

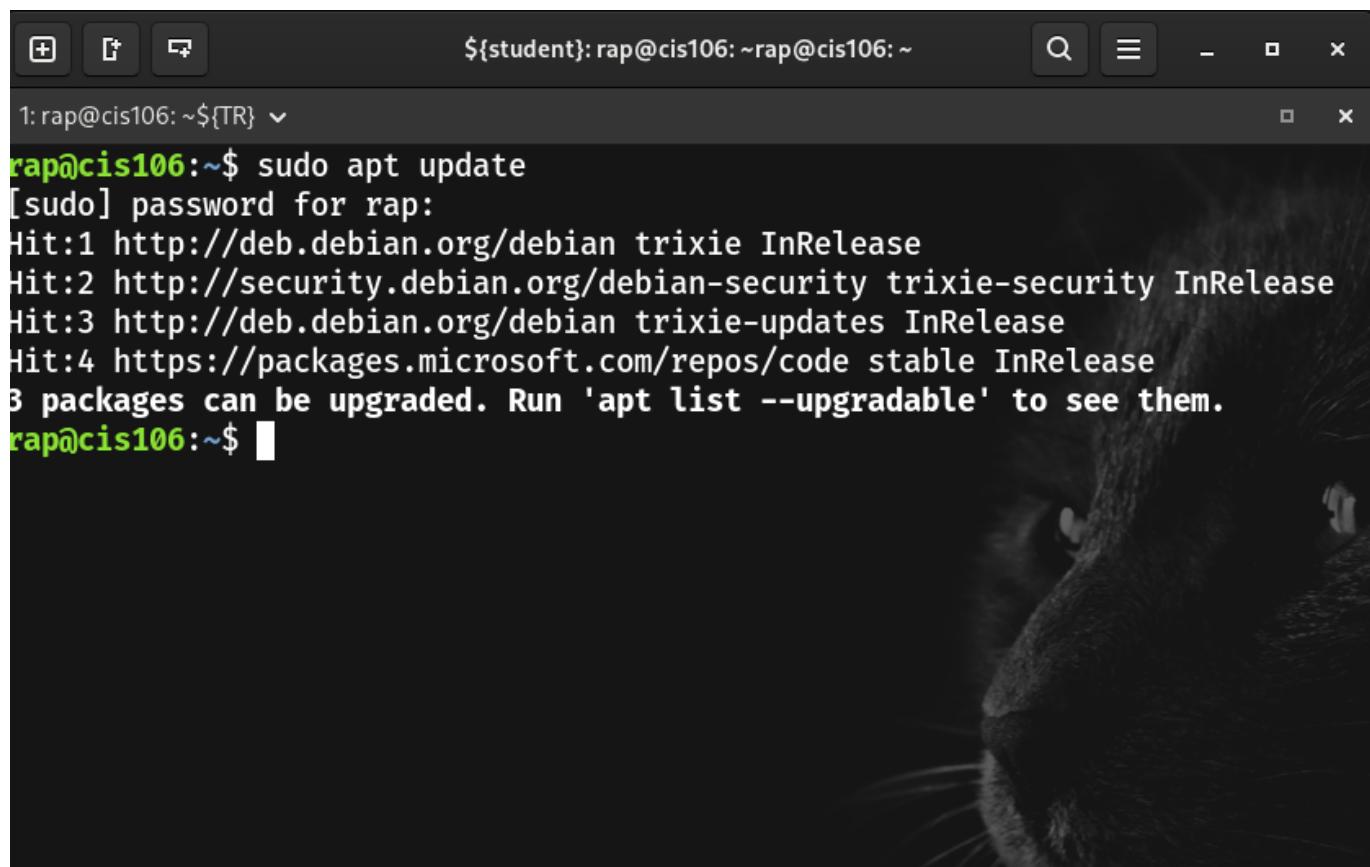
Notes 4

How to install and remove software using the APT command.

Installing Software with APT

Update the Package List

Command sudo apt update



```
1: rap@cis106: ~${TR} ▾
rap@cis106:~$ sudo apt update
[sudo] password for rap:
Hit:1 http://deb.debian.org/debian trixie InRelease
Hit:2 http://security.debian.org/debian-security trixie-security InRelease
Hit:3 http://deb.debian.org/debian trixie-updates InRelease
Hit:4 https://packages.microsoft.com/repos/code stable InRelease
3 packages can be upgraded. Run 'apt list --upgradable' to see them.
rap@cis106:~$ █
```

Install package

Command sudo apt install

```
1: rap@cis106:~${TR} ~
rap@cis106:~$ sudo apt install vitetris -y
Installing:
  vitetris

Summary:
  Upgrading: 0, Installing: 1, Removing: 0, Not Upgrading: 3
  Download size: 70.4 kB
  Space needed: 159 kB / 26.1 GB available

Get:1 http://deb.debian.org/debian trixie/main amd64 vitetris amd64 0.59.1-3 [70.4 kB]
Fetched 70.4 kB in 0s (974 kB/s)
Selecting previously unselected package vitetris.
(Reading database ... 204384 files and directories currently installed.)
Preparing to unpack .../vitetris_0.59.1-3_amd64.deb ...
Unpacking vitetris (0.59.1-3) ...
Setting up vitetris (0.59.1-3) ...
Processing triggers for desktop-file-utils (0.28-1) ...
Processing triggers for gnome-menus (3.36.0-3) ...
Processing triggers for man-db (2.13.1-1) ...
Processing triggers for mailcap (3.74) ...
rap@cis106:~$ █
```

Remove package

Command sudo apt remove

```
2: rap@cis106: ~${TR} ▼
rap@cis106:~$ sudo apt remove vitetris -y
[sudo] password for rap:
REMOVING:
  vitetris

Summary:
  Upgrading: 0, Installing: 0, Removing: 1, Not Upgrading: 3
  Freed space: 159 kB

(Reading database ... 204393 files and directories currently installed.)
Removing vitetris (0.59.1-3) ...
Processing triggers for gnome-menus (3.36.0-3) ...
Processing triggers for man-db (2.13.1-1) ...
Processing triggers for mailcap (3.74) ...
Processing triggers for desktop-file-utils (0.28-1) ...
rap@cis106:~$ █
```

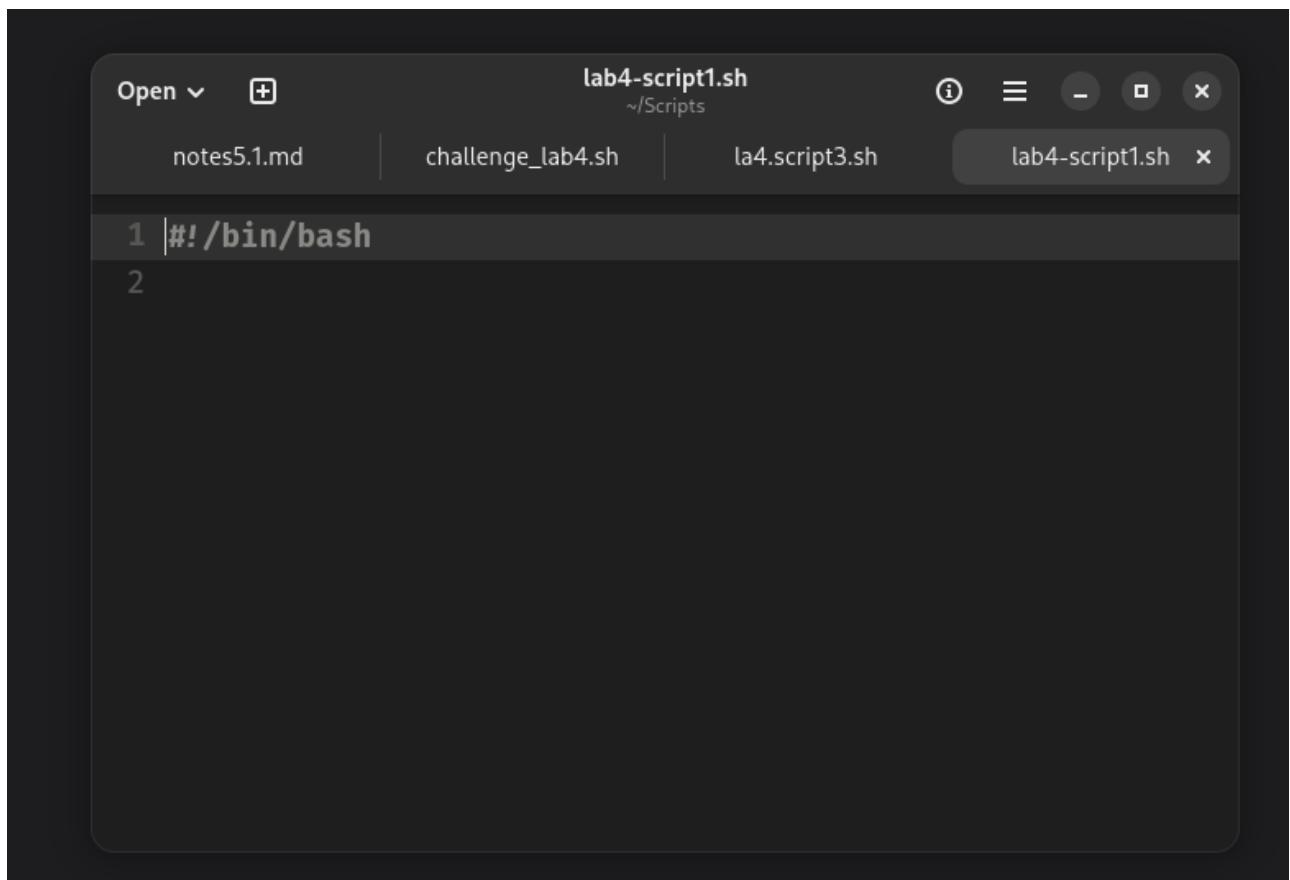
Command sudo apt purge

```
2: rap@cis106: ~${TR} ▼
rap@cis106:~$ sudo apt purge
[sudo] password for rap:
Summary:
  Upgrading: 0, Installing: 0, Removing: 0, Not Upgrading: 3
rap@cis106:~$ █
```

How to create a shell script step by step including screenshots and how to run it.

Pick a file for script

- Gnome text edit



- Save as and name the shell script

The screenshot shows a dark-themed code editor window titled "challenge_lab4.sh" located at "~/Scripts". The file contains a shell script with numbered lines from 1 to 12. Lines 1 through 11 are visible, while line 12 is partially visible at the bottom. The script uses various Linux commands like figlet, date, hostname, uptime, whoami, free, and df to display system information. The code editor has tabs for "notes5.1.md", "challenge_lab4.s", "la4.script3.sh", and "lab4-script1.sh".

```
1 #!/bin/bash
2 echo -e "_____"
3 figlet System
4 echo -e "DATE UTC:           $(date + "%m-%d-%Y-%T")"
5 echo -e "HOSTNAME:          $(hostname)"
6 echo -e "UPTIME:             $(uptime -p)"
7 echo -e "USER:               $(whoami)"
8 figlet MEMORY
9 free -h
10 figlet DISK
11 df -h
12 echo|
```

Open the shell script on the terminal

The screenshot shows a terminal window with a dark background. The title bar reads "\${student}: rap@cis106: ~/scripts\$". The command history shows the user navigating to the "/scripts" directory. The terminal is currently displaying a black and white image of a cat's face.

```
1: rap@cis106: ~/scripts${TR} ~
rap@cis106:~$ cd scripts/
rap@cis106:~/scripts$ |
```

Run it

The terminal window displays the following information:

```
Nov 6 9:59 AM
${student}:rap@cis106:~/scripts$[TR]
1: rap@cis106:~/scripts$ cd scripts/
rap@cis106:~/scripts$ bash challenge_lab4.sh

DATE UTC:          11-06-2025-09:59:22
HOSTNAME:         cis106
UPTIME:           up 55 minutes
USER:             rap

total        used        free      shared  buff/cache   available
Mem:       3.8Gi     2.9Gi    174Mi      62Mi     1.1Gi     957Mi
Swap:      2.1Gi     315Mi    1.8Gi

Filesystem  Size  Used Avail Use% Mounted on
udev      1.9G   0  1.9G  0% /dev
tmpfs     392M  4.4M 388M  2% /run
/dev/sda1  38G  12G  25G 33% /
tmpfs     2.0G  20M  1.9G  2% /dev/shm
tmpfs     5.0M   0  5.0M  0% /run/lock
tmpfs     1.0M   0  1.0M  0% /run/credentials/systemd-journald.service
```