There are two major ways to run the class project from a virtual machine, or via ssh to linuxlab.

<demo ssh into linux lab>

       Run at least two terminal windows

       Make run

       Make dbgrun

       <second window> make dbg

<demo virtual machine>

       Show login

       Make run

       Make dbgrun

Have all students:

- Get into a vm or linuxlab
- Follow project directions to checkout geekos

Helpful suggestions:

- All of the output will end up in the file output.log
- Typing <esc>2 (at the same time) or <ctl><alt>2 (at the same time) will take you to qemu command line prompt, the type q to quit the emulator.

Setup steps (Virtual Machine):

- Download virtual machine http://www.cs.umd.edu/~hollings/cs412/s14/412studentVM.ova
- Start VM in Emulator (Virtual Box or something else)
- From terminal window:
  - o sudo apt-get install subversion
  - o sudo apt-get update
  - o sudo apt-get install openjdk-7-jre
  - o svn co https://svn.cs.umd.edu/repos/geekos/spring2014
    - ▪ your login is sv-geekosro with a blank password.

Setup steps (Linuxlab Machines):

- login to your account in linuxab.cs.umd.edu
- edit the file local.cshrc
  - o to the line "set path = (/bin …)" change it to "set path = (~hollings/qemu/bin /bin …)"

o   add a line after the path one of
- setenv LD_LIBRARY_PATH /usr/local/pixman/lib

Using GDB

- Try ls and show it hangs in a todo
- Run with gdb and use where to show what is going on

Walk through source tree of supplied code

Src/geekos – source code for kernel

- Most of the code is in C, but some assembly

Src/user – source code for user level programs

- One .c file per command
- Programs must be 8.3 format for now (initial file system)

Src/libc – source of user code built into the C runtime library for Geekos

Include/geekos

build