

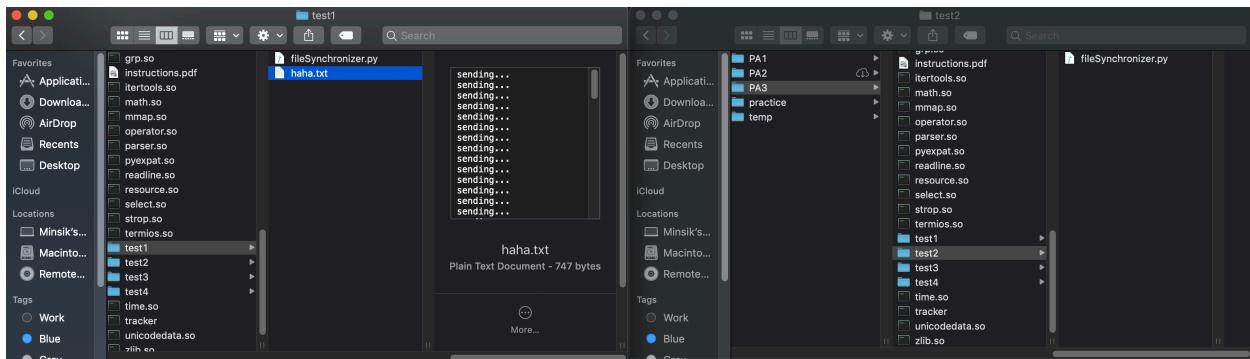
# COMP SCI 4CO3 PA 3 Report

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The desired output of test cases are successfully transferring files if it is not mentioned specifically

The first test case would be transferring one file. I first set up with one folder with one file and another with none and transferred the file.

Initial folder:

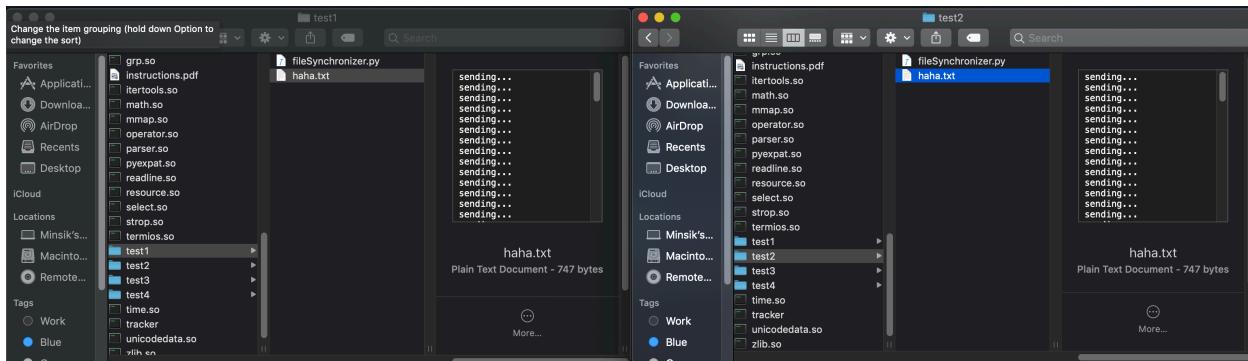


## Command window :

```
client server127.0.0.1:8001
client server127.0.0.1:8002
client server127.0.0.1:8003
client server127.0.0.1:8004
^Quit: 3
Minsiks-MacBook-Pro:PA3 minsiks$ ./tracker 127.0.0.1 8000
Waiting for connections on port 8000
Client connected with 127.0.0.1:52935
Client connected with 127.0.0.1:52936
Client connected with 127.0.0.1:52937
Client connected with 127.0.0.1:52938
client server127.0.0.1:8001
client server127.0.0.1:8002
client server127.0.0.1:8003
client server127.0.0.1:8004
client server127.0.0.1:8001
client server127.0.0.1:8002
client server127.0.0.1:8003
client server127.0.0.1:8004
client server127.0.0.1:8001
client server127.0.0.1:8002
client server127.0.0.1:8003
client server127.0.0.1:8004
^Quit: 3
Minsiks-MacBook-Pro:PA3 minsiks$ clear

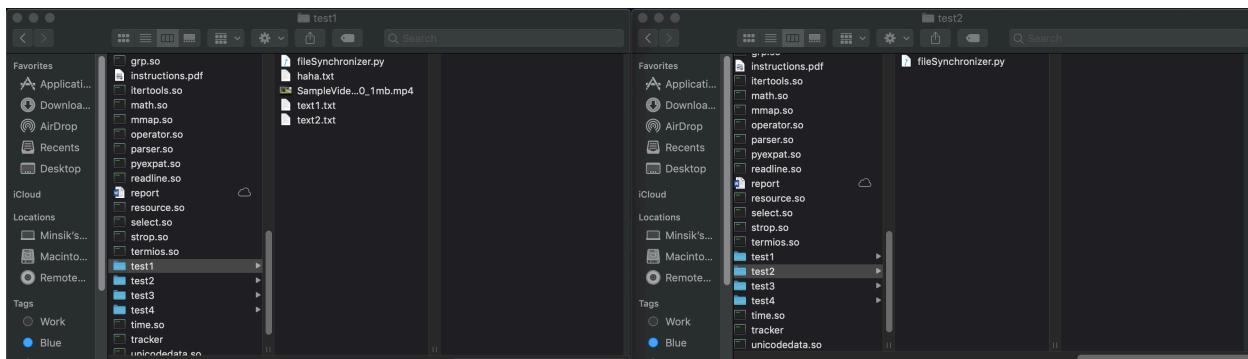
Minsiks-MacBook-Pro:PA3 minsiks$ ./tracker 127.0.0.1 8000
Waiting for connections on port 8000
Client connected with 127.0.0.1:53038
Client connected with 127.0.0.1:53039
Client connected with 127.0.0.1:53040
Client connected with 127.0.0.1:53041
Client connected with 127.0.0.1:8002
Client server127.0.0.1:8001
Client server127.0.0.1:8002
Client server127.0.0.1:8003
Client server127.0.0.1:8004
Client server127.0.0.1:8001
Client server127.0.0.1:8002
Client server127.0.0.1:8003
Client server127.0.0.1:8004
^Quit: 3
Minsiks-MacBook-Pro:PA3 minsiks$ test1 --bash - 78x50
Minsiks-MacBook-Pro:Test1 minsiks$ python fileSynchronizer.py 127.0.0.1 8000
trying to connect to host : 127.0.0.0 port : 8000
Waiting for connections on port 8000
('connect to:127.0.0.1', 8000)
Client connected with 127.0.0.0.53040
Requesting file : haha.txt
sending file : haha.txt to : 53040
done sending file
('connect to:127.0.0.1', 8000)
('connect to:127.0.0.1', 8000)
^Quit: 3
Minsiks-MacBook-Pro:Test1 minsiks$ test2 --bash - 80x24
Minsiks-MacBook-Pro:Test2 minsiks$ python fileSynchronizer.py 127.0.0.1 8000
trying to connect to host : 127.0.0.0 port : 8002
Waiting for connections on port 8002
('connect to:127.0.0.1', 8000)
Client connected with 127.0.0.0.53041
Requesting file : haha.txt
sending file : haha.txt to : 53041
done sending file
('connect to:127.0.0.1', 8000)
('connect to:127.0.0.1', 8000)
^Quit: 3
Minsiks-MacBook-Pro:Test2 minsiks$ test3 --bash - 71x24
Minsiks-MacBook-Pro:Test3 minsiks$ python fileSynchronizer.py 127.0.0.1 8000
trying to connect to host : 127.0.0.0 port : 8000
Waiting for connections on port 8000
('connect to:127.0.0.1', 8000)
Client connected with 127.0.0.0.53042
Requesting file : haha.txt
sending file : haha.txt to : 53042
done sending file
('connect to:127.0.0.1', 8000)
('connect to:127.0.0.1', 8000)
^Quit: 3
Minsiks-MacBook-Pro:Test3 minsiks$ test4 --bash - 71x24
Minsiks-MacBook-Pro:Test4 minsiks$ python fileSynchronizer.py 127.0.0.1 8000
trying to connect to host : 127.0.0.0 port : 8000
Waiting for connections on port 8000
('connect to:127.0.0.1', 8000)
Client connected with 127.0.0.0.53043
Requesting file : haha.txt
sending file : haha.txt to : 53043
done sending file
('connect to:127.0.0.1', 8000)
('connect to:127.0.0.1', 8000)
^Quit: 3
Minsiks-MacBook-Pro:Test4 minsiks$
```

after transfer:



The second test cases were transferring multiple files.

Initial folder:



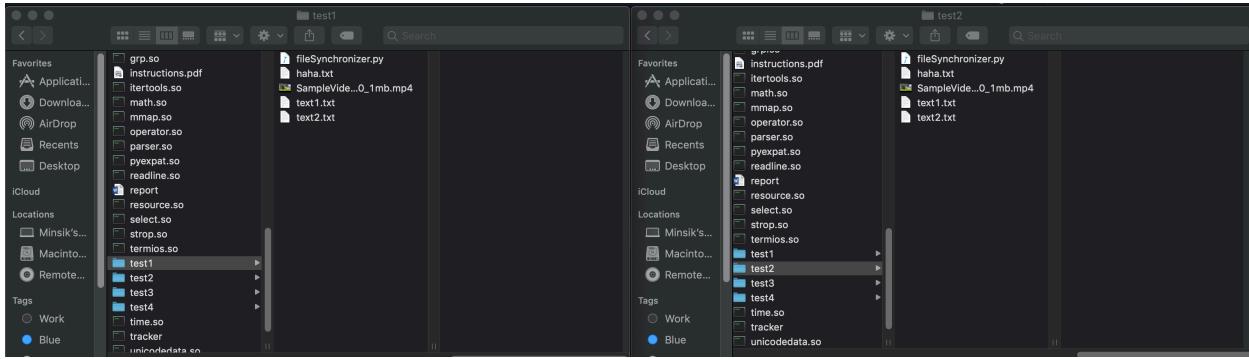
## Command window:

```
[minisiks-MacBook-Pro:PA3 minisiks$ ./tracker 127.0.0.1 8000
Waiting for connections on port 8000
Client connected with 127.0.0.1:53059
Client connected with 127.0.0.1:53060
Client server127.0.0.1:8002
client server127.0.0.1:8002
client server127.0.0.1:8001
client server127.0.0.1:8002
^Quit: 3
minisiks-MacBook-Pro:PA3 minisiks$ ]
```

```
[minisiks-MacBook-Pro:test1 minisiks$ python fileSyncronizer.py 127.0.0.1 8000
trying to connect to host : 127.0.0.1:8001
Waiting for connections on port 8001
('connect to:127.0.0.1', 8000)
Client connected with 127.0.0.1:53061
received file date is : SampleVideo_1280x720_1mb.mp4
sending file : SampleVideo_1280x720_1mb.mp4 to : 53061
done sending file
Client connected with 127.0.0.1:53062
received file date is : haha.txt
sending file : haha.txt to : 53062
done sending file
Client connected with 127.0.0.1:53063
received file date is : text2.txt
sending file : text2.txt to : 53063
done sending file
Client connected with 127.0.0.1:53064
received file date is : text1.txt
sending file : text1.txt to : 53064
done sending file
('connect to:127.0.0.1', 8000)
^Quit: 3
minisiks-MacBook-Pro:test1 minisiks$ ]
```

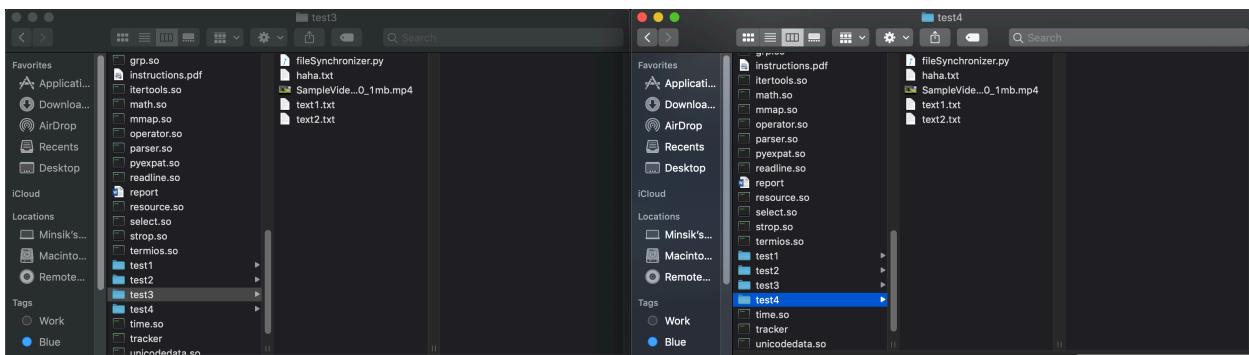
```
[minisiks-MacBook-Pro:test2 minisiks$ python fileSyncronizer.py 127.0.0.1 8000
trying to connect to host : 127.0.0.0:8000
Waiting for connections on port 8002
('connect to:127.0.0.1', 8000)
Client connected with 127.0.0.0:8001
file requested : SampleVideo_1280x720_1mb.mp4
connected to peer ip : 0.0.0.0 port : 8001
file requested : SampleVideo_1280x720_1mb.mp4
connected to peer ip : 0.0.0.0 port : 8001
file requested : text2.txt
connected to peer ip : 0.0.0.0 port : 8001
file requested : text2.txt
connected to peer ip : 0.0.0.0 port : 8001
file requested : text1.txt
('connect to:127.0.0.1', 8000)
^Quit: 3
minisiks-MacBook-Pro:test2 minisiks$ ]
```

### After transfer:



The third test case was setting multiple file with newer mtime and checked whether it updates to a new file. All the files had same names.  
As it can be seen below at after transfer, the modified time of the files have been updated to more recent one

Initial folder:



Initial mtime:

```
test3 -- bash -- 80x24
Minsiks-MacBook-Pro:test3 minsik$ ls -l
total 2120
-rw-r--r--@ 1 minsik staff 1055736 26 Mar 04:16 SampleVideo_1280x720_1mb.mp4
-rw-r--r--@ 1 minsik staff 13297 26 Mar 04:16 fileSynchronizer.py
-rw-r--r-- 1 minsik staff 747 26 Mar 04:16 haha.txt
-rw-r--r-- 1 minsik staff 21 26 Mar 04:16 text1.txt
-rw-r--r-- 1 minsik staff 37 26 Mar 04:16 text2.txt
Minsiks-MacBook-Pro:test3 minsik$ 

test4 -- bash -- 71x24
Minsiks-MacBook-Pro:test4 minsik$ ls -l
total 2120
-rw-r--r-- 1 minsik staff 1055736 15 Mar 14:23 SampleVideo_1280x720_
1mb.mp4
-rw-r--r--@ 1 minsik staff 13297 26 Mar 03:24 fileSynchronizer.py
-rw-r--r-- 1 minsik staff 747 26 Mar 01:17 haha.txt
-rw-r--r-- 1 minsik staff 21 23 Mar 23:32 text1.txt
-rw-r--r-- 1 minsik staff 37 23 Mar 23:32 text2.txt
Minsiks-MacBook-Pro:test4 minsik$ 
```

Command window:

```

test3 --bash -- 80x24
-rw-r--r-- 1 minsik staff 37 26 Mar 04:16 text2.txt
[Minisks-MacBook-Pro:test3 minsik$ python3 fileSynchronizer.py 127.0.0.1 8000
trying to connect to host : 0.0.0.0 port : 8001
Waiting for connections on port 8001
('connect to:127.0.0.1', 8000)
Client connected with 127.0.0.1:53117
requested file data is : SampleVideo_1280x720_1mb.mp4
sending file : SampleVideo_1280x720_1mb.mp4 to : 53117
done sending file
Client connected with 127.0.0.1:53118
requested file data is : haha.txt
sending file : haha.txt to : 53118
done sending file
Client connected with 127.0.0.1:53119
requested file data is : text2.txt
sending file : text2.txt to : 53119
done sending file
Client connected with 127.0.0.1:53120
requested file data is : text1.txt
sending file : text1.txt to : 53120
done sending file
('connect to:127.0.0.1', 8000)
^Quit: 3
[Minisks-MacBook-Pro:test3 minsik$ ]
```

```

test4 --bash -- 71x24
[Minisks-MacBook-Pro:test4 minsik$ ls -l
total 2120
-rw-r--r-- 1 minsik staff 1055736 15 Mar 14:23 SampleVideo_1280x720_
1mb.mp4
-rw-r--r--@ 1 minsik staff 13297 26 Mar 03:24 fileSynchronizer.py
-rw-r--r-- 1 minsik staff 747 26 Mar 01:17 haha.txt
-rw-r--r-- 1 minsik staff 21 23 Mar 23:32 text1.txt
-rw-r--r-- 1 minsik staff 37 23 Mar 23:32 text2.txt
[Minisks-MacBook-Pro:test4 minsik$ python3 fileSynchronizer.py 127.0.0.1]
8000
trying to connect to host : 0.0.0.0 port : 8002
Waiting for connections on port 8002
('connect to:127.0.0.1', 8000)
connected to peer ip : 0.0.0.0 port : 8001
file requested : SampleVideo_1280x720_1mb.mp4
connected to peer ip : 0.0.0.0 port : 8001
file requested : haha.txt
connected to peer ip : 0.0.0.0 port : 8001
file requested : text2.txt
connected to peer ip : 0.0.0.0 port : 8001
file requested : text1.txt
('connect to:127.0.0.1', 8000)
^Quit: 3
[Minisks-MacBook-Pro:test4 minsik$ ]
```

After transfer:

```

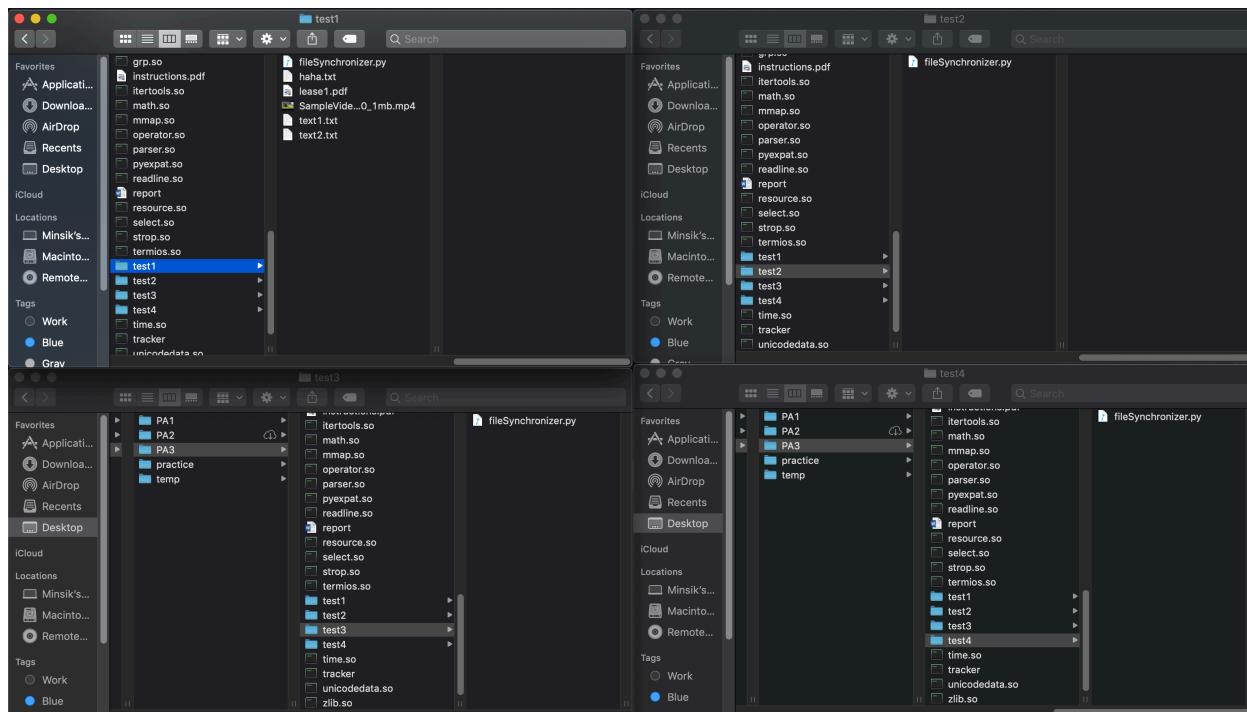
^Quit: 3
[Minisks-MacBook-Pro:test3 minsik$ ls -l
total 2120
-rw-r--r--@ 1 minsik staff 1055736 26 Mar 04:16 SampleVideo_1280x720_
1mb.mp4
-rw-r--r-- 1 minsik staff 13297 26 Mar 04:16 fileSynchronizer.py
-rw-r--r-- 1 minsik staff 747 26 Mar 04:16 haha.txt
-rw-r--r-- 1 minsik staff 21 26 Mar 04:16 text1.txt
-rw-r--r-- 1 minsik staff 37 26 Mar 04:16 text2.txt
[Minisks-MacBook-Pro:test3 minsik$ ]
```

```

[Minisks-MacBook-Pro:test4 minsik$ ls -l
total 2120
-rw-r--r-- 1 minsik staff 1055736 26 Mar 04:16 SampleVideo_1280x720_
1mb.mp4
-rw-r--r--@ 1 minsik staff 13297 26 Mar 03:24 fileSynchronizer.py
-rw-r--r-- 1 minsik staff 747 26 Mar 04:16 haha.txt
-rw-r--r-- 1 minsik staff 21 26 Mar 04:16 text1.txt
-rw-r--r-- 1 minsik staff 37 26 Mar 04:16 text2.txt
[Minisks-MacBook-Pro:test4 minsik$ ]
```

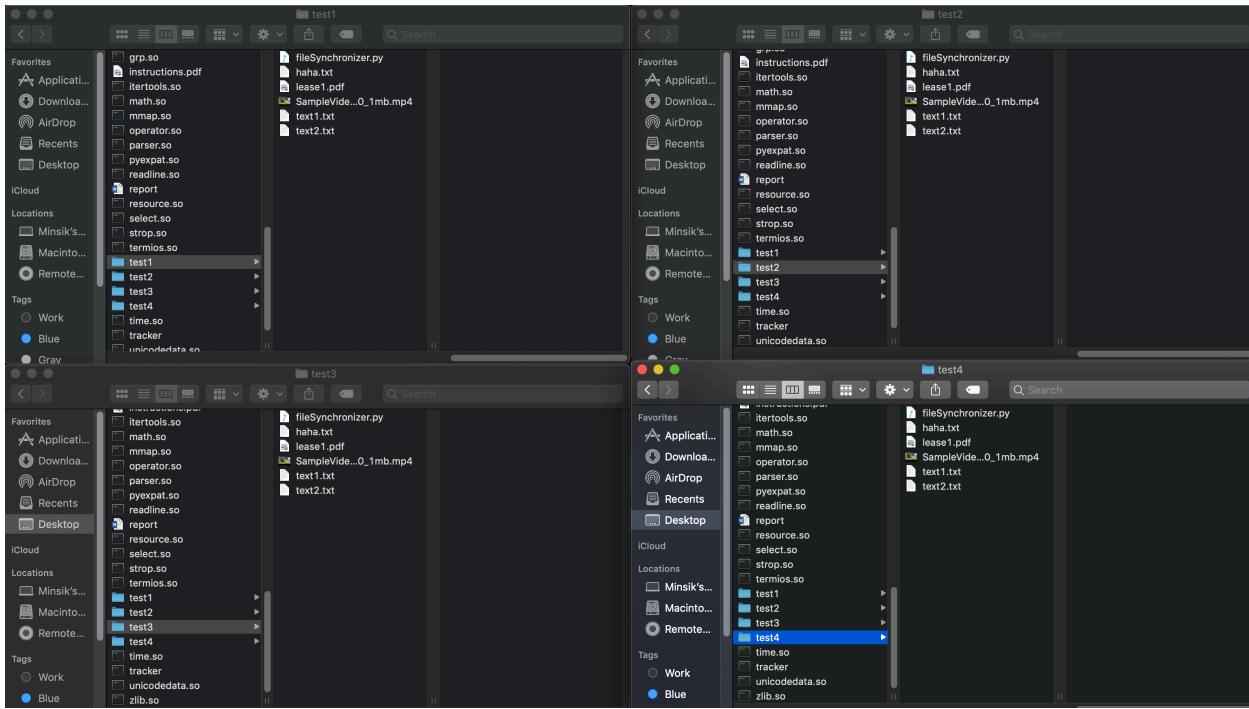
The fourth test case was transferring multiple files to multiple folders.  
As seen below, all files were shared between folders

Initial folder:



## Command window:

### After transfer:

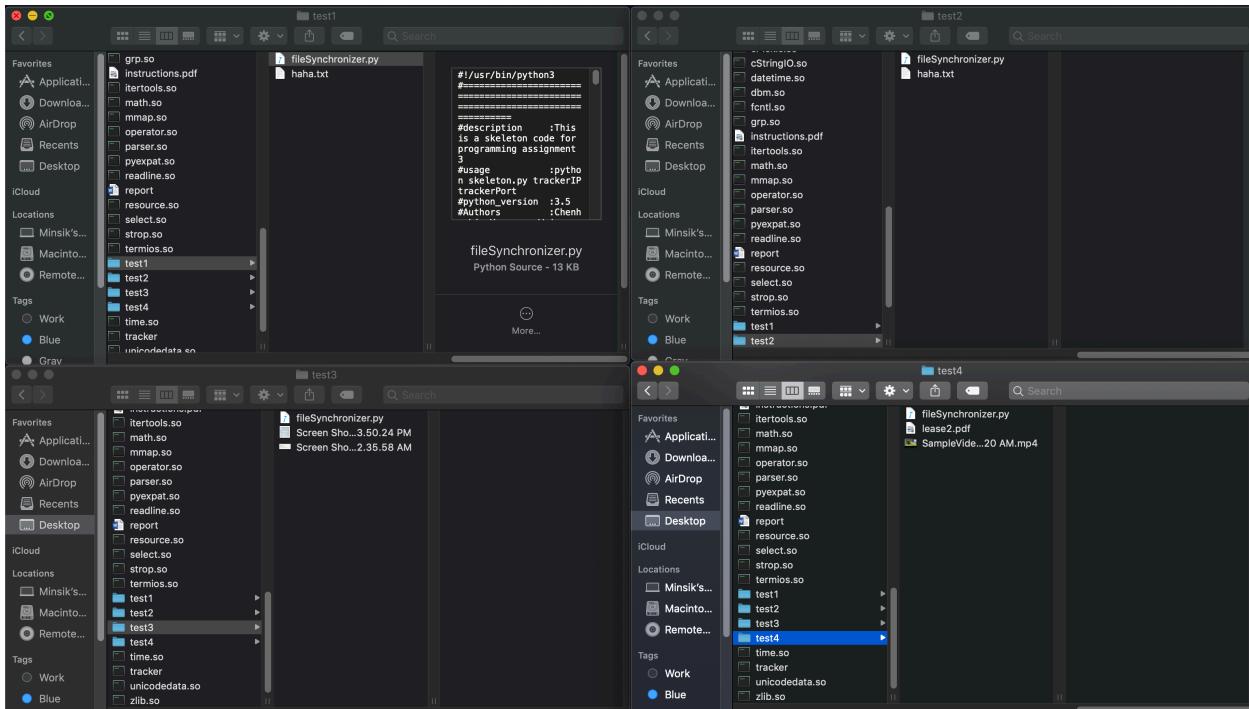


The fifth test case was interrupting connection while transferring the file to see if it continues to transfer next file. In order to test this, I have set the settimout to 5 seconds, and disconnected peer from folder 3.

The desired output is the files of folders except folder 3 are shared between folder 1,2 and 4.

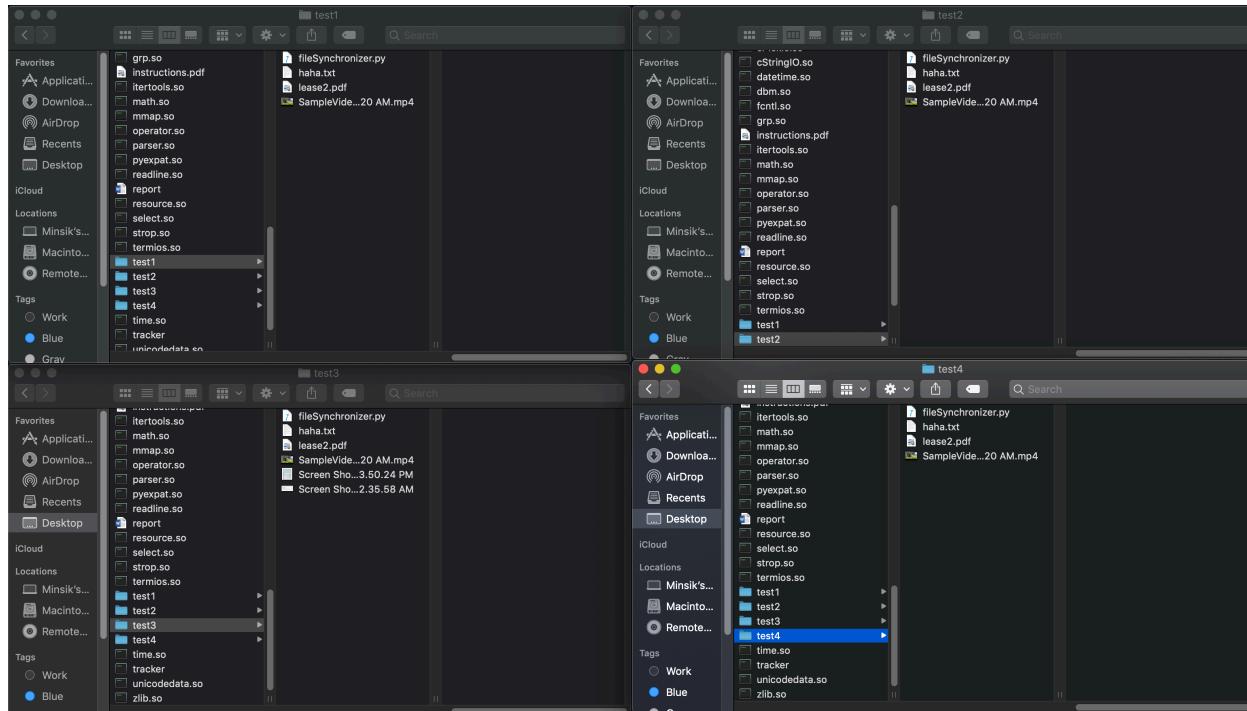
The desire output was achieved, and after tracker removed files from folder 3, it stopped producing errors.

Initial folder:



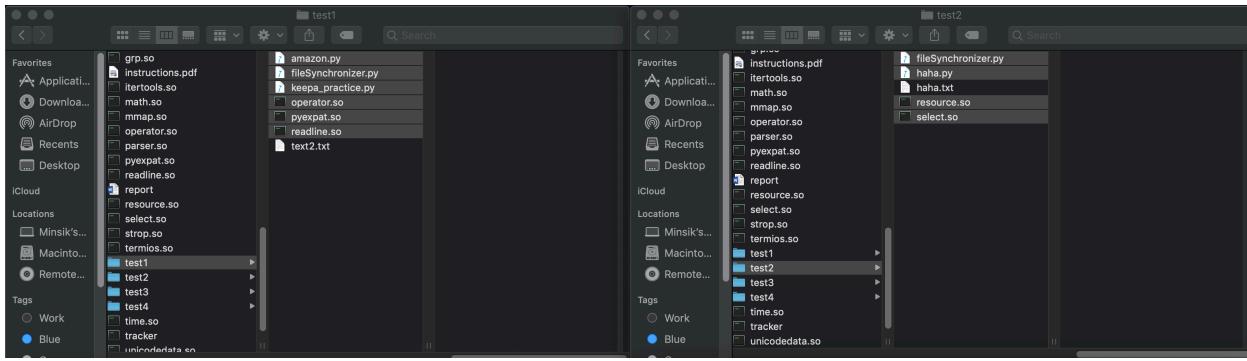
## Command window:

## After transfer:



The sixth test case was to checking if it transfers extension with .py and .so. As it can be seen below, all the files except .py and .so extensions have been transferred.

Initial folder (.py and .so file highlighted):



## Command window:

```

PA3 -- bash -- 78x50
Minsiks-MacBook-Pro:PA3 minski$ ./tracker 127.0.0.1 8000
Waiting for connections on port 8000
Client connected with 127.0.0.1:53174
Client connected with 127.0.0.1:53175
client server127.0.0.1:8001
client server127.0.0.1:8002
client server127.0.0.1:8003
client server127.0.0.1:8004
client server127.0.0.1:8005
client server127.0.0.1:8006
client server127.0.0.1:8007
^Quit: 3
Minsiks-MacBook-Pro:PA3 minski$ 

test1 -- bash -- 80x24
Minsiks-MacBook-Pro:test1 minski$ python3 fileSynchronizer.py 127.0.0.1 8000
trying to connect to host : 0.0.0.0 port : 8000
Waiting for connections on port 8001
('connect to 127.0.0.1', 8000)
Client connected with 127.0.0.1:53176
requestd file data is : text2.txt
sending file : text2.txt to : 53176
done sending file
('connect to 127.0.0.1', 8000)
connected to peer ip : 0.0.0.0 port : 8002
file requested : text2.txt
('connect to 127.0.0.1', 8000)
requestd file data is : haha.txt
sending file : haha.txt to : 53179
done sending file
('connect to 127.0.0.1', 8000)
('connect to 127.0.0.1', 8000)
^Quit: 3
Minsiks-MacBook-Pro:test1 minski$ 

test2 -- bash -- 71x24
Minsiks-MacBook-Pro:test2 minski$ python fileSynchronizer.py 127.0.0.1 8000
trying to connect to host : 0.0.0.0 port : 8002
Waiting for connections on port 8001
('connect to 127.0.0.1', 8000)
connected to peer ip : 0.0.0.0 port : 8001
file requested : text2.txt
('connect to 127.0.0.1', 8000)
requestd file data is : haha.txt
sending file : haha.txt to : 53179
done sending file
('connect to 127.0.0.1', 8000)
('connect to 127.0.0.1', 8000)
^Quit: 3
Minsiks-MacBook-Pro:test2 minski$ 

```

## After transfer:

