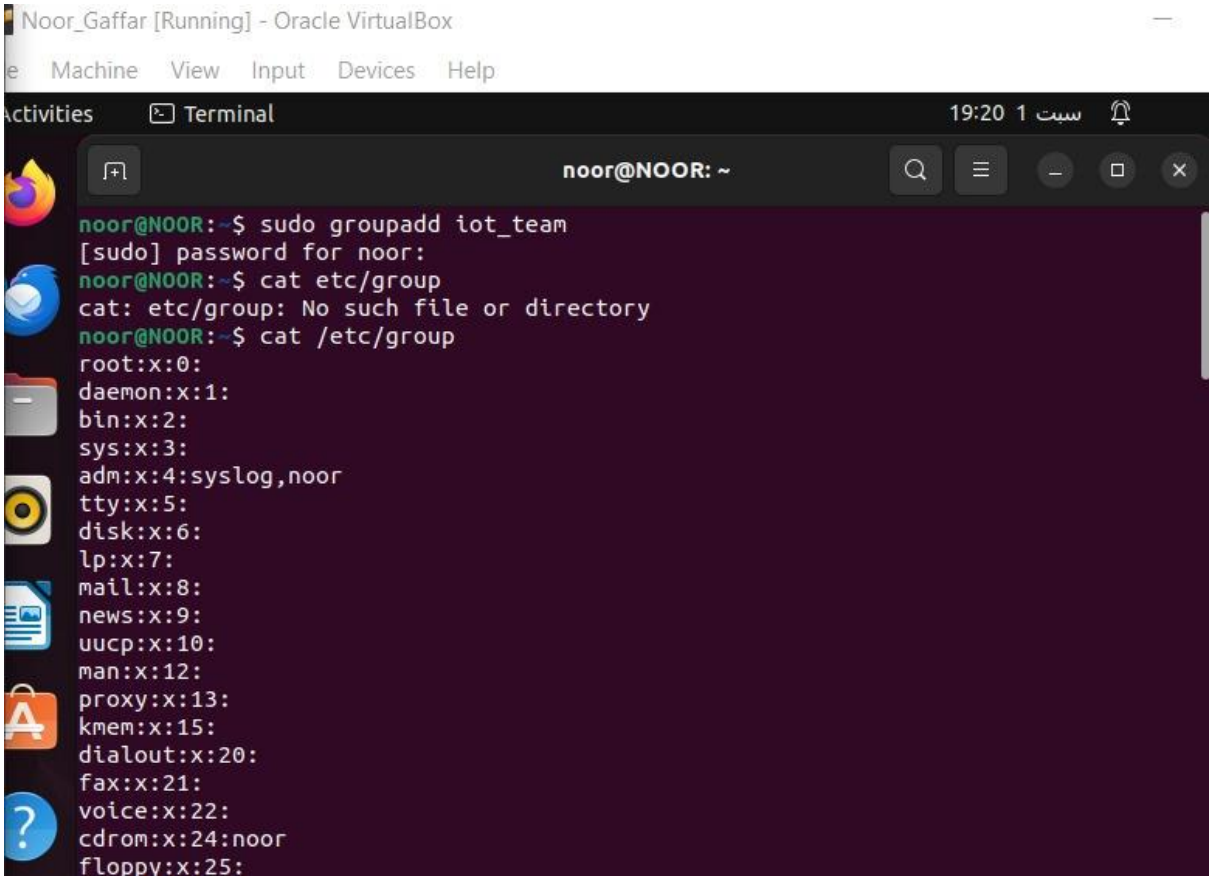
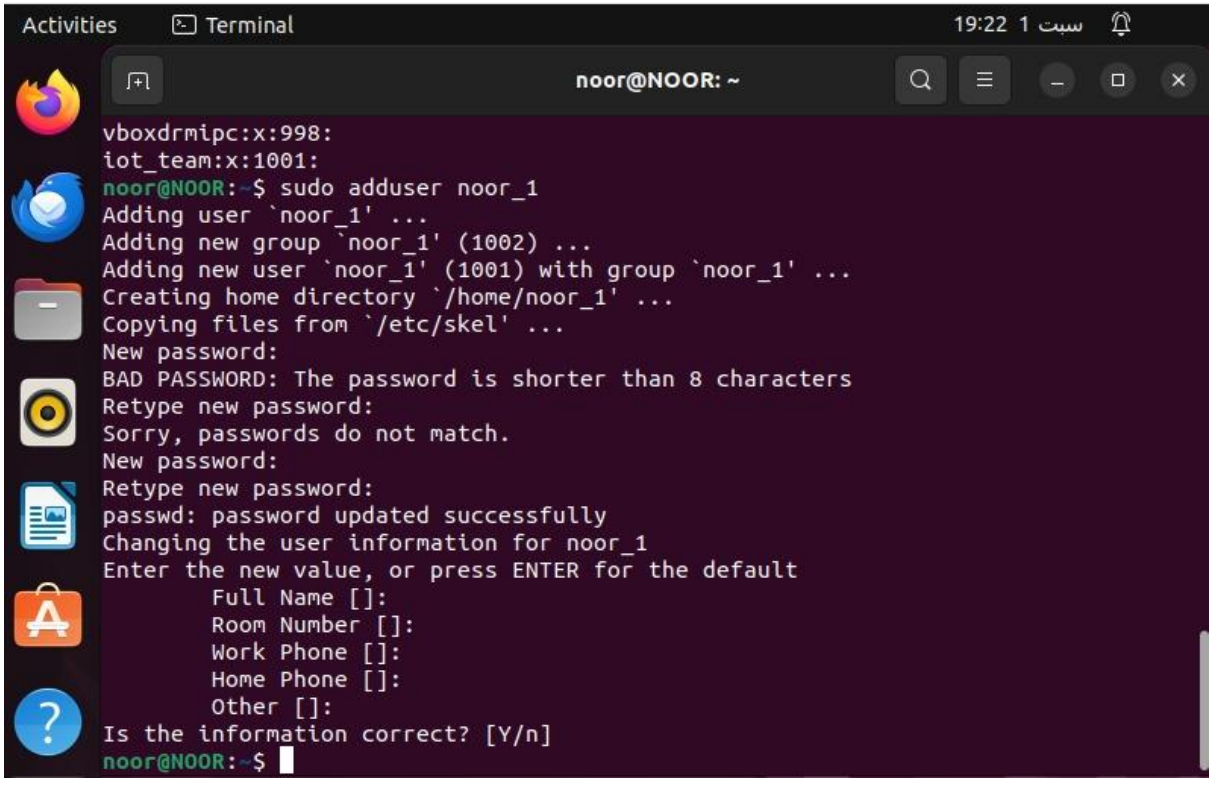
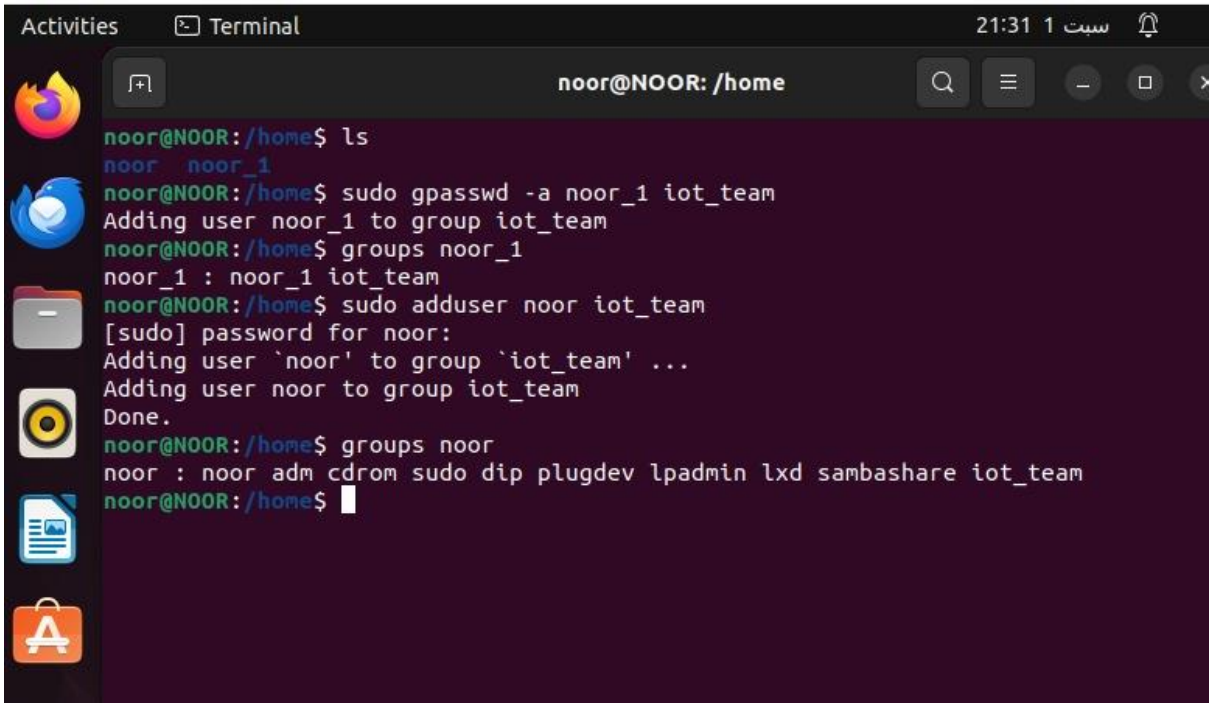
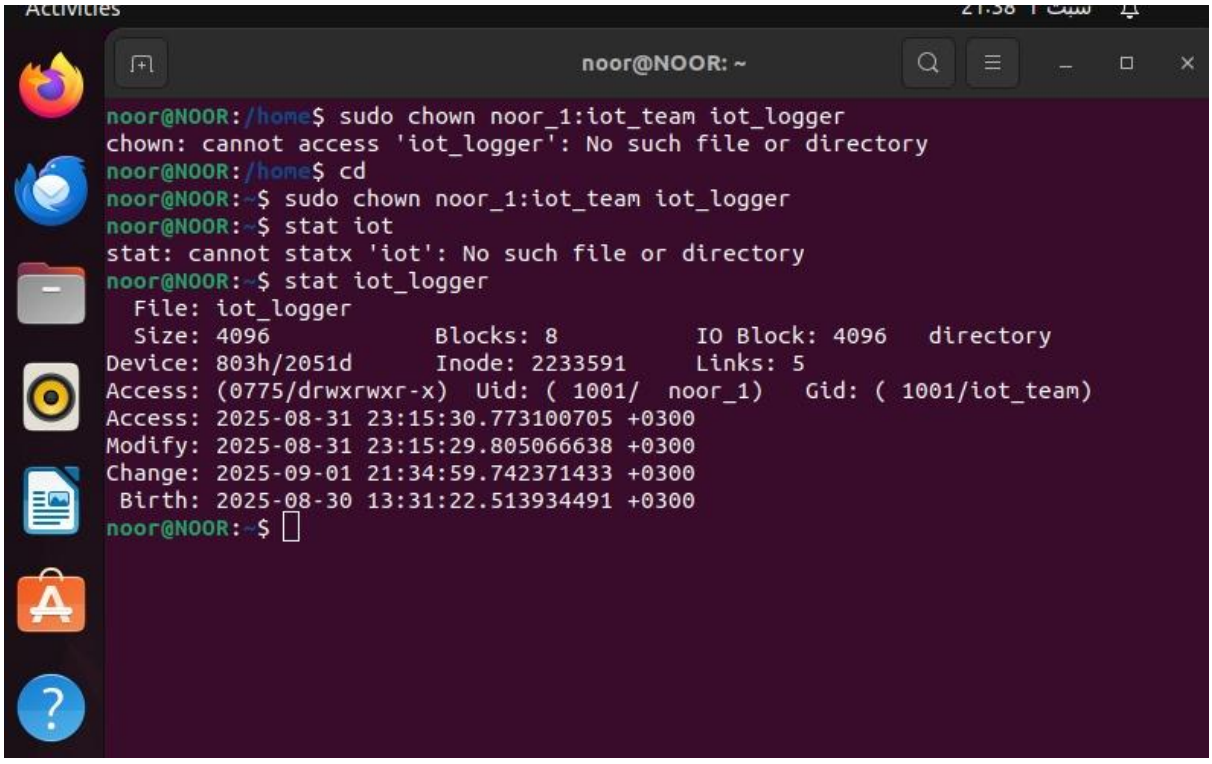
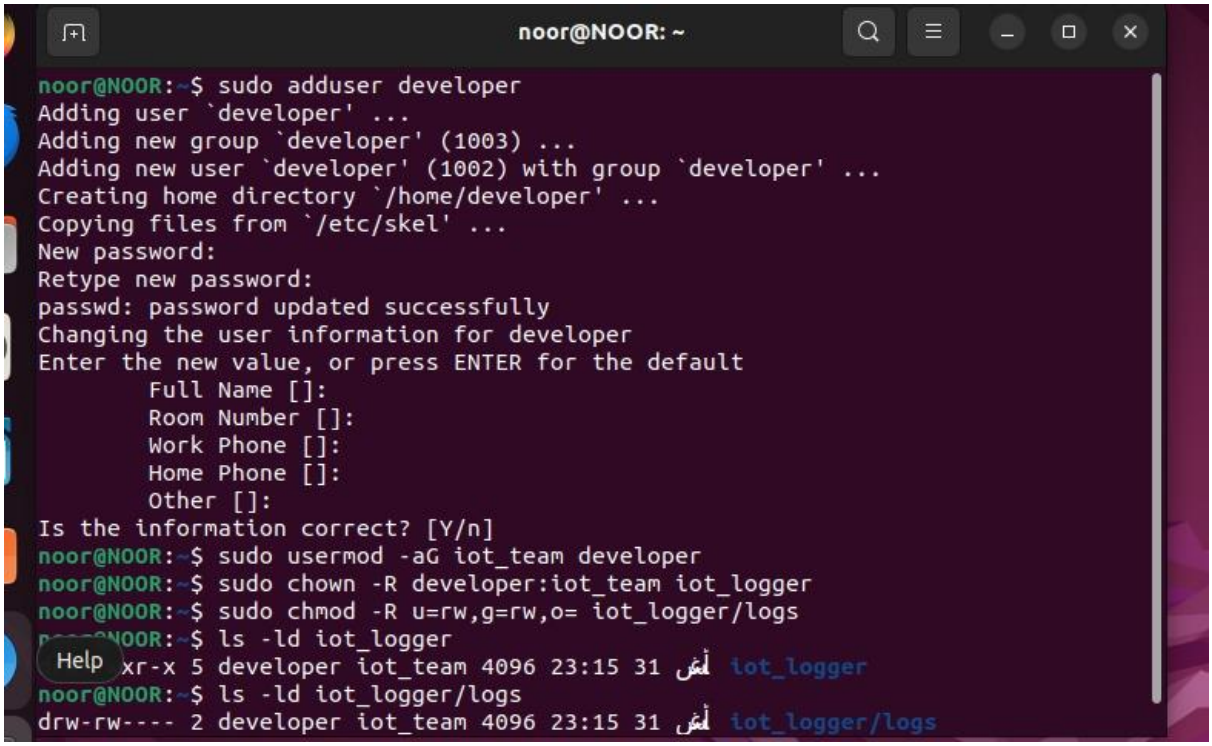

Noor_Gaffar [Running] - Oracle VirtualBox
Machine View Input Devices Help
Activities Terminal 19:20 1 سبت
noor@NOOR: ~
noor@NOOR:~$ sudo groupadd iot_team
[sudo] password for noor:
noor@NOOR:~$ cat etc/group
cat: etc/group: No such file or directory
noor@NOOR:~$ cat /etc/group
root:x:0:
daemon:x:1:
bin:x:2:
sys:x:3:
adm:x:4:syslog,noor
tty:x:5:
disk:x:6:
lp:x:7:
mail:x:8:
news:x:9:
uucp:x:10:
man:x:12:
proxy:x:13:
kmem:x:15:
dialout:x:20:
fax:x:21:
voice:x:22:
cdrom:x:24:noor
floppy:x:25:


Activities Terminal 19:22 1 سبت
noor@NOOR: ~
vboxdrmipc:x:998:
iot_team:x:1001:
noor@NOOR:~$ sudo adduser noor_1
Adding user `noor_1' ...
Adding new group `noor_1' (1002) ...
Adding new user `noor_1' (1001) with group `noor_1' ...
Creating home directory `/home/noor_1' ...
Copying files from `/etc/skel' ...
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
Sorry, passwords do not match.
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for noor_1
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]
noor@NOOR:~$


Activities
Terminal
21:31 1 سبت
noor@NOOR: /home
noor@NOOR:/home$ ls
noor noor_1
noor@NOOR:/home$ sudo gpasswd -a noor_1 iot_team
Adding user noor_1 to group iot_team
noor@NOOR:/home$ groups noor_1
noor_1 : noor_1 iot_team
noor@NOOR:/home$ sudo adduser noor iot_team
[sudo] password for noor:
Adding user `noor' to group `iot_team' ...
Adding user noor to group iot_team
Done.
noor@NOOR:/home$ groups noor
noor : noor adm cdrom sudo dip plugdev lpadmin lxd sambashare iot_team
noor@NOOR:/home$


noor@NOOR: ~
noor@NOOR:/home$ sudo chown noor_1:iot_team iot_logger
chown: cannot access 'iot_logger': No such file or directory
noor@NOOR:/home$ cd
noor@NOOR:~$ sudo chown noor_1:iot_team iot_logger
noor@NOOR:~$ stat iot
stat: cannot statx 'iot': No such file or directory
noor@NOOR:~$ stat iot_logger
File: iot_logger
Size: 4096 Blocks: 8 IO Block: 4096 directory
Device: 803h/2051d Inode: 2233591 Links: 5
Access: (0775/drwxrwxr-x) Uid: (1001/ noor_1) Gid: (1001/iot_team)
Access: 2025-08-31 23:15:30.773100705 +0300
Modify: 2025-08-31 23:15:29.805066638 +0300
Change: 2025-09-01 21:34:59.742371433 +0300
Birth: 2025-08-30 13:31:22.513934491 +0300
noor@NOOR:~$



How do Linux file permissions (r, w, x) work for files vs directories? Give an example

There is three permissions read , write , execute

And three user : owner , group , others

File : r = view content w= modify the file content x = run the file as a program

Directory : r = list the directory content w= add ,remove files inside the dir

X=can enter the dir and access its content

Ls -l: file = -rw-r--r -- owner can read and write group and others can read

directory =drwxr-x--- owner can read write execute group can read ,execute others no access

Explain octal notation for permissions and what the umask command does. Give one calculation example.

Permissions and be wrote In octal numbers ex: rw-r--r-- =110 100 100 which is transferred to 644

Umask: it set a default permission files =666 directory = 777

With umask files=666-002=644 rw-r--r-- dir=777-002=755 rwxr-xr-x

What is the difference between the root user and a normal user? Why is root considered dangerous?

The root is dangerous cause a single wrong command can destroy the entire system

Normal user: limited permission ,cannot affect the system files

Root user: can write and delete anything in the system ,can install software and manage users ,groups