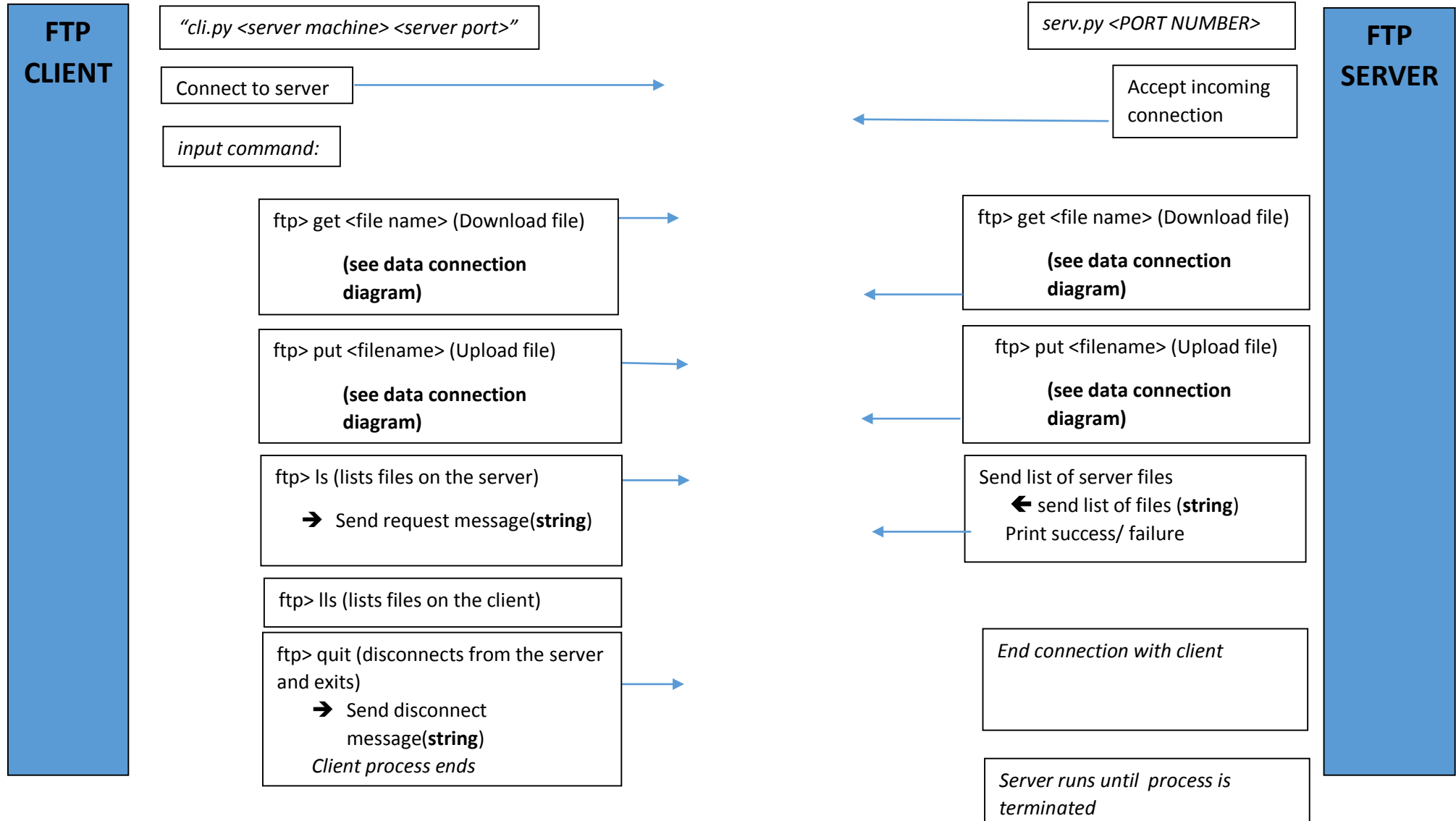


FTP Control Connection Diagram



FTP Data Connection Diagram

FTP CLIENT

ftp> get <file name> (Download file)

Generate ephemeral port

Send request for server to
connect to client on port (**string**)

*Wait until entire size of file
is received*

Print filename and bytes received

Close port

ftp> put <filename> (Upload file)

Generate ephemeral port

Send request for server to
connect to client on port (**string**)

Send size of file (**string**)

Send actual file (**filetype**)

Print filename and bytes sent

Close port

FTP SERVER

Confirm connection to
client (**string**)

Send size of file (**string**)

Send actual file (**filetype**)

Disconnect from port

*Print success/failure
depending on status*

Confirm connection to
client (**string**)

*Wait until entire size of file
is received*

Disconnect from port

Print success/failure

- Error checks will be put in place to make sure file paths to download/upload exist
- The server runs until it the process is killed
- The client and server will exchange messages through the control connection to avoid any possible inconsistencies involving commands
- The client creates a separate data connection using an ephemeral port for each file transfer and closes it once finished