The problem may also be in the permissions of the file's *directory*. Some programs need permission to write more files into the same directory (for example, temporary files), or to rename files (for instance, making a file into a backup) while editing. If it's safe to add write permission to the directory (if other files in the directory don't need protection from removal or renaming) try that. Otherwise, copy the file to a writable directory (with **cp**), edit it there, then copy it back to the original directory.

Changing Group and Owner

Group ownership lets a certain group of users have access to a file or directory. You might need to let a different group have access. The **chgrp** program sets the group owner of a file or directory. You can set the group to any of the groups you belong to. (The system staff control the list of groups you're in.) On most versions of Unix, the **groups** program lists your groups.

For example, if you're an instructor creating a directory named *csc303* for students in a course, the directory's original group owner might be *faculty*. You'd like the students, all of whom are in the group named *csstudnt*, to access the directory; members of other groups should have no access. Use commands such as these:*

```
$ groups
faculty csstudnt wheel research
$ mkdir csc303
$ ls -ld csc303
drwxr-xr-x    2 roberts  faculty      4096 Aug 25 13:35 csc303
$ chgrp csstudnt csc303
$ chmod o= csc303
$ ls -ld csc303
drwxr-x---    2 roberts  csstudnt     4096 Aug 25 13:35 csc303
```

The **chown** program changes the owner of a file or directory. On most Unix systems, only the superuser can use **chown**.†

* Many Unix systems also let you set a directory's group ownership so that any files you later create in that directory will be owned by the same group as the directory. Try the command "**chmod g+s** *dirname*". If this works, the permissions listing from **ls -ld** should show an *s* in place of the second *x*, such as `drwxr-s---`.

† If you have permission to read another user's file, you can make a copy of it (with **cp**; see the section "Copying Files" in Chapter 4). You'll own the copy.