

Module 1:

Task1:

Firstly I've installed ubuntu ISO from the official website the i saved it in my USB drive then i inserted the USB drive and restarted the computer. Then iv'e accessed the boot menu in the BIOS to boot the USB drive , then i used website instructions till i reached "install ubuntu alongside windows".

Task 2:

Is command :

```
PROBLEMS 7 OUTPUT DEBUG CONSOLE TERMINAL PORTS
● abdallah@abdallah-ROG-Strix-G531GT-G531GT:~/Assignment1$ ls
fursaHomework.odt log_analysis.txt module6.sh module7.sh system_health_check.log
```

cd command :

```
PROBLEMS 7 OUTPUT DEBUG CONSOLE TERMINAL PORTS
● abdallah@abdallah-ROG-Strix-G531GT-G531GT:~/Assignment1$ cd ..
● abdallah@abdallah-ROG-Strix-G531GT-G531GT:~$ cd Assignment1/
```

pwd command :

```
PROBLEMS 7 OUTPUT DEBUG CONSOLE TERMINAL PORTS
● abdallah@abdallah-ROG-Strix-G531GT-G531GT:~/Assignment1$ pwd
/home/abdallah/Assignment1
```

mkdir command :

```

  ▾ ASSIGNMENT1
    > 1
    > 2
    > 3
    ▾ ./lock.fursaHomework.odt# U
    ▾ fursaHomework.odt
$ module7.sh
20 | ... # Check if services exist
PROBLEMS 7 OUTPUT DEBUG CONSOLE TERMINAL PORTS
● abdallah@abdallah-ROG-Strix-G531GT-G531GT:~/Assignment1$ mkdir 1
● abdallah@abdallah-ROG-Strix-G531GT-G531GT:~/Assignment1$ mkdir 2
● abdallah@abdallah-ROG-Strix-G531GT-G531GT:~/Assignment1$ mkdir 3
```

touch command :

```

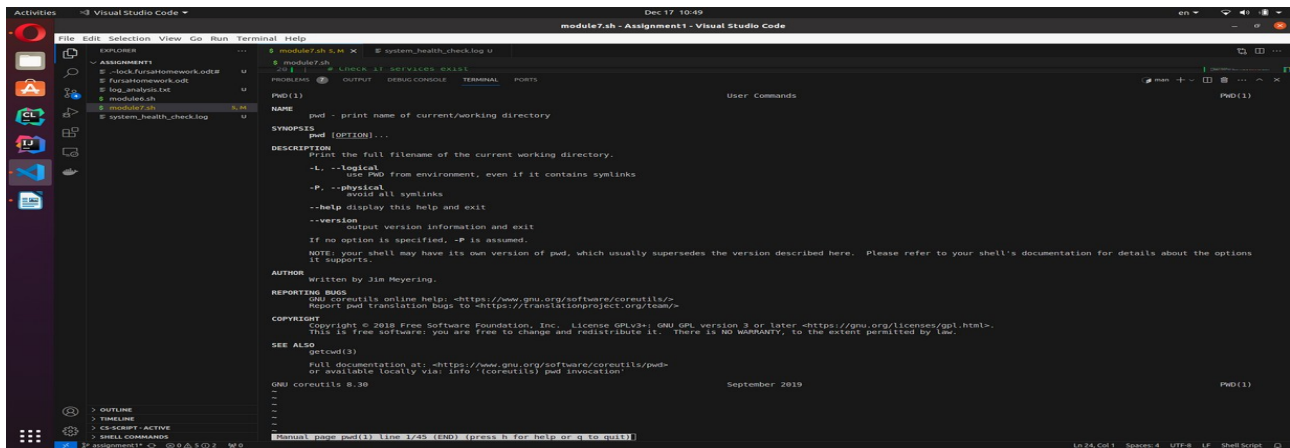
  ▾ ASSIGNMENT1
    > 1
    > 2
    > 3
    ▾ ./lock.fursaHomework.odt# U
    ▾ 3.cpp U
    ▾ 3.java U
    ▾ fursaHomework.odt
    ▾ log_analysis.txt U
    $ module6.sh
    $ module7.sh S, M
    ▾ myFile U
    ▾ system_health_check.log U
  ▾ myFile
    1
PROBLEMS 7 OUTPUT DEBUG CONSOLE TERMINAL PORTS
● abdallah@abdallah-ROG-Strix-G531GT-G531GT:~/Assignment1$ mkdir 1
● abdallah@abdallah-ROG-Strix-G531GT-G531GT:~/Assignment1$ mkdir 2
● abdallah@abdallah-ROG-Strix-G531GT-G531GT:~/Assignment1$ mkdir 3
● abdallah@abdallah-ROG-Strix-G531GT-G531GT:~/Assignment1$ gnome-screenshot -a
● abdallah@abdallah-ROG-Strix-G531GT-G531GT:~/Assignment1$ touch myFile
● abdallah@abdallah-ROG-Strix-G531GT-G531GT:~/Assignment1$ touch 3
● abdallah@abdallah-ROG-Strix-G531GT-G531GT:~/Assignment1$ touch 3.java
● abdallah@abdallah-ROG-Strix-G531GT-G531GT:~/Assignment1$ touch 3.cpp
● abdallah@abdallah-ROG-Strix-G531GT-G531GT:~/Assignment1$ touch 3
● abdallah@abdallah-ROG-Strix-G531GT-G531GT:~/Assignment1$ gnome-screenshot -a
```

rm command :

```

  ▾ ASSIGNMENT1
    ▾ ./lock.fursaHomework.odt# U
    ▾ fursaHomework.odt
    ▾ log_analysis.txt U
    $ module6.sh
    $ module7.sh S, M
    ▾ system_health_check.log U
  ▾ myFile
    1
PROBLEMS 7 OUTPUT DEBUG CONSOLE TERMINAL PORTS
● abdallah@abdallah-ROG-Strix-G531GT-G531GT:~/Assignment1$ rm -r 1
● abdallah@abdallah-ROG-Strix-G531GT-G531GT:~/Assignment1$ rm -r 2
● abdallah@abdallah-ROG-Strix-G531GT-G531GT:~/Assignment1$ rm -r 3
● abdallah@abdallah-ROG-Strix-G531GT-G531GT:~/Assignment1$ rm -r 3.cpp
● abdallah@abdallah-ROG-Strix-G531GT-G531GT:~/Assignment1$ rm -r 3.java
● abdallah@abdallah-ROG-Strix-G531GT-G531GT:~/Assignment1$ rm -r myFile
● abdallah@abdallah-ROG-Strix-G531GT-G531GT:~/Assignment1$ gnome-screenshot -a
```

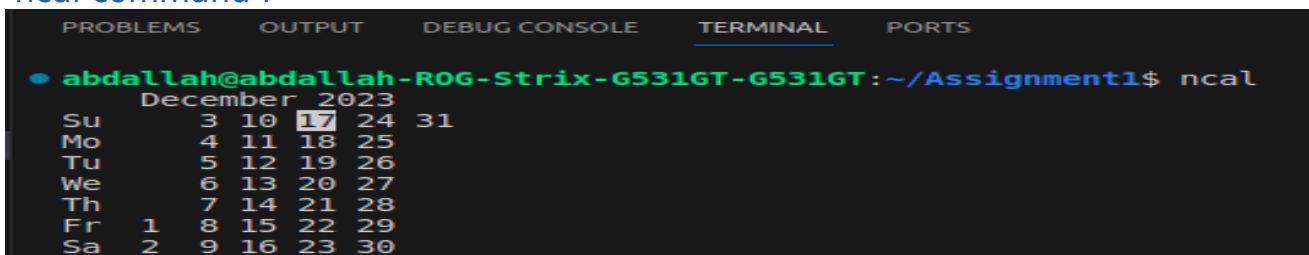
man command :



The screenshot shows the Visual Studio Code interface with the 'Terminal' tab active. The terminal displays the man page for the 'pwd' command. The page includes the following information:

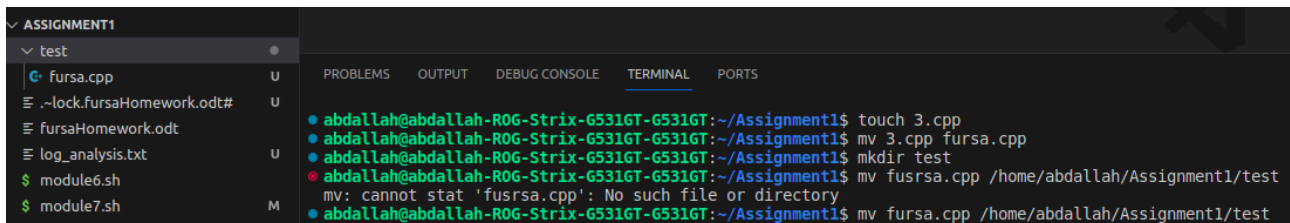
- NAME:** pwd - print name of current/working directory
- SYNOPSIS:** pwd [OPTION]...
- DESCRIPTION:** Print the full filename of the current working directory. Options include -L (logical), -P (physical), --help, and --version.
- NOTE:** Your shell may have its own version of pwd, which usually supersedes the version described here.
- AUTHOR:** Written by Jim Meyering.
- REPORTING BUGS:** GNU coreutils online help: <https://www.gnu.org/software/coreutils/>
- COPYRIGHT:** Copyright © 2018 Free Software Foundation, Inc. License GPLv3+.
- SEE ALSO:** Getcwd(3), Full documentation at: <https://www.gnu.org/software/coreutils/pwd/>

ncal command :



The screenshot shows a terminal window with the 'ncal' command being executed. The output displays a calendar for December 2023, showing the days of the week and the corresponding dates.

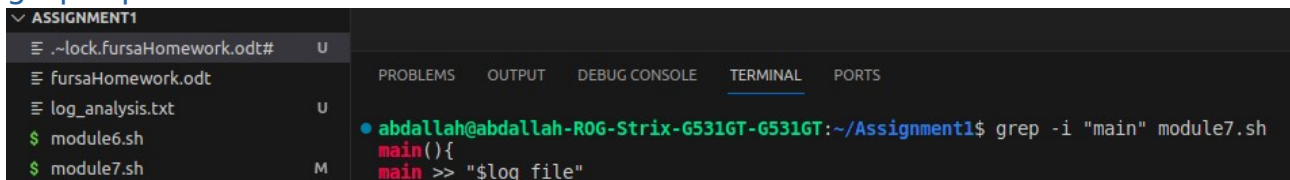
mv command :



The screenshot shows the Visual Studio Code interface with the 'Terminal' tab active. The terminal displays the following commands and their outputs:

- `touch 3.cpp`
- `mv 3.cpp fursa.cpp`
- `mkdir test`
- `mv fursra.cpp /home/abdallah/Assignment1/test` (Note: 'fursra' is a typo for 'fursa')
- `mv fursa.cpp /home/abdallah/Assignment1/test`

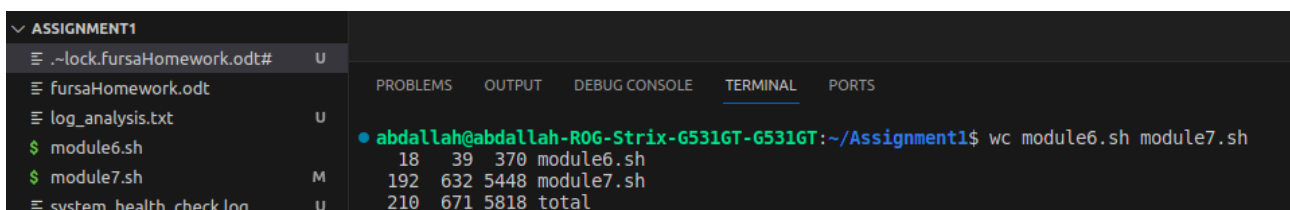
grep -option command :



The screenshot shows the Visual Studio Code interface with the 'Terminal' tab active. The terminal displays the following commands and their outputs:

- `grep -i "main" module7.sh`
- Output: `main(){`
- Output: `main >> "$log_file"`

wc command :



The screenshot shows the Visual Studio Code interface with the 'Terminal' tab active. The terminal displays the following commands and their outputs:

- `wc module6.sh module7.sh`
- Output: `18 39 370 module6.sh`
- Output: `192 632 5448 module7.sh`
- Output: `210 671 5818 total`

cat command :

```

└─$ ./lock.fursaHomework.odt#
└─$ fursaHomework.odt
└─$ log_analysis.txt
└─$ module6.sh
└─$ module7.sh
└─$ newfile
└─$ system_health_check.log
└─$
```

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
● abdallah@abdallah-R06-Strix-G531GT-G531GT:~/Assignment1$ cat module6.sh
#!/bin/bash

backup_dir="/home/abdallah/1"
backup_des="/home/abdallah/2"

mkdir -p $backup_des

for file path in "$backup_dir"/*; do
    if [ -f "$file_path" ]; then
        cp "$file_path" "$backup_des"

        if [ $? -eq 0 ]; then
            echo "Copied successfully."
        else
            echo "Failed to copy"
        fi
    fi
done
● abdallah@abdallah-R06-Strix-G531GT-G531GT:~/Assignment1$ cat >> newfile
hi fursa
^C
● abdallah@abdallah-R06-Strix-G531GT-G531GT:~/Assignment1$ cat newfile
hi fursa
○ abdallah@abdallah-R06-Strix-G531GT-G531GT:~/Assignment1$ gnome-screenshot -a
■
```

echo command:

```
ASSIGNMENT1
└─ ~/.lock.fursaHomework.odt# U
└─ fursaHomework.odt
└─ log_analysis.txt U
$ module6.sh
$ module7.sh M
└─ newfile U
└─ system_health_check.log U
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
● abdallah@abdallah-R0G-Strix-G531GT-G531GT:~/Assignment1$ echo hello world
hello world
○ abdallah@abdallah-R0G-Strix-G531GT-G531GT:~/Assignment1$ gnome-screenshot -a
```

cp command :

The screenshot shows a terminal window with a file explorer on the left and a terminal output on the right. The file explorer shows a directory structure under 'ASSIGNMENT1' with files like 'newfile', 'fursaHomework.odt', 'log_analysis.txt', 'module6.sh', 'module7.sh', and 'system_health_check.log'. The terminal shows the execution of commands: 'mkdir tmp', 'cp newfile tmp', and 'gnome-screenshot -a'.

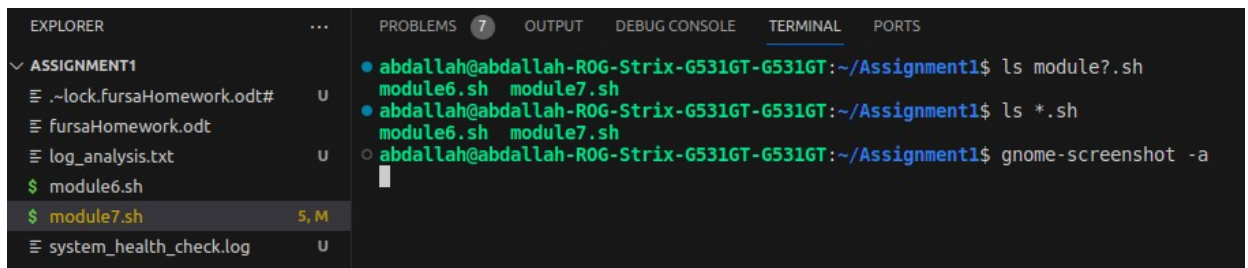
date command :

```
EXPLORER ... PROBLEMS 7 OUTPUT DEBUG CONSOLE TERMINAL PORTS
ASSIGNMENT1
└─ ./lock.fursaHomework.odt# U
└─ fursaHomework.odt
  ● abdallah@abdallah-R0G-Strix-G531GT:~/Assignment1$ date +%Y-%m-%d %H:%M:%S
    2023-12-17 12:12:18
  ○ abdallah@abdallah-R0G-Strix-G531GT:~/Assignment1$ gnome-screenshot -a
```

module 2:

Task3 :

- done in module 1 task 2
- wildCards:

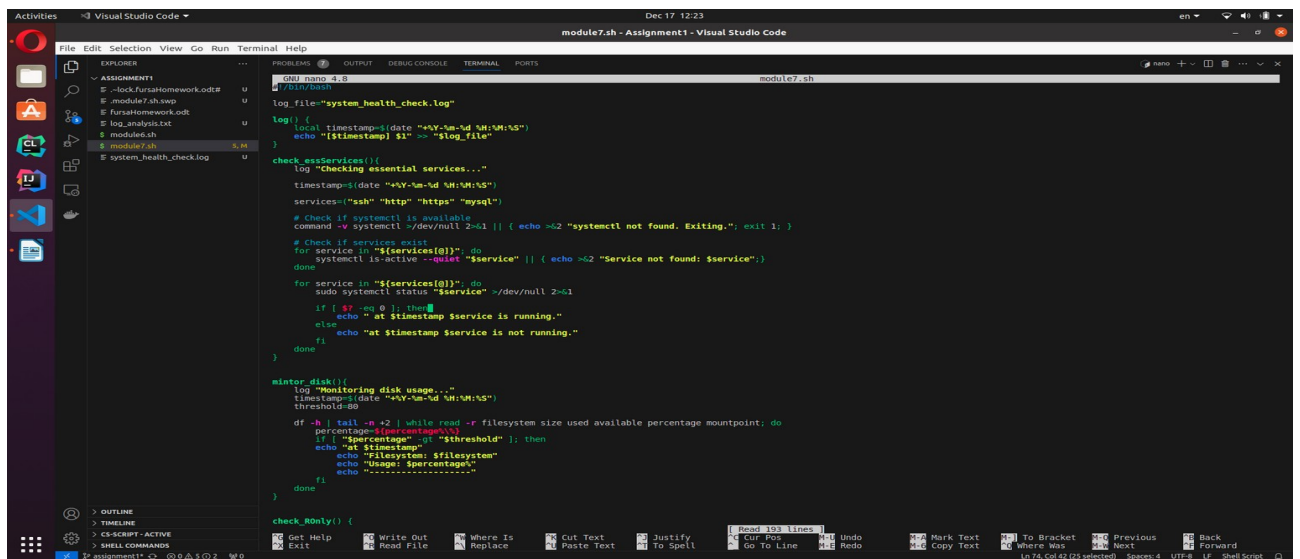


```
EXPLORER  PROBLEMS 7  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS
ASSIGNMENT1
└─ lock.fursaHomework.odt#
└─ fursaHomework.odt
└─ log_analysis.txt
└─ module6.sh
└─ module7.sh
└─ system_health_check.log

abdallah@abdallah-R0G-Strix-G531GT-G531GT:~/Assignment1$ ls module?.sh
module6.sh  module7.sh
abdallah@abdallah-R0G-Strix-G531GT-G531GT:~/Assignment1$ ls *.sh
module6.sh  module7.sh
abdallah@abdallah-R0G-Strix-G531GT-G531GT:~/Assignment1$ gnome-screenshot -a
```

- done in module 1 task 2

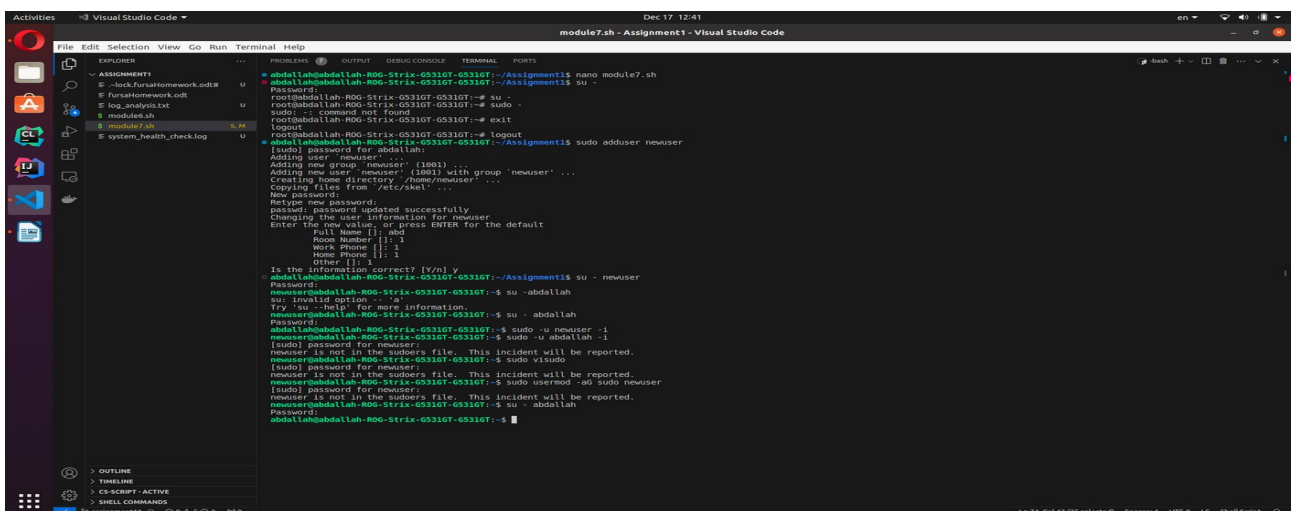
Task4 :



```
module7.sh
#!/bin/bash
log_file="system_health_check.log"
log() {
    local timestamp=$(date "+Y-%m-%d %H:%M:%S")
    echo "[timestamp] $1" >> "$log_file"
}
check_essServices() {
    log "Checking essential services..."
    timestamp=$(date "+Y-%m-%d %H:%M:%S")
    services=("ssh" "http" "https" "mysql")
    # Check if systemctl is available
    command -v systemctl >/dev/null 2>&1 || { echo >42 "systemctl not found. Exiting."; exit 1; }
    # Check if service exists
    for service in "${services[@]}; do
        systemctl is-active --quiet "$service" || { echo >42 "Service not found: $service"; }
    done
    for service in "${services[@]}; do
        sudo systemctl status "$service" >/dev/null 2>&1
        if [ $? -eq 0 ]; then
            echo "at $timestamp $service is running."
        else
            echo "at $timestamp $service is not running."
        fi
    done
}
monitor_disk() {
    log "Monitoring disk usage..."
    timestamp=$(date "+Y-%m-%d %H:%M:%S")
    threshold=80
    df -h | tail -n 2 | while read -r filesystem size used available percentage mountpoint; do
        percentage=$((percentage%100))
        if [ "$percentage" -gt "$threshold" ]; then
            echo "at $timestamp"
            echo "Filesystem: $filesystem"
            echo "Usage: $percentage"
            echo "-----"
        fi
    done
}
check_ROnly() {
    # Write Out
    # Read File
    # Where Is
    # Cut Text
    # Justify
    # To Spell
    # Read 133 lines
    # Cur Pos
    # Go To Line
    # Undo
    # Mark Text
    # Copy Text
    # To Bracket
    # Where Was
    # Next
    # Previous
    # Back
    # Forward
    # Shell Script
}
```

module 3:

Task5 :



```
abdallah@abdallah-R0G-Strix-G531GT-G531GT:~/Assignment1$ nano module7.sh
abdallah@abdallah-R0G-Strix-G531GT-G531GT:~/Assignment1$ su -
root@abdallah-R0G-Strix-G531GT-G531GT:~# su -
abdallah@abdallah-R0G-Strix-G531GT-G531GT:~$ sudo
[sudo] password for root:
root@abdallah-R0G-Strix-G531GT-G531GT:~# exit
logout
abdallah@abdallah-R0G-Strix-G531GT-G531GT:~$ logout
abdallah@abdallah-R0G-Strix-G531GT-G531GT:~$ sudo adduser newuser
[sudo] password for abdallah:
Adding user 'newuser' ...
Adding new group 'newuser' ...
Adding new user 'newuser' (1001) with group 'newuser' ...
Creating home directory '/home/newuser' ...
Copying files from '/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for newuser
Enter the new value, or press ENTER for the default
Full Name []: abd
Room Number []: 1
Work Phone []: 1
Home Phone []: 1
Other []: 3
Is the information correct? [Y/n] Y
abdallah@abdallah-R0G-Strix-G531GT-G531GT:~/Assignment1$ su - newuser
newuser@abdallah-R0G-Strix-G531GT-G531GT:~$ su - abdallah
su: invalid option
TRY 'su --help' for more information.
newuser@abdallah-R0G-Strix-G531GT-G531GT:~$ su - abdallah
Password:
abdallah@abdallah-R0G-Strix-G531GT-G531GT:~$ sudo -u newuser -i
newuser@abdallah-R0G-Strix-G531GT-G531GT:~$ sudo -u abdallah -i
[sudo] password for newuser:
newuser is not in the sudoers file. This incident will be reported.
[sudo] password for newuser:
newuser is not in the sudoers file. This incident will be reported.
newuser@abdallah-R0G-Strix-G531GT-G531GT:~$ sudo usermod -ad sudo newuser
[sudo] password for newuser:
newuser is not in the sudoers file. This incident will be reported.
newuser@abdallah-R0G-Strix-G531GT-G531GT:~$ su - abdallah
Password:
abdallah@abdallah-R0G-Strix-G531GT-G531GT:~$
```