

About The P2P Network

This is a basic implementation of a P2P network. The instructions to run this network are very simple. To run the network follow the given steps:

1. Run the `manager.py` file using the following command:

```
python manager.py --host localhost --port 12000 --max 20
```

host: Host where the manager will run. (*default* = localhost)

port: Port where the manager will run. (*default* = 12000)

max: Maximum number of peers connection (*default* = 20)

2. Now to run the `peer.py` file open a new terminal and run:

```
python peer.py --manager_host localhost --manager_port 12000 --host localhost --max 20
```

manager_host: Host where the manager is running. (*default* = localhost)

manager_port: Port where the manager is running. (*default* = 12000)

host: Port where the peer will run. (*default* = localhost)

max: Maximum number of peers connection (*default* = 20)

3. In the `peer.py` terminal you should be prompted to enter your unique **port number** (around 7000) and **username**. Once that is done a folder will be created with the entered username. As shown below:

```
$ python peer.py
Enter your port number: 7000
Type your username: username

-----
Store all sharable files in the folder named 'username' !!!
-----

Started Listening for new peers ...

Enter the file name you want (Q to quit): █
```

Terminal of peer

```
> username
🔗 manager.py
🔗 peer.py
```

Folder created for the peer

4. In the `manager.py` you can see the table containing the currently active peers.

```
Showing Availabel Peers...
+-----+-----+-----+
| Username | Host      | Port  |
+-----+-----+-----+
| username | localhost | 7000  |
+-----+-----+-----+
```

Table showing currently active peers

5. Next you can open more terminals and run more `peer.py` files as shown above with unique usernames.
The `manager.py` terminal will look like this:

```
Showing Availabel Peers...
+-----+-----+-----+
| Username | Host      | Port  |
+-----+-----+-----+
| username | localhost | 7000  |
+-----+-----+-----+
| fire_user | localhost | 7001  |
+-----+-----+-----+
| water_user | localhost | 7002  |
+-----+-----+-----+
```

Table showing currently multiple active peers

Transferring files

1. Copy the initial files for every peer and put them inside the corresponding peer's folder.



bison.exe in fire_user and water_user

2. Now in the terminal of the other peer, fetch that file

```
-----  
Store all sharable files in the folder named 'username' !!!  
-----
```

```
Started Listening for new peers ...
```

```
Enter the file name you want (Q to quit): bison.exe
```

```
Enter the name of downloaded file: bison.exe
```

```
938 chunks will be downloaded...
```

```
Chunk 0 downloaded... From water_user
```

```
Chunk 1 downloaded... From fire_user
```

```
Chunk 2 downloaded... From water_user
```

```
Chunk 3 downloaded... From fire_user
```

```
Chunk 4 downloaded... From water_user
```

```
Chunk 5 downloaded... From fire_user
```

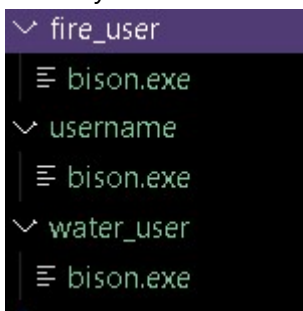
```
Chunk 8 downloaded... From water_user
```

```
Chunk 6 downloaded... From water_user
```

```
Chunk 7 downloaded... From fire_user
```

bison.exe getting fetched parallely in chunks

3. Now if you look at the other peer's folder, you will see *bison.exe*



bison.exe in the other peer

4. You can press **Q** in a peer to quit.