

OLD DOMINION UNIVERSITY
CYSE 270 LINUX SYSTEM FOR CYBERSECURITY

Assignment 14

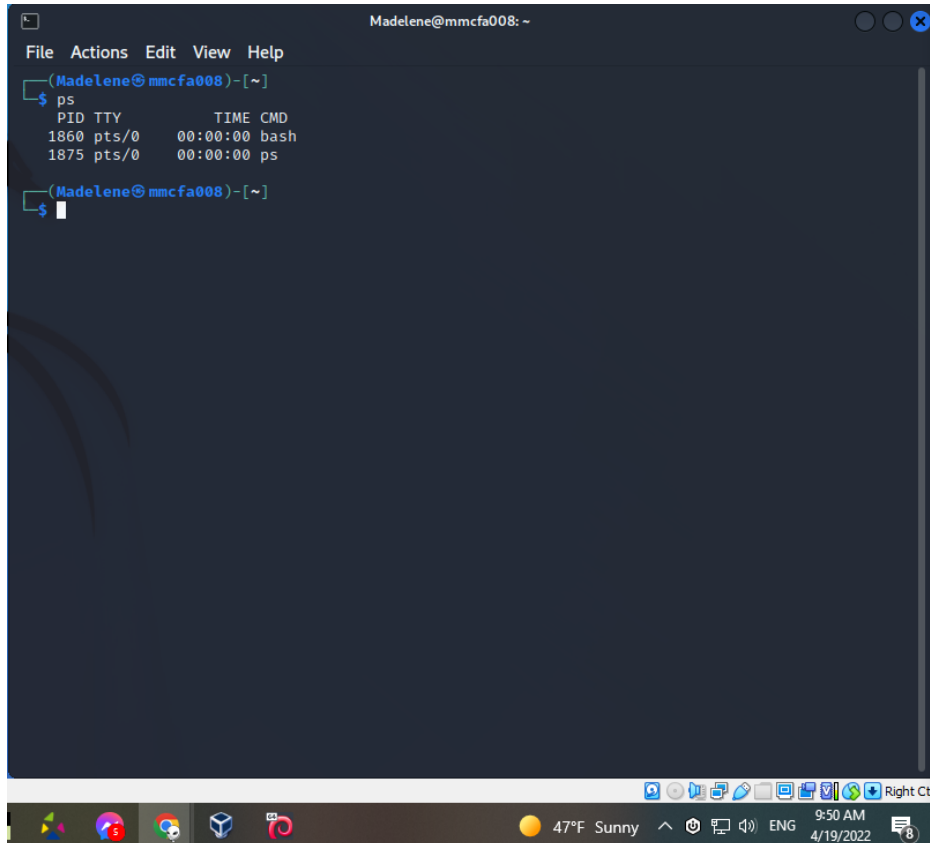
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Task A: Managing System Processes (40 points)

Step 1. Open the terminal in your VM.

Step 2. List the processes that are running in the current shell.



The screenshot shows a terminal window titled "Madelene@mmcfa008: ~". The terminal displays the following output for the 'ps' command:

```
(Madelene@mmcfa008)-[~]
$ ps
  PID TTY          TIME CMD
 1860 pts/0    00:00:00 bash
 1875 pts/0    00:00:00 ps
```

The terminal window also shows a menu bar with "File", "Actions", "Edit", "View", and "Help". The system tray at the bottom of the window displays the date and time as "9:50 AM 4/19/2022" and the weather as "47°F Sunny".

Step 3: List all processes that are running on this system.

Step 4: Display all processes that are running by using the **top** command. (Keep this command running for the next few steps.)

```
File Actions Edit View Help
top - 09:50:36 up 4 min, 1 user, load average: 0.14, 0.26, 0.13
Tasks: 155 total, 1 running, 154 sleeping, 0 stopped, 0 zombie
%Cpu(s): 0.3 us, 0.3 sy, 0.0 ni, 99.3 id, 0.0 wa, 0.0 hi, 0.0 si, 0.0 st
MiB Mem : 4931.9 total, 4040.0 free, 502.0 used, 389.8 buff/cache
MiB Swap: 975.0 total, 975.0 free, 0.0 used, 4206.1 avail Mem

  PID USER      PR  NI   VIRT   RES   SHR  S  %CPU  %MEM    TIME+  COMMAND
 566 root        20   0 356544 111548 46104 S  1.7   2.2   0:01.59 Xorg
1857 Madelene    20   0 418600  89460 73380 S  1.3   1.8   0:00.30 qterminal
 939 Madelene    20   0 360700  27380 19852 S  0.3   0.5   0:00.57 panel-15-genmon
2012 Madelene  20   0  10428   3756  3192 R  0.3   0.1   0:00.01 top
   1 root         0  -20     0     0     0  S  0.0   0.2   0:00.76 systemd
   2 root         0   0     0     0     0  S  0.0   0.0   0:00.00 kthreadd
   3 root         0  -20     0     0     0  I  0.0   0.0   0:00.00 rcu_gp
   4 root         0  -20     0     0     0  I  0.0   0.0   0:00.00 rcu_par_gp
   5 root        20   0     0     0     0  I  0.0   0.0   0:00.00 kworker/0:0-events
   6 root         0  -20     0     0     0  I  0.0   0.0   0:00.00 kworker/0:0H-events_high+
   7 root        20   0     0     0     0  I  0.0   0.0   0:00.03 kworker/0:1-events
   8 root        20   0     0     0     0  I  0.0   0.0   0:01.06 kworker/u4:0-flush-8:0
   9 root         0  -20     0     0     0  I  0.0   0.0   0:00.00 mm_percpu_wq
  10 root        20   0     0     0     0  S  0.0   0.0   0:00.00 rcu_tasks_rude_
  11 root        20   0     0     0     0  S  0.0   0.0   0:00.00 rcu_tasks_trace
  12 root        20   0     0     0     0  S  0.0   0.0   0:00.01 ksoftirqd/0
  13 root        20   0     0     0     0  I  0.0   0.0   0:00.03 rcu_sched
  14 root        rt   0     0     0     0  S  0.0   0.0   0:00.00 migration/0
  15 root        20   0     0     0     0  S  0.0   0.0   0:00.00 cpuhp/0
  16 root        20   0     0     0     0  S  0.0   0.0   0:00.00 cpuhp/1
  17 root        rt   0     0     0     0  S  0.0   0.0   0:00.29 migration/1
  18 root        20   0     0     0     0  S  0.0   0.0   0:00.01 ksoftirqd/1
  19 root        20   0     0     0     0  I  0.0   0.0   0:00.00 kworker/1:0-ata_sff
  20 root         0  -20     0     0     0  I  0.0   0.0   0:00.00 kworker/1:0H-events_high+
  22 root        20   0     0     0     0  I  0.0   0.0   0:00.01 kworker/u4:1-events_unb+
  23 root        20   0     0     0     0  S  0.0   0.0   0:00.00 kdevtmpfs
  24 root         0  -20     0     0     0  I  0.0   0.0   0:00.00 netns
  25 root         0  -20     0     0     0  I  0.0   0.0   0:00.00 inet_frag_wq
  26 root        20   0     0     0     0  S  0.0   0.0   0:00.00 kauditd
  27 root        20   0     0     0     0  S  0.0   0.0   0:00.00 khungtaskd
```

Step 5: While in the top command, display the help screen.

```
File Actions Edit View Help
Help for Interactive Commands - procps-ng 3.3.17
Window 1:Def: Cumulative mode Off. System: Delay 3.0 secs; Secure mode Off.

Z,B,E,e Global: 'Z' colors; 'B' bold; 'E'/'e' summary/task memory scale
l,t,m,I Toggle: 'l' load avg; 't' task/cpu; 'm' memory; 'I' Irix mode
0,1,2,3,4 Toggle: '0' zeros; '1/2/3' cpu/numa views; '4' cpus two abreast
f,F,X Fields: 'f'/'F' add/remove/order/sort; 'X' increase fixed-width

L,S,<,> . Locate: 'L'/'S' find/again; Move sort column: '<'/'>' left/right
R,H,J,C . Toggle: 'R' Sort; 'H' Threads; 'J' Num justify; 'C' Coordinates
c,l,S,j . Toggle: 'c' Cmd name/line; 'i' Idle; 'S' Time; 'j' Str justify
x,y . Toggle highlights: 'x' sort field; 'y' running tasks
z,b . Toggle: 'z' color/mono; 'b' bold/reverse (only if 'x' or 'y')
u,U,o,o . Filter by: 'u'/'U' effective/any user; 'o'/'O' other criteria
n,#,^O . Set: 'n'/'#' max tasks displayed; Show: Ctrl+'O' other filter(s)
V,v . Toggle: 'V' forest view; 'v' hide/show forest view children

k,r Manipulate tasks: 'k' kill; 'r' renice
d or s Set update interval
W,Y,! Write config file 'W'; Inspect other output 'Y'; Combine Cpus '!'
q Quit
( commands shown with '.' require a visible task display window )
Press 'h' or '?' for help with Windows,
Type 'q' or <Esc> to continue
```

Step 6: Quit the top command.

```
Madelene@mmcfa008: ~
File Actions Edit View Help
MiB Mem : 4931.9 total, 4041.7 free, 500.0 used, 390.1 buff/cache
MiB Swap: 975.0 total, 975.0 free, 0.0 used, 4208.1 avail Mem

  PID USER   PR   NI  VIRT  RES  SHR  S  %CPU  %MEM    TIME+  COMMAND
 1029 Madelene 20    0 550060 47956 36464 S   0.3   0.9   0:00.31 nm-applet
 2215 Madelene 20    0 418600 89096 73036 S   0.3   1.8   0:00.51 qterminal
    1 root     20    0 165932 11252  8472 S   0.0   0.2   0:00.76 systemd
    2 root     20    0      0      0      0  S   0.0   0.0   0:00.00 kthreadd
    3 root     0  -20    0      0      0  I   0.0   0.0   0:00.00 rcu_gp
    4 root     0  -20    0      0      0  I   0.0   0.0   0:00.00 rcu_par_gp
    6 root     0  -20    0      0      0  I   0.0   0.0   0:00.00 kworker/0:0H-events_hig+
    7 root     20    0      0      0      0  I   0.0   0.0   0:00.07 kworker/0:1-events_powe+
    9 root     0  -20    0      0      0  I   0.0   0.0   0:00.00 mm_percpu_wq
   10 root     20    0      0      0      0  S   0.0   0.0   0:00.00 rcu_tasks_rude_
   11 root     20    0      0      0      0  S   0.0   0.0   0:00.00 rcu_tasks_trace
   12 root     20    0      0      0      0  S   0.0   0.0   0:00.01 ksoftirqd/0
   13 root     20    0      0      0      0  I   0.0   0.0   0:00.06 rcu_sched
   14 root     rt    0      0      0      0  S   0.0   0.0   0:00.00 migration/0
   15 root     20    0      0      0      0  S   0.0   0.0   0:00.00 cpuhp/0
   16 root     20    0      0      0      0  S   0.0   0.0   0:00.00 cpuhp/1
   17 root     rt    0      0      0      0  S   0.0   0.0   0:00.29 migration/1
   18 root     20    0      0      0      0  S   0.0   0.0   0:00.01 ksoftirqd/1
   20 root     0  -20    0      0      0  I   0.0   0.0   0:00.00 kworker/1:0H-events_hig+
   22 root     20    0      0      0      0  I   0.0   0.0   0:00.01 kworker/u4:1-events_unb+
   23 root     20    0      0      0      0  S   0.0   0.0   0:00.00 kdevtmpfs
   24 root     0  -20    0      0      0  I   0.0   0.0   0:00.00 netns
   25 root     0  -20    0      0      0  I   0.0   0.0   0:00.00 inet_frag_wq
   26 root     20    0      0      0      0  S   0.0   0.0   0:00.00 kauditd
   27 root     20    0      0      0      0  S   0.0   0.0   0:00.00 khungtaskd
   28 root     20    0      0      0      0  S   0.0   0.0   0:00.00 oom_reaper
   29 root     0  -20    0      0      0  I   0.0   0.0   0:00.00 writeback
   30 root     20    0      0      0      0  S   0.0   0.0   0:00.01 kcompactd0
   31 root     25    5      0      0      0  S   0.0   0.0   0:00.00 ksmd
   32 root     39   19      0      0      0  S   0.0   0.0   0:00.15 khugepaged

(Madelene@mmcfa008)~-[~]
$ gnome-calculator &
```

By pressing the command 'q' I was able to quit the top command

Step 7: Execute the **gnome-calculator** program in the background.

Step 8: In the current shell, list all running jobs.

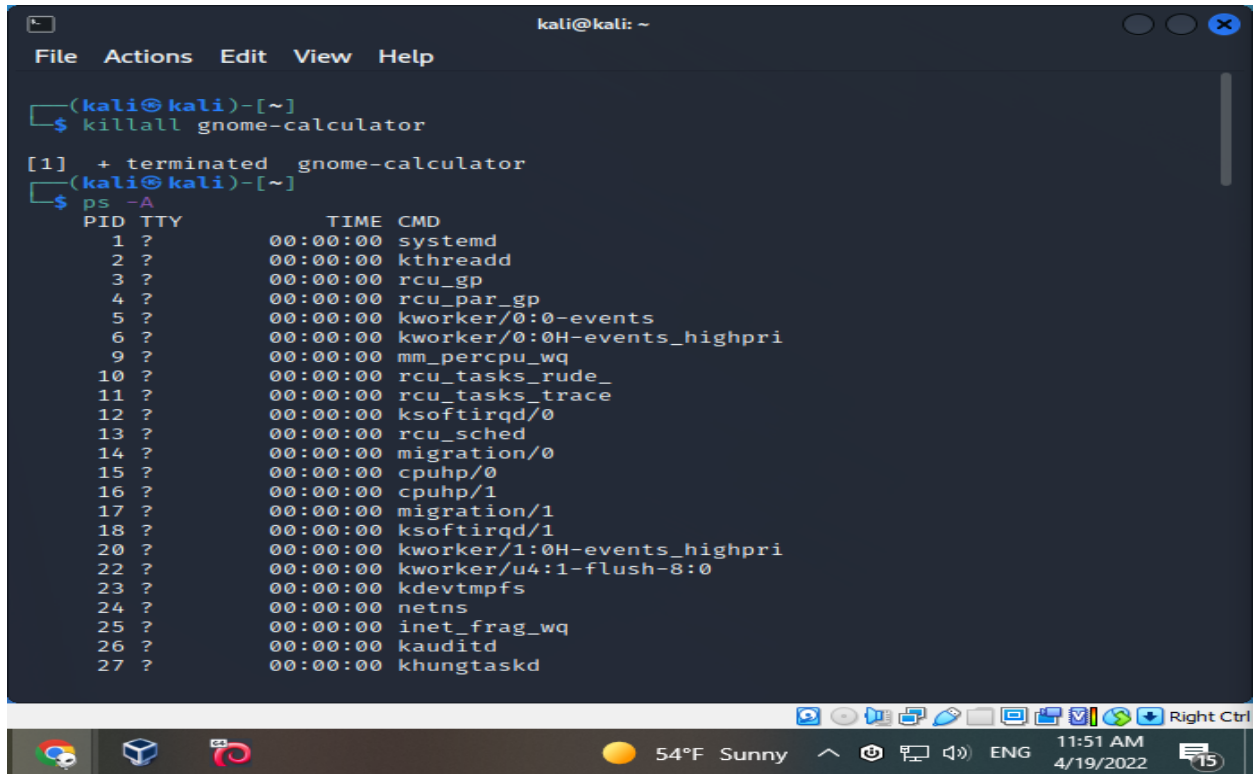
```
kali@kali: ~
File Actions Edit View Help
(kali@kali)~-[~]
$ gnome-calculator &
[1] 3081

(kali@kali)~-[~]
$ ps x
ps x
  PID TTY          STAT       TIME COMMAND
  736 ?        Ss         0:00   /lib/systemd/systemd --user
  737 ?        S           0:00   (sd-pam)
  751 ?        S<sl       0:00   /usr/bin/pipewire
  752 ?        Ssl        0:00   /usr/bin/pipewire-media-session
  753 ?        S<sl       0:00   /usr/bin/pulseaudio --daemonize=no --log-target=journ
  755 ?        Ss         0:00   /usr/bin/dbus-daemon --session --address=systemd: --n
  764 ?        Ssl        0:00   xfce4-session
  816 ?        S           0:00   /usr/bin/VBoxClient --clipboard
  817 ?        Sl         0:00   /usr/bin/VBoxClient --clipboard
  826 ?        S           0:00   /usr/bin/VBoxClient --seamless
  828 ?        Sl         0:00   /usr/bin/VBoxClient --seamless
  831 ?        S           0:00   /usr/bin/VBoxClient --draganddrop
  833 ?        Sl         0:00   /usr/bin/VBoxClient --draganddrop
  836 ?        S           0:00   /usr/bin/VBoxClient --vmvga
  837 ?        Sl         0:00   /usr/bin/VBoxClient --vmvga
  847 ?        Ss         0:00   /usr/bin/ssh-agent x-session-manager
  857 ?        Ssl        0:00   /usr/libexec/at-spi-bus-launcher
  863 ?        S           0:00   /usr/bin/dbus-daemon --config-file=/usr/share/default
  867 ?        Sl         0:00   /usr/lib/x86_64-linux-gnu/xfce4/xfconf/xfconfd
  873 ?        Sl         0:00   /usr/libexec/at-spi2-registryd --use-gnome-session
  883 ?        Sls        0:00   /usr/bin/gpg-agent --supervised
  885 ?        Sl         0:01   xfwm4
  888 ?        Ssl        0:00   /usr/libexec/gvfsd
  893 ?        Sl         0:00   /usr/libexec/gvfsd-fuse /run/user/1000/gvfs -f
```

I ran into troubles and had to reinstall kali to my VB. Therefore, that is the reason for the user changes.

step-9: Use the **killall** command to stop (kill) all instances of the gnome-calculator program.

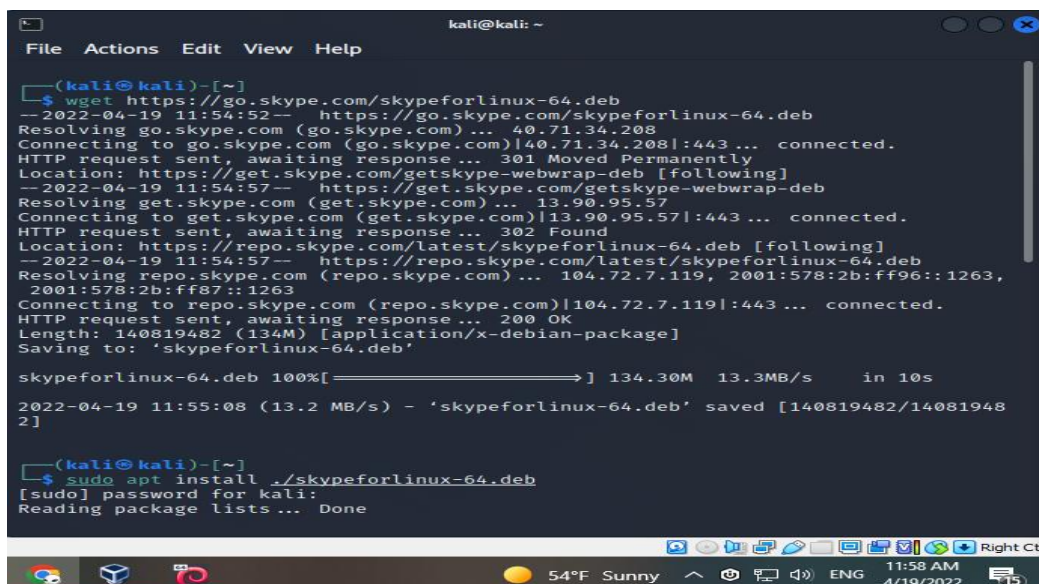
Step 10. In the current shell, use the **ps** command to list all running processes.



```
kali@kali: ~  
File Actions Edit View Help  
└─(kali@kali)-[~]  
└─$ killall gnome-calculator  
[1] + terminated gnome-calculator  
└─(kali@kali)-[~]  
└─$ ps -A  
PID TTY          TIME CMD  
  1 ?            00:00:00 systemd  
  2 ?            00:00:00 kthreadd  
  3 ?            00:00:00 rcu_gp  
  4 ?            00:00:00 rcu_par_gp  
  5 ?            00:00:00 kworker/0:0-events  
  6 ?            00:00:00 kworker/0:0H-events_highpri  
  9 ?            00:00:00 mm_percpu_wq  
 10 ?           00:00:00 rcu_tasks_rude_  
 11 ?           00:00:00 rcu_tasks_trace  
 12 ?           00:00:00 ksoftirqd/0  
 13 ?           00:00:00 rcu_sched  
 14 ?           00:00:00 migration/0  
 15 ?           00:00:00 cpuhp/0  
 16 ?           00:00:00 cpuhp/1  
 17 ?           00:00:00 migration/1  
 18 ?           00:00:00 ksoftirqd/1  
 20 ?           00:00:00 kworker/1:0H-events_highpri  
 22 ?           00:00:00 kworker/u4:1-flush-8:0  
 23 ?           00:00:00 kdevtmpfs  
 24 ?           00:00:00 netns  
 25 ?           00:00:00 inet_frag_wq  
 26 ?           00:00:00 kauditd  
 27 ?           00:00:00 khungtaskd
```

Task B – Package installation (60 points)

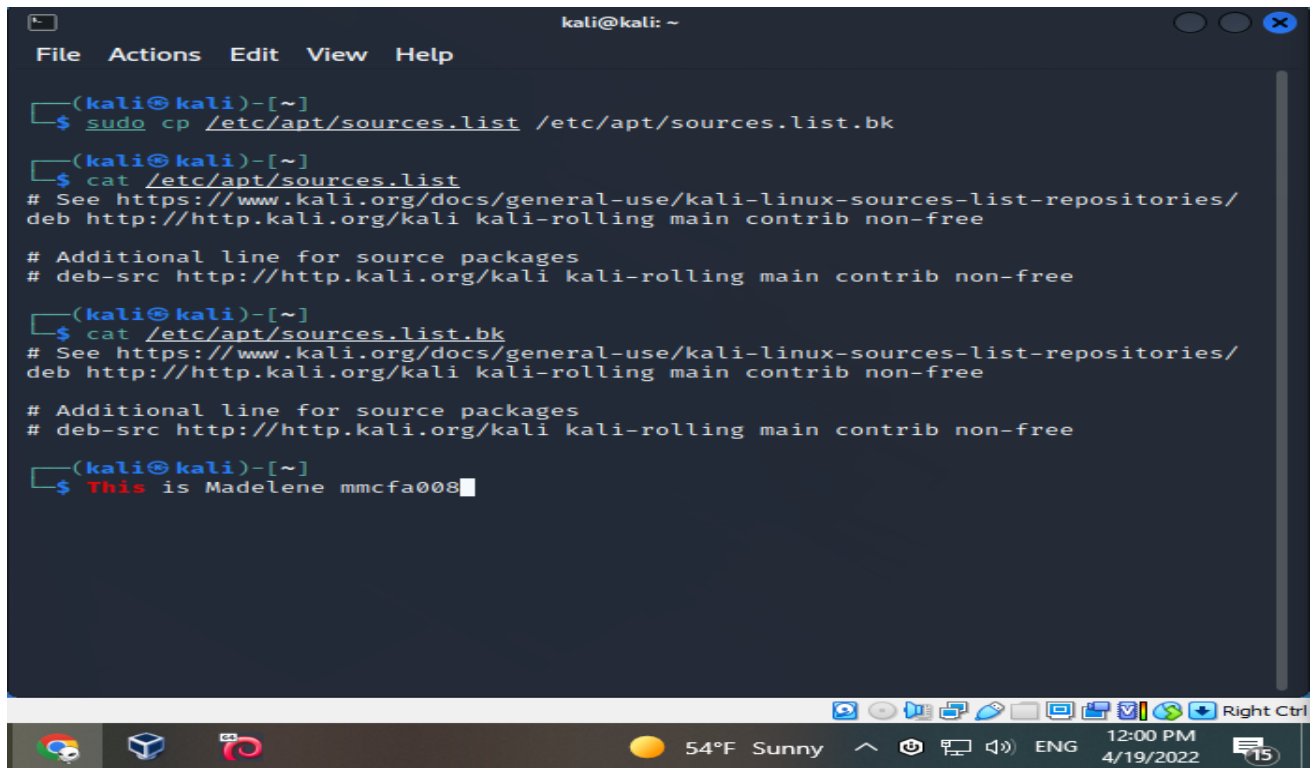
Step 1. Download the installation package (deb file) for skype in Linux and install it properly.



```
kali@kali: ~  
File Actions Edit View Help  
└─(kali@kali)-[~]  
└─$ wget https://go.skype.com/skypeforlinux-64.deb  
--2022-04-19 11:54:52-- https://go.skype.com/skypeforlinux-64.deb  
Resolving go.skype.com (go.skype.com)... 40.71.34.208  
Connecting to go.skype.com (go.skype.com)|40.71.34.208|:443... connected.  
HTTP request sent, awaiting response... 301 Moved Permanently  
Location: https://get.skype.com/gets skype-webwrap-deb [following]  
--2022-04-19 11:54:57-- https://get.skype.com/gets skype-webwrap-deb  
Resolving get.skype.com (get.skype.com)... 13.90.95.57  
Connecting to get.skype.com (get.skype.com)|13.90.95.57|:443... connected.  
HTTP request sent, awaiting response... 302 Found  
Location: https://repo.skype.com/latest/skypeforlinux-64.deb [following]  
--2022-04-19 11:54:57-- https://repo.skype.com/latest/skypeforlinux-64.deb  
Resolving repo.skype.com (repo.skype.com)... 104.72.7.119, 2001:578:2b:ff96::1263,  
2001:578:2b:ff87::1263  
Connecting to repo.skype.com (repo.skype.com)|104.72.7.119|:443... connected.  
HTTP request sent, awaiting response... 200 OK  
Length: 140819482 (134M) [application/x-debian-package]  
Saving to: 'skypeforlinux-64.deb'  
  
skypeforlinux-64.deb 100%[====>] 134.30M 13.3MB/s in 10s  
2022-04-19 11:55:08 (13.2 MB/s) - 'skypeforlinux-64.deb' saved [140819482/140819482]  
  
└─(kali@kali)-[~]  
└─$ sudo apt install ./skypeforlinux-64.deb  
[sudo] password for kali:  
Reading package lists... Done
```

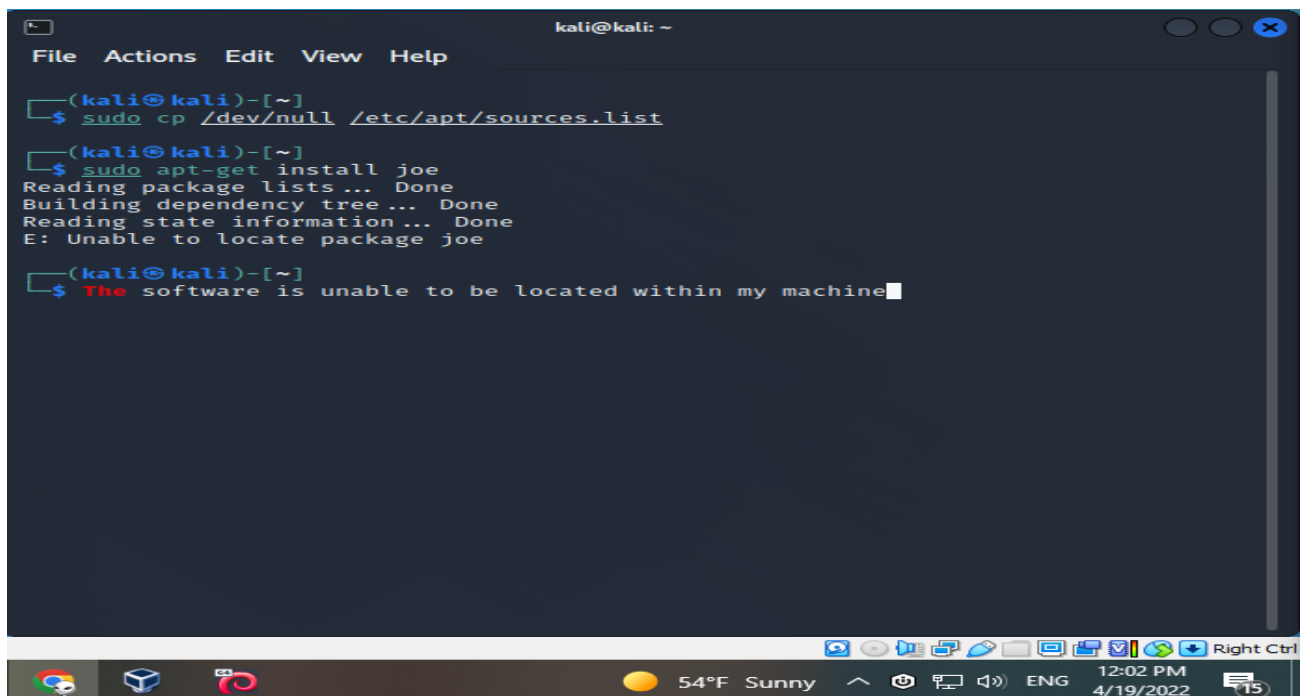
Step 2. Create a backup file for the sources.list named source.list.bk in your Linux system.

Display the contents in both files, and **make sure they are identical.**



```
kali@kali: ~  
File Actions Edit View Help  
└─(kali@kali)-[~]  
└─$ sudo cp /etc/apt/sources.list /etc/apt/sources.list.bk  
└─(kali@kali)-[~]  
└─$ cat /etc/apt/sources.list  
# See https://www.kali.org/docs/general-use/kali-linux-sources-list-repositories/  
deb http://http.kali.org/kali kali-rolling main contrib non-free  
  
# Additional line for source packages  
# deb-src http://http.kali.org/kali kali-rolling main contrib non-free  
└─(kali@kali)-[~]  
└─$ cat /etc/apt/sources.list.bk  
# See https://www.kali.org/docs/general-use/kali-linux-sources-list-repositories/  
deb http://http.kali.org/kali kali-rolling main contrib non-free  
  
# Additional line for source packages  
# deb-src http://http.kali.org/kali kali-rolling main contrib non-free  
└─(kali@kali)-[~]  
└─$ This is Madelene mmcfa008
```

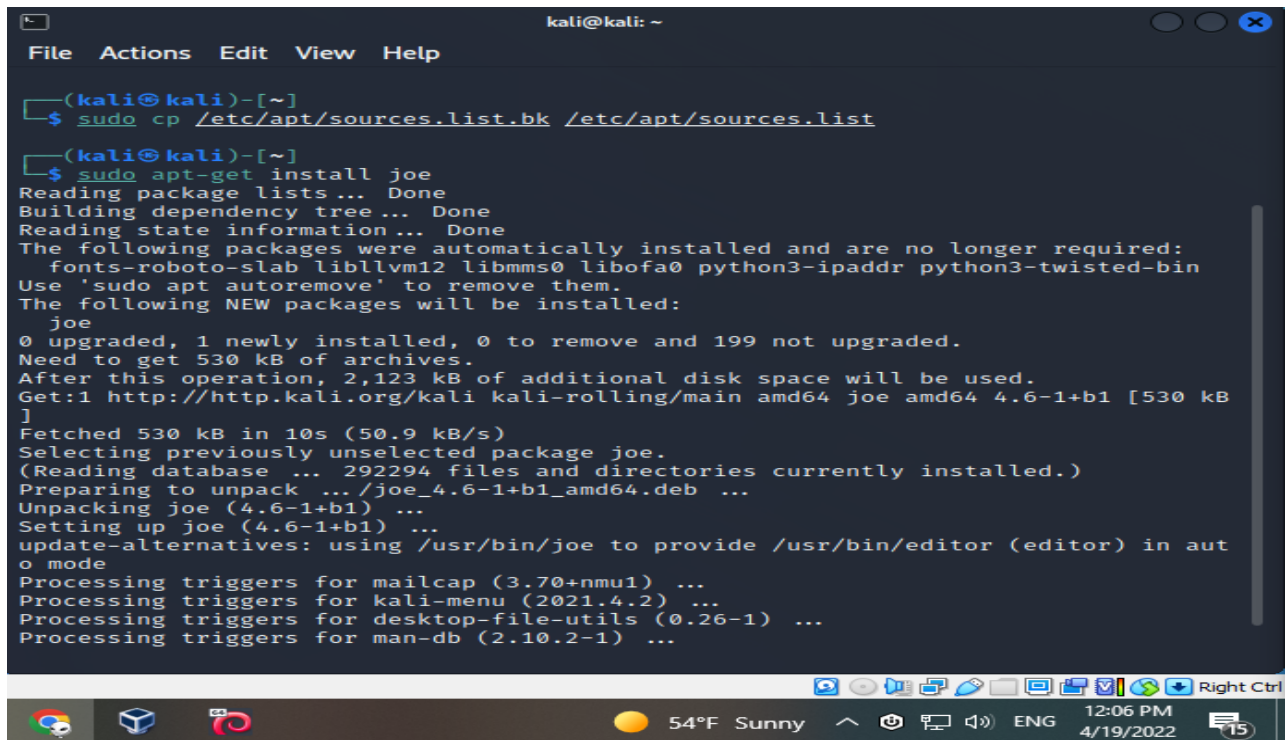
Step 3. Delete everything in the source.list file. Now try to download the package “joe” by using apt-get install command. What error do you see?



```
kali@kali: ~  
File Actions Edit View Help  
└─(kali@kali)-[~]  
└─$ sudo cp /dev/null /etc/apt/sources.list  
└─(kali@kali)-[~]  
└─$ sudo apt-get install joe  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
E: Unable to locate package joe  
└─(kali@kali)-[~]  
└─$ The software is unable to be located within my machine
```

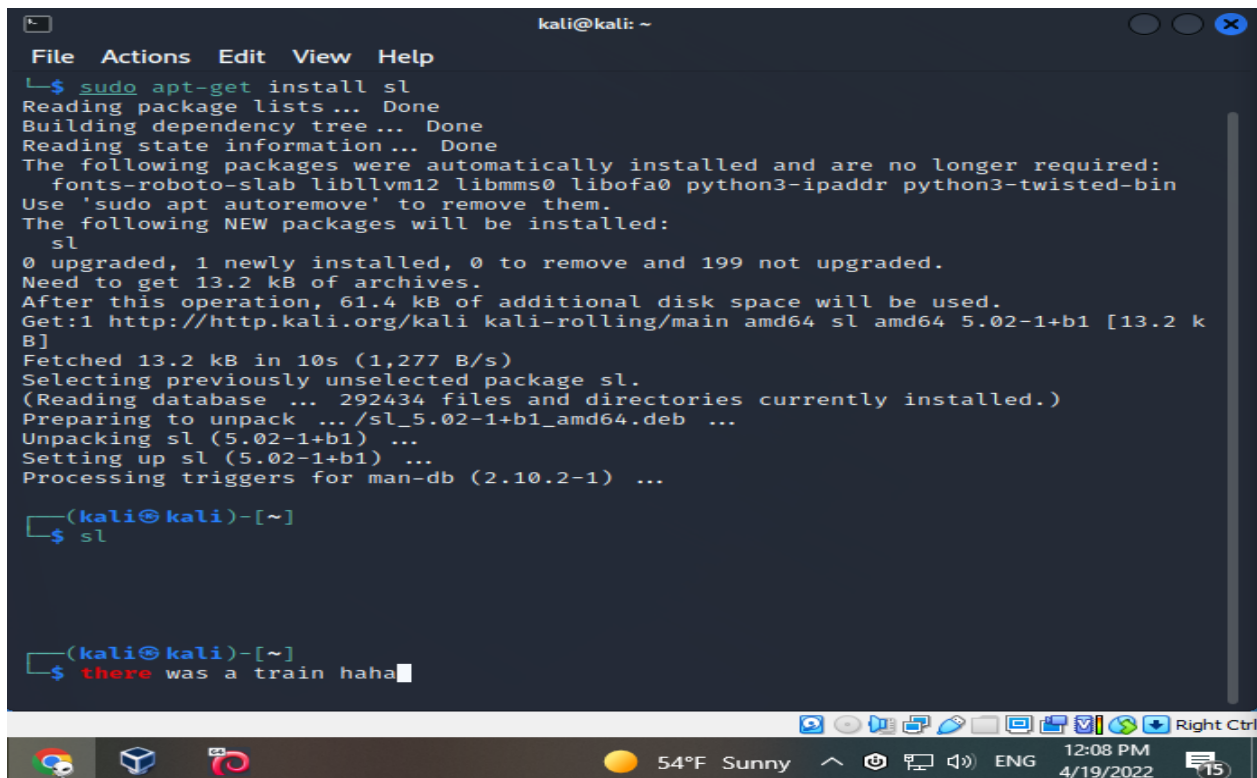
Step 4. Recover the `sources.list` from the backup file, then try to download the “joe” file again.

You should be able to install joe this time.



```
kali@kali: ~  
File Actions Edit View Help  
└─(kali@kali)-[~]  
└─$ sudo cp /etc/apt/sources.list.bk /etc/apt/sources.list  
└─(kali@kali)-[~]  
└─$ sudo apt-get install joe  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
The following packages were automatically installed and are no longer required:  
  fonts-roboto-slab libllvm12 libmms0 libofa0 python3-ipaddr python3-twisted-bin  
Use 'sudo apt autoremove' to remove them.  
The following NEW packages will be installed:  
  joe  
0 upgraded, 1 newly installed, 0 to remove and 199 not upgraded.  
Need to get 530 kB of archives.  
After this operation, 2,123 kB of additional disk space will be used.  
Get:1 http://http.kali.org/kali kali-rolling/main amd64 joe amd64 4.6-1+b1 [530 kB  
]   
Fetched 530 kB in 10s (50.9 kB/s)  
Selecting previously unselected package joe.  
(Reading database ... 292294 files and directories currently installed.)  
Preparing to unpack .../joe_4.6-1+b1_amd64.deb ...  
Unpacking joe (4.6-1+b1) ...  
Setting up joe (4.6-1+b1) ...  
update-alternatives: using /usr/bin/joe to provide /usr/bin/editor (editor) in aut  
o mode  
Processing triggers for mailcap (3.70+nmul) ...  
Processing triggers for kali-menu (2021.4.2) ...  
Processing triggers for desktop-file-utils (0.26-1) ...  
Processing triggers for man-db (2.10.2-1) ...  
└─(kali@kali)-[~]  
└─$
```

Step 5. Install and play the “sl” command.



```
kali@kali: ~  
File Actions Edit View Help  
└─$ sudo apt-get install sl  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
The following packages were automatically installed and are no longer required:  
  fonts-roboto-slab libllvm12 libmms0 libofa0 python3-ipaddr python3-twisted-bin  
Use 'sudo apt autoremove' to remove them.  
The following NEW packages will be installed:  
  sl  
0 upgraded, 1 newly installed, 0 to remove and 199 not upgraded.  
Need to get 13.2 kB of archives.  
After this operation, 61.4 kB of additional disk space will be used.  
Get:1 http://http.kali.org/kali kali-rolling/main amd64 sl amd64 5.02-1+b1 [13.2 k  
B]   
Fetched 13.2 kB in 10s (1,277 B/s)  
Selecting previously unselected package sl.  
(Reading database ... 292434 files and directories currently installed.)  
Preparing to unpack .../sl_5.02-1+b1_amd64.deb ...  
Unpacking sl (5.02-1+b1) ...  
Setting up sl (5.02-1+b1) ...  
Processing triggers for man-db (2.10.2-1) ...  
└─(kali@kali)-[~]  
└─$ sl  
  
└─(kali@kali)-[~]  
└─$ there was a train haha
```

Step 6. Install and play the “cowsay” command.

```
kali@kali: ~  
File Actions Edit View Help  
  
(kali@kali)-[~]  
└─$ sudo apt-get install cowsay  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
The following packages were automatically installed and are no longer required:  
  fonts-roboto-slab libllvml2 libmms0 libofa0 python3-ipaddr python3-twisted-bin  
Use 'sudo apt autoremove' to remove them.  
Suggested packages:  
  filters cowsay-off  
The following NEW packages will be installed:  
  cowsay  
0 upgraded, 1 newly installed, 0 to remove and 199 not upgraded.  
Need to get 21.4 kB of archives.  
After this operation, 94.2 kB of additional disk space will be used.  
Get:1 http://http.kali.org/kali kali-rolling/main amd64 cowsay all 3.03+dfsg2-8 [21.4 kB]  
Fetched 21.4 kB in 10s (2,063 B/s)  
Selecting previously unselected package cowsay.  
(Reading database ... 292458 files and directories currently installed.)  
Preparing to unpack .../cowsay_3.03+dfsg2-8_all.deb ...  
Unpacking cowsay (3.03+dfsg2-8) ...  
Setting up cowsay (3.03+dfsg2-8) ...  
Processing triggers for man-db (2.10.2-1) ...  
  
(kali@kali)-[~]  
└─$ cowsay -b Hello World  
  
< Hello World >  
  _____  
 /         \  
 (  ___  ) \  
  (_____) \  
 ||-----w||  
 ||         ||
```

Step 7. Install and play the “cmatrix” command.

```
kali@kali: ~  
File Actions Edit View Help  
m b  
$ \<$f?>C4/(^P/./xlB  
!2ADME]d5JnEN=0"KB,R  
4tRNE$*vOH=\o^e^Z-vOR-P\eiXVa_@2[8  
YdI>HN^p.(3I)uWt^fgV=z/X@;-U  
PiiY\^_oPE  
Lc^Od-  
4AE^J\rGQ.,5,#9m',>c>#bJEI',2  
/bbSy+]02Q!<4BBjj  
Z]4bb=-yunn  
4Ae^J\rGQ.,5,#9m',>c>#bJEI',2  
/bbSy+]02Q!<4BBjj  
Z]4bb=-yunn  
A y j m v ) ( j o \ s + ( 9 ( d o s n d R b * 5 L T f _ 5 e * u v v !  
g n j f t o 5 \ s + ( 9 ( d o s n d R b * 5 L T f _ 5 e * u v v !  
O a m $ . 5 H % d 6 \ $ e z ( S k [ W U D 5 b 5 O i f k N ) 9 v * " , ? K N  
1 R R a a M - R w U V i ? e , . 7 n < 8 8 a H / x 4 P G ^ ! M # . d $ 5 8 z Q # S [  
r q i 0 $ G v ( \ F V _ Q s u ] j  
e R ] : s 5 f k 1 ? + = ? P r > g V n _ W B 8 a a q s y #  
g ) E k 9 m I O a 6 S 0 k Q 8 K I 4 G B A , q # c * a J 4 x  
h ! Z n n ^ K J W 9 % l b P ? g c ; H 7 6 R V n _ W B 8 a a q s y #  
T " G H < / J J H ) R ' 7 f b " O S 4 t c $ " V n _ W B 8 a a q s y #  
w Y ` < m h J J 2 4 7 U # Q k D L ] k I % 3 : F x V n _ W B 8 a a q s y #  
F s o v ; [ D W f J j c 6 p O a 6 S 0 k Q 8 K I 4 G B A , q # c * a J 4 x  
c l ( 5 k W E k ? F 5 X 9 e 2 + ! 3 j B Z [ g - R y  
a r t % S j e b b Q L , 0 t * , / k 4 j x # K , Y p r x H t [ g - R y  
B W q m k D G [ F _ 5 m F 7 g H ! v D % n K = k M p L 5 I w X ^ t  
I r r ? " 4 Q # I S Y 6 y I i n _ u o ? 4  
Q $ U : r % D U 9 t a D L ( \ R L B q \ u 7 # I S Y 6 y I i n _ u o ? 4  
c a t s p u _ z ^ \ g ( V ; [ < ] \ Y L ; + T X  
p ( N : : 1 , E Z L R \ t A s D H v > O x > T N o f E C ^ [ P ^ [ ( V  
= K ] o 9 r A ! d L c % P x ! u 7 M J v u f C r r b ^ F T 3 G i x e T u 5 ! Z  
^ P k s J O W * O P B $ - \ G G o ^ g ] o i _ [ 3 m e e t ? H 5 ? i E @  
w z o < j ^ N z y D P B $ - \ G G o ^ g ] o i _ [ 3 m e e t ? H 5 ? i E @
```