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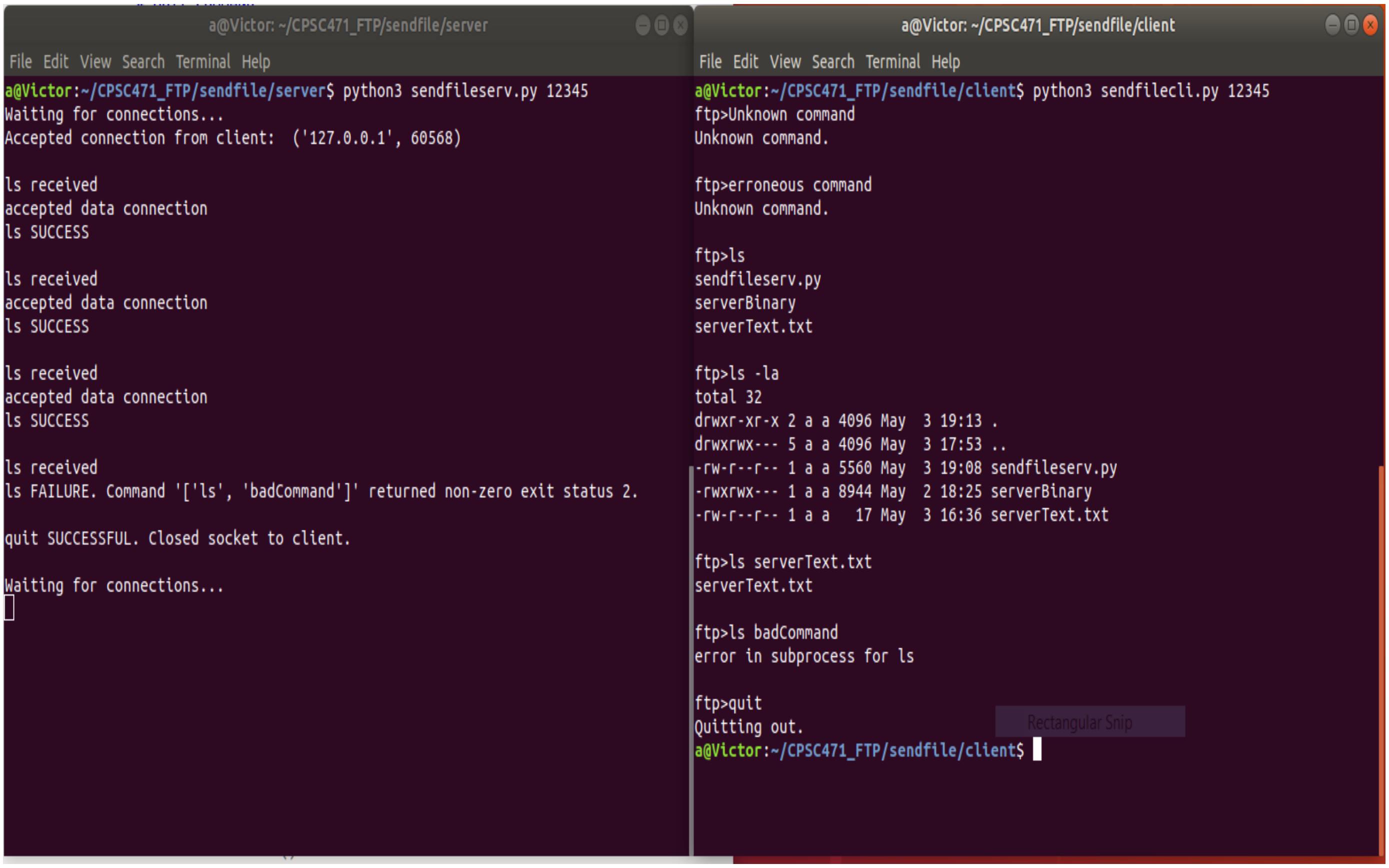
CPSC 471 FTP Report

Here we'll see a few demonstrations of the FTP program in operation. On the left is the server, on the right is the client. These images show a connection by the client, a few erroneous commandsd, several ls commands, and a quit. Note that some of the ls commands have legitimate options, while others do not. Once the client disconnects the server simply goes back to waiting for more connections.



a@Victor: ~/CPSC471_FTP/sendfile/server
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a@Victor: ~/CPSC471_FTP/sendfile/client
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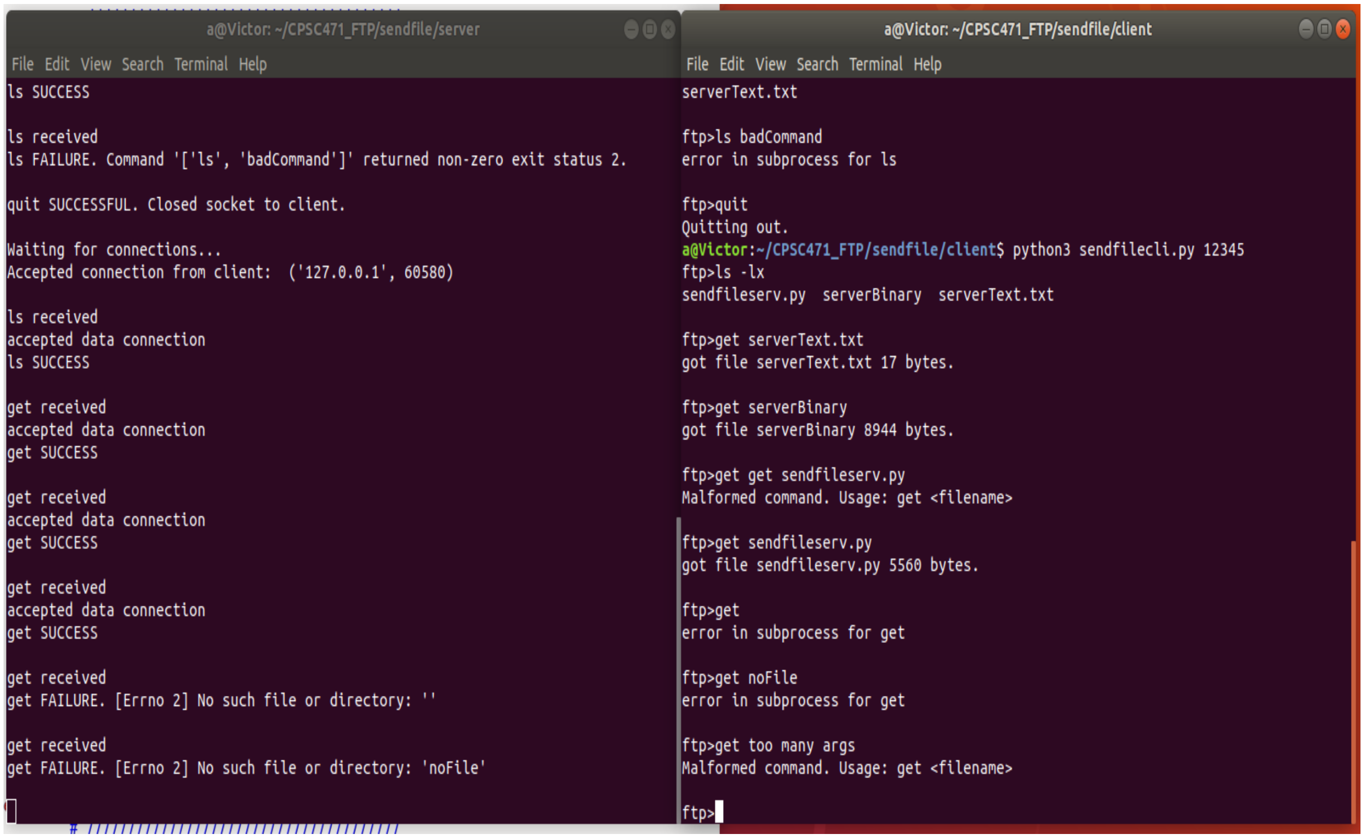
Rectangular Snip

```
a@Victor:~/CPSC471_FTP/sendfile/server$ python3 sendfileserv.py 12345
Waiting for connections...
Accepted connection from client:  ('127.0.0.1', 60568)

ls received
accepted data connection
ls SUCCESS

ls received
accepted data connection
ls SUCCESS

ls received
accepted data connection
ls SUCCESS

ls received
ls FAILURE. Command '['ls', 'badCommand']' returned non-zero exit status 2.

quit SUCCESSFUL. Closed socket to client.

Waiting for connections...
```

```
a@Victor:~/CPSC471_FTP/sendfile/client$ python3 sendfilecli.py 12345
ftp>Unknown command
Unknown command.

ftp>erroneous command
Unknown command.

ftp>ls
sendfileserv.py
serverBinary
serverText.txt

ftp>ls -la
total 32
drwxr-xr-x 2 a a 4096 May  3 19:13 .
drwxrwx--- 5 a a 4096 May  3 17:53 ..
-rw-r--r-- 1 a a 5560 May  3 19:08 sendfileserv.py
-rwxrwx--- 1 a a 8944 May  2 18:25 serverBinary
-rw-r--r-- 1 a a   17 May  3 16:36 serverText.txt

ftp>ls serverText.txt
serverText.txt

ftp>ls badCommand
error in subprocess for ls

ftp>quit
Quitting out.
a@Victor:~/CPSC471_FTP/sendfile/client$
```

Here we see the client reconnect to the same server instance, use ls, then get a number of files. Some of the calls are to nonexistent files, some have too many or too few arguments. Note that the client is even able to get binary files.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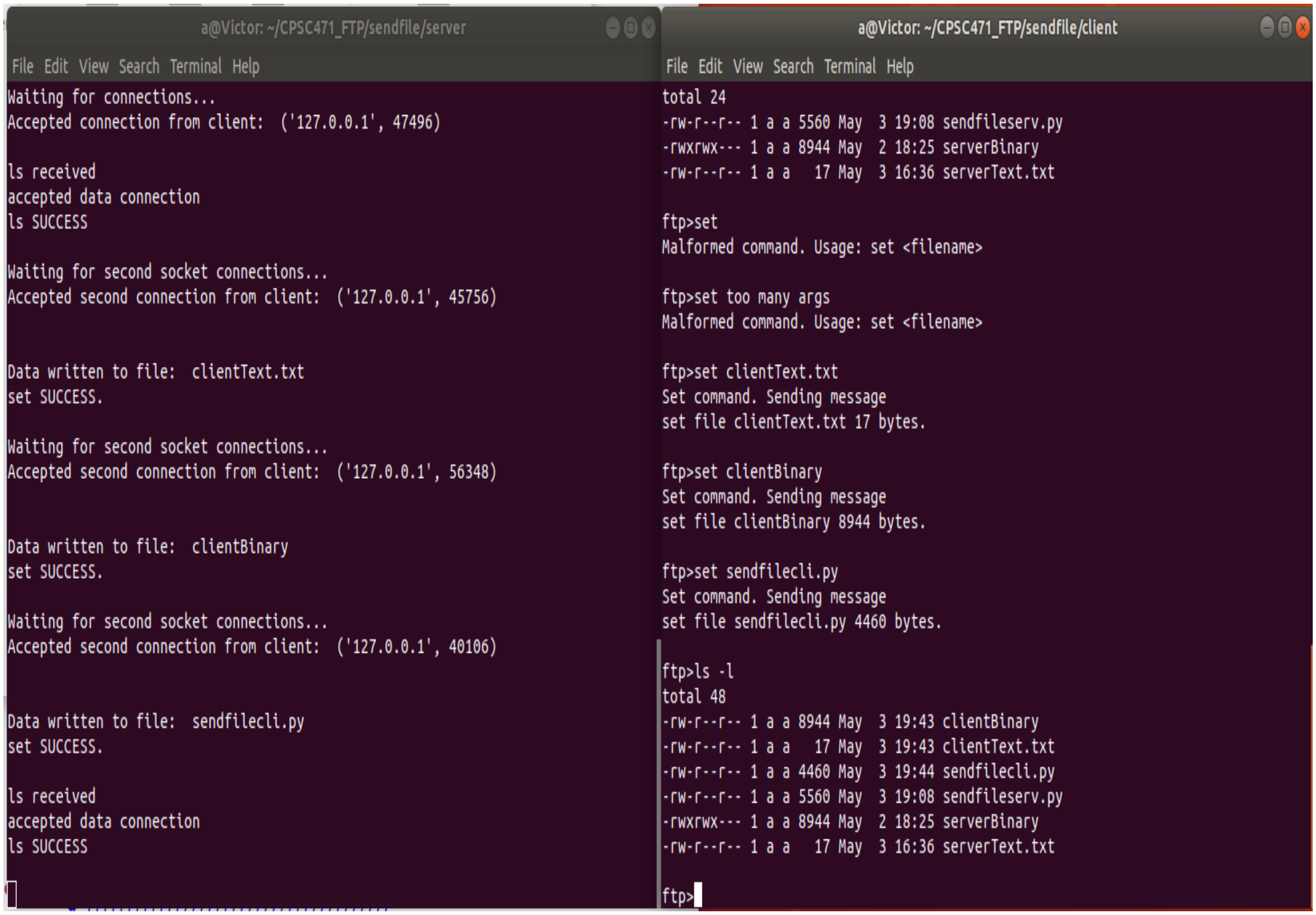
```
ls SUCCESS

ls received
ls FAILURE. Command '['ls', 'badCommand']' returned non-zero exit status 2.

quit SUCCESSFUL. Closed socket to client.

Waiting for connections...
Accepted connection from client:  ('127.0.0.1', 60580)

ls received
accepted data connection
ls SUCCESS

get received
accepted data connection
get SUCCESS

get received
accepted data connection
get SUCCESS

get received
accepted data connection
get SUCCESS

get received
get FAILURE. [Errno 2] No such file or directory: ''

get received
get FAILURE. [Errno 2] No such file or directory: 'noFile'
```

```
serverText.txt

ftp>ls badCommand
error in subprocess for ls

ftp>quit
Quitting out.
a@Victor:~/CPSC471_FTP/sendfile/client$ python3 sendfilecli.py 12345
ftp>ls -lx
sendfileserv.py  serverBinary  serverText.txt

ftp>get serverText.txt
got file serverText.txt 17 bytes.

ftp>get serverBinary
got file serverBinary 8944 bytes.

ftp>get get sendfileserv.py
Malformed command. Usage: get <filename>

ftp>get sendfileserv.py
got file sendfileserv.py 5560 bytes.

ftp>get
error in subprocess for get

ftp>get noFile
error in subprocess for get

ftp>get too many args
Malformed command. Usage: get <filename>

ftp>
```

And finally, here we see set in action. The client connects, checks the files on the server, sets several files, including a binary file, and then checks the files on the server. Note that some of the set commands are erroneous and handled by the program.



a@Victor: ~/CPSC471_FTP/sendfile/server
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```
Waiting for connections...
Accepted connection from client:  ('127.0.0.1', 47496)

ls received
accepted data connection
ls SUCCESS

Waiting for second socket connections...
Accepted second connection from client:  ('127.0.0.1', 45756)


Data written to file:  clientText.txt
set SUCCESS.

Waiting for second socket connections...
Accepted second connection from client:  ('127.0.0.1', 56348)


Data written to file:  clientBinary
set SUCCESS.

Waiting for second socket connections...
Accepted second connection from client:  ('127.0.0.1', 40106)


Data written to file:  sendfilecli.py
set SUCCESS.

ls received
accepted data connection
ls SUCCESS

```

a@Victor: ~/CPSC471_FTP/sendfile/client
File Edit View Search Terminal Help

```
total 24
-rw-r--r-- 1 a a 5560 May  3 19:08 sendfileserv.py
-rwxrwx--- 1 a a 8944 May  2 18:25 serverBinary
-rw-r--r-- 1 a a   17 May  3 16:36 serverText.txt

ftp>set
Malformed command. Usage: set <filename>

ftp>set too many args
Malformed command. Usage: set <filename>

ftp>set clientText.txt
Set command. Sending message
set file clientText.txt 17 bytes.

ftp>set clientBinary
Set command. Sending message
set file clientBinary 8944 bytes.

ftp>set sendfilecli.py
Set command. Sending message
set file sendfilecli.py 4460 bytes.

ftp>ls -l
total 48
-rw-r--r-- 1 a a 8944 May  3 19:43 clientBinary
-rw-r--r-- 1 a a   17 May  3 19:43 clientText.txt
-rw-r--r-- 1 a a 4460 May  3 19:44 sendfilecli.py
-rw-r--r-- 1 a a 5560 May  3 19:08 sendfileserv.py
-rwxrwx--- 1 a a 8944 May  2 18:25 serverBinary
-rw-r--r-- 1 a a   17 May  3 16:36 serverText.txt

ftp>
```