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Lab #7: COMP 3000B (Operating Systems) March 7 & 9, 2006

This lab focuses on a quick introduction to FreeDOS. FreeDOS is another operating system which is significantly different from Linux, the operating system you have been using for the past several weeks. Please answer all seven questions, and be sure to shut down your computer

- when you are done. 1. (1 pt) In contrast to the "man" help system in Unix, DOS has help available through the "help" command. What command can be used to change directories? What command can be used to edit files? 2. (1 pt) What is one difference in the layout of file permissions (called attributes in DOS) between DOS and Linux. 3. (1 pt) DOS is not a multiuser operating system. It is only capable of running one user process at a time. Is it possible to run a multithreaded program under DOS? Why or why not?
 - 4. (1 pt) in the comp3000 directory there are three .com files (this is one form of executable file under dos). Use the dos debug command to unassemble the *cold.com* command and view the assembly output. What is the instruction located at address offset 0108h?

5.	(3 pts) Run the <i>warm.com</i> command in the comp3000 directory. What does it do? Examine the assembly code for the <i>warm.com</i> command. It writes 1234h to address 0040:0072 and then jumps to F000:FFF0. Would this code be able to run correctly under Linux? What security mechanism(s) may influence the running of the program under Linux?
6.	(2 pts) Examine the <i>kbd.com</i> command in the comp3000 directory. It accomplishes the same task as the <i>warm.com</i> command but in a different way (using the reset line on the keyboard controller chip). What security concept(s) would prevent this program from running under Linux?
7.	(1 pt) Given the observed layout and operation of DOS from the questions above, what is one application that DOS would be useful for?