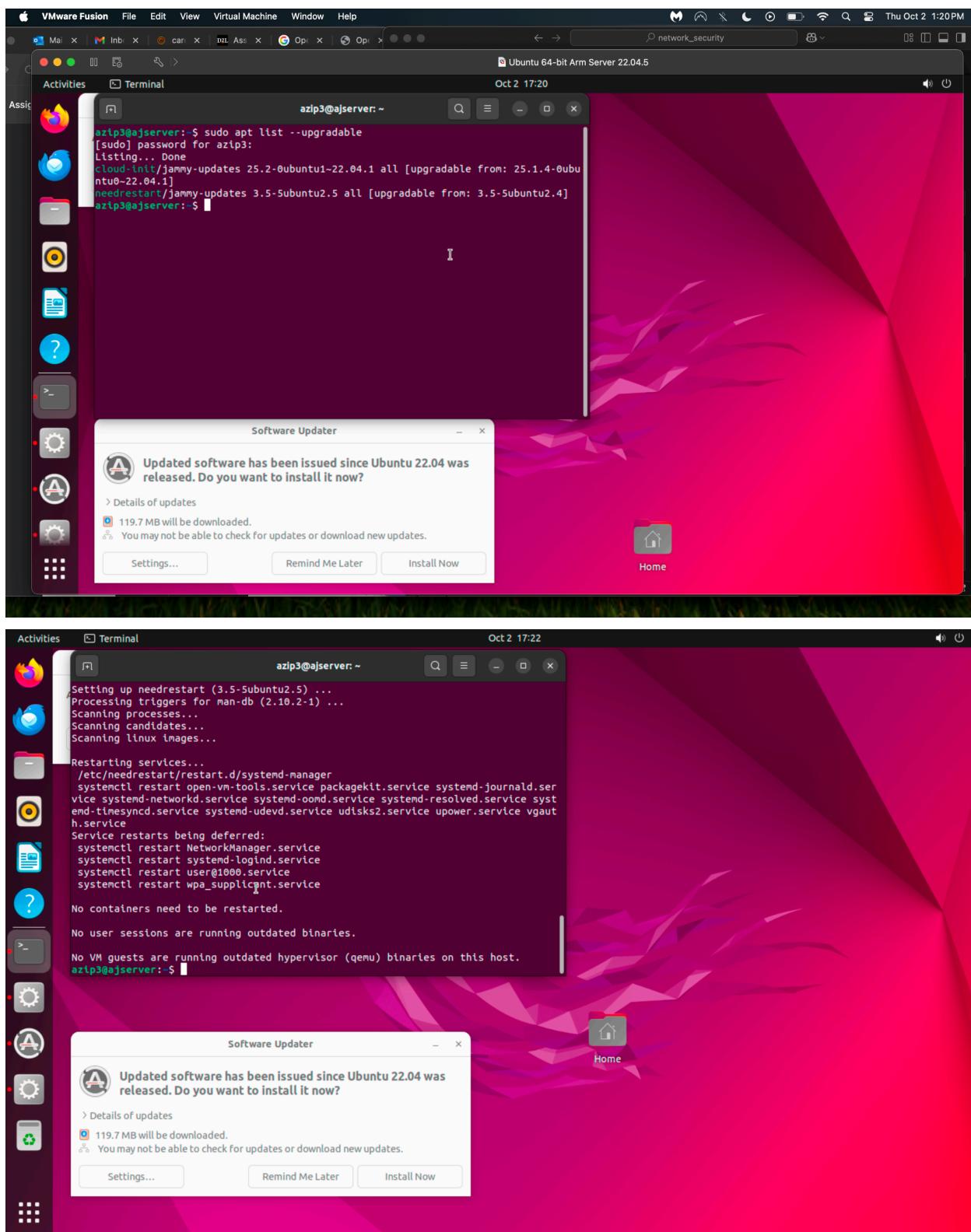


1-3



User Tasks: 4. Change the current user to root using the command `sudo su root`. What does the prompt look like?

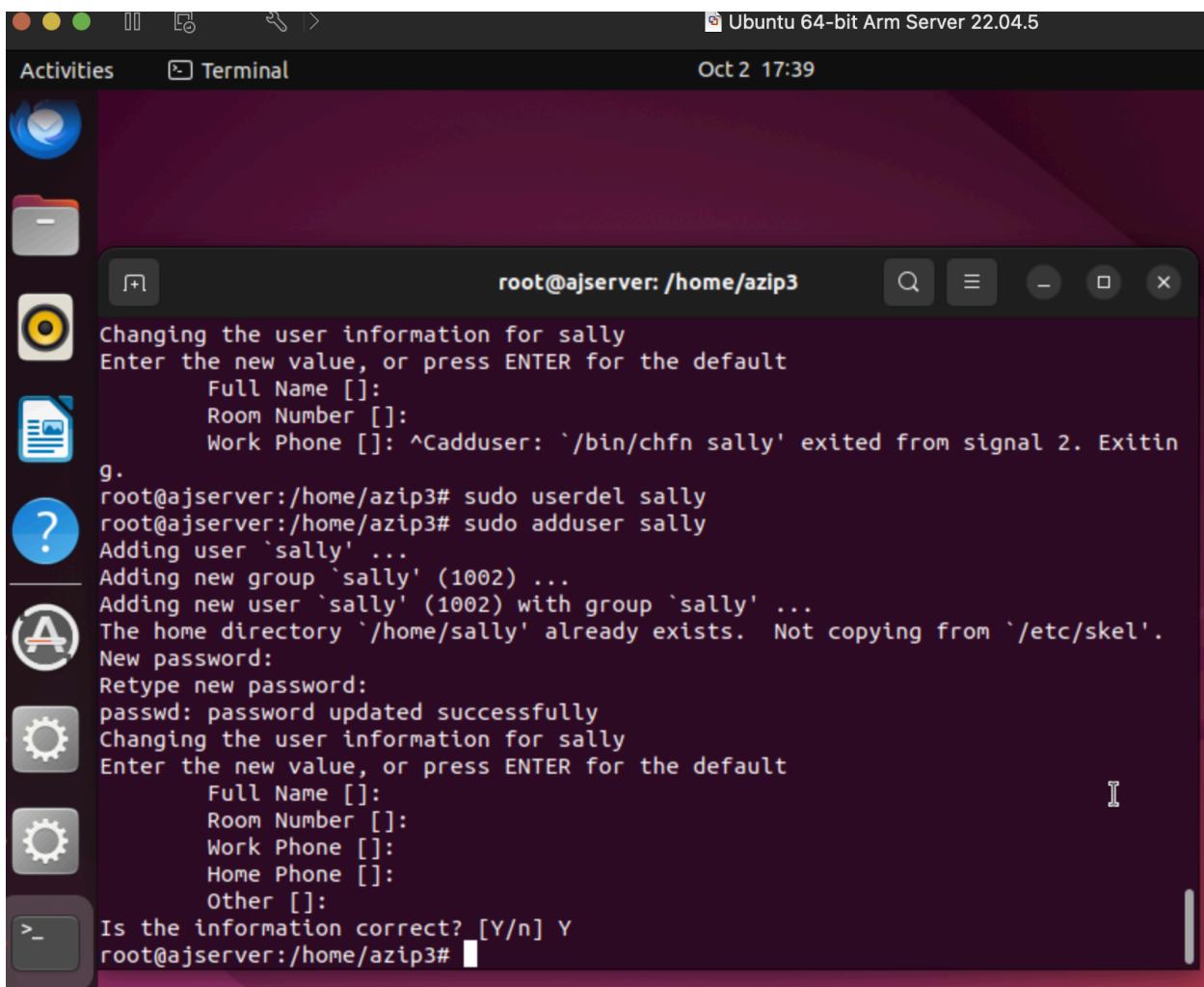
It looks like a normal terminal and it has a # at the end of the line.

5. Create a new user with the name bobby using the command useradd. Next, create another user with the name sally using the command adduser. What is the difference between the two?

The useradd didn't need a password but the other command did

6. Change the current user to sally. What does the prompt look like now?

It just looks says "sally@ajserver:/home/azip3 \$"

A screenshot of an Ubuntu 64-bit Arm Server 22.04.5 desktop environment. A terminal window is open in the center, titled 'root@ajserver: /home/azip3'. The terminal displays the following command-line session:

```
root@ajserver: /home/azip3
root@ajserver: /home/azip3# sudo userdel sally
root@ajserver: /home/azip3# sudo adduser sally
Adding user `sally' ...
Adding new group `sally' (1002) ...
Adding new user `sally' (1002) with group `sally' ...
The home directory `/home/sally' already exists. Not copying from `/etc/skel'.
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for sally
Enter the new value, or press ENTER for the default
    Full Name []:
    Room Number []:
    Work Phone []:
    Home Phone []:
    Other []:
>_ Is the information correct? [Y/n] Y
root@ajserver: /home/azip3#
```

7. While you're logged in as sally still, try to create a new user with the name earl. What happens? Why?

It did not work because they don't have sudo permission. It says it will be reported, probably because someone without permission was doing something they were not supposed to.

8. Enter exit until you are the original user, ubuntu, again. Delete the user earl. I didn't show you the command, but Google it! "Googling" skills are a great skill in CS; It's impossible to know everything.

I am not deleting Earl since it was not created which I thought was the purpose of the previous part

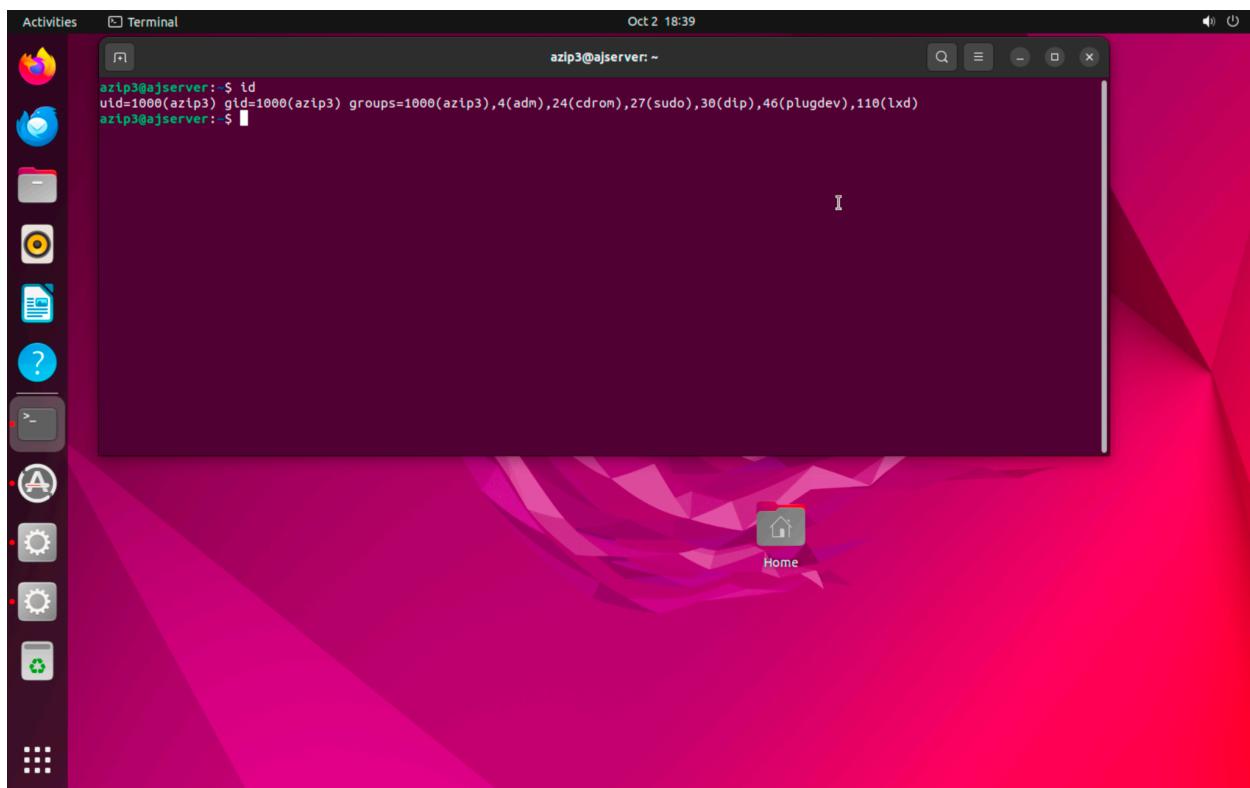
9. Change the password of sally to something you can remember using sudo passwd sally

////

10. For the rest of the tasks, use the ubuntu user. Even though it's easier to complete tasks/commands, why is it bad practice to stay logged in as root?

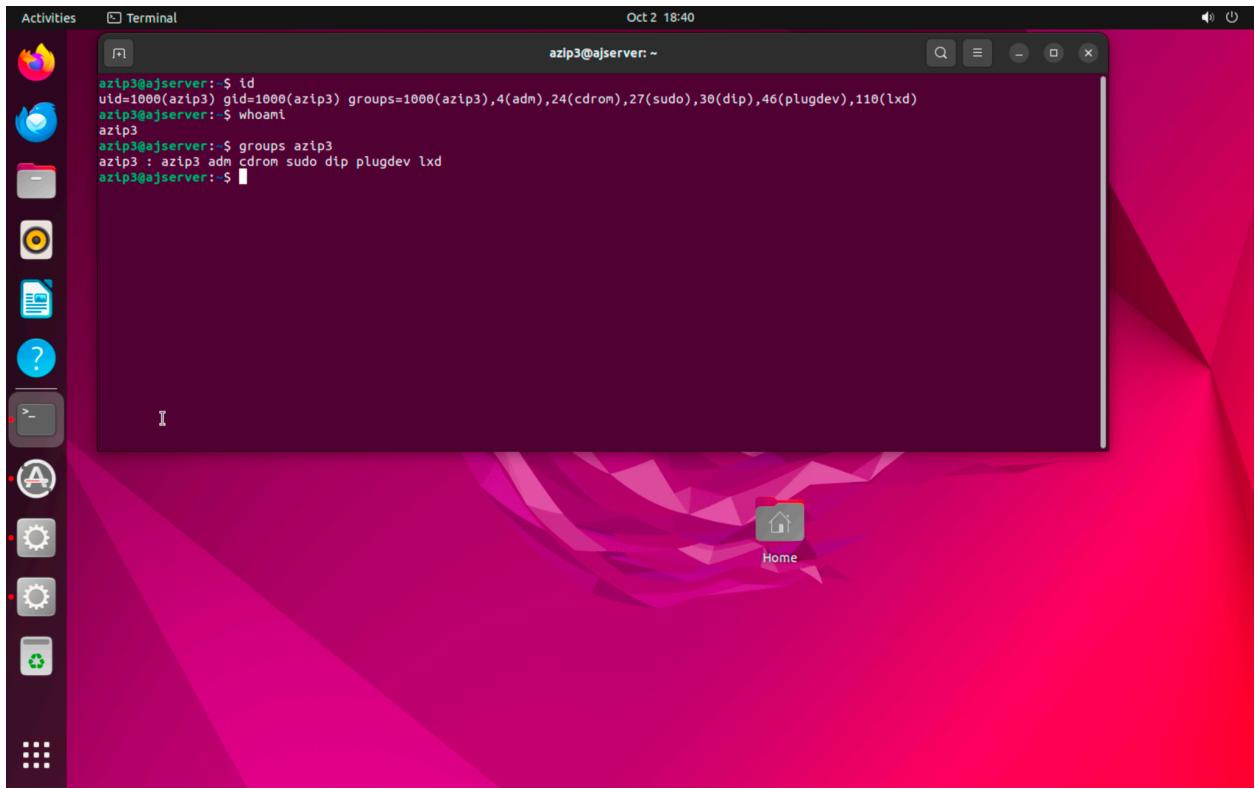
It is a security risk because root has full access and this can delete files if misused or severe damage can be done if someone had access maliciously

11. Enter the command to see what your user id is. Group Tasks:

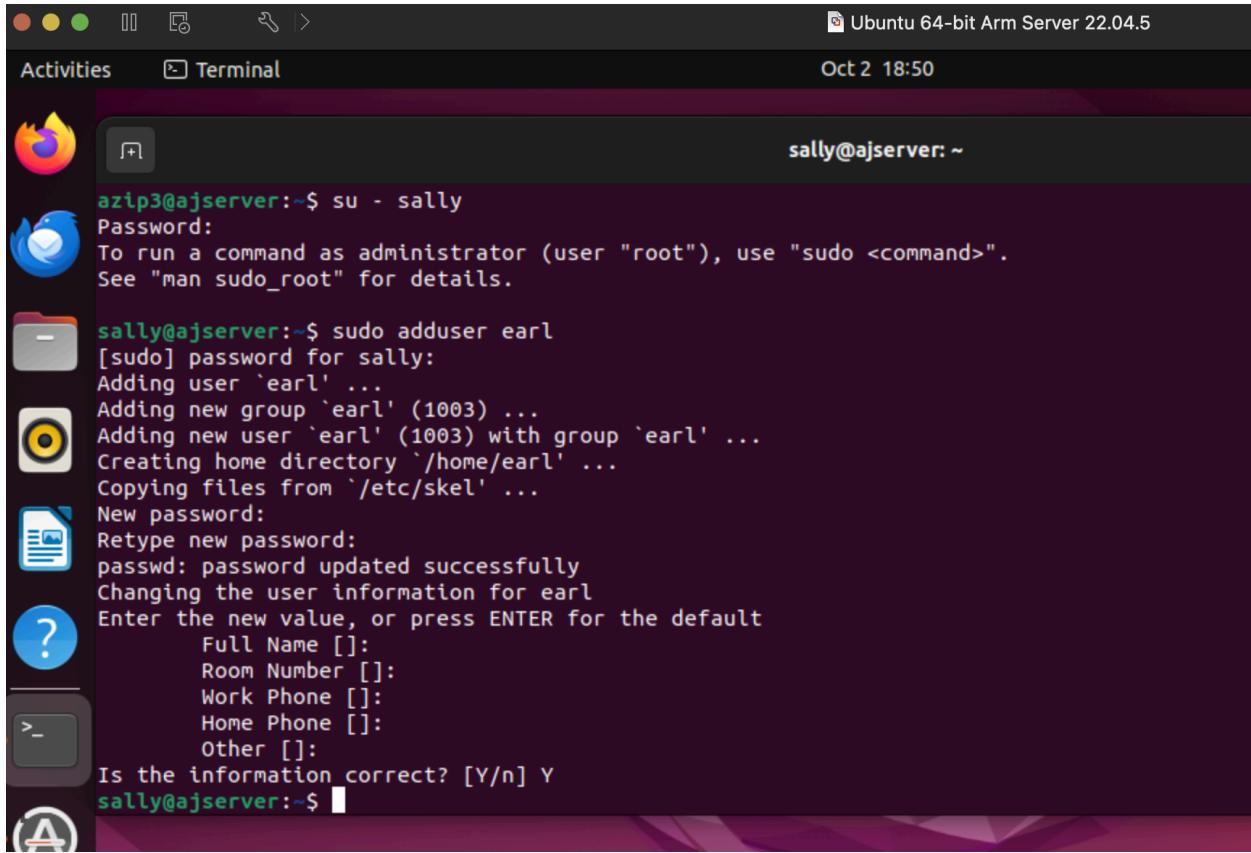


12. What groups does ubuntu belong to?

Adin , cdrom, dip, plugdev, lxd



13. Give sally the ability to execute sudo commands. Next, try to create a new user while logged in as sally.

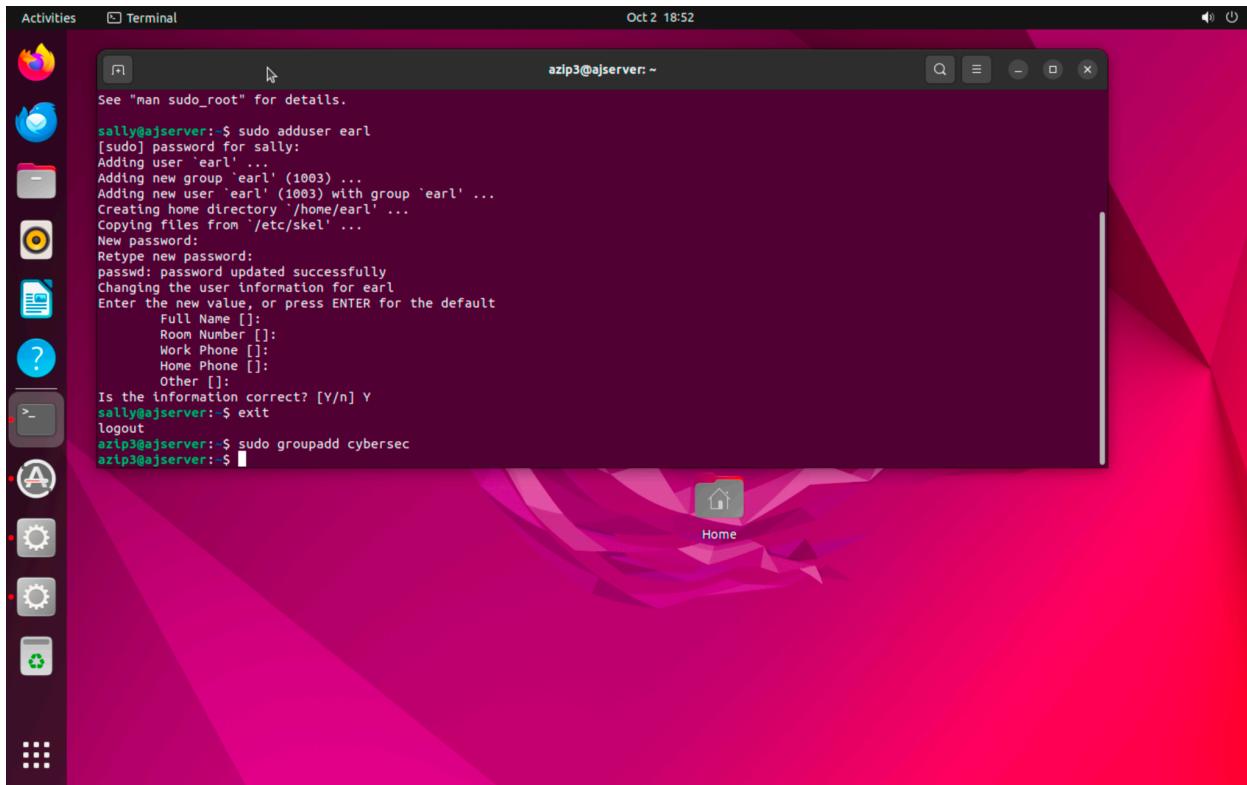


The image shows a screenshot of an Ubuntu 64-bit Arm Server 22.04.5 desktop environment. The desktop has a dark purple theme. On the left, there is a dock with icons for a browser (Mozilla Firefox), file manager (Nautilus), terminal (Terminal), and help (Help). The terminal window is open and shows the following command-line session:

```
azip3@ajserver:~$ su - sally
Password:
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

sally@ajserver:~$ sudo adduser earl
[sudo] password for sally:
Adding user `earl' ...
Adding new group `earl' (1003) ...
Adding new user `earl' (1003) with group `earl' ...
Creating home directory `/home/earl' ...
Copying files from `/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for earl
Enter the new value, or press ENTER for the default
      Full Name []:
      Room Number []:
      Work Phone []:
      Home Phone []:
      Other []:
Is the information correct? [Y/n] Y
sally@ajserver:~$
```

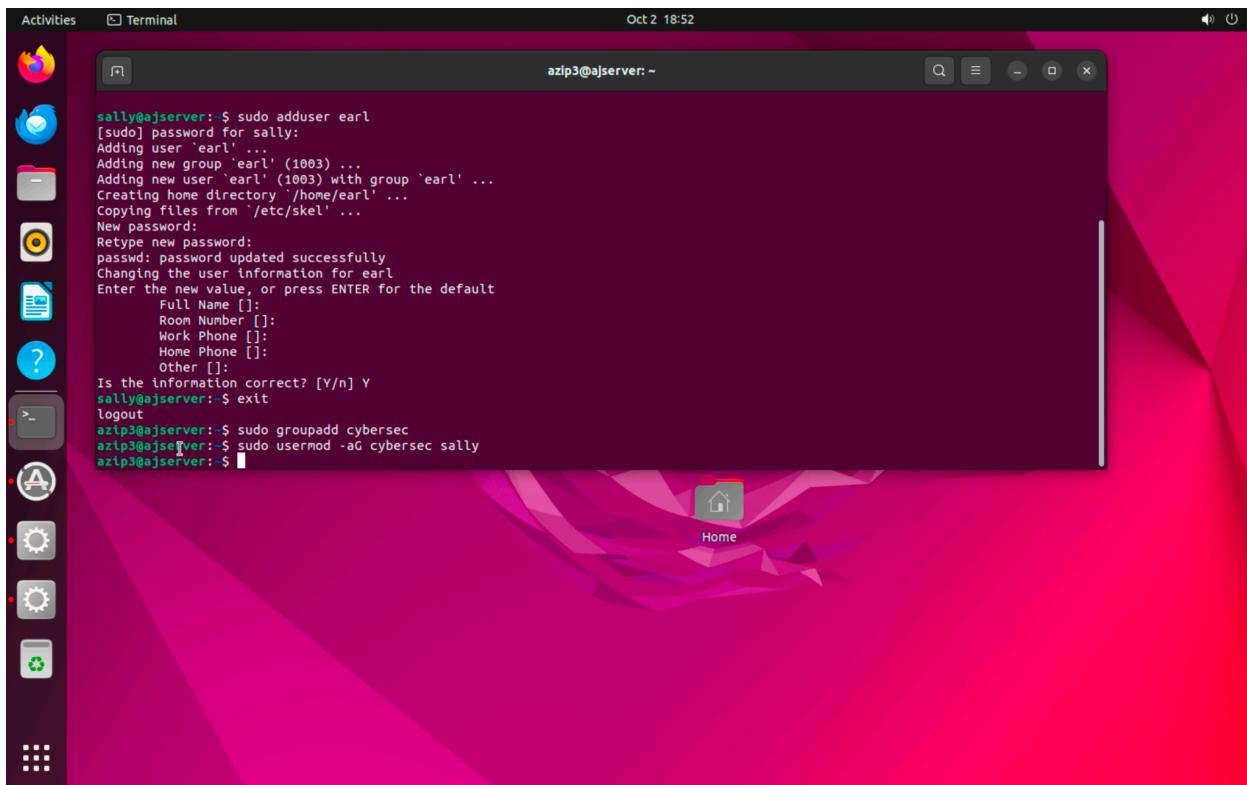
14. Create a new group called cybersec



A screenshot of an Ubuntu desktop environment. On the left is a vertical dock with icons for Dash, Home, Activities, Terminal, and other system applications. A terminal window titled 'Terminal' is open in the Activities dock, showing the following command-line session:

```
sally@ajserver:~$ sudo adduser earl  
[sudo] password for sally:  
Adding user 'earl' ...  
Adding new group 'earl' (1003) ...  
Adding new user 'earl' (1003) with group 'earl' ...  
Creating home directory '/home/earl' ...  
Copying files from '/etc/skel' ...  
New password:  
Retype new password:  
passwd: password updated successfully  
Changing the user information for earl  
Enter the new value, or press ENTER for the default  
    Full Name []:  
    Room Number []:  
    Work Phone []:  
    Home Phone []:  
    Other []:  
Is the information correct? [Y/n] Y  
sally@ajserver:~$ exit  
logout  
aztp3@ajserver:~$ sudo groupadd cybersec  
aztp3@ajserver:~$
```

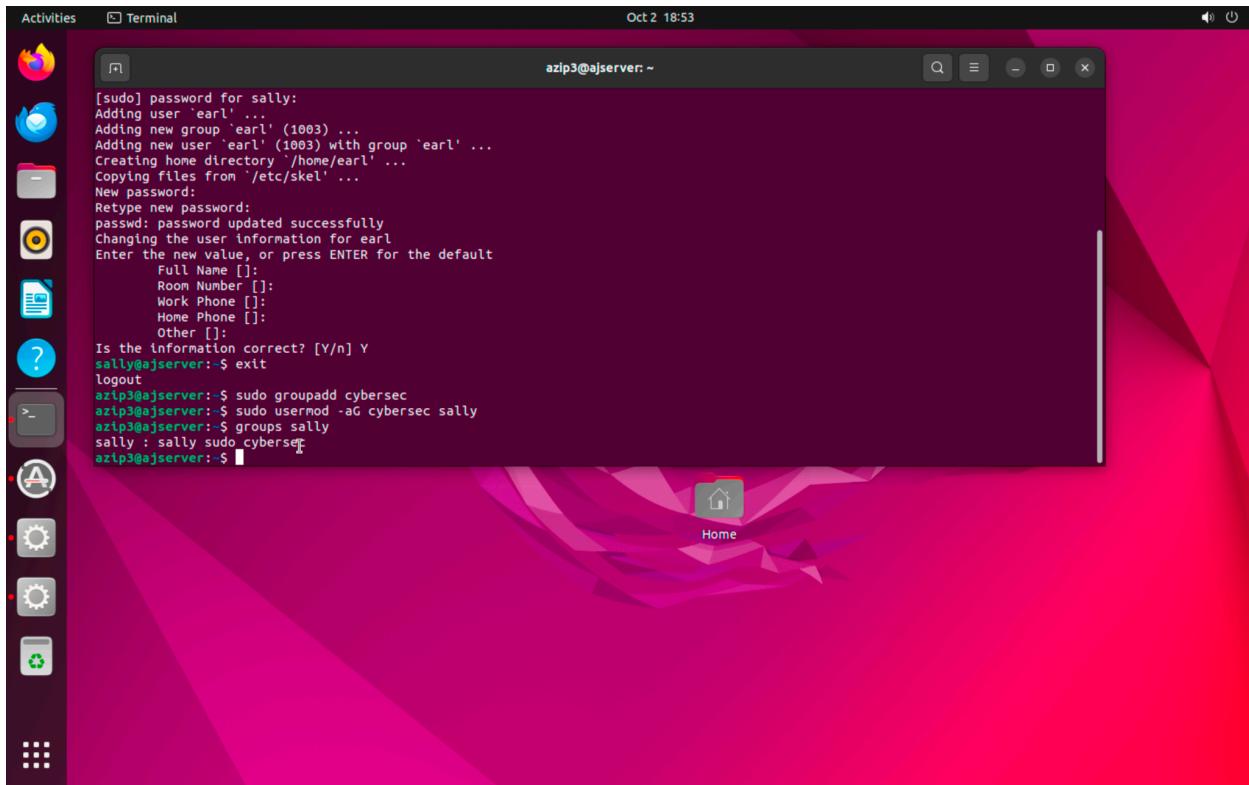
15. Add sally to the group, cybersec



A screenshot of an Ubuntu desktop environment. The interface is identical to the previous one, showing the terminal window in the dock. The terminal session continues from where it left off:

```
sally@ajserver:~$ sudo adduser earl  
[sudo] password for sally:  
Adding user 'earl' ...  
Adding new group 'earl' (1003) ...  
Adding new user 'earl' (1003) with group 'earl' ...  
Creating home directory '/home/earl' ...  
Copying files from '/etc/skel' ...  
New password:  
Retype new password:  
passwd: password updated successfully  
Changing the user information for earl  
Enter the new value, or press ENTER for the default  
    Full Name []:  
    Room Number []:  
    Work Phone []:  
    Home Phone []:  
    Other []:  
Is the information correct? [Y/n] Y  
sally@ajserver:~$ exit  
logout  
aztp3@ajserver:~$ sudo groupadd cybersec  
aztp3@ajserver:~$ sudo usermod -aG cybersec sally  
aztp3@ajserver:~$
```

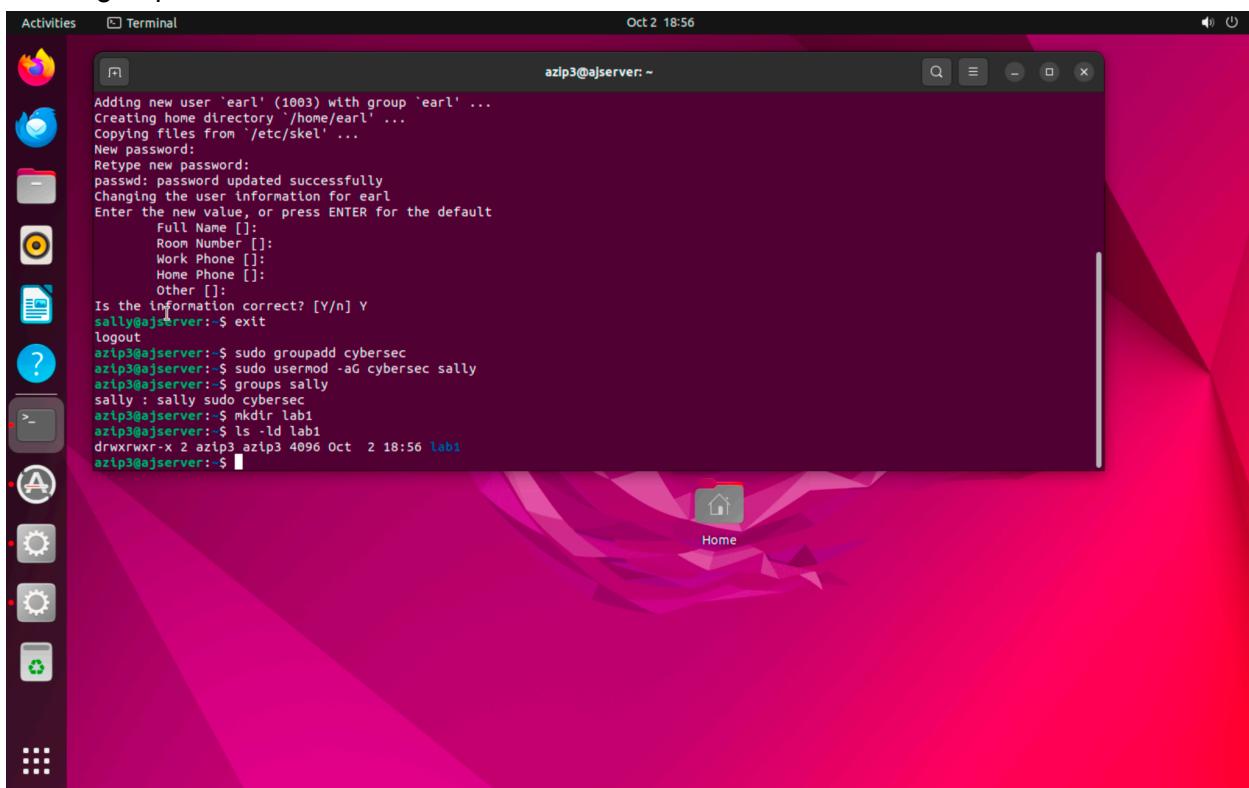
16. Check to see which groups sally belongs. Permission and Access Control Lists:



A screenshot of an Ubuntu desktop environment. On the left is a vertical dock with icons for various applications like Dash, Home, and System Settings. In the center is a terminal window titled 'azip3@ajserver: ~'. The terminal shows the following command sequence:

```
[sudo] password for sally:  
Adding user 'earl' ...  
Adding new group 'earl' (1003) ...  
Adding new user 'earl' (1003) with group 'earl' ...  
Creating home directory '/home/earl' ...  
Copying files from '/etc/skel' ...  
New password:  
Retype new password:  
passwd: password updated successfully  
Changing the user information for earl  
Enter the new value, or press ENTER for the default  
    Full Name []:  
    Room Number []:  
    Work Phone []:  
    Home Phone []:  
    Other []:  
Is the information correct? [Y/n] Y  
sally@ajserver:~$ exit  
logout  
azip3@ajserver:~$ sudo groupadd cybersec  
azip3@ajserver:~$ sudo usermod -aG cybersec sally  
azip3@ajserver:~$ groups sally  
sally : sally sudo cybersec  
azip3@ajserver:~$
```

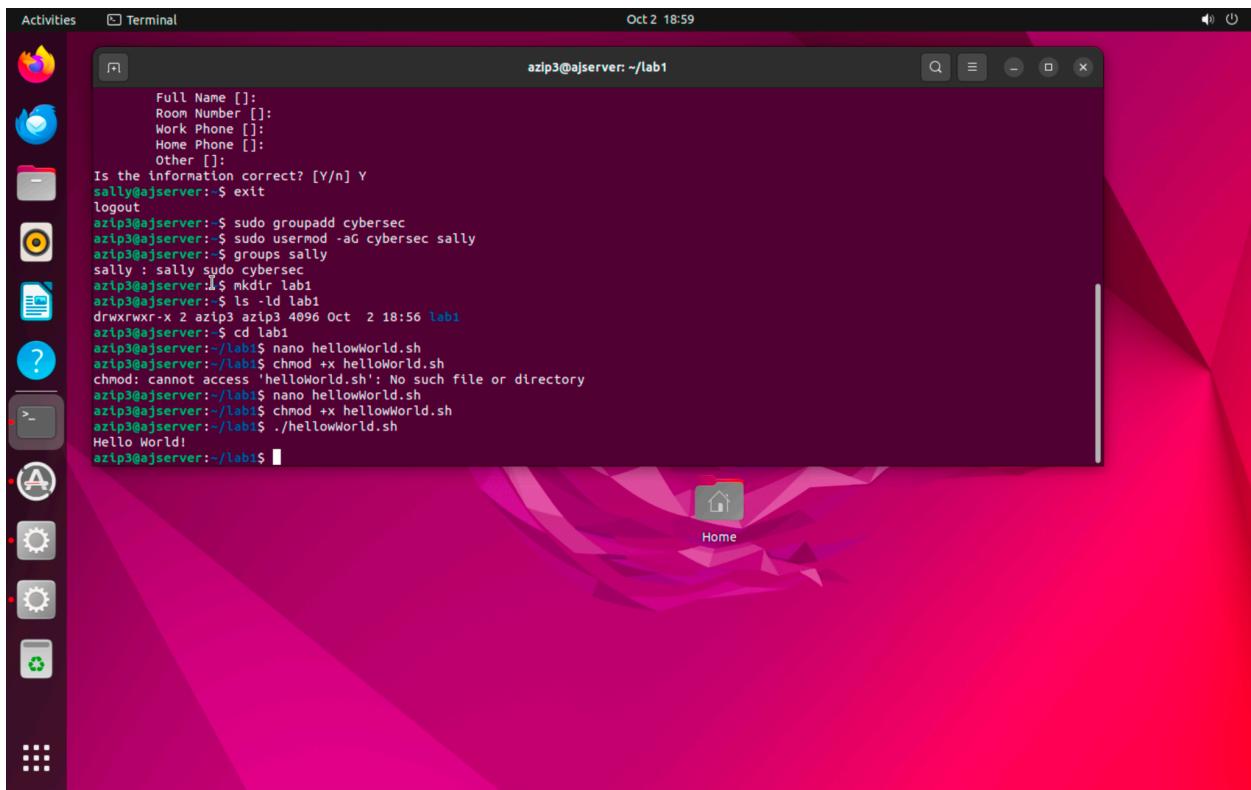
17. Create a new directory called lab1. Enter the command to find the permissions of the directory. Who is the owner and group owner of this directory? What permissions does the owner, group and other have?



A screenshot of an Ubuntu desktop environment, similar to the one above. It shows a terminal window titled 'azip3@ajserver: ~' with the following command sequence:

```
Adding new user 'earl' (1003) with group 'earl' ...  
Creating home directory '/home/earl' ...  
Copying files from '/etc/skel' ...  
New password:  
Retype new password:  
passwd: password updated successfully  
Changing the user information for earl  
Enter the new value, or press ENTER for the default  
    Full Name []:  
    Room Number []:  
    Work Phone []:  
    Home Phone []:  
    Other []:  
Is the information correct? [Y/n] Y  
sally@ajserver:~$ exit  
logout  
azip3@ajserver:~$ sudo groupadd cybersec  
azip3@ajserver:~$ sudo usermod -aG cybersec sally  
azip3@ajserver:~$ groups sally  
sally : sally sudo cybersec  
azip3@ajserver:~$ mkdir lab1  
azip3@ajserver:~$ ls -ld lab1  
drwxrwxr-x 2 azip3 azip3 4096 Oct  2 18:56 lab1  
azip3@ajserver:~$
```

18. Change your directory to lab1. Create a new bash file called, helloWorld. When ran, your program should just print “Hello World!”. (Don’t forget to make your bash file executable).



A screenshot of an Ubuntu desktop environment. A terminal window titled "Terminal" is open, showing a command-line session. The session starts with a series of prompts for user information (Full Name, Room Number, etc.) which are left blank. The user then types "sally" as the full name. They proceed to log out. After logging out, they run several commands to set up a user account for "sally": "sudo groupadd cybersec", "sudo usermod -aG cybersec sally", "groups sally", and "sally sudo cybersec". They then create a directory "lab1" and change into it. Inside "lab1", they run "nano helloWorld.sh" to create a new file, "chmod +x helloWorld.sh" to make it executable, and finally execute the script with "./helloWorld.sh", which prints "Hello World!". The desktop background is a pink and purple abstract design. The Unity dock at the bottom has icons for Home, Dash, Activities, and other applications.

```
Full Name []:
Room Number []:
Work Phone []:
Home Phone []:
Other []

Is the information correct? [Y/n] Y
sally@ajserver:~$ exit
logout
aztp3@ajserver:~$ sudo groupadd cybersec
aztp3@ajserver:~$ sudo usermod -aG cybersec sally
aztp3@ajserver:~$ groups sally
sally : sally sudo cybersec
aztp3@ajserver:~$ mkdir lab1
aztp3@ajserver:~$ ls -ld lab1
drwxrwxr-x 2 aztp3 aztp3 4096 Oct  2 18:56 lab1
aztp3@ajserver:~$ cd lab1
aztp3@ajserver:~/lab1$ nano helloWorld.sh
aztp3@ajserver:~/lab1$ chmod +x helloWorld.sh
chmod: cannot access 'helloWorld.sh': No such file or directory
aztp3@ajserver:~/lab1$ nano helloWorld.sh
aztp3@ajserver:~/lab1$ chmod +x helloWorld.sh
aztp3@ajserver:~/lab1$ ./helloWorld.sh
Hello World!
aztp3@ajserver:~/lab1$
```

19. Enter the command `ls -la helloWorld`. What are the reading, writing, and executing permissions for the owner, group and other? a. Change the permissions so the group also has w and x permissions.

```
azip3@ajserver: ~/lab1
Is the information correct? [Y/n] Y
sally@ajserver: $ exit
logout
azip3@ajserver: $ sudo groupadd cybersec
azip3@ajserver: $ sudo usermod -aG cybersec sally
sally : sally sudo cybersec
azip3@ajserver: $ mkdir lab1
azip3@ajserver: $ ls -ld lab1
drwxrwxr-x 2 azip3 azip3 4096 Oct  2 18:56 lab1
azip3@ajserver: $ cd lab1
azip3@ajserver:~/lab1$ nano helloworld.sh
azip3@ajserver:~/lab1$ chmod +x helloworld.sh
chmod: cannot access 'helloworld.sh': No such file or directory
azip3@ajserver:~/lab1$ chmod +x helloworld.sh
azip3@ajserver:~/lab1$ ./helloworld.sh
Hello World!
azip3@ajserver:~/lab1$ ls -la helloworld.sh
-rwxrwxr-x 1 azip3 azip3 32 Oct  2 18:58 helloworld.sh
azip3@ajserver:~/lab1$ chmod g+wx helloworld.sh
azip3@ajserver:~/lab1$
```

20. Use the getfacl command to view the ACL of the file.

```
azip3@ajserver: ~/lab1
sally : sally sudo cybersec
azip3@ajserver: $ mkdir lab1
azip3@ajserver: $ ls -ld lab1
drwxrwxr-x 2 azip3 azip3 4096 Oct  2 18:56 lab1
azip3@ajserver: $ cd lab1
azip3@ajserver:~/lab1$ nano helloworld.sh
azip3@ajserver:~/lab1$ chmod +x helloworld.sh
chmod: cannot access 'helloworld.sh': No such file or directory
azip3@ajserver:~/lab1$ nano helloworld.sh
azip3@ajserver:~/lab1$ chmod +x helloworld.sh
azip3@ajserver:~/lab1$ ./helloworld.sh
Hello World!
azip3@ajserver:~/lab1$ ls -la helloworld.sh
-rwxrwxr-x 1 azip3 azip3 32 Oct  2 18:58 helloworld.sh
azip3@ajserver:~/lab1$ chmod g+wx helloworld.sh
azip3@ajserver:~/lab1$ getfacl helloworld.sh
# file: helloworld.sh
# owner: azip3
# group: azip3
user::rwx
group::rwx
other::r-x
azip3@ajserver:~/lab1$
```

21. Using the setfacl command, allow the user, sally, the ability to read and write to the file

