Basic commands

ls = lists contents

pwd = prints correct working directory

man = manual

cd = change directory

touch = creates file

echo = allows input into file

cat = reads file

grep = searches for word within file

head -n 5 = shows first 5 lines of file

tail -n 5 = shows last 5 lines of file

mkdir = make directory

rmdir = remove directory

rm = remove

mv = move/rename

cp = copy

chmod = changes permissions of a file or directory

chown = changes owner of file or directory

chgrp = changes group

printenv = views current environment variables

source = Used to apply changes to .zshrc or .bashrc

alias – lists all aliases (shortcut commands) set

!! = repeats last command

history: Lists previously executed commands

ctrl + r = reverse searches specific command

ctrl + j = select reverse searche specific command

VIM navigation

wq! = force write and quit

hjkl in command mode = right down up left

move to start of line = 0

move to end of line = shift + 4

w in command mode or shift + right arrow = move forward a word

b in command mode or shift + left arrow = move back a word

move to specific line = :line number

/ = search for specific word

n when searching = next result

shift + n when searching = previous result

d d = delete line

shift + d = remove last section of line

o = inserts new line

y = copy line (yank)

p = paste line

u = undo change

ctrl + r = redo change

:syntax = highlights commands

:set number = displays line numbers

:set nonumber = hide line numbers

Users

sudo = super user do

useradd = add new user

passwd = make password for user

sudo deluser = delete sudo permissions from user

su - =switch user

whoami – tells you the current user

exit – takes back to ubuntu user

sudo usermod -aG sudo newuser = adds newuser to sudo permissions group

Groups

cat /etc/group = shows all groups within system

groupadd = create new group

sudo gpasswd -d user group = removes user from group

groupdel = deletes group

File permissions – crucial for security and order on system

String representation = rwx rw- r-x

assigned to 3 categories = user rights, group rights, other rights

rwx = read, write, execute octal representation = 4 2 1 binary representation = 111

chmod u+x,g+r,o-w = gives user execute permissions, group read permissions and takes away others’ right permissions

chmod ug=rw,o=r 🡪 specifies what permissions each category gets

./ = runs script

chown user:group example.txt = specifies owner and group permissions of the file

chown -R user:group my\_directory/ = specifies permissions of directory

Standard streams

Standard input (stdin) = typing the command

Standard output (stdout) = displayed on terminal screen

Standard error (stderr) = Error message displayed on terminal screen

Redirection = Taking standard output away from terminal screen and into a file

e.g. echo “hello” > example.txt

2> = redirects errors to a file

&> redirects both standard output and error to a file

e.g. ls nonexistent my\_directory/ &> alloutputs.txt

/dev/null = discards all data sent to it

Enivornment variables – Affect behaviour of processes within system. Stores important info

$PATH = contains directories where system looks for executable commands

$HOME = current user’s home directory

$USER = current user's username

$SHELL = shell program in use

export NAME=VALUE 🡪 Temporarily sets environment variable

.bashrc .zshrc = configuration files found in home directory of specific shell

source .bashrc = sets changes permanently to environment variable

export PATH=$PATH:/home/ubuntu = Adds new directories to set of directories. Scripts can now be made and recognised in /home/ubuntu