| Tracker - | p1 | p2 | p3 | p4 | p5 | p6 | p7 | p8 | p9 | p10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Sharing status | 0/1 | 0/1 | 0/1 | 0/1 | 0/1 | 0/1 | ----- | | | |

| FileInfo.txt | sf1 | sf2 | sf3 | sf4 | sf5 | sf6 | sf7 | sf8 | sf9 | s10 |
|---|---|---|---|---|---|---|---|---|---|---|

For the first time peer comes in network

1. Register : Portno: UserId:password
2. SharefiledetailsofPeer itself In format:

**FileName:UserId:No_of_Blocks:Total_size:SHAofFullFile:SHAofEveryBlockAppendedUsingAterminationCharacter:\n**
**Shaoffirstblock_shaof second block_sha of thirdblock**

3. To download files:
    a. Step 1: getfiledetails from tracker
    b. Step 2: Choose file name and send filename to tracker and tracker returns list of peers and details of the file for all those peers
    c. Step 3: For first: Download whole file from any one peer
    d. Step 4: Download 1/n part from each of n peer

Filesize /mms = #messages
How do we guarantee that every message is delivered accurately

SHA : SHA1(Data) returns unique string universally for any size of data : 2 gb,2 kb

Sha1 sent === sha1 received ⇒ packet delivered correctly

Sf1 : harry potter 1 - 8 movies
1

It will send info about every file in a fixed format
We assume that FileName is Unique.
Fixed Block size = 512KB
No of blocks= Total size in KB/512
Bit_vector: It represents that ith block is present for given file Name
Harry potter sorcerer stone: 1 GB =2048 blocks
Int Bit_vector[2048] =[] ith index value represent if the block is available to the userId of given filename

Send this to tracker:

**FileName:UserId:No_of_Blocks:Total_size:SHAofFullFile:SHAofEveryBlockAppendedUsingAterminationCharacter:\n**

**Map**

**FileName(Key): vector<pair<string(UserId),string(rest)>> (Value)**

**Map**
**UserId: PortNo**

**Download SHA1 function for C++**

**We divide file into blocks of 512KB ->calculate SHA1 for that block -> append it in a string (|,\,_)**
**jdsfisadf_iasdlfjds_lkasdflkjdsf_kasdjlkfjadsf_**