HW4

April 8, 2020

[1]:
```
pwd
```

```
/home/jupyter-tsagynysh
```

[2]:
```
ls
```

```
HW3.ipynb  shared           Untitled2.ipynb  Untitled.ipynb
Sagynysh   Untitled1.ipynb  Untitled3.ipynb
```

[3]:
```
touch Sashko
```

[4]:
```
ls
```

```
HW3.ipynb  Sashko  Untitled1.ipynb  Untitled3.ipynb
Sagynysh   shared  Untitled2.ipynb  Untitled.ipynb
```

[5]:
```
ls -l Sashko
```

```
-rw-r--r-- 1 jupyter-tsagynysh jupyter-tsagynysh 0 Apr  8 21:27 Sashko
```

[8]:
```
chmod u+rw Sashko
```

[10]:
```
ls -l Sashko
```

```
-rw-r--r-- 1 jupyter-tsagynysh jupyter-tsagynysh 0 Apr  8 21:27 Sashko
```

[12]:
```
chmod g+wrx Sashko
```

[13]:
```
ls -l Sashko
```

```
-rw-rwxr-- 1 jupyter-tsagynysh jupyter-tsagynysh 0 Apr  8 21:27 Sashko
```

[14]:
```
# chmod u+wr g+wr o+wr this is not right
# we can write one of them together bot not all of them
```

[15]:
```
man chmod
```

```
CHMOD(1)                        User Commands                        CHMOD(1)
```

NAME

chmod - change file mode bits

SYNOPSIS

chmod [OPTION]… MODE[,MODE]… FILE…
chmod [OPTION]… OCTAL-MODE FILE…
chmod [OPTION]… --reference=RFILE FILE…

DESCRIPTION

This manual page documents the GNU version of chmod. chmod changes the file mode bits of each given file according to mode, which can be either a symbolic representation of changes to make, or an octal number representing the bit pattern for the new mode bits.

The format of a symbolic mode is [ugoa…][[-+=][perms…]…], where perms is either zero or more letters from the set rwxXst, or a single letter from the set ugo. Multiple symbolic modes can be given, separated by commas.

A combination of the letters ugoa controls which users' access to the file will be changed: the user who owns it (u), other users in the file's group (g), other users not in the file's group (o), or all users (a). If none of these are given, the effect is as if (a) were given, but bits that are set in the umask are not affected.

The operator + causes the selected file mode bits to be added to the existing file mode bits of each file; - causes them to be removed; and = causes them to be added and causes unmentioned bits to be removed except that a directory's unmentioned set user and group ID bits are not affected.

The letters rwxXst select file mode bits for the affected users: read (r), write (w), execute (or search for directories) (x), execute/search only if the file is a directory or already has execute permission for some user (X), set user or group ID on execution (s), restricted deletion flag or sticky bit (t). Instead of one or more of these letters, you can specify exactly one of the letters ugo: the permissions granted to the user who owns the file (u), the permissions granted to other users who are members of the file's group (g), and the permissions granted to users that are in neither of the two preceding categories (o).

A numeric mode is from one to four octal digits (0-7), derived by adding up the bits with values 4, 2, and 1. Omitted digits are assumed to be leading zeros. The first digit selects the set user ID (4) and set group ID (2) and restricted deletion or sticky (1) attributes. The second digit selects permissions for the user who owns the file: read (4), write (2), and execute (1); the third selects permissions for

other users in the file's group, with the same values; and the fourth for other users not in the file's group, with the same values.

chmod never changes the permissions of symbolic links; the chmod system call cannot change their permissions. This is not a problem since the permissions of symbolic links are never used. However, for each symbolic link listed on the command line, chmod changes the permissions of the pointed-to file. In contrast, chmod ignores symbolic links encountered during recursive directory traversals.

SETUID AND SETGID BITS

chmod clears the set-group-ID bit of a regular file if the file's group ID does not match the user's effective group ID or one of the user's supplementary group IDs, unless the user has appropriate privileges. Additional restrictions may cause the set-user-ID and set-group-ID bits of MODE or RFILE to be ignored. This behavior depends on the policy and functionality of the underlying chmod system call. When in doubt, check the underlying system behavior.

chmod preserves a directory's set-user-ID and set-group-ID bits unless you explicitly specify otherwise. You can set or clear the bits with symbolic modes like u+s and g-s, and you can set (but not clear) the bits with a numeric mode.

RESTRICTED DELETION FLAG OR STICKY BIT

The restricted deletion flag or sticky bit is a single bit, whose interpretation depends on the file type. For directories, it prevents unprivileged users from removing or renaming a file in the directory unless they own the file or the directory; this is called the restricted deletion flag for the directory, and is commonly found on world-writable directories like /tmp. For regular files on some older systems, the bit saves the program's text image on the swap device so it will load more quickly when run; this is called the sticky bit.

OPTIONS

Change the mode of each FILE to MODE. With --reference, change the mode of each FILE to that of RFILE.

-c, --changes
: like verbose but report only when a change is made

-f, --silent, --quiet
: suppress most error messages

-v, --verbose
: output a diagnostic for every file processed

--no-preserve-root

```
              do not treat '/' specially (the default)

       --preserve-root
              fail to operate recursively on '/'

       --reference=RFILE
              use RFILE's mode instead of MODE values

       -R, --recursive
              change files and directories recursively

       --help display this help and exit

       --version
              output version information and exit

       Each           MODE           is           of           the           form
       '[ugoa]*([-+=]([rwxXst]*|[ugo]))+|[-+=][0-7]+'.

AUTHOR
       Written by David MacKenzie and Jim Meyering.

REPORTING BUGS
       GNU coreutils online help: <http://www.gnu.org/software/coreutils/>
       Report chmod translation bugs to <http://translationproject.org/team/>

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SEE ALSO
       chmod(2)

       Full documentation at: <http://www.gnu.org/software/coreutils/chmod>
       or available locally via: info '(coreutils) chmod invocation'

GNU coreutils 8.28              January 2018                        CHMOD(1)
```

[26]:
```
# WILDCARDS IN LINUX
```

[17]:
```
touch 7.png
```

[18]:
```
touch s.jpg
```

[19]:
```
touch b.jpg
```

[20]:
```
touch t.mp3
```

[21]:
```
touch 5.mp4
```

[22]:
```
# get all images
```

[23]:
```
ls *.[jp][pn]g
```

```
7.png  b.jpg  s.jpg
```

[28]:
```
# caret
```

[29]:
```
# ^ means NOT
```

[36]:
```
pwd
```

```
/home/jupyter-tsagynysh
```

[38]:
```
cd /
```

[39]:
```
pwd
```

```
/
```

[41]:
```
cd home
```

[42]:
```
pwd
```

```
/home
```

[43]:
```
ls
```

```
azat                    jupyter-cubefiction     jupyter-official-nanakai
jupyter-admin           jupyter-danenok         jupyter-orissim
jupyter-aiana178        jupyter-darganius       jupyter-tsagynysh
jupyter-aigerimunisat   jupyter-ekdana          jupyter-unisat
jupyter-aizadait        jupyter-inkar601        jupyter-unisatkz
jupyter-amayakof        jupyter-kkenzh          jupyter-yeldana
jupyter-amirkhan        jupyter-nazymungarova   jupyter-zhandos
jupyter-arayka          jupyter-nuray.serkali   jupyter-zhanelbaltabay
jupyter-aruzhan149      jupyter-nurike          jupyter-zhannaspace
jupyter-aselleon        jupyter-nurlaura
jupyter-azat            jupyter-nurlaura2
```

[46]:
```
ls -al
```

```
total 132
drwxr-xr-x 33 root                    root                    4096 Apr  8
```

```
19:35 .
drwxr-xr-x 25 root                     root                     4096 Apr  7
06:52 ..
drwxr-xr-x 12 azat                     azat                     4096 Mar 18
01:23 azat
drwxr-x---  8 jupyter-admin            jupyter-admin            4096 Apr  8
19:21 jupyter-admin
drwxr-x---  9 jupyter-aiana178         jupyter-aiana178         4096 Apr  4
11:56 jupyter-aiana178
drwxr-x--- 10 jupyter-aigerimunisat    jupyter-aigerimunisat    4096 Apr  3
19:25 jupyter-aigerimunisat
drwxr-x---  8 jupyter-aizadait         jupyter-aizadait         4096 Mar 28
01:17 jupyter-aizadait
drwxr-x--- 10 jupyter-amayakof         jupyter-amayakof         4096 Apr  4
14:54 jupyter-amayakof
drwxr-x---  7 jupyter-amirkhan         jupyter-amirkhan         4096 Mar 21
13:40 jupyter-amirkhan
drwxr-x---  4 jupyter-arayka           jupyter-arayka           4096 Mar 18
17:22 jupyter-arayka
drwxr-x---  8 jupyter-aruzhan149       jupyter-aruzhan149       4096 Apr  5
23:35 jupyter-aruzhan149
drwxr-x---  7 jupyter-aselleon         jupyter-aselleon         4096 Mar 23
19:08 jupyter-aselleon
drwxr-x--- 12 jupyter-azat             jupyter-azat             4096 Mar 23
22:20 jupyter-azat
drwxr-x--- 11 jupyter-cubefiction      jupyter-cubefiction      4096 Apr  2
17:47 jupyter-cubefiction
drwxr-x--- 12 jupyter-danenok          jupyter-danenok          4096 Apr  8
18:44 jupyter-danenok
drwxr-x---  7 jupyter-darganius        jupyter-darganius        4096 Mar 23
12:19 jupyter-darganius
drwxr-x--- 10 jupyter-ekdana           jupyter-ekdana           4096 Apr  4
15:43 jupyter-ekdana
drwxr-x--- 11 jupyter-inkar601         jupyter-inkar601         4096 Apr  8
02:38 jupyter-inkar601
drwxr-x--- 11 jupyter-kkenzh           jupyter-kkenzh           4096 Apr  4
14:10 jupyter-kkenzh
drwxr-x--- 10 jupyter-nazymungarova    jupyter-nazymungarova    4096 Apr  8
16:03 jupyter-nazymungarova
drwxr-x---  7 jupyter-nuray.serkali    jupyter-nuray.serkali    4096 Mar 19
17:09 jupyter-nuray.serkali
drwxr-x---  7 jupyter-nurike           jupyter-nurike           4096 Mar 24
04:56 jupyter-nurike
drwxr-x---  8 jupyter-nurlaura         jupyter-nurlaura         4096 Mar 28
00:09 jupyter-nurlaura
drwxr-x---  9 jupyter-nurlaura2        jupyter-nurlaura2        4096 Apr  4
12:11 jupyter-nurlaura2
drwxr-x--- 13 jupyter-official-nanakai jupyter-official-nanakai 4096 Apr  8
```

```
20:03 jupyter-official-nanakai
drwxr-x--- 10 jupyter-orissim          jupyter-orissim          4096 Apr  8
21:48 jupyter-orissim
drwxr-x---  8 jupyter-tsagynysh        jupyter-tsagynysh        4096 Apr  8
21:50 jupyter-tsagynysh
drwxr-x--- 15 jupyter-unisat           jupyter-unisat           4096 Apr  2
17:10 jupyter-unisat
drwxr-x--- 13 jupyter-unisatkz         jupyter-unisatkz         4096 Apr  4
14:10 jupyter-unisatkz
drwxr-x---  4 jupyter-yeldana          jupyter-yeldana          4096 Mar 23
16:17 jupyter-yeldana
drwxr-x---  5 jupyter-zhandos          jupyter-zhandos          4096 Mar 23
12:19 jupyter-zhandos
drwxr-x---  8 jupyter-zhanelbaltabay   jupyter-zhanelbaltabay   4096 Apr  4
10:22 jupyter-zhanelbaltabay
drwxr-x--- 11 jupyter-zhannaspace      jupyter-zhannaspace      4096 Apr  6
20:07 jupyter-zhannaspace
```

[48]:
```
ls /home/jupyter-a*
```

```
ls: cannot open directory '/home/jupyter-admin': Permission denied
ls: cannot open directory '/home/jupyter-aiana178': Permission denied
ls: cannot open directory '/home/jupyter-aigerimunisat': Permission denied
ls: cannot open directory '/home/jupyter-aizadait': Permission denied
ls: cannot open directory '/home/jupyter-amayakof': Permission denied
ls: cannot open directory '/home/jupyter-amirkhan': Permission denied
ls: cannot open directory '/home/jupyter-arayka': Permission denied
ls: cannot open directory '/home/jupyter-aruzhan149': Permission denied
ls: cannot open directory '/home/jupyter-aselleon': Permission denied
ls: cannot open directory '/home/jupyter-azat': Permission denied
```

[49]:
```
ls /home/jupyter-n*
```

```
ls: cannot open directory '/home/jupyter-nazymungarova': Permission denied
ls: cannot open directory '/home/jupyter-nuray.serkali': Permission denied
ls: cannot open directory '/home/jupyter-nurike': Permission denied
ls: cannot open directory '/home/jupyter-nurlaura': Permission denied
ls: cannot open directory '/home/jupyter-nurlaura2': Permission denied
```

[50]:
```
pwd
```

```
/home
```

[51]:
```
ls /home/jupyter-t*
```

```
5.mp4  HW3.ipynb  shared  Untitled1.ipynb  Untitled.ipynb
7.png  Sagynysh   s.jpg   Untitled2.ipynb
b.jpg  Sashko     t.mp3   Untitled3.ipynb
```

[55]:
```
pwd
```

```
/home
```

[56]:
```
cd ./..
```

[57]:
```
pwd
```

```
/
```

[58]:
```
cd ./
```

[59]:
```
pwd
```

```
/
```

[60]:
```
cd /home/jupyter-tsagynysh
```

[61]:
```
pwd
```

```
/home/jupyter-tsagynysh
```

[62]:
```
touch Tuke
```

[63]:
```
ls
```

```
5.mp4  b.jpg      Sagynysh  shared  t.mp3  Untitled1.ipynb  Untitled3.ipynb
7.png  HW3.ipynb  Sashko    s.jpg   Tuke   Untitled2.ipynb  Untitled.ipynb
```

[64]:
```
ls T*ke
```

```
Tuke
```

[65]:
```
touch Tukke
```

[69]:
```
ls T*ke
```

```
Tuke  Tukke
```

[67]:
```
ls T?ke
```

```
Tuke
```

[68]:
```
ls Tu?ke
```

Tukke

[ ]: