

**CS444/544**  
**Final Programming Project - myssh**  
**Due: Thursday, June 7th, NOON**

Your final project is to build a simple client/server system for running programs remotely. The `myssh` client program syntax is:

`myssh [-d] host[:port] shell_command`

`mysshd [-d]`

The program runs the command “`shell_command`” on the specified host. The behavior of the program should be “nearly” indistinguishable from running the same program locally, but it is actually run on “host”. The program must meet the following requirements:

- Must use TCP for command input/output
- Must be secure
- Must return stdout and stderr

Because we will be grading this project after many of you leave, it’s important that you:

- Document your program thoroughly
- Explain how your client and server “find” each other (to connect on the same port)
- Test that it works when OTHER PEOPLE run it

An important, graded component of this project is SECURITY.

- Your documentation must explain how your program deals with security (password, challenge/response, shared key, etc)
- You must JUSTIFY why your security measures are sufficient to protect your program

Extra credit ideas:

- Receive stdin and forward to the shell script
- Have a really good security mechanism
- Anything else you can think of
- Be sure to document the extra credit and show how to use it