Peer to Peer File Sharing System

Omer Arshad

CSC 414

Purpose

- I wanted to implement my own working program that would enable users to download files through a peer-to-peer approach.
- Software which already provide services like these BitTorrent.

```
THE SERVER HAS BEEN LAUNCHED

You are conntected to : 127.0.0.1 at port no : 1231
```

We begin by launching the tracking server.





.torrent

```
THE CLIENT HAS BEEN LAUNCHED
You are conntected to : localhost at port no : 3001

    Connect to a Peer

  Make a new torrent file
  Download a file
4. List peers
5. List of Files
Exit
Your choice : 2
Enter File name: 1.jpg
Enter File torrent name: New
Enter the File type: jpg
Enter the number of parts the file is to be divided: 10
Creating torrent
Size: 160805
Status: 1
Sending Information to the Server.....
```

• A peer client is launched. It further generates torrent for the file "1.jpg" and updates the information to the server.

```
Got connection from ('127.0.0.1', 64124)
Name: 1.jpg type: jpg tor: Newport: 3001 Host: localhost
Name: 1.jpg type: jpg tor: New
port: 3001 Host: localhost
Name New 10 160805
Got connection from ('127.0.0.1', 64131)
```

The server has received the information about the torrent and has added it to the list of "active files"

- Launch another P2P client with a different port, 5999 used for this one.
- All the chunks of the file have been downloaded.
 To confirm they were found in the downloads folder of the directory.

```
THE CLIENT HAS BEEN LAUNCHED
You are conntected to : localhost at port no : 5999
  Connect to a Peer
  Make a new torrent file
  Download a file
  List peers
  List of Files
  Exit
Your choice : 3
Enter name of file 1.jpg
Press Enter to confirm that you want to download :
Requested File: 1.jpg
Downloading....
Downloading....
Downloading....
Downloading....
Downloading....
Downloading....
Downloading....
Downloading....
```

 Re-do step 3 with Port 2999, to demonstrate the download being called from port 5999 as the original port 3001 where 5999 downloaded from has been closed and is no longer a part of the active network.

```
THE CLIENT HAS BEEN LAUNCHED
You are conntected to : localhost at port no : 2999
  Connect to a Peer
  Make a new torrent file
  Download a file
  List peers
  List of Files
  Exit
Your choice : 3
Enter name of file 1.jpg
Press Enter to confirm that you want to download :
Requested File : 1.jpg
Downloading....
ucessfully downloaded!!!!
```

```
1.jpg
160805
name: New.torrent
 Lines....
key: 0
 Lines....
size:160805
 Lines....
n_parts: 10 Lines....
in server 1.jpg
Sent the file
```

This image shows the instance of the window from

client with port no: 5999 when port 2999 had requested to download the file 1.jpg. This screenshot shows that port 5999 who had earlier downloaded the 1.jpg from port 3001, is now the one sending the file to port 2999.