

Name \_\_\_\_\_ /20 pts.

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## SE 4C03 Winter 2002

### Lab Exercise 2

Instructor: William M. Farmer

Revised: 11 February 2002

Assigned: 08-FEB-2002

Lab report due: 08-MAR-2002

Do this lab exercise with your assigned team members.

1. Configure your host's routing table using `route` so that the specification below is satisfied. Add a *direct route* to the routing table for each of the three network interfaces on your host. Add enough *indirect routes* (including possibly one default route) to the routing table so that there is a route to each IP address on the Little Internet. Put a copy of the your `route` commands in the `/etc/rc.local` file so that they are executed when your host is rebooted.

\_\_\_\_\_ /15 pts.

2. After configuring your host's routing table, use `ping` to determine which IP addresses are accessible to your host. Record your findings in a table on a separate sheet. Each entry of the table should include the date, the time, the IP address that was pinged, and what was observed.

\_\_\_\_\_ /5 pts.

For your team's lab report, hand in this sheet, the ping results table, and a copy of each team member's log book.

**Little Internet Routing Specification.** If the number of your host is  $x$  and the destination address of a packet belongs to a host with number  $y$ , then:

1. If  $x = y$ , the packet should be immediately delivered.
2. If  $x < y$ , the packet should be forwarded to a host with number  $z$  such that  $x < z \leq y$ .
3. If  $y < x$ , the packet should be forwarded to a host with number  $z$  such that  $y \leq z < x$ .