

# CS120 Worksheet

## 1.6 Network Speed & 1.7 Client/Server Model

**Date:** Tuesday, February 13, 2007

**Name:** \_\_\_\_\_

- 1) A dial-up modem typically runs at 56 kilobits per second. How long will it take to upload a 20 MB file? Show work.
  
- 2) Network congestion can slow down your network speed. Keeping this in mind, when (and why) do you think would be a particularly bad time to try to connect to <http://www.weather.com>?
  
- 3) Some companies are selling software that a user accesses by loading a web page. The software is not permanently installed on the user's computer and instead runs in a web browser.
  - a. Open a web browser and load <http://us.ajax13.com/en/ajaxwrite/>. Select the blue "Launch Now!" button. Use this application to write a small text file. Change the font, make some text bold, cut and paste, and highlight some text. How does this compare to using Microsoft Word? Easier, Harder, the same? Slower, faster, the same? How else is your experience different?
  - b. Give two reasons why selling software this way may be a good idea and two reasons this may be a bad idea.
  
- 4) Open the Terminal application on the computer. Use the 'host' command to determine the IP address of a website you frequently use. If you do not know how to start the Terminal, type Terminal into the Finder search window.

For example, to check the IP address of [www.pacificu.edu](http://www.pacificu.edu) type the following after the dollar sign (\$) in the terminal window and then press enter:

```
host www.pacificu.edu
```

What is the IP address of [www.pacificu.edu](http://www.pacificu.edu)

- 5) [www.pacificu.edu](http://www.pacificu.edu) is an alias. Using the host command, what is the domain name and the host name for the alias [www.pacificu.edu](http://www.pacificu.edu)?
- 6) The ping command will tell you how long it takes to send data from your computer to a remote computer and back again. The command `ping -i 3 euler.math.pacificu.edu` will send data every 3 seconds. The time taken is shown in milliseconds at the end of the line (time=###.### ms).

In the terminal window you previously opened, type:

```
ping -i 3 euler.math.pacificu.edu
```

Open a new terminal window and type:

```
ping -i 3 ping.symantec.com
```

Which machine has a higher ping time? Why is that? What does a higher ping time mean? The ping time for a particular machine may vary while you do this exercise. What may cause that variance?