

```
main
  if server program
    start server
    exit

  if client
    start client
    exit

server
  create thread
  create semaphore
  create queue

  while the program is running
    if there is a new client
      store the client pid, priority, file
      fork

      open the file
      if the file could not be opened exit

      if child
        while not done with file
          lock semaphore
          send priority times
          unlock semaphore
          child exit

    close queue
    close semaphore
    join thread

addClient
  listen for new client request
  if client request is found
    parse client request to pid, priority, filename

client(qid)
  get pid
  create message buffer

  while running
    read from message queue
    if data was read
      display to buffer

client thread
  if new data on stdin
    if command
```

execute command

else

send request to server with stdin as filename