PERMISSION	MODE	WHY AND WHEN
Setuid	4000	Execute file as owning user ("Set user id on execution"). This property is removed and must be reset each time the file is changed (edited).
Setgid	2000	Execute file as owning group ("Set group id on execution"). This property is removed and must be reset each time the file is changed (edited).
Sticky bit	1000	A directory whose *sticky bit* is set has special restrictions on file deletion. In order to delete or rename a file inside a sticky directory, a user must have write permission on the directory or own the directory, and must also own the file. The root user is not restricted by sticky directories. The /private/tmp directory in Mac OS X is a sticky directory (and /tmp is a symbolic link to it). See man sticky for more on the sticky bit.

Table 8.5. Mode Values for Directory Permissions

PERMISSION	MODE	WHY AND WHEN
User read	0400	So that the owning user may list contents.
User write	0200	So that the owning user may create and delete files inside it.
User execute	0100	So that the owning user may cd into or through it.
Group read	0040	So that the owning group may list contents.
Group write	0020	So that the owning group may create and delete files inside it.
Group execute	0010	So that the owning user may cd into or through it.
Others read	0004	So that all others may list contents.
Others write	0002	So that all others may create and delete files inside it.
Others execute	0001	So that all others may cd into or through it.
Setuid	4000	No effect.
Setgid	2000	Any files or directories created inside this directory are owned by the same group that owns this directory.

Table 8.6. Options for the chmod Command

OPTION	MEANING
-R	Makes changes recursively. Used when changing permissions on a directory and everything it contains. The next three options only work in combination with the -R option. Only one of the following may be used. If more than one is used, the last one on the command line takes precedence.
-H	If the -R option is specified, symbolic links on the command line are followed. (Symbolic links encountered in the directory traversal are not followed.) See Chapter 5 for more on symbolic links.
-L	If the -R option is specified, all symbolic links are followed.