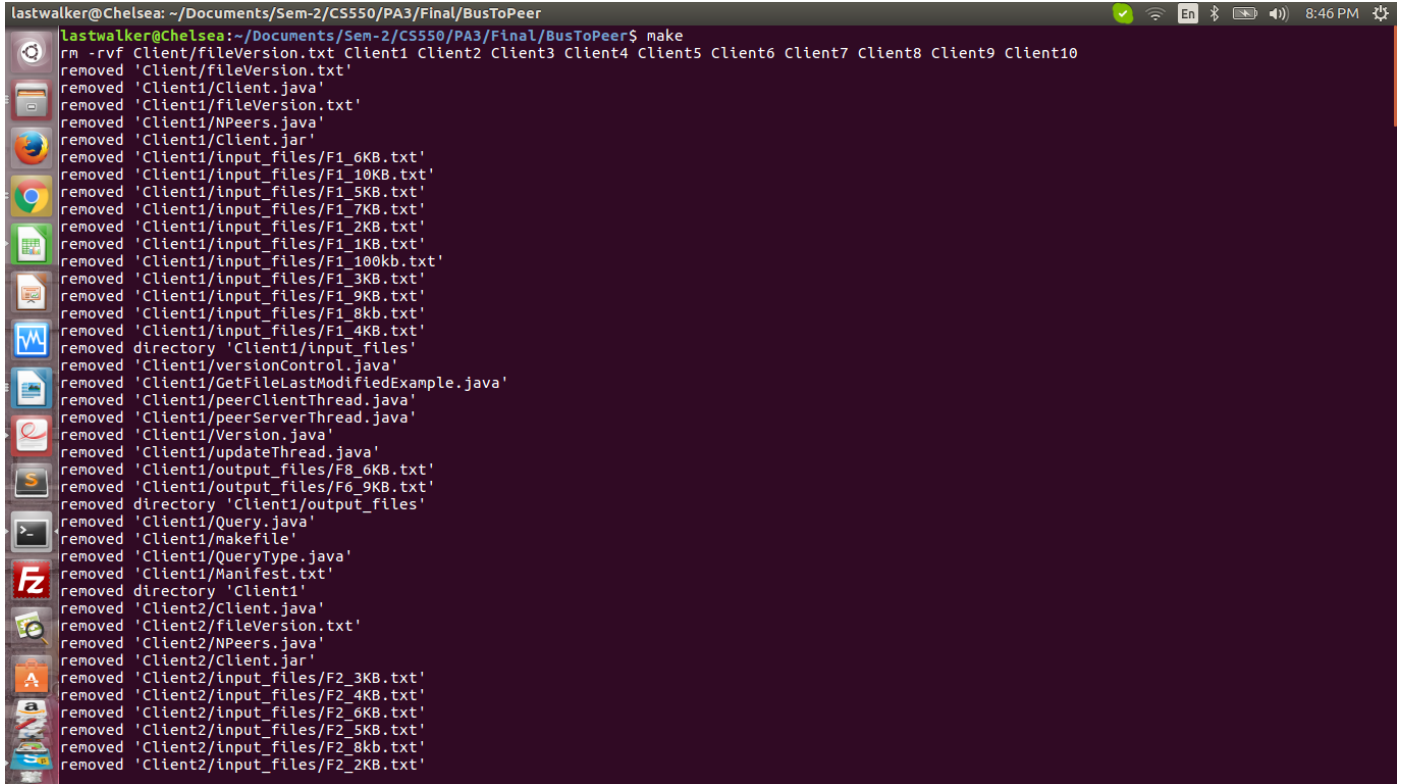


Topology: Bus Peer to Peer Manual:-

Run Peer1:

1. Copy BusToPeer Folder to Linux or windows
2. Cd BusToPeer
3. Type Ubuntu>make -> Its create 9 fresh copy of Client1 and reset conf file



```
lastwalker@Chelsea: ~/Documents/Sem-2/CS550/PA3/Final/BusToPeer
lastwalker@Chelsea:~/Documents/Sem-2/CS550/PA3/Final/BusToPeer$ make
rm -rvf Client/fileVersion.txt Client1 Client2 Client3 Client4 Client5 Client6 Client7 Client8 Client9 Client10
removed 'Client/fileVersion.txt'
removed 'Client1/client.java'
removed 'Client1/fileVersion.txt'
removed 'Client1/NPeers.java'
removed 'Client1/Client.jar'
removed 'Client1/input_files/F1_6KB.txt'
removed 'Client1/input_files/F1_10KB.txt'
removed 'Client1/input_files/F1_5KB.txt'
removed 'Client1/input_files/F1_7KB.txt'
removed 'Client1/input_files/F1_2KB.txt'
removed 'Client1/input_files/F1_1KB.txt'
removed 'Client1/input_files/F1_100kb.txt'
removed 'Client1/input_files/F1_3KB.txt'
removed 'Client1/input_files/F1_9KB.txt'
removed 'Client1/input_files/F1_8kb.txt'
removed 'Client1/input_files/F1_4KB.txt'
removed directory 'Client1/input_files'
removed 'Client1/versionControl.java'
removed 'Client1/GetFileLastModifiedExample.java'
removed 'Client1/peerClientThread.java'
removed 'Client1/peerServerThread.java'
removed 'Client1/Version.java'
removed 'Client1/updateThread.java'
removed 'Client1/output_files/F8_6KB.txt'
removed 'Client1/output_files/F6_9KB.txt'
removed directory 'Client1/output_files'
removed 'Client1/Query.java'
removed 'Client1/makefile'
removed 'Client1/QueryType.java'
removed 'Client1/Manifest.txt'
removed directory 'Client1'
removed 'Client2/Client.java'
removed 'Client2/fileVersion.txt'
removed 'Client2/NPeers.java'
removed 'Client2/Client.jar'
removed 'Client2/input_files/F2_3KB.txt'
removed 'Client2/input_files/F2_4KB.txt'
removed 'Client2/input_files/F2_6KB.txt'
removed 'Client2/input_files/F2_5KB.txt'
removed 'Client2/input_files/F2_8kb.txt'
removed 'Client2/input_files/F2_2KB.txt'
```

4. Cd Client1
5. Type Ubuntu> make -> compile and run client 1

```
lastwalker@Chelsea: ~/Documents/Sem-2/CS550/PA3/Final/BusToPeer/Client1
adding: versionControl$RemindTask2.class(in = 432) (out= 289)(deflated 33%)
adding: versionControl$RemindTask3.class(in = 432) (out= 293)(deflated 32%)
adding: versionControl.class(in = 5360) (out= 2922)(deflated 45%)
rm *.class
java -jar Client.jar sam 10 10 5 on
Input Format : java Client <Client Name> <TTL> <Flush Time>
fileVersion.txt (No such file or directory)

-----
PULL & PUSH ON
-----

127.0.0.1 60001 taken
127.0.0.1 60002 available
127.0.0.1 60003 available
127.0.0.1 60004 available
127.0.0.1 60005 available
127.0.0.1 60006 available
127.0.0.1 60007 available
127.0.0.1 60008 available
127.0.0.1 60009 available
127.0.0.1 60010 available
127.0.0.1 60011 available
Version Size :-11
1. 127.0.0.160002
2. 127.0.0.160003
3. 127.0.0.160004
4. 127.0.0.160005
5. 127.0.0.160006
6. 127.0.0.160007
7. 127.0.0.160008
8. 127.0.0.160009
9. 127.0.0.160010
10. 127.0.0.160011
127.0.0.1 60001

Client listening on 60001

1. Lookup Files
2. Refress Files
3. Exit
Enter :-
```

Client1 take first ip address and port from bus conf.txt and mark “taken” so that no other client can take same address and port no. Client pass 3arg first is client name second is time to live and 3rd is flush time which holds the record of queryhit.

6. Do the above for all the peers available.
7. Press 1 for lookup files, 2 to Refresh the duplicate copy of the file after downloading it from a master peer for that file and 3 for exit.

```
Terminal
127.0.0.1 60001
Client listening on 60001

1. Lookup Files
2. Refress Files
3. Exit
Enter :- 1

Enter File name :- F2_1KB.txt
***** Lookup for file *****
Average Response Time from '1' Clients in Milliseconds: 438
***** Download file *****
1. Client1 IP:127.0.0.1 Port:60002 Response Time :- 438msAutho
r:Master Version:1.0

Select Client to Download (Please Enter No.) :- 1
Version :- 1.0
mv2 tmp.txt fileVersion.txt
Sending request to peer

Transfer Time in milliseconds: 5
Downloaded file :F2_1KB.txt File size : 1.01KB
Performance speed 0.17MB/sec

1. Lookup Files
2. Refress Files
3. Exit
Enter :-

lastwalker@Chelsea: ~/Documents/Sem-2/CS550/PA3/Final/BusToPeer/Client2
-----
PULL & PUSH ON
-----

127.0.0.1 60001 taken
127.0.0.1 60002 taken
127.0.0.1 60003 available
127.0.0.1 60004 available
127.0.0.1 60005 available
127.0.0.1 60006 available
127.0.0.1 60007 available
127.0.0.1 60008 available
127.0.0.1 60009 available
127.0.0.1 60010 available
127.0.0.1 60011 available
Version Size :-11
mv1 tmp.txt fileVersion.txt
1. 127.0.0.160001
2. 127.0.0.160003
3. 127.0.0.160004
4. 127.0.0.160005
5. 127.0.0.160006
6. 127.0.0.160007
7. 127.0.0.160008
8. 127.0.0.160009
9. 127.0.0.160010
10. 127.0.0.160011
127.0.0.1 60002

Client listening on 60002

1. Lookup Files
2. Refress Files
3. Exit
Enter :- Query Type:- Request
FileName:-F2_1KB.txt
Version No:- 1.0 Ver 1.0
FileName:-F2_1KB.txt
File Sent
```

8. When done with random downloading at different peers, modify some downloaded file at the master peer of that particular file and then press 2 for checking the invalid status.

```
Terminal
***** Download file *****
1. Client1 IP:127.0.0.1 Port:60002 Response Time :- 438msAuthor:Master Version:-1.0

Select Client to Download (Please Enter No.) :- 1
Version :- 1.0
mv2 tmp.txt fileVersion.txt
sending request to peer
-----
Transfer Time in milliseconds: 5
Downloaded File :F2_1KB.txt File size : 1.01KB
Performance speed 0.17MB/sec
-----
1. Lookup Files
2. Refress Files
3. Exit
Enter :- FileName :F2_1KB.txt Refress with Master
mv tmp.txt fileVersion.txt
FileName :F2_1KB.txt Refress with Master
FileName :F2_1KB.txt Refress with Master
Query Type:- Request
FileName:-F2_1.txt
FileName :F2_1KB.txt Refress with Master
Query Type:- Request
FileName:-F2_1KB.txt
FileName :F2_1KB.txt Refress with Master
2
List of invalid Files
1. FileName: F2_1KB.txt IP:127.0.0.1 Port:60002
Select File to Download (Please Enter No.) OR Press '0' to Update All
:- FileName :F2_1KB.txt Refress with Master

lastwalker@Chelsea: ~/Documents/Sem-2/CS550/PA3/Final/BusToPeer/Client2
FileName:-F2_1KB.txt
File Sent
Slave Call this function
Version Size :-11
mv1 tmp.txt fileVersion.txt
Slave Call this function
Slave Call this function
Query Type:- Request
FileName:-F2_1.txt
Slave Call this function
Query Type:- Request
FileName:-F2_1KB.txt
Version No:- 1.1 Ver 1.1
Slave Call this function
Slave Call this function

lastwalker@Chelsea: ~/Documents/Sem-2/CS550/PA3/Final/BusToPeer/Client4
Enter File name :- F2_1.txt
***** Lookup for file *****
File Not Found
1. Lookup Files
2. Refress Files
3. Exit
Enter :- 1

Enter File name :- F2_1KB.txt
***** Lookup for file *****
-----
Average Response Time from '1' Clients in Milliseconds: 154
-----
***** Download file *****
1. Client1 IP:127.0.0.1 Port:60002 Response Time :- 154msAuthor:Ma
Version:-1.1
Select Client to Download (Please Enter No.) :-
```

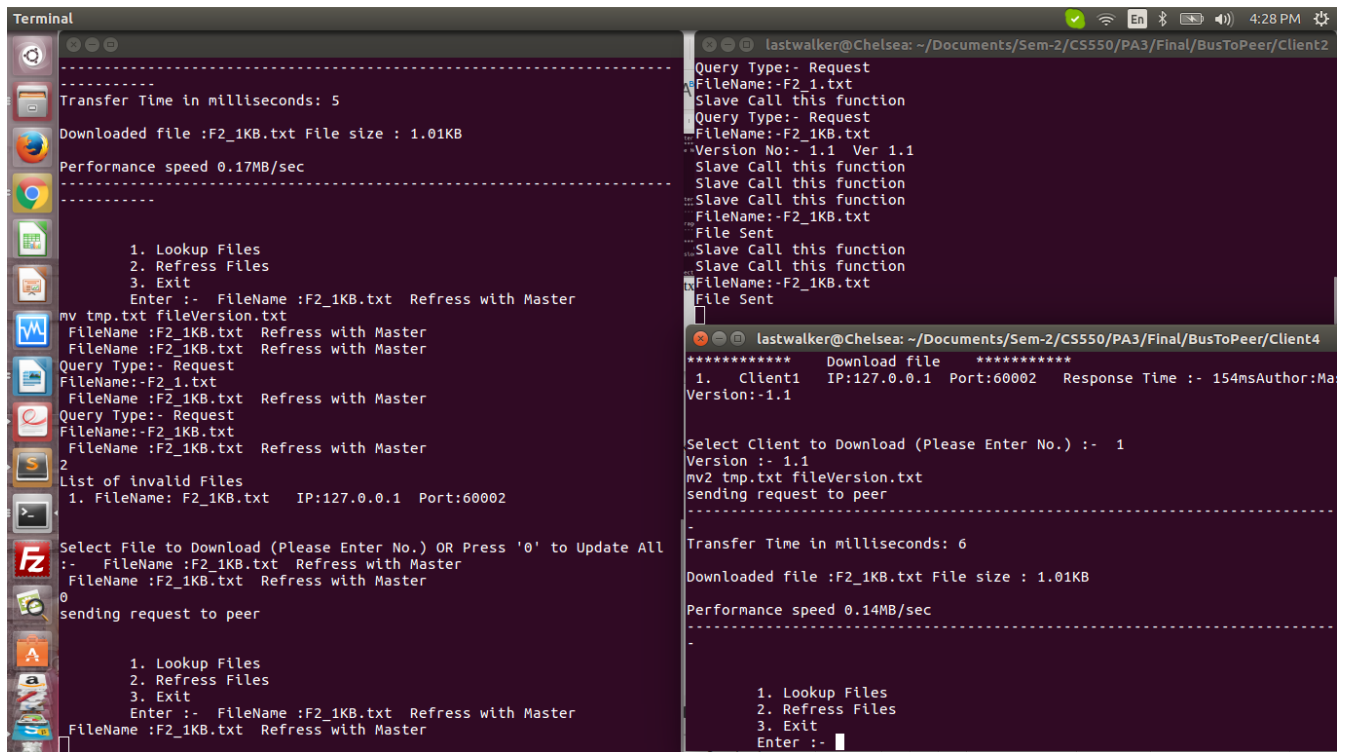
9. Press 0 to update all invalid files (this will download latest version of the related file from the master.

```
Terminal
mv2 tmp.txt fileVersion.txt
sending request to peer
-----
Transfer Time in milliseconds: 5
Downloaded file :F2_1KB.txt File size : 1.01KB
Performance speed 0.17MB/sec
-----
1. Lookup Files
2. Refress Files
3. Exit
Enter :- FileName :F2_1KB.txt Refress with Master
mv tmp.txt fileVersion.txt
FileName :F2_1KB.txt Refress with Master
FileName :F2_1KB.txt Refress with Master
Query Type:- Request
FileName:-F2_1.txt
FileName :F2_1KB.txt Refress with Master
Query Type:- Request
FileName:-F2_1KB.txt
FileName :F2_1KB.txt Refress with Master
2
List of invalid Files
1. FileName: F2_1KB.txt IP:127.0.0.1 Port:60002
Select File to Download (Please Enter No.) OR Press '0' to Update All
:- FileName :F2_1KB.txt Refress with Master
FileName :F2_1KB.txt Refress with Master
0
sending request to peer
1. Lookup Files
2. Refress Files
3. Exit
Enter :-

lastwalker@Chelsea: ~/Documents/Sem-2/CS550/PA3/Final/BusToPeer/Client2
Version Size :-11
mv1 tmp.txt fileVersion.txt
Slave Call this function
Slave Call this function
Query Type:- Request
FileName:-F2_1.txt
Slave Call this function
Query Type:- Request
FileName:-F2_1KB.txt
Version No:- 1.1 Ver 1.1
Slave Call this function
Slave Call this function
Slave Call this function
Slave Call this function
FileName:-F2_1KB.txt
File Sent

lastwalker@Chelsea: ~/Documents/Sem-2/CS550/PA3/Final/BusToPeer/Client4
Enter File name :- F2_1.txt
***** Lookup for file *****
File Not Found
1. Lookup Files
2. Refress Files
3. Exit
Enter :- 1

Enter File name :- F2_1KB.txt
***** Lookup for file *****
-----
Average Response Time from '1' Clients in Milliseconds: 154
-----
***** Download file *****
1. Client1 IP:127.0.0.1 Port:60002 Response Time :- 154msAuthor:Ma
Version:-1.1
Select Client to Download (Please Enter No.) :-
```



```
lastwalker@Chelsea: ~/Documents/Sem-2/CS550/PA3/Final/BusToPeer/Client2
-----
Transfer Time in milliseconds: 5
Downloaded file :F2_1KB.txt File size : 1.01KB
Performance speed 0.17MB/sec
-----
1. Lookup Files
2. Refress Files
3. Exit
Enter :- FileName :F2_1KB.txt Refress with Master
mv tmp.txt fileVersion.txt
FileName :F2_1KB.txt Refress with Master
FileName :F2_1KB.txt Refress with Master
Query Type:- Request
FileName:-F2_1.txt
FileName:F2_1KB.txt Refress with Master
Query Type:- Request
FileName:-F2_1KB.txt
FileName :F2_1KB.txt Refress with Master
2
List of invalid Files
1. FileName: F2_1KB.txt IP:127.0.0.1 Port:60002
Select File to Download (Please Enter No.) OR Press '0' to Update All
:- FileName :F2_1KB.txt Refress with Master
FileName :F2_1KB.txt Refress with Master
0
sending request to peer
-----
1. Lookup Files
2. Refress Files
3. Exit
Enter :- FileName :F2_1KB.txt Refress with Master
FileName :F2_1KB.txt Refress with Master

lastwalker@Chelsea: ~/Documents/Sem-2/CS550/PA3/Final/BusToPeer/Client4
***** Download file *****
1. Client1 IP:127.0.0.1 Port:60002 Response Time :- 154msAuthor:Ma
Version:-1.1
Select Client to Download (Please Enter No.) :- 1
Version :- 1.1
mv2 tmp.txt fileVersion.txt
sending request to peer
-----
Transfer Time in milliseconds: 6
Downloaded file :F2_1KB.txt File size : 1.01KB
Performance speed 0.14MB/sec
-----
1. Lookup Files
2. Refress Files
3. Exit
Enter :-
```

It prints “sending request to peer” and then it downloads from master peer.

10. By default the TTR value is 2 mins , to change the TTR value we need to modify the makefile of “client” folder and make 2 as 5 for 5 mins or any other number as required. After changing come out of the client folder and open terminal at BusToPeer folder and run make. This will apply all the changes in the “client” folder to the rest of the client1,client2,...clientn folders.

11. By default the Push and Pull approach is on, in order to turn it off , go to the makefile in the “client” folder, open the config file and change “on” to “off”. After changing come out of the client folder and open terminal at BusToPeer folder and run make. This will apply all the changes in the “client” folder to the rest of the client1,client2,...clientn folders.

12. Run the new configuration in the similar manner as described above, if changes has been made.

13. For Star topology Copy StarToPeer Folder to Linux or windows

14. Cd StarToPeer

15. Type Ubuntu>make -> Its create 9 fresh copy of Client1 and reset conf file.

16. Star configuration is run in the similar manner as the bus configuration.