kiwi.cs.uoc.gr frapa.cs.uoc.gr
Server port(3980): I send request UPDATERLIST to server 3981
Server port(3980): New request UPDATERLIST from server 3981
Server port(3980): List updated: 3980 3981 3982
Server port(3980): Names updated: ktwl.cs.uoc.gr frapa.cs.uoc.gr firiki.cs.uoc.gr
Server port(3980): New request PUT from server 3982
Server port(3980): New entry -> (kostas,loukas) Storage updated: (kostas,loukas)
[...]
```

```
File Edit View Bookmarks Settings Help
csd3980@frapa:~/hy335/assignment2/WebServer2$ java WebServer
Server port(3981): Server Started
Server port(3981): I send request JOIN to server 3980
Server port(3981): Accepted to join servers group
Server port(3981): New request UPDATERLIST from server 3980
Server port(3981): List updated: 3980 3981
Server port(3981): Names updated: ktwl.cs.uoc.gr frapa.cs.uoc.gr
Server port(3981): I send request JOIN from server 3982
Server port(3981): List updated: 3980 3981 3982
Server port(3981): Names updated: ktwl.cs.uoc.gr frapa.cs.uoc.gr firiki.cs.uoc.gr
Server port(3981): I send request UPDATERLIST to server 3982
[...]
```

```
File Edit View Bookmarks Settings Help
csd3980@frapa:~/hy335/assignment2/WebServer3$ java WebServer
Server port(3982): Server Started
Server port(3982): I send request JOIN to server 3981
Server port(3982): Accepted to join servers group
Server port(3982): New request UPDATERLIST from server 3981
Server port(3982): List updated: 3980 3981 3982
Server port(3982): Names updated: ktwl.cs.uoc.gr frapa.cs.uoc.gr firiki.cs.uoc.gr
Server port(3982): I send request UPDATERLIST to server 3980
[...]
```

```
File Edit View Bookmarks Settings Help
csd3980@thanatos:~/hy335/assignment2/Clients$ java Client
Computer: [ ]
```

```
File Edit View Bookmarks Settings Help
csd3980@frapa:~/hy335/assignment2/Clients$ java Client
Computer: [ ]
Method: put
Key: kostas
Value: loukas
Client: I send PUT request (kostas,loukas) to Server 3981
Client: SERVER RESPONSE: HTTP PUT complete for (kostas,loukas)
[...]
```

SEND PUT REQUEST TO SERVER3

```
File Edit View Bookmarks Settings Help
csd3980@kwl:~/hy335/assignment2$ java WebServer
Server port(3980): Server Started
Server port(3980): New request JOIN from server 3981
Server port(3980): List updated: 3980 3981
Server port(3980): Names updated: kwl.csd.uoc.gr frapa.csuoc.gr
Server port(3980): I send request UPDATERLIST to server 3981
Server port(3980): New request UPDATERLIST from server 3982
Server port(3980): List updated: 3980 3981 3982
Server port(3980): Names updated: kwl.csd.uoc.gr frapa.csuoc.gr firiki.csuoc.gr
Server port(3980): New request PUT from server 3982
Server port(3980): New entry -> (kostas,loukas) Storage updated: (kostas,loukas)
Server port(3980): I send request PUT to server 3981
Server port(3980): New entry -> (katerina,1234) Storage updated: (katerina,1234) (kostas,loukas)
Server port(3980): I send request PUT to server 3981
[...]
```

```
File Edit View Bookmarks Settings Help
csd3980@frapa:~/hy335/assignment2$ java WebServer
Server port(3981): Server Started
Server port(3981): I send request JOIN to server 3988
Server port(3981): Accepted to join servers group
Server port(3981): New request UPDATERLIST from server 3980
Server port(3981): List updated: 3980 3981
Server port(3981): Names updated: kwl.csd.uoc.gr frapa.csuoc.gr firiki.csuoc.gr
Server port(3981): I send request UPDATERLIST to server 3982
Server port(3981): New request PUT from client
Server port(3981): New entry -> (kostas,loukas) Storage updated: (kostas,loukas)
Server port(3981): I send request PUT to server 3982
Server port(3981): New request PUT from server 3988
Server port(3981): New entry -> (katerina,1234) Storage updated: (katerina,1234) (kostas,loukas)
Server port(3981): I send request PUT to server 3981
[...]
```

```
File Edit View Bookmarks Settings Help
csd3980@firiki:~/hy335/assignment2$ java WebServer
Server port(3982): Server Started
Server port(3982): I send request JOIN to server 3981
Server port(3982): Accepted to join servers group
Server port(3982): New request UPDATERLIST from server 3981
Server port(3982): List updated: 3980 3981 3982
Server port(3982): Names updated: kwl.csd.uoc.gr frapa.csuoc.gr firiki.csuoc.gr
Server port(3982): I send request UPDATERLIST to server 3980
Server port(3982): New request PUT from client
Server port(3982): New entry -> (kostas,loukas) Storage updated: (kostas,loukas)
Server port(3982): I send request PUT to server 3980
Server port(3982): New entry -> (katerina,1234) Storage updated: (katerina,1234) (kostas,loukas)
Server port(3982): I send request PUT to server 3980
[...]
```

```
File Edit View Bookmarks Settings Help
csd3980@hanatos:~/hy335/assignment2$ java Client
-----
Computer: frapa
Method: put
Key: kostas
Value: loukas
Client: I send PUT request (kostas,loukas) to Server 3981
Client: SERVER RESPONSE: HTTP PUT complete for (kostas,loukas)
-----
Computer: firiki
Method: put
Key: katerina
Value: 1234
Client: I send PUT request (katerina,1234) to Server 3982
Client: SERVER RESPONSE: HTTP PUT complete for (katerina,1234)
-----
Computer: kwl
Method: put
Key: csd3980
Value: katerinas loukas
Client: I send PUT request (csd3980,kostas loukas) to Server 3980
Client: SERVER RESPONSE: HTTP PUT complete for (rsd3980,kostas loukas)
-----
Computer: [...]
```

SEND PUT REQUEST TO SERVER1

```
File Edit View Bookmarks Settings Help
csd3980@kwl:~/hy335/assignment2$ java WebServer
Server port(3980): Server Started
Server port(3980): New request JOIN from server 3981
Server port(3980): List updated: 3980 3981
Server port(3980): Names updated: kwl.csd.uoc.gr frapa.csuoc.gr
Server port(3980): I send request UPDATERLIST to server 3981
Server port(3980): New request UPDATERLIST from server 3982
Server port(3980): List updated: 3980 3981 3982
Server port(3980): Names updated: kwl.csd.uoc.gr frapa.csuoc.gr firiki.csuoc.gr
Server port(3980): New request PUT from server 3982
Server port(3980): New entry -> (kostas,loukas) Storage updated: (kostas,loukas)
Server port(3980): I send request PUT to server 3981
Server port(3980): New entry -> (katerina,1234) Storage updated: (katerina,1234) (kostas,loukas)
Server port(3980): I send request PUT to server 3981
[...]
```

```
File Edit View Bookmarks Settings Help
csd3980@frapa:~/hy335/assignment2$ java WebServer
Server port(3981): Server Started
Server port(3981): I send request JOIN to server 3988
Server port(3981): Accepted to join servers group
Server port(3981): New request UPDATERLIST from server 3980
Server port(3981): List updated: 3980 3981
Server port(3981): Names updated: kwl.csd.uoc.gr frapa.csuoc.gr firiki.csuoc.gr
Server port(3981): I send request UPDATERLIST to server 3982
Server port(3981): New request PUT from client
Server port(3981): New entry -> (kostas,loukas) Storage updated: (kostas,loukas)
Server port(3981): I send request PUT to server 3982
Server port(3981): New request PUT from server 3988
Server port(3981): New entry -> (katerina,1234) Storage updated: (katerina,1234) (kostas,loukas)
Server port(3981): I send request PUT to server 3981
[...]
```

```
File Edit View Bookmarks Settings Help
csd3980@firiki:~/hy335/assignment2$ java WebServer
Server port(3982): Server Started
Server port(3982): I send request JOIN to server 3981
Server port(3982): Accepted to join servers group
Server port(3982): New request UPDATERLIST from server 3981
Server port(3982): List updated: 3980 3981 3982
Server port(3982): Names updated: kwl.csd.uoc.gr frapa.csuoc.gr firiki.csuoc.gr
Server port(3982): I send request UPDATERLIST to server 3980
Server port(3982): New request PUT from client
Server port(3982): New entry -> (kostas,loukas) Storage updated: (kostas,loukas)
Server port(3982): I send request PUT to server 3980
Server port(3982): New entry -> (katerina,1234) Storage updated: (katerina,1234) (kostas,loukas)
Server port(3982): I send request PUT to server 3980
[...]
```

```
File Edit View Bookmarks Settings Help
csd3980@hanatos:~/hy335/assignment2$ java Client
-----
Computer: frapa
Method: put
Key: kostas
Value: loukas
Client: I send PUT request (kostas,loukas) to Server 3981
Client: SERVER RESPONSE: HTTP PUT complete for (kostas,loukas)
-----
Computer: firiki
Method: put
Key: katerina
Value: 1234
Client: I send PUT request (katerina,1234) to Server 3982
Client: SERVER RESPONSE: HTTP PUT complete for (katerina,1234)
-----
Computer: kwl
Method: put
Key: csd3980
Value: katerinas loukas
Client: I send PUT request (csd3980,kostas loukas) to Server 3980
Client: SERVER RESPONSE: HTTP PUT complete for (rsd3980,kostas loukas)
-----
Computer: [...]
```

ΕΡΩΤΗΣΗ 3:

SEND GET REQUEST TO SERVER2

```
File Edit View Bookmarks Settings Help ~: bash - Konsole <3>
csd3980@kwlw:~/hy335/assignment2/WebServer$ java WebServer
Server port(3980): Server Started
Server port(3980): New request JOIN from server 3981
Server port(3980): Names updated: kwlw.csd.uoc.gr frapa.csd.uoc.gr
Server port(3980): I send request UPDATERLIST to server 3981
Server port(3980): New request UPDATERLIST from server 3982
Server port(3980): List updated: 3980 3981
Server port(3980): Names updated: kwlw.csd.uoc.gr frapa.csd.uoc.gr fririki.csd.uoc.gr
Server port(3980): New request PUT from server 3982
Server port(3980): New entry -> (kostas,loukas) Storage updated: (kostas,loukas)
Server port(3980): I send request PUT to server 3982
Server port(3980): New entry -> (katerina,1234) Storage updated: (katerina,1234) (kostas,loukas)
Server port(3980): I send request PUT to server 3981
Server port(3980): New request PUT from client
Server port(3980): New entry -> (csd3980,kostas loukas) Storage updated: (katerina,1234) (csd3980,kostas loukas) (kostas,loukas)
Server port(3980): I send request PUT to server 3981
File Edit View Bookmarks Settings Help ~: bash - Konsole <4>
csd3980@frapa:~/hy335/assignment2/WebServer$ java WebServer
Server port(3981): Server Started
Server port(3981): I send request JOIN to server 3980
Server port(3981): Names updated: join servers group
Server port(3981): New request UPDATERLIST from server 3980
Server port(3981): list updated: 3980 3981
Server port(3981): Names updated: kwlw.csd.uoc.gr frapa.csd.uoc.gr
Server port(3981): New request JOIN from server 3982
Server port(3981): List updated: 3980 3981 3982
Server port(3981): Names updated: kwlw.csd.uoc.gr frapa.csd.uoc.gr fririki.csd.uoc.gr
Server port(3981): I send request PUT to server 3982
Server port(3981): I send request PUT from Client
Server port(3981): New entry -> (kostas,loukas) Storage updated: (kostas,loukas)
Server port(3981): I send request PUT to server 3982
Server port(3981): New request PUT from server 3980
Server port(3981): New entry -> (katerina,1234) Storage updated: (katerina,1234) (kostas,loukas)
Server port(3981): I send request PUT to server 3982
Server port(3981): New request GET from Client
File Edit View Bookmarks Settings Help ~: bash - Konsole <2>
csd3980@fririki:~/hy335/assignment2/WebServer$ java WebServer
Server port(3982): Server Started
Server port(3982): I send request UPDATERLIST to server 3980
Server port(3982): New request UPDATERLIST from server 3981
Server port(3982): List updated: 3980 3981 3982
Server port(3982): Names updated: kwlw.csd.uoc.gr frapa.csd.uoc.gr fririki.csd.uoc.gr
Server port(3982): I send request UPDATERLIST to server 3980
Server port(3982): New request PUT from server 3981
Server port(3982): New entry -> (kostas,loukas) Storage updated: (kostas,loukas)
Server port(3982): I send request PUT to server 3980
Server port(3982): New request PUT from Client
Server port(3982): New entry -> (katerina,1234) Storage updated: (katerina,1234) (kostas,loukas)
Server port(3982): I send request PUT to server 3988
Server port(3982): New request PUT from server 3981
Server port(3982): New entry -> (csd3980,kostas loukas) Storage updated: (katerina,1234) (csd3980,kostas loukas) (kostas,loukas)
File Edit View Bookmarks Settings Help ~: bash - Konsole <2>
Key: kostas
Value: loukas
Client: I send PUT request (kostas,loukas) to Server 3981
Client: SERVER RESPONSE: HTTP PUT complete for (kostas,loukas)
-----
Computer: fririki
Method: put
Key: katerina
Value: 1234
Client: I send PUT request (katerina,1234) to Server 3982
Client: SERVER RESPONSE: HTTP PUT complete for (katerina,1234)
-----
Computer: kwlw
Method: put
Key: csd3980
Value: kostas loukas
Client: I send PUT request (csd3980,kostas loukas) to Server 3980
Client: SERVER RESPONSE: HTTP PUT complete for (csd3980,kostas loukas)
-----
Computer: frapa
Method: get
Key: kostas
Client: I send GET request (kostas) to Server 3981
Client: RESPONSE from Server 3981: The value of (Kostas) is loukas
Computer: 
```

SEND GET REQUEST TO SERVER1

```
- : bash — Konsole <3>
File Edit View Bookmarks Settings Help
cd3398@ktwl:/hv35/assignment2/WebServer1$ java WebServer
Server port(3988): Server Started
Server port(3988): New request JOIN from server 3981
Server port(3988): List updated: 3980 3981
Server port(3988): Names updated: ktwl.csdl.uoc.gr frapa.csdl.uoc.gr
Server port(3988): I send request UPDATERLIST to server 3981
Server port(3988): New request UPDATERLIST from server 3982
Server port(3988): List updated: 3980 3981 3982
Server port(3988): Names updated: ktwl.csdl.uoc.gr frapa.csdl.uoc.gr firiki.csdl.uoc.gr
Server port(3988): New request PUT from server 3982
Server port(3988): New entry -> (kostas,loukas) Storage updated: (kostas,loukas)
Server port(3988): New request PUT from server 3982
Server port(3988): New entry -> (katerina,1234) Storage updated: (katerina,1234) (kostas,loukas)
Server port(3988): I send request PUT to server 3981
Server port(3988): New entry -> (katerina,1234) Storage updated: (katerina,1234) (kostas,loukas)
Server port(3988): I send request PUT from client
Server port(3988): New entry -> (cd33980,kostas loukas) Storage updated: (katerina,1234) (cd33980,kostas loukas) (kostas,loukas)
Server port(3988): I send request GET from client
[]

- : bash — Konsole <4>
File Edit View Bookmarks Settings Help
cd3398@frapa:/hv35/assignment2/WebServer2$ java WebServer
Server port(3981): Server Started
Server port(3981): I send request JOIN to server 3980
Server port(3981): Accepted to join servers group
Server port(3981): New request UPDATERLIST from server 3980
Server port(3981): List updated: 3980 3981
Server port(3981): Names updated: ktwl.csdl.uoc.gr frapa.csdl.uoc.gr
Server port(3981): I send request JOIN from server 3982
Server port(3981): List updated: 3980 3981 3982
Server port(3981): Names updated: ktwl.csdl.uoc.gr frapa.csdl.uoc.gr firiki.csdl.uoc.gr
Server port(3981): I send request UPDATERLIST to server 3982
Server port(3981): New request PUT from client
Server port(3981): New entry -> (kostas,loukas) Storage updated: (kostas,loukas)
Server port(3981): I send request PUT to server 3982
Server port(3981): New entry -> (cd33980,kostas loukas) Storage updated: (katerina,1234) (cd33980,kostas loukas) (kostas,loukas)
Server port(3981): I send request PUT to server 3982
Server port(3981): New entry -> (katerina,1234) Storage updated: (katerina,1234) (kostas,loukas)
Server port(3981): I send request PUT to server 3982
Server port(3981): New request GET from client
[]

- : bash — Konsole <2>
File Edit View Bookmarks Settings Help
cd3398@firki:/hv35/assignment2/WebServer3$ java WebServer
Server port(3982): Server Started
Server port(3982): I send request JOIN to server 3981
Server port(3982): Accepted to join servers group
Server port(3982): New request UPDATERLIST from server 3981
Server port(3982): List updated: 3980 3981
Server port(3982): Names updated: ktwl.csdl.uoc.gr frapa.csdl.uoc.gr firiki.csdl.uoc.gr
Server port(3982): I send request UPDATERLIST to server 3981
Server port(3982): New request PUT from server 3980
Server port(3982): New entry -> (kostas,loukas) Storage updated: (kostas,loukas)
Server port(3982): I send request PUT to server 3980
Server port(3982): New request PUT from client
Server port(3982): New entry -> (katerina,1234) Storage updated: (katerina,1234) (kostas,loukas)
Server port(3982): I send request PUT to server 3980
Server port(3982): New request PUT from server 3981
Server port(3982): New entry -> (cd33980,kostas loukas) Storage updated: (katerina,1234) (cd33980,kostas loukas) (kostas,loukas)
Server port(3982): I send request GET from client
[]

-----  

Computer: ktwl  

Method: put  

Key: katerina  

Value: 1234  

Client: I send PUT request (katerina,1234) to Server 3982  

Client: SERVER RESPONSE: HTTP PUT complete for (katerina,1234)  

-----  

Computer: ktwl  

Method: put  

Key: cd33980  

Value: kostas loukas  

Client: I send PUT request (cd33980,kostas loukas) to Server 3980  

Client: SERVER RESPONSE: HTTP PUT complete for (cd33980,kostas loukas)  

-----  

Computer: frapa  

Method: get  

Key: kostas  

Client: I send GET request (kostas) to Server 3981  

Client: RESPONSE from Server 3981: The value of (kostas) is loukas  

-----  

Computer: ktwl  

Method: get  

Key: katerina  

Client: I send GET request (katerina) to Server 3980  

Client: RESPONSE from Server 3980: The value of (katerina) is 1234  

-----  

Computer: 
```

SEND GET REQUEST TO SERVER3

```

File Edit View Bookmarks Settings Help

```

```

csd3980@kwl:~/hy335/assignment2/WebServer$ java WebServer
Server port(3980): Server Started
Server port(3980): New request JOIN from server 3981
Server port(3980): List updated: 3980 3981
Server port(3980): Names updated: kiwi.csd.uoc.gr frapa.csd.uoc.gr
Server port(3980): I send request UPDATERLIST to server 3981
Server port(3980): New entry -> (kostas,loukas) Storage updated: (kostas,loukas)
Server port(3980): Names updated: kiwi.csd.uoc.gr frapa.csd.uoc.gr firiki.csd.uoc.gr
Server port(3980): New request PUT from server 3982
Server port(3980): List updated: 3980 3981 3982
Server port(3980): Names updated: kiwi.csd.uoc.gr frapa.csd.uoc.gr firiki.csd.uoc.gr
Server port(3980): New request PUT from server 3982
Server port(3980): New entry -> (katerina,1234) Storage updated: (katerina,1234) (kostas,loukas)
Server port(3980): New entry -> (katerina,1234) Storage updated: (katerina,1234) (kostas,loukas)
Server port(3980): I send request PUT to server 3981
Server port(3980): New request PUT from client
Server port(3980): New entry -> (csd3980,kostas loukas) Storage updated: (katerina,1234) (csd3980,kost
as loukas) (kostas,loukas)
Server port(3980): I send request PUT to server 3981
Server port(3980): New request GET from client

```

```

csd3980@firliki:~/hy335/assignment2/WebServer$ java WebServer
Server port(3981): Server Started
Server port(3981): I send request JOIN to server 3980
Server port(3981): Accepted to join servers group
Server port(3981): New request UPDATERLIST from server 3980
Server port(3981): List updated: 3980 3981
Server port(3981): Names updated: kiwi.csd.uoc.gr frapa.csd.uoc.gr firiki.csd.uoc.gr
Server port(3981): I send request UPDATERLIST to server 3982
Server port(3981): New request PUT from server 3980
Server port(3981): List updated: 3980 3981 3982
Server port(3981): Names updated: kiwi.csd.uoc.gr frapa.csd.uoc.gr firiki.csd.uoc.gr
Server port(3981): New request PUT from server 3982
Server port(3981): New entry -> (katerina,1234) Storage updated: (katerina,1234) (kostas,loukas)
Server port(3981): New entry -> (katerina,1234) Storage updated: (katerina,1234) (kostas,loukas)
Server port(3981): I send request PUT to server 3982
Server port(3981): New request GET from client
Server port(3981): New entry -> (csd3980,kostas loukas) Storage updated: (katerina,1234) (csd3980,kost
as loukas) (kostas,loukas)
Server port(3981): I send request PUT to server 3982
Server port(3981): New request GET from client

```

```

csd3980@firliki:~/hy335/assignment2/WebServer$ java WebServer
Server port(3982): Server Started
Server port(3982): I send request JOIN to server 3981
Server port(3982): Accepted to join servers group
Server port(3982): New request UPDATERLIST from server 3981
Server port(3982): List updated: 3980 3981
Server port(3982): Names updated: kiwi.csd.uoc.gr frapa.csd.uoc.gr firiki.csd.uoc.gr
Server port(3982): I send request UPDATERLIST to server 3980
Server port(3982): New request PUT from server 3981
Server port(3982): List updated: 3980 3981 3982
Server port(3982): Names updated: kiwi.csd.uoc.gr frapa.csd.uoc.gr firiki.csd.uoc.gr
Server port(3982): I send request PUT from server 3981
Server port(3982): New entry -> (katerina,1234) Storage updated: (katerina,1234) (kostas,loukas)
Server port(3982): I send request PUT to server 3980
Server port(3982): New request PUT from server 3981
Server port(3982): New entry -> (csd3980,kostas loukas) Storage updated: (katerina,1234) (csd3980,kost
as loukas) (kostas,loukas)
Server port(3982): I send request GET from client
Server port(3982): New request PUT from client
Server port(3982): I lost the connection with server in port 3981
Server port(3982): I send request UPDATERLIST to server 3980

```

```

File Edit View Bookmarks Settings Help

```

```

Computer: kwl
Method: put
Key: csd3980
Value: kostas loukas
Client: I send PUT request (csd3980,kostas loukas) to Server 3980
Client: SERVER RESPONSE: HTTP PUT complete for (csd3980,kostas loukas)
-----
Computer: frapa
Method: get
Key: kostas
Client: I send GET request (kostas) to Server 3981
Client: RESPONSE from Server 3981: The value of (kostas) is loukas
-----
Computer: kwl
Method: get
Key: katerina
Client: I send GET request (katerina) to Server 3980
Client: RESPONSE from Server 3980: The value of (katerina) is 1234
-----
Computer: firiki
Method: get
Key: csd3980
Client: I send GET request (csd3980) to Server 3982
Client: RESPONSE from Server 3982: The value of (csd3980) is kostas loukas
-----
Computer: []

```

ΕΡΩΤΗΣΗ 4:

WE CLOSE SERVER 2 (LOST ALL DATA)

```

File Edit View Bookmarks Settings Help

```

```

csd3980@kwl:~/hy335/assignment2/WebServer$ java WebServer
Server port(3980): Server Started
Server port(3980): New request JOIN from server 3981
Server port(3980): List updated: 3980 3981
Server port(3980): Names updated: kiwi.csd.uoc.gr frapa.csd.uoc.gr
Server port(3980): I send request UPDATERLIST to server 3981
Server port(3980): New request UPDATERLIST from server 3981
Server port(3980): List updated: 3980 3981 3982
Server port(3980): Names updated: kiwi.csd.uoc.gr frapa.csd.uoc.gr firiki.csd.uoc.gr
Server port(3980): I send request UPDATERLIST to server 3982
Server port(3980): New request PUT from server 3981
Server port(3980): List updated: 3980 3981 3982
Server port(3980): Names updated: kiwi.csd.uoc.gr frapa.csd.uoc.gr firiki.csd.uoc.gr
Server port(3980): I send request PUT to server 3981
Server port(3980): New request PUT from client
Server port(3980): New entry -> (csd3980,kostas loukas) Storage updated: (katerina,1234) (csd3980,kost
as loukas) (kostas,loukas)
Server port(3980): I send request PUT to server 3981
Server port(3980): New request GET from client
Server port(3980): I lost the connection with server in port 3981
Server port(3980): I send request UPDATERLIST to server 3982

```

```

File Edit View Bookmarks Settings Help

```

```

csd3980@firliki:~/hy335/assignment2/WebServer$ java WebServer
Server port(3982): Server Started
Server port(3982): I send request JOIN to server 3981
Server port(3982): Accepted to join servers group
Server port(3982): New request UPDATERLIST from server 3981
Server port(3982): List updated: 3980 3981
Server port(3982): Names updated: kiwi.csd.uoc.gr frapa.csd.uoc.gr firiki.csd.uoc.gr
Server port(3982): I send request UPDATERLIST to server 3980
Server port(3982): New request PUT from server 3981
Server port(3982): List updated: 3980 3981 3982
Server port(3982): Names updated: kiwi.csd.uoc.gr frapa.csd.uoc.gr firiki.csd.uoc.gr
Server port(3982): I send request PUT to server 3980
Server port(3982): New request GET from client
Server port(3982): New entry -> (katerina,1234) Storage updated: (katerina,1234) (kostas,loukas)
Server port(3982): I send request PUT to server 3980
Server port(3982): New entry -> (katerina,1234) Storage updated: (katerina,1234) (kostas,loukas)
Server port(3982): I send request PUT to server 3980
Server port(3982): New request GET from client
Server port(3982): New entry -> (csd3980,kostas loukas) Storage updated: (katerina,1234) (csd3980,kost
as loukas) (kostas,loukas)
Server port(3982): I send request PUT to server 3980
Server port(3982): New request GET from client

```

```

File Edit View Bookmarks Settings Help

```

```

Computer: kwl
Method: put
Key: csd3980
Value: kostas loukas
Client: I send PUT request (csd3980,kostas loukas) to Server 3980
Client: SERVER RESPONSE: HTTP PUT complete for (csd3980,kostas loukas)
-----
Computer: frapa
Method: get
Key: kostas
Client: I send GET request (kostas) to Server 3981
Client: RESPONSE from Server 3981: The value of (kostas) is loukas
-----
Computer: kwl
Method: get
Key: katerina
Client: I send GET request (katerina) to Server 3980
Client: RESPONSE from Server 3980: The value of (katerina) is 1234
-----
Computer: firiki
Method: get
Key: csd3980
Client: I send GET request (csd3980) to Server 3982
Client: RESPONSE from Server 3982: The value of (csd3980) is kostas loukas
-----
Computer: []

```

WE RESTART SERVER 2

```

File Edit View Bookmarks Settings Help
File Edit View Bookmarks Settings Help
File Edit View Bookmarks Settings Help
- : bash — Konsole <3> - : bash — Konsole <4> - : bash — Konsole <2>
cd3980@kuki:~/hy335/assignment2/WebServer1$ java WebServer
Server port(3980): Server Started
Server port(3980): New request JOIN from server 3981
Server port(3980): List updated: 3980 3981
Server port(3980): Names updated: kiwi.csd.uoc.gr frapa.csd.uoc.gr
Server port(3980): I send request UPDATERLIST to server 3981
Server port(3980): New request UPDATERLIST from server 3982
Server port(3980): List updated: 3980 3981 3982
Server port(3980): Names updated: kiwi.csd.uoc.gr frapa.csd.uoc.gr firiki.csd.uoc.gr
Server port(3980): I send request PUT from server 3982
Server port(3980): New entry -> (kostas,loukas) Storage updated: (kostas,loukas)
Server port(3980): New request PUT from server 3982
Server port(3980): New entry -> (katerina,1234) Storage updated: (katerina,1234) (kostas,loukas)
Server port(3980): I send request PUT to server 3981
Server port(3980): New request GET from client
Server port(3980): I lost the connection with server in port 3981
Server port(3980): I send request UPDATERLIST to server 3982
Server port(3980): New request JOIN from server 3981
Server port(3980): List updated: 3980 3981 3982
Server port(3980): Names updated: kiwi.csd.uoc.gr frapa.csd.uoc.gr firiki.csd.uoc.gr
Server port(3980): I send request UPDATERLIST to server 3981
[...]

```



```

File Edit View Bookmarks Settings Help
File Edit View Bookmarks Settings Help
File Edit View Bookmarks Settings Help
- : bash — Konsole <3> - : bash — Konsole <4> - : bash — Konsole <2>
cd3980@firiki:~/hy335/assignment2/WebServer2$ java WebServer
Server port(3982): Server Started
Server port(3982): Accepted to join servers group
Server port(3982): New request UPDATERLIST from server 3981
Server port(3982): List updated: 3980 3981 3982
Server port(3982): Names updated: kiwi.csd.uoc.gr frapa.csd.uoc.gr firiki.csd.uoc.gr
Server port(3982): I send request UPDATERLIST to server 3980
Server port(3982): New request PUT from server 3981
Server port(3982): New entry -> (kostas,loukas) Storage updated: (kostas,loukas)
Server port(3982): I send request PUT to server 3980
Server port(3982): New request PUT from client
Server port(3982): New entry -> (katerina,1234) Storage updated: (katerina,1234) (kostas,loukas)
Server port(3982): I send request PUT to server 3980
Server port(3982): New entry -> (kostas,loukas) Storage updated: (katerina,1234) (kostas,loukas)
Server port(3982): I send request PUT to server 3980
Server port(3982): New request GET from client
Server port(3982): New request UPDATERLIST from server 3980
Server port(3982): List updated: 3980 3982
Server port(3982): Names updated: kiwi.csd.uoc.gr firiki.csd.uoc.gr
Server port(3982): New request UPDATERLIST from server 3981
Server port(3982): List updated: 3980 3981 3982
Server port(3982): Names updated: kiwi.csd.uoc.gr frapa.csd.uoc.gr firiki.csd.uoc.gr
Server port(3982): I send request UPDATERLIST to server 3981
[...]

```



```

Computer: kiwi
Method: put
Key: csd3980
Value: kostas loukas
Client: I send PUT request (csd3980,kostas loukas) to Server 3980
Client: SERVER RESPONSE: HTTP PUT complete for (csd3980,kostas loukas)
-----
Computer: firiki
Method: get
Key: kostas
Client: I send GET request (kostas) to Server 3981
Client: RESPONSE from Server 3981: The value of (kostas) is loukas
-----
Computer: kuki
Method: get
Key: katerina
Client: I send GET request (katerina) to Server 3980
Client: RESPONSE from Server 3980: The value of (katerina) is 1234
-----
Computer: firiki
Method: get
Key: kostas
Client: I send GET request (csd3980) to Server 3982
Client: RESPONSE from Server 3982: The value of (csd3980) is kostas loukas
-----
Computer: []

```

1. SEND GET REQUEST TO SERVER 2 FOR KEY KOSTAS
2. SERVER 2 ASK FOR KEY-VALUE FROM NEXT SERVER IN LIST
3. SERVER 2 GETS THE KEY-VALUE IF ANYONE ANSWER

```

File Edit View Bookmarks Settings Help
File Edit View Bookmarks Settings Help
File Edit View Bookmarks Settings Help
- : bash — Konsole <3> - : bash — Konsole <4> - : bash — Konsole <2>
cd3980@kuki:~/hy335/assignment2/WebServer1$ java WebServer
Server port(3980): Server Started
Server port(3980): New request JOIN from server 3981
Server port(3980): List updated: 3980 3981
Server port(3980): Names updated: kiwi.csd.uoc.gr frapa.csd.uoc.gr
Server port(3980): I send request UPDATERLIST to server 3981
Server port(3980): New request UPDATERLIST from server 3981
Server port(3980): List updated: 3980 3981 3982
Server port(3980): Names updated: kiwi.csd.uoc.gr frapa.csd.uoc.gr firiki.csd.uoc.gr
Server port(3980): I send request UPDATERLIST to server 3982
Server port(3980): New entry -> (kostas,loukas) Storage updated: (kostas,loukas)
Server port(3980): New request PUT from client
Server port(3980): New entry -> (katerina,1234) Storage updated: (katerina,1234) (kostas,loukas)
Server port(3980): I send request PUT to server 3981
Server port(3980): New request PUT from client
Server port(3980): New entry -> (katerina,1234) Storage updated: (katerina,1234) (kostas,loukas)
Server port(3980): I send request PUT to server 3981
Server port(3980): New request PUT from client
Server port(3980): New entry -> (katerina,1234) Storage updated: (katerina,1234) (kostas,loukas)
Server port(3980): I send request PUT to server 3981
Server port(3980): New request GET from client
Server port(3980): I lost the connection with server in port 3981
Server port(3980): I send request UPDATERLIST to server 3982
Server port(3980): New request JOIN from server 3981
Server port(3980): List updated: 3980 3981 3982
Server port(3980): Names updated: kiwi.csd.uoc.gr frapa.csd.uoc.gr firiki.csd.uoc.gr
Server port(3980): I send request UPDATERLIST to server 3981
[...]

```



```

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- : bash — Konsole <3> - : bash — Konsole <4> - : bash — Konsole <2>
cd3980@firiki:~/hy335/assignment2/WebServer2$ java WebServer
Server port(3982): Server Started
Server port(3982): Accepted to join servers group
Server port(3982): New request JOIN from server 3981
Server port(3982): List updated: 3980 3981 3982
Server port(3982): Names updated: kiwi.csd.uoc.gr frapa.csd.uoc.gr firiki.csd.uoc.gr
Server port(3982): I send request UPDATERLIST to server 3980
Server port(3982): New request PUT from client
Server port(3982): New entry -> (kostas,loukas) Storage updated: (kostas,loukas)
Server port(3982): I send request PUT to server 3980
Server port(3982): New request PUT from client
Server port(3982): New entry -> (katerina,1234) Storage updated: (katerina,1234) (kostas,loukas)
Server port(3982): I send request PUT to server 3980
Server port(3982): New request GET from client
Server port(3982): New request UPDATERLIST from server 3981
Server port(3982): List updated: 3980 3981 3982
Server port(3982): Names updated: kiwi.csd.uoc.gr frapa.csd.uoc.gr firiki.csd.uoc.gr
Server port(3982): I send request UPDATERLIST to server 3981
[...]

```



```

Key: kostas
Value: loukas
Client: I send PUT request (kostas,loukas) to Server 3981
Client: SERVER RESPONSE: HTTP PUT complete for (kostas,loukas)
-----
Computer: firiki
Method: put
Key: katerina
Value: 1234
Client: I send PUT request (katerina) to Server 3982
Client: SERVER RESPONSE: HTTP PUT complete for (katerina,1234)
-----
Computer: kuki
Method: put
Key: kostas
Client: I send PUT request (csd3980,kostas loukas) to Server 3980
Client: SERVER RESPONSE: HTTP PUT complete for (csd3980,kostas loukas)
-----
Computer: frapa
Method: get
Key: kostas
Client: I send GET request (kostas) to Server 3981
Client: RESPONSE from Server 3981: The value of (kostas) is loukas
-----
Computer: []

```

SEND GET REQUEST TO SERVER 2 FOR KEY KATERINA

```

Server port(3980): List updated: 3980 3981
Server port(3980): Names updated: kwl.csd.uoc.gr frapa.csdl.uoc.gr
Server port(3980): New request UPDATEREQUEST to server 3981
Server port(3980): New request UPDATEREQUEST from server 3982
Server port(3980): List updated: 3980 3981 3982
Server port(3980): Names updated: kwl.csd.uoc.gr frapa.csdl.uoc.gr
Server port(3980): New request PUT from server 3982
Server port(3980): New entry -> (kostas,loukas) Storage updated: (kostas,loukas)
Server port(3980): New request PUT from server 3982
Server port(3980): New entry -> (katerina,1234) Storage updated: (katerina,1234) (kostas,loukas)
Server port(3980): I send request PUT to server 3981
Server port(3980): I lost the connection with server in port 3981
Server port(3980): I send request JOIN to server 3982
Server port(3980): New request JOIN from server 3981
Server port(3980): List updated: 3980 3981 3982
Server port(3980): Names updated: kwl.csd.uoc.gr frapa.csdl.uoc.gr
Server port(3980): I send request UPDATEREQUEST to server 3981
Server port(3980): New request ASK from server 3981
Server port(3980): I send request ASK to server 3981
Server port(3980): New request ASK from server 3982
Server port(3980): I send request ASK to server 3981
[]

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```

SEND GET REQUEST TO SERVER 2 FOR KEY CSD3980

```

Server port(3980): I send request UPDATEREQUEST to server 3981
Server port(3980): New request UPDATEREQUEST from server 3982
Server port(3980): List updated: 3980 3981 3982
Server port(3980): Names updated: kwl.csd.uoc.gr frapa.csdl.uoc.gr
Server port(3980): New request PUT from server 3982
Server port(3980): New entry -> (kostas,loukas) Storage updated: (kostas,loukas)
Server port(3980): New request PUT from server 3982
Server port(3980): New entry -> (katerina,1234) Storage updated: (katerina,1234) (kostas,loukas)
Server port(3980): I send request PUT to server 3981
Server port(3980): I lost the connection with server in port 3981
Server port(3980): I send request JOIN to server 3982
Server port(3980): New request JOIN from server 3981
Server port(3980): List updated: 3980 3981 3982
Server port(3980): Names updated: kwl.csd.uoc.gr frapa.csdl.uoc.gr
Server port(3980): New request UPDATEREQUEST to server 3981
Server port(3980): New request ASK from server 3981
Server port(3980): I send request ASK to server 3980
Server port(3980): New request ASK from server 3982
Server port(3980): I send request ASK to server 3981
[]

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```