# Linux Administration Day 4 Lab

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# 1 Assignment Questions

#### 1.1 Question 1

Create a folder called /tmp/myteam and set permissions:

- Read only for owner
- No permissions for group and others

```
    mkdir /tmp/myteam
    chmod 400 /tmp/myteam
    ls -al /tmp | grep myteam
    dr----- - emary 15 Jan 17:31 myteam
```

Figure 1: Command Output

## 1.2 Question 2

Try to access the folder using cd command

```
~ ) cd /tmp/myteam
cd: permission denied: /tmp/myteam
~ ) chmod +x /tmp/myteam
~ ) cd /tmp/myteam
_ myteam )
```

Figure 2: Command Output

## 1.3 Question 3

Change permissions of /tmp/mycv file:

- Owner: read and write
- Group: write and execute
- Others: execute only
- Do this using chmod in 2 different ways

Using chmod with octal values, and using chmod with symbolic values:

Figure 3: Command Output

#### 1.4 Question 4

Create a file with permission 444 in /tmp directory:

```
~ ) touch /tmp/myFile
~ ) chmod 444 /tmp/myFile
```

Figure 4: Command Output

• Try to edit it

```
W10: Warning: Changing a readonly file
```

Figure 5: Command Output

• Try to remove it

```
~ ) rm /tmp/myFile
rm: remove write-protected regular empty file '/tmp/myFile'? y
~ )
```

Figure 6: Command Output

- Document what happens:
  - When trying to edit it in Vim and save the edits with :wq we get a warning that the file is readonly and we cannot save the changes.
  - $\circ$  When trying to remove the file using rm command we get a warning that the file is readonly and ask if we want to remove it.

#### 1.5 Question 5

Explain the difference between x permission for:

• Files

- $\circ$  For files x permission allows the user to execute the file as a program. For example if a file is a shell script, the user needs execute permission to run the script.
- Directories
  - For directories **x** permission allows the user to access the directory (**cd** on it) and list its contents. Without **x** permission the user cannot access the directory or list its contents.

#### 1.6 Question 6

List minimum permissions needed for:

- Copying a file (source file and target directory)
  - Source file: r-- (read permission)
  - Target directory: -wx (write and execute permissions)
- Deleting a file
  - File: -w- (write permission)
- Changing to a directory
  - Directory: --x (execute permission only)
- Listing directory contents (1s command)
  - Directory: r-x (read and execute permissions)
- Viewing file contents (more/cat commands)
  - File: r-- (read permission)
- Modifying file contents
  - File: rw- (read and write permissions)

#### 1.7 Question 7

List user commands from /usr/bin and redirect output to /tmp/commands.list

```
- root
                24 Aug 2024 mkfs.vfat → mkfs.fat
                4 Mar
                     2024 pstree.x11 \rightarrow pstree
          - root
        2.6k root
                5 Dec
                     2024 fsck.xfs
        472k root
                5 Dec
                     2024 mkfs.xfs
                24 Dec
                     2024 env_parallel.zsh
         20k root
```

Figure 7: Command Output

## 1.8 Question 9

Search for username games on your machine

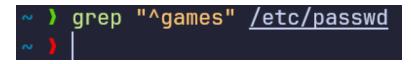


Figure 8: Command Output

# 1.9 Question 15

Write two commands:

• Search for all files named .bash\_profile on the system

```
~ ) find / -name .bash_profile 2>/dev/null
/home/emary/.bash_profile
^C
~ ) sudo find / -name .bash_profile 2>/dev/null
/home/emary/.bash_profile
^C
```

Figure 9: Command Output

#### 1.10 Question 16

Display number of currently logged-in users

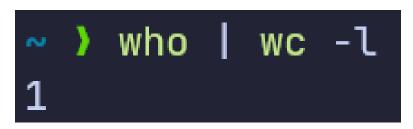


Figure 10: Command Output

#### 1.11 Question 17

Display lines 7-10 of /etc/passwd file

```
~ ) head -n 10 <u>/etc/passwd</u> | tail -n 4
nobody:x:65534:65534:Kernel Overflow User:/:/usr/bin/nologin
dbus:x:81:81:System Message Bus:/:/usr/bin/nologin
systemd-coredump:x:980:980:systemd Core Dumper:/:/usr/bin/nologin
systemd-network:x:979:979:systemd Network Management:/:/usr/bin/nologin
```

Figure 11: Command Output

#### 1.12 Question 18

Search for .bash\_profile files using two different methods Similar to Question 15.