Peer-to-Peer File Sharing System

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User manual

Name: Zhiqian You
CLID: zxy4959

- **Directory Server Start**

  You can start a directory server in a command terminal. Then command line format is “java DirectoryServer [port]”, and [port] is the listening port number with default number 8911.

```
D:\study\513\project_p2p\DirectoryServer\src>java DirectoryServer 8911
host IP must be one of the follow(s):
wlan0: 192.168.0.104
listening on port: 8911
```

  If you get the output as above, a directory server has started successfully.

- **File Server Start**

  After starting a directory server, you can start a file server in a command terminal. Then command line format is “java FileServer [local directory] [local port] [dir server IP] [dir server port]”. The meaning of each parameter are as follow:

[local directory]	- a local directory that contains the files you want to share;
[local port]	- the listening port for receive file transfer requests;
[dir server IP]	- the host IP of a directory server;
[dir server port]	- the port of a directory server.

  Example: java FileServer D:\movies**** 8821 192.168.0.101, 8891

  Notice: the first parameter must end up with a directory divider (“\” for windows or “/” for Linux/Unix/OSX).

```
D:\study\513\project_p2p\FileServer\src>java FileServer "D:\foto\wallpapers\\" "
8821" "127.0.0.1" "8911"
directory server is at 127.0.0.1:8911
 --connected to directory server: 127.0.0.1
shared directory: D:\foto\wallpapers\
host IP must be one of the follow(s):
wlan0: 192.168.0.104
listening at: 8821...
```

If you get the output as above, a file server has started successfully.

After a file server is started, it will update all the files it possesses to the directory server; therefore, you can get the file update information from the directory server output window:

```
--update file_DSC7629.jpg from 192.168.0.104_8821
--update file_DSC7688.jpg from 192.168.0.104_8821
--update file_DSC8192.jpg from 192.168.0.104_8821
--update file_DSC8246.jpg from 192.168.0.104_8821
--update file_DSC9003.jpg from 192.168.0.104_8821
--update file_DSC9037.jpg from 192.168.0.104_8821
--update file_DSC9438.jpg from 192.168.0.104_8821
--register fileserver: 192.168.0.104_8821
```

- **File list update**

  You can add some new files to the directory that a file server shares. The file server will send the new file list to the directory server within seconds:

```
listening at: 8821...
-- new file:
newfile_1136.jpg
newfile_1196.jpg
newfile_1520.jpg
newfile_7886.jpg
```

  And the file update information will also display in the directory server output window:

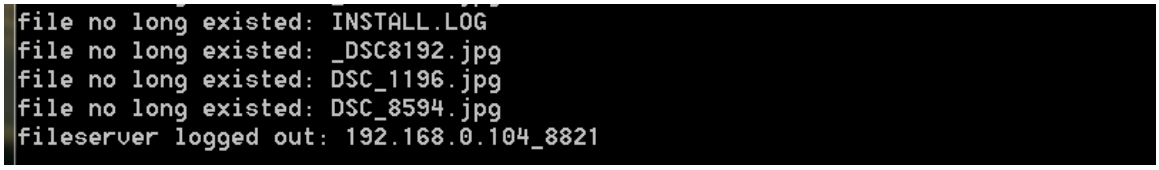
```
--register fileserver: 192.168.0.104_8821
--new files from 192.168.0.104:5644...
newfile_1136.jpg
newfile_1196.jpg
newfile_1520.jpg
newfile_7886.jpg
--update filenewfile_1136.jpg from 192.168.0.104_8821
--update filenewfile_1196.jpg from 192.168.0.104_8821
--update filenewfile_1520.jpg from 192.168.0.104_8821
--update filenewfile_7886.jpg from 192.168.0.104_8821
```

  Likewise, if you delete some files in the shared directory of a file server, file server will also notice and relay the deletion list to the directory server:

```
--remove filenewfile_7886.jpg from 192.168.0.104_8821
--remove filenewfile_1520.jpg from 192.168.0.104_8821
--remove filenewfile_1196.jpg from 192.168.0.104_8821
--remove filenewfile_1136.jpg from 192.168.0.104_8821
```

- **File Server Stop**

  Press “Ctrl C” to terminate a file server. After several seconds you can get the file server log out and file update information from the directory server output window:



- **Retrieve a file from client**

  Command format: java FileRequester [dir server IP] [dir server port] [file name] [local dir]

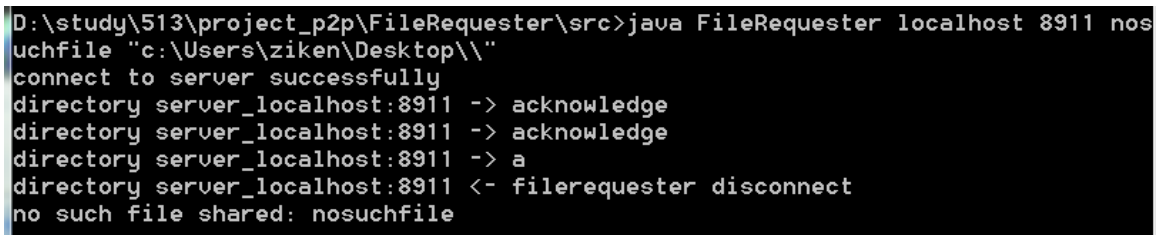
  The meaning of each parameter are as follow:

[dir server IP]	- the host IP of a directory server;
[dir server port]	- the port of a directory server;
[file name]	- the file you want to retrieve;
[local dir]	- where the file is to be stored.

  Example: java FileRequester 192.168.0.101 8911 “Ex Machina.mkv" c:\Users\ziken\Desktop\

  Notice: the last parameter must end up with a directory divider (“\” for windows or “/” for Linux/Unix/OSX).

  If the file does not exist in the server, you will receive the information as follow:

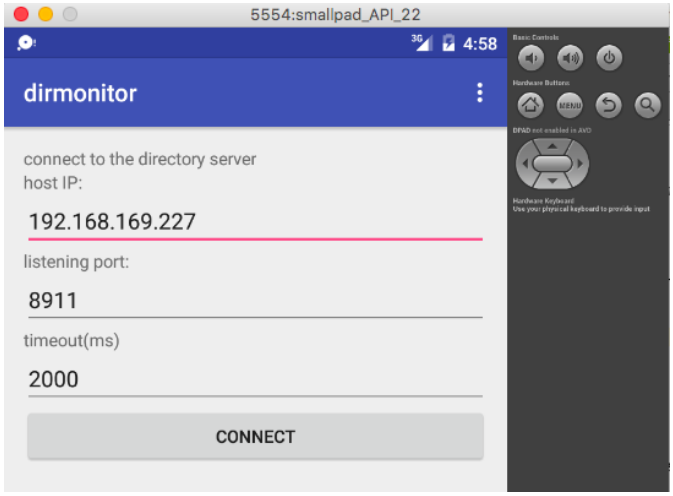


  If everything goes smoothly, you will get the file you want and receive the information as follow:

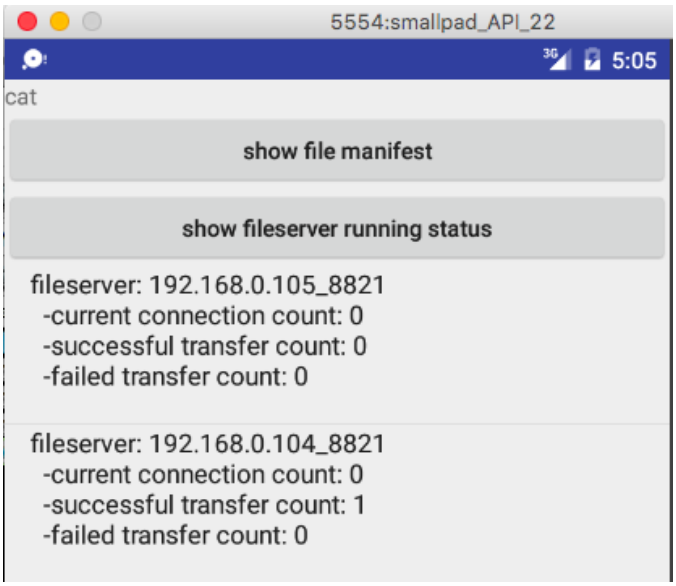
- **Monitor the servers' running status**

  You can monitor all servers' running status such as current connections count, transfer successful count, transfer failure count and connection failure count through an Android device.

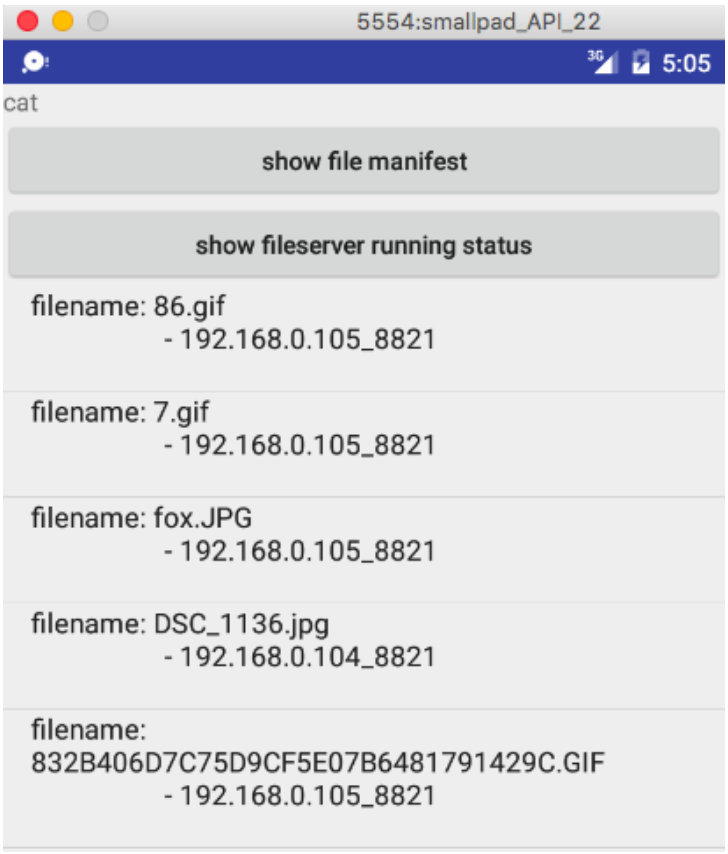
  The app's name is "dirmonitor":



Login window



File servers' running status



Shared file list