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Changing File Ownership

Initially, the owner of a file is the user who creates it. The `chown` command is used to change the ownership of files and directories. Changing the user owner requires administrative access. A regular user cannot use this command to change the user owner of a file, even to give the ownership of one of their own files to another user. However, the `chown` command also permits changing group ownership, which can be accomplished by either root or the owner of the file.

To change the user owner of a file, the following syntax can be used. The first argument, `[OWNER]`, specifies which user is to be the new owner. The second argument, `FILE`, specifies which file's ownership is changing.

```
chown [OPTIONS] [OWNER] FILE
```

Follow Along

Use the following command to switch to the `Documents` directory:

```
sysadmin@localhost:~$ cd ~/Documents
```

Currently all the files in the `Documents` directory are owned by the `sysadmin` user. This can be verified by using the `ls -l` command. Recall that the third column indicates the user owner.

```
sysadmin@localhost:~/Documents$ ls -l
total 144
drwx------ 5 sysadmin sysadmin  4096 Dec 20  2017 School
drwx------ 2 sysadmin sysadmin  4096 Dec 20  2017 Work
-rw-r--r-- 1 sysadmin sysadmin    39 Dec 20  2017 adjectives.txt
-rw-r--r-- 1 sysadmin sysadmin    90 Dec 20  2017 alpha-first.txt
-rw-r--r-- 1 sysadmin sysadmin   106 Dec 20  2017 alpha-second.txt
-rw-r--r-- 1 sysadmin sysadmin   195 Dec 20  2017 alpha-third.txt
-rw-r--r-- 1 sysadmin sysadmin   390 Dec 20  2017 alpha.txt
-rw-r--r-- 1 sysadmin sysadmin    42 Dec 20  2017 animals.txt
-rw-r--r-- 1 sysadmin sysadmin    14 Dec 20  2017 food.txt
-rwxr--r-- 1 sysadmin sysadmin   647 Dec 20  2017 hello.sh
-rw-r--r-- 1 sysadmin sysadmin    67 Dec 20  2017 hidden.txt
-rw-r--r-- 1 sysadmin sysadmin    10 Dec 20  2017 letters.txt
-rw-r--r-- 1 sysadmin sysadmin    83 Dec 20  2017 linux.txt
-rw-r--r-- 1 sysadmin sysadmin 66540 Dec 20  2017 longfile.txt
-rw-r--r-- 1 sysadmin sysadmin   235 Dec 20  2017 newhome.txt
-rw-r--r-- 1 sysadmin sysadmin    10 Dec 20  2017 numbers.txt
-rw-r--r-- 1 sysadmin sysadmin    77 Dec 20  2017 os.csv
-rw-r--r-- 1 sysadmin sysadmin    59 Dec 20  2017 people.csv
-rw-r--r-- 1 sysadmin sysadmin   110 Dec 20  2017 profile.txt
-rw-r--r-- 1 sysadmin sysadmin    51 Dec 20  2017 red.txt
```

To switch the owner of the `hello.sh` script to the `root` user, use `root` as the first argument and `hello.sh` as the second argument. Don't forget to use the `sudo` command in order to gain the necessary administrative privileges. Use password `netlab123` if prompted:

```
sysadmin@localhost:~/Documents$ sudo chown root hello.sh
[sudo] password for sysadmin:
```

Confirm the user owner has changed by executing the `ls -l` command. Use the filename as an argument to limit the output:

```
sysadmin@localhost:~/Documents$ ls -l hello.sh
-rwxr--r-- 1 root sysadmin 647 Dec 20  2017 hello.sh
```

The user owner field is now `root` indicating the change was successful.

```
-rwxr--r-- 1 root sysadmin 647 Dec 20  2017 hello.sh
```

Consider This

Try executing the `hello.sh` script again. It fails! Why?

```
sysadmin@localhost:~/Documents$ ./hello.sh
-bash: ./hello.sh: Permission denied
```

Only the user owner has the execute permission, and now the `root` user is the user owner. This file now requires administrative access to execute. Use the `sudo` command to execute the script as the `root` user.

```
sysadmin@localhost:~/Documents$ sudo ./hello.sh
[sudo] password for sysadmin:
 _______________
( Hello World! )
 --------------
        \
         \
           <(^)
            ( )
```