(/)

0x01. Shell, permissions

DevOps Shell Bash

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Weight: 1

m Project over - took place from Sep 1, 2022 4:00 AM to Sep 2, 2022 4:00 AM

An auto review will be launched at the deadline

In a nutshell...

• Auto QA review: 70.0/70 mandatory & 10.75/20 optional

Altogether: 153.75%Mandatory: 100.0%

o Optional: 53.75%

Calculation: 100.0% + (100.0% * 53.75%) == 153.75%

About Bash projects

Unless stated, all your projects will be auto-corrected with Ubuntu 20.04 LTS.

Resources

Read or watch:

• Permissions (/rltoken/aQmRB6ms-SDHUhqY0Rsa3g)

man or help:

- chmod
- sudo
- su
- chown
- chgrp
- id
- groups
- whoami
- adduser
- useradd
- addgroup



Learning Objectives

At the end of this project, you are expected to be able to explain to anyone (/rltoken/ku9cNLQc4XzHnVXH6YFE7A), without the help of Google:

Permissions

- What do the commands chmod, sudo, su, chown, chgrp do
- Linux file permissions
- How to represent each of the three sets of permissions (owner, group, and other) as a single digit
- How to change permissions, owner and group of a file
- Why can't a normal user chown a file
- How to run a command with root privileges
- How to change user ID or become superuser

Other Man Pages

- · How to create a user
- How to create a group
- How to print real and effective user and group IDs
- How to print the groups a user is in
- · How to print the effective userid

Copyright - Plagiarism

- You are tasked to come up with solutions for the tasks below yourself to meet with the above learning objectives.
- You will not be able to meet the objectives of this or any following project by copying and pasting someone else's work.
- You are not allowed to publish any content of this project.
- Any form of plagiarism is strictly forbidden and will result in removal from the program.

Requirements

General

- Allowed editors: vi, vim, emacs
- All your scripts will be tested on Ubuntu 20.04 LTS
- All your scripts should be exactly two lines long (\$ wc -1 file should print 2)
- All your files should end with a new line (why? (http://unix.stackexchange.com/questions/18743/whats-the-point-in-adding-a-new-line-to-the-end-of-a-file/18789))
- The first line of all your files should be exactly #!/bin/bash
- A README.md file, at the root of the folder of the project, describing what each script is doing
- You are not allowed to use backticks, && , || or ;
- All your files must be executable

Quiz questions

(Great! You've completed the quiz successfully! Keep going! (Show quiz)

Tasks

0. My name is Betty

mandatory

Score: 100.0% (Checks completed: 100.0%)

Create a script that switches the current user to the user betty.

- You should use exactly 8 characters for your command (+1 character for the new line)
- You can assume that the user betty will exist when we will run your script

```
julien@ubuntu:/tmp/h$ tail -1 0-iam_betty | wc -c
9
julien@ubuntu:/tmp/h$
```

Repo:

- GitHub repository: alx-system_engineering-devops
- Directory: 0x01-shell_permissions
- File: 0-iam_betty

☑ Done! Help Check your code >_ Get a sandbox QA Review

1. Who am I

mandatory

Score: 100.0% (Checks completed: 100.0%)

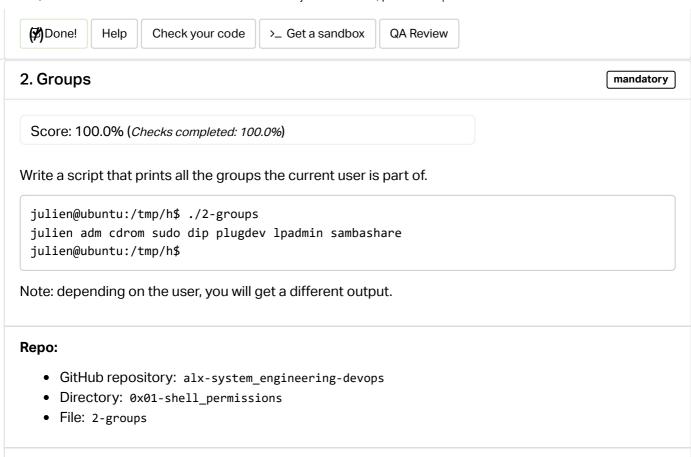
Write a script that prints the effective username of the current user.

```
julien@ubuntu:/tmp/h$ ./1-who_am_i
julien
```

julien@ubuntu:/tmp/h\$

Repo:

- GitHub repository: alx-system_engineering-devops
- Directory: 0x01-shell_permissions
- File: 1-who_am_i



3. New owner mandatory

QA Review

>_ Get a sandbox

Score: 100.0% (Checks completed: 100.0%)

Check your code

Write a script that changes the owner of the file hello to the user betty.

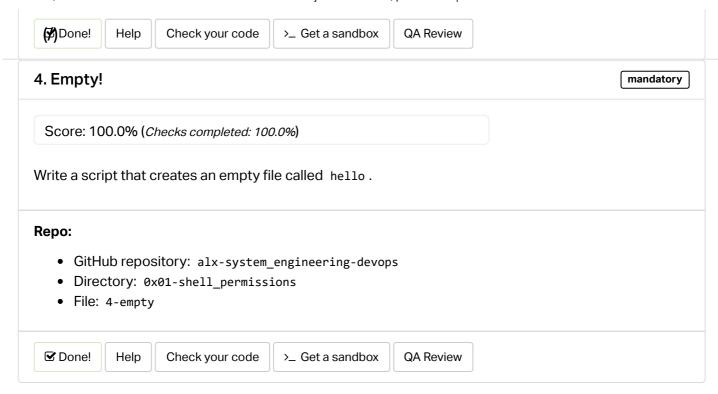
```
julien@ubuntu:/tmp/h$ ls -l
total 4
-rwxrw-r-- 1 julien julien 30 Sep 20 14:23 3-new_owner
-rw-rw-r-- 1 julien julien 0 Sep 20 14:18 hello
julien@ubuntu:/tmp/h$ sudo ./3-new_owner
julien@ubuntu:/tmp/h$ ls -l
total 4
-rwxrw-r-- 1 julien julien 30 Sep 20 14:23 3-new_owner
-rw-rw-r-- 1 betty julien 0 Sep 20 14:18 hello
julien@ubuntu:/tmp/h$
```

Repo:

✓ Done!

Help

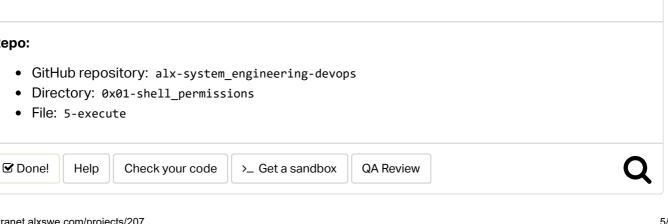
- GitHub repository: alx-system_engineering-devops
- Directory: 0x01-shell permissions
- File: 3-new_owner



5. Execute mandatory Score: 100.0% (Checks completed: 100.0%) Write a script that adds execute permission to the owner of the file hello. • The file hello will be in the working directory julien@ubuntu:/tmp/h\$ ls -1 total 8 -rwxrw-r-- 1 julien julien 28 Sep 20 14:26 5-execute -rw-rw-r-- 1 julien julien 23 Sep 20 14:25 hello julien@ubuntu:/tmp/h\$./hello bash: ./hello: Permission denied julien@ubuntu:/tmp/h\$./5-execute

Repo:

total 8



julien@ubuntu:/tmp/h\$ ls -1

julien@ubuntu:/tmp/h\$

-rwxrw-r-- 1 julien julien 28 Sep 20 14:26 5-execute -rwxrw-r-- 1 julien julien 23 Sep 20 14:25 hello

6/Multiple permissions

mandatory

Score: 100.0% (Checks completed: 100.0%)

Write a script that adds execute permission to the owner and the group owner, and read permission to other users, to the file hello.

• The file hello will be in the working directory

```
julien@ubuntu:/tmp/h$ ls -1
total 8
-rwxrw-r-- 1 julien julien 36 Sep 20 14:31 6-multiple_permissions
-r--r--- 1 julien julien 23 Sep 20 14:25 hello
julien@ubuntu:/tmp/h$ ./6-multiple_permissions
julien@ubuntu:/tmp/h$ ls -1
total 8
-rwxrw-r-- 1 julien julien 36 Sep 20 14:31 6-multiple_permissions
-r-xr-xr-- 1 julien julien 23 Sep 20 14:25 hello
julien@ubuntu:/tmp/h$
```

Repo:

- GitHub repository: alx-system_engineering-devops
- Directory: 0x01-shell_permissions
- File: 6-multiple_permissions

✓ Done! Help Check your code

>_ Get a sandbox

QA Review

7. Everybody!

mandatory

Score: 100.0% (Checks completed: 100.0%)

Write a script that adds execution permission to the owner, the group owner and the other users, to the file hello

- The file hello will be in the working directory
- You are not allowed to use commas for this script

```
iyslien@ubuntu:/tmp/h$ ls -1
total 8
-rwxrw-r-- 1 julien julien 28 Sep 20 14:35 7-everybody
-rw-r---- 1 julien julien 23 Sep 20 14:25 hello
julien@ubuntu:/tmp/h$ ./7-everybody
julien@ubuntu:/tmp/h$ ls -1
total 8
-rwxrw-r-- 1 julien julien 28 Sep 20 14:35 7-everybody
-rwxr-x--x 1 julien julien 23 Sep 20 14:25 hello
julien@ubuntu:/tmp/h$
```

✓ Done!

• GitHub repository: alx-system_engineering-devops

Check your code

- Directory: 0x01-shell_permissions
- File: 7-everybody

Help

8. James Bond mandatory

QA Review

>_ Get a sandbox

Score: 100.0% (Checks completed: 100.0%)

Write a script that sets the permission to the file hello as follows:

- · Owner: no permission at all
- · Group: no permission at all
- Other users: all the permissions

The file hello will be in the working directory You are not allowed to use commas for this script

```
julien@ubuntu:/tmp/h$ ls -l
total 8
-rwxrw-r-- 1 julien julien 28 Sep 20 14:40 8-James_Bond
-rwxr-x--x 1 julien julien 23 Sep 20 14:25 hello
julien@ubuntu:/tmp/h$ ./8-James_Bond
julien@ubuntu:/tmp/h$ ls -l
total 8
-rwxrw-r-- 1 julien julien 28 Sep 20 14:40 8-James_Bond
-----rwx 1 julien julien 23 Sep 20 14:25 hello
julien@ubuntu:/tmp/h$
```

Repo:

- GitHub repository: alx-system_engineering-devops
- Directory: 0x01-shell_permissions
- File: 8-James_Bond

☑ Done! Help Check your code >_ Get a sandbox QA Review

9(A)ohn Doe

mandatory

Score: 100.0% (Checks completed: 100.0%)

Write a script that sets the mode of the file hello to this:

-rwxr-x-wx 1 julien julien 23 Sep 20 14:25 hello

- The file hello will be in the working directory
- You are not allowed to use commas for this script

Repo:

- GitHub repository: alx-system_engineering-devops
- Directory: 0x01-shell_permissions
- File: 9-John_Doe

☑ Done!

Help

Check your code

>_ Get a sandbox

QA Review

10. Look in the mirror

mandatory

Score: 100.0% (Checks completed: 100.0%)

Write a script that sets the mode of the file hello the same as olleh 's mode.

- The file hello will be in the working directory
- The file olleh will be in the working directory

```
julien@ubuntu:/tmp/h$ ls -l
total 8
-rwxrw-r-- 1 julien julien 42 Sep 20 14:45 10-mirror_permissions
-rwxr-x-wx 1 julien julien 23 Sep 20 14:25 hello
-rw-rw-r-- 1 julien julien 0 Sep 20 14:43 olleh
julien@ubuntu:/tmp/h$ ./10-mirror_permissions
julien@ubuntu:/tmp/h$ ls -l
total 8
-rwxrw-r-- 1 julien julien 42 Sep 20 14:45 10-mirror_permissions
-rw-rw-r-- 1 julien julien 23 Sep 20 14:25 hello
-rw-rw-r-- 1 julien julien 0 Sep 20 14:43 olleh
julien@ubuntu:/tmp/h$
```

Note: the mode of olleh will not always be 664. Make sure your script works for any mode.

Repo:

- GitHub repository: alx-system_engineering-devops
- Directory: 0x01-shell_permissions

• File: 10-mirror_permissions (/)

☑ Done! Help Check your code >_ Get a sandbox QA Review

11. Directories mandatory

Score: 100.0% (Checks completed: 100.0%)

Create a script that adds execute permission to all subdirectories of the **current directory** for the owner, the group owner and all other users.

Regular files should not be changed.

```
julien@ubuntu:/tmp/h$ ls -1
total 20
-rwxrwxr-x 1 julien julien 24 Sep 20 14:53 11-directories_permissions
drwx----- 2 julien julien 4096 Sep 20 14:49 dir0
drwx----- 2 julien julien 4096 Sep 20 14:49 dir1
drwx----- 2 julien julien 4096 Sep 20 14:49 dir2
-rw-rw-r-- 1 julien julien
                            23 Sep 20 14:25 hello
julien@ubuntu:/tmp/h$ ./11-directories_permissions
julien@ubuntu:/tmp/h$ ls -1
total 20
-rwxrwxr-x 1 julien julien 24 Sep 20 14:53 11-directories_permissions
drwx--x--x 2 julien julien 4096 Sep 20 14:49 dir0
drwx--x--x 2 julien julien 4096 Sep 20 14:49 dir1
drwx--x--x 2 julien julien 4096 Sep 20 14:49 dir2
-rw-rw-r-- 1 julien julien 23 Sep 20 14:25 hello
julien@ubuntu:/tmp/h$
```

Repo:

- GitHub repository: alx-system engineering-devops
- Directory: 0x01-shell_permissions
- File: 11-directories_permissions

✓ Done! Help Check your code >_ Get a sandbox QA Review

12. More directories

mandatory

Score: 100.0% (Checks completed: 100.0%)

Create a script that creates a directory called <code>my_dir</code> with permissions 751 in the working directory.

```
jγlien@ubuntu:/tmp/h$ ls -l
ťótal 20
-rwxrwxr-x 1 julien julien
                            39 Sep 20 14:59 12-directory_permissions
drwx--x--x 2 julien julien 4096 Sep 20 14:49 dir0
drwx--x--x 2 julien julien 4096 Sep 20 14:49 dir1
drwx--x--x 2 julien julien 4096 Sep 20 14:49 dir2
-rw-rw-r-- 1 julien julien
                            23 Sep 20 14:25 hello
julien@ubuntu:/tmp/h$ ./12-directory_permission s
julien@ubuntu:/tmp/h$ ls -l
total 24
-rwxrwxr-x 1 julien julien 39 Sep 20 14:59 12-directory_permissions
drwx--x--x 2 julien julien 4096 Sep 20 14:49 dir0
drwx--x--x 2 julien julien 4096 Sep 20 14:49 dir1
drwx--x--x 2 julien julien 4096 Sep 20 14:49 dir2
drwxr-x--x 2 julien julien 4096 Sep 20 14:59 my_dir
-rw-rw-r-- 1 julien julien 23 Sep 20 14:25 hello
julien@ubuntu:/tmp/h$
```

- GitHub repository: alx-system_engineering-devops
- Directory: 0x01-shell_permissions
- File: 12-directory_permissions

☑ Done! Help Check your code >_ Get a sandbox QA Review

13. Change group

mandatory

Score: 100.0% (Checks completed: 100.0%)

Write a script that changes the group owner to school for the file hello

The file hello will be in the working directory

```
jγlien@ubuntu:/tmp/h$ ls -l
tótal 24
-rwxrwxr-x 1 julien julien
                            34 Sep 20 15:03 13-change_group
drwx--x--x 2 julien julien 4096 Sep 20 14:49 dir0
drwx--x--x 2 julien julien 4096 Sep 20 14:49 dir1
drwx--x--x 2 julien julien 4096 Sep 20 14:49 dir2
drwxr-x--x 2 julien julien 4096 Sep 20 14:59 my_dir
-rw-rw-r-- 1 julien julien
                            23 Sep 20 14:25 hello
julien@ubuntu:/tmp/h$ sudo ./13-change_group
julien@ubuntu:/tmp/h$ ls -1
total 24
-rwxrwxr-x 1 julien julien
                               34 Sep 20 15:03 13-change_group
drwx--x--x 2 julien julien
                             4096 Sep 20 14:49 dir0
drwx--x--x 2 julien julien 4096 Sep 20 14:49 dir1
drwx--x--x 2 julien julien 4096 Sep 20 14:49 dir2
drwxr-x--x 2 julien julien 4096 Sep 20 14:59 my_dir
-rw-rw-r-- 1 julien school 23 Sep 20 14:25 hello
julien@ubuntu:/tmp/h$
```

- GitHub repository: alx-system_engineering-devops
- Directory: 0x01-shell_permissions
- File: 13-change_group

☑ Done! Help Check your code >_ Get a sandbox QA Review

14. Owner and group

#advanced

Score: 65.0% (Checks completed: 100.0%)

Write a script that changes the owner to vincent and the group owner to staff for all the files and directories in the working directory.

```
jγlien@ubuntu:/tmp/h$ ls -l
tótal 24
-rwxrwxr-x 1 julien julien
                            36 Sep 20 15:06 100-change_owner_and_group
drwx--x--x 2 julien julien 4096 Sep 20 14:49 dir0
drwx--x--x 2 julien julien 4096 Sep 20 14:49 dir1
drwx--x--x 2 julien julien 4096 Sep 20 14:49 dir2
drwxr-x--x 2 julien julien 4096 Sep 20 14:59 my dir
-rw-rw-r-- 1 julien julien
                            23 Sep 20 14:25 hello
julien@ubuntu:/tmp/h$ sudo ./100-change_owner_and_group
julien@ubuntu:/tmp/h$ ls -l
total 24
-rwxrwxr-x 1 vincent staff
                            36 Sep 20 15:06 100-change_owner_and_group
drwx--x--x 2 vincent staff 4096 Sep 20 14:49 dir0
drwx--x--x 2 vincent staff 4096 Sep 20 14:49 dir1
drwx--x--x 2 vincent staff 4096 Sep 20 14:49 dir2
drwxr-x--x 2 vincent staff 4096 Sep 20 14:59 my_dir
-rw-rw-r-- 1 vincent staff
                           23 Sep 20 14:25 hello
julien@ubuntu:/tmp/h$
```

- GitHub repository: alx-system_engineering-devops
- Directory: 0x01-shell permissions
- File: 100-change_owner_and_group

☑ Done! Help Check your code >_ Get a sandbox QA Review

15. Symbolic links

#advanced

Score: 50.0% (Checks completed: 100.0%)

Write a script that changes the owner and the group owner of _hello to vincent and staff respectively.

- The file _hello is in the working directory
- The file hello is a symbolic link

- Gitl lub repository: alx-system_engineering-devops
- Directory: 0x01-shell permissions
- File: 101-symbolic link permissions

☑ Done! Help Check your code >_ Get a sandbox QA Review

16. If only

#advanced

Score: 50.0% (Checks completed: 100.0%)

Write a script that changes the owner of the file hello to betty only if it is owned by the user guillaume.

The file hello will be in the working directory

Repo:

- GitHub repository: alx-system_engineering-devops
- Directory: 0x01-shell_permissions
- File: 102-if_only

✓ Done! Help Check your code >_ Get a sandbox QA Review

17. Star Wars

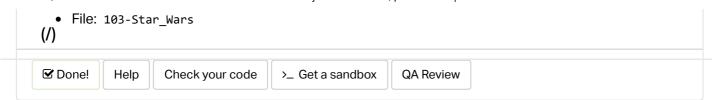
#advanced

Score: 50.0% (Checks completed: 100.0%)

Write a script that will play the StarWars IV episode in the terminal.

Repo:

- GitHub repository: alx-system_engineering-devops
- Directory: 0x01-shell_permissions



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