CS425 MP3: Simple Distributed File System Readme
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File List:

mServer.c/h → SDFS servers

mClient.c/h → Client Node

mDNS.c/h → Fixed machine used to resolve IP and port of current leader

mFileLib.c/h → File Library for reading/writing and splitting/joining files

payload.c/h → Payload Library

queue.c/h → Queue Library

mSocketLib.c/h → Socket Library

mLoggingLib.c/h → Logging Library

libdictionary.c/h → Dictionary Library

failureleader.c/h → Failure Detection and Leader Election protocols

mFileGen.c → Used to generate 1MB, 10MB, 100MB, 1GB files

IMPORTANT NOTE: All files/libraries were written by Rohan Jyoti and Yiwei Yang(no external libraries were used)

Compilation and Execution Instructions

To generate files, first 'make' the project, then launch mFileGen with First argument as the file you wish to create and second argument as number of MBs you wish the file to be.

```
-bash-4.1$ ./mFileGen testfile1MB 1
```

```
-bash-4.1$ ./mFileGen testfile10MB 10
```

```
-bash-4.1$ ./mFileGen testfile100MB 100
```

```
-bash-4.1$ ./mFileGen testfile1GB 1000
```

To start SDFS system:

mDNS must start first. Must supply port to run on as argument

```
-bash-4.1$ ./mDNS 5432
```

Next, start mServer instances (master and servant will automatically be decided).
The arguments are as follow:

First Argument: IP Address of mDNS

Second Argument: Port of mDNS

Third Argument: Port for TCP listener, Port for UDP listeners is auto-set to +1

```
-bash-4.1$ ./mServer 192.168.1.123 5432 5440
```

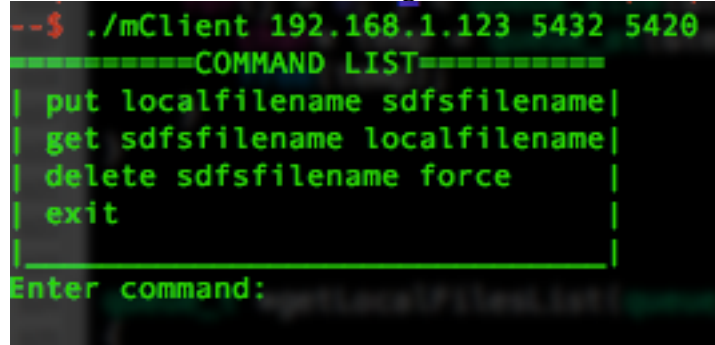Lastly, start mClient instance.
The arguments are follows:
First Argument: IP Address of mDNS
Second Argument: Port of mDNS
Third Argument: Port for TCP listener

```
-bash-4.1$ ./mClient 192.168.1.123 5432 5420
```

The mClient has the following interface:

You may put, get, delete a file or exit the program. The program runs in an infinite loop until you type 'exit'.