P2. BigFS

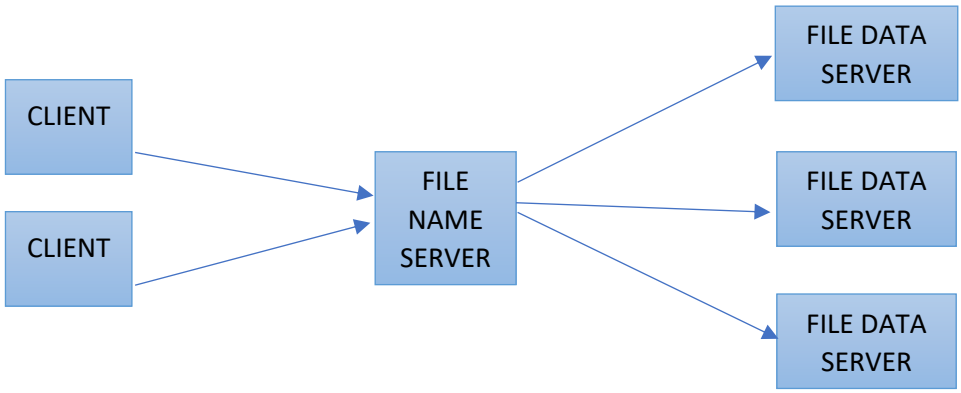
Design

Bigfs is divided into three files. These are the client, the file name server and the file data server. The client serves as the interface to the bigfs. It provides a minimal shell-like environment and supports 7 commands. These are ls, rm, cat, cp, mv, up(upload) and exit.

The upload command splits a big file into chunks of size 1mb each and stores it in the data server's designated directory. Other commands work as expected in normal shells, and do not support flags.

The client gets the command from the user and sends it to the file name server. In all commands other than ls, the file name server forwards the necessary information to the respective file data servers, which perform the operation requested.

A config file is present which indicates the number of data servers present in BigFS.



Files Included

client.c, filenameserver.c, filedataserver.c, config.txt

How to run

- To compile, use make/make all.
- To run the program first start the data servers (./ds <number> e.g: ./ds 1)
- Then start the name server (./ns)
- Execute the client (./c)
- Run commands such as ls, cp <filename>, rm <filename>
- To upload, command "up" must be used. (e.g up <filename>)

Limitation

- Data loss during cat operation
- BigFS works with files only, not directories