## **ANSWERS TO EVEN-NUMBERED EXERCISES**

2. How would Max store a copy of his email in ~/mbox and send a copy to max@bravo.com?

Max needs to create a ~/.forward file with the following lines:

```
$ cat ~/.forward
~/mbox
max@bravo.com
\max
```

4. What does dnl stand for in the m4 macro language? What are dnl commands used for?

The dnl command, which stands for delete to new line, instructs the compiler to ignore anything on a line following the dnl. It is used to set off comments.

6. Describe the software and protocols used when Max sends an email to Sam on a remote Linux system.

One possible answer of many:

- a. Max's MUA passes the email to sendmail.
- b. The **sendmail** daemon uses SMTP to deliver the email to the instance of **sendmail** on Sam's system.
- c. On Sam's system, sendmail passes the email to the local MDA (procmail).
- d. The MDA stores the email in Sam's file in the spool directory.
- e. Sam's MDA retrieves the email from the spool directory.

8. Assume you have a script that sends its output to standard output. How would you modify the script to send the output in an email to a user specified by the first argument on the command line? (You may assume that the data is stored in \$RESULT.)

```
echo "$RESULT" | /usr/sbin/sendmail $1
```

10. If you accidentally delete the /etc/aliases file, how could you easily re-create it (assuming that you had not restarted sendmail)?

```
# praliases > /etc/aliases
```