

CSE 589 Fall 2015
Programming Assignment 1
Distributed File Sharing System

Name : Dhiren Patel
UBitName : dhirenbh
UBit number : 50170084

SYNC Implementation

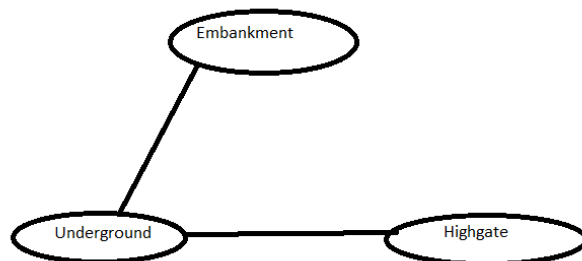
As, Described in project document, I implemented SYNC command.

I will try to explain my implementation through example.

Suppose EMBANKMENT and HIGHGATE are connected to UNDERGROUND.
And If any 1 of them will enter "SYNC" command. All will receive each other's file.
Suppose EMBANKMENT enters "SYNC" then HIGHGATE and will receive underground.txt.
UNDERGROUND will receive both embankment.txt and highgate.txt.
For now I haven't used text files. I'm simply transferring message to each other.

How I implemented

Whoever enters SYNC command. Then SYNC + FILE + String indicating Time will be transferred to it's peers. Peers will transfer file + String indicating Time to it and will forward SYNC + FILE + String indicating TIME to all of it's other peers. They will perform same act.
So, At the end all will receive each other's file.



I'm explaining "SYNC" in steps below by taking example.

Wherever I indicate "STRING". It contains appropriate information as below.

Start euston.txt at 10:21:30

Start highgate.txt at 10:21:31

End euston.txt at 10:21:40

End highgate.txt at 10:21:42

Step 1 : Suppose HIGHGATE enters "SYNC". It will append SYNC + highgate.txt + STRING in 1 message and will send it's connected peers. In this example UNDERGROUND.

Step 2 : UNDERGROUND will forward SYNC Message to other connected peers except HIGHGATE. It will save highgate.txt and will display STRING.

Along with SYNC it will also forward underground.txt + STRING to it's other connected peers (In this case EMBANKMENT.

It will also send underground.txt and appropriate STRING to HIGHGATE.

So, Above action is performed till completion of app peers. Upon completion all would have received each other's file.

How to prevent other clients from filling up my disk

As Example : `recv(p2p_newsock,p2p_buf,file_size,0)`

I have implemented RECV as above. So, IF received message will be more than **file_size** (As shown above) then it will discard all other bytes after this.

How to prevent usage of file outside your own directory

In GET, PUT, SYNC command if any host will try to get files from current machine's other folders, It will not be allowed. For this , We need to get File name from received GET or PUT message. Split this by '/' and get last word. Check for this file in current directory where program is located. If it exist then allow otherwise discard the request with appropriate message.