I am getting a "public key denied" or some other authentication error. What should I do?
The answer to this depends on what else you have tried.

- If you use PuTTY:
    - This might be due to the different format that PuTTYgen generates. You might have to do the following to generate the right format of the private key: Go to the "Conversions" menu in PuTTYgen, and click on "Import key." Select your .ppk private key file. Then go to "Conversions" again, and click on "Export OpenSSH key." Save the exported private key file and you should be able to log in with it. If you still cannot, go to the last bullet point.
- Are you sure you have the correct private key in your **~/.ssh**?
    - Please make sure you add the private key corresponding to the public key you sent us in your **~/.ssh** folder and name it **id_ed25519** (no suffixes). If you submitted the wrong public key in the sign-up form, you can edit your response to re-submit the correct one.
- If none of the above solves the issue, please email us at cse484-tas@cs **with your group name *and* the public key** you'd like to use to access the machine. We'll look into your issue.

I am getting a segfault in gdb when I try to set breakpoints.
Please, re-read the assignment. In particular, this part:
*When running gdb using these command line flags, be sure to first issue '**catch exec**' then '**run**' the program before you set any breakpoints; the command 'run' naturally breaks the execution at the first execve call before the target is actually exec-ed, so you can set your breakpoints when gdb catches the execve. Note that if you try to set breakpoints before entering the command 'run', you'll get a segmentation fault.*

sploit0 doesn't work if I take it from the section slides.
Did you add any other code (like declaring other local variables in main)? If so, make sure that only the buffer is declared in the main of your sploit0.c The shellcode variable is included with the `#include` at the beginning of the skeleton. If you didn't use the included shellcode but tried to write your own or you declared any other local variables in your sploit0.c, then the layout of the stack may be different, so the exact addresses from section won't work. Either try to figure out what the new address of the shellcode location is or make sure your code is ***really*** the same as that from section.

After I fixed a bug my exploit starting working strangely
Changing the input size of your string can, in some cases, change the layout of the stack. This will cause the addresses of everything to change. If you fix the size of your input string, you'll

stop having stack layout changes. (We set this up in a way that minimizes the layout changes, but can't eliminate them entirely.)

How can I see the entire program in assembly?

Objdump is a useful tool for this, e.g. `objdump -d target#`

-d is for 'disassemble all code`

-D is for 'disassemble everything, even if its not code`