

Lab 4 Submission

Question 1

```
Tilix: map@cis106: ~
```

1: map@cis106: ~

```
map@cis106:~$ apt search "tetris clone"
bastet/stable 0.43.2-2 amd64
  ncurses Tetris clone with a bastard >
ltris/stable 2.0.3-1 amd64
  very polished Tetris clone with CPU >
tint/stable 0.07 amd64
  Tetris clone for text based terminal
```

lines 1-9/9 (END)

2: map@cis106: ~

```
bastet/stable 0.43.2-2 amd64
  ncurses Tetris clone with a bastard algorithm

blockattack/stable 2.9.0-1+b1 amd64
  puzzle game inspired by Tetris

blockout2/stable 2.5+dfsg1-2 amd64
  Tetris like game (3D-tetris)
```

lines 1-9

```
Tilix: map@cis106: ~
```

1: map@cis106: ~

```
Selecting previously unselected package blockout2.
Preparing to unpack .../3-blockout2_2.5+dfsg1-2_amd64.deb ...
Unpacking blockout2 (2.5+dfsg1-2) ...
Selecting previously unselected package cuyo-data.
Preparing to unpack .../4-cuyo-data_2.1.0-1_all.deb ...
Unpacking cuyo-data (2.1.0-1) ...
Selecting previously unselected package cuyo.
Preparing to unpack .../5-cuyo_2.1.0-1_amd64.deb ...
Unpacking cuyo (2.1.0-1) ...
Setting up libmikmod3:amd64 (3.3.13-1) ...
Setting up libsdl1.2debian:amd64 (1.2.68-3) ...
Setting up libsdl-mixer1.2:amd64 (1.2.12-19+b1) ...
Setting up cuyo-data (2.1.0-1) ...
Setting up cuyo (2.1.0-1) ...
Setting up blockout2 (2.5+dfsg1-2) ...
Processing triggers for hicolor-icon-theme (0.18-2) ...
Processing triggers for gnome-menus (3.36.0-3) ...
Processing triggers for libc-bin (2.41-12) ...
Processing triggers for man-db (2.13.1-1) ...
Processing triggers for mailcap (3.74) ...
Processing triggers for desktop-file-utils (0.28-1) ...
map@cis106:~$ _
```

```
1/1 + ⌂ ⌂ Tilix: map@cis106: ~ Q - ⌂ x
1: map@cis106: ~
map@cis106:~$ sudo apt remove cuyo
[sudo] password for map:
The following packages were automatically installed and are no longer required:
  cuyo-data libopusfile0 libsdl2-image-2.0-0 libsdl2-ttf-2.0-0
  libfmt10 libphysfs1 libsdl2-mixer-2.0-0 libxmp4
Use 'sudo apt autoremove' to remove them.

REMOVING:
  cuyo

Summary:
  Upgrading: 0, Installing: 0, Removing: 1, Not Upgrading: 0
  Freed space: 489 kB

Continue? [Y/n] Y
(Reading database ... 195187 files and directories currently installed.)
Removing cuyo (2.1.0-1) ...
Processing triggers for hicolor-icon-theme (0.18-2) ...
Processing triggers for gnome-menus (3.36.0-3) ...
Processing triggers for mailcap (3.74) ...
Processing triggers for desktop-file-utils (0.28-1) ...
map@cis106:~$ _
```

```
1/1 + ⌂ ⌂ Tilix: map@cis106: ~ Q - ⌂ x
1: map@cis106: ~
o apt autopurge
REMOVING:
  cuyo-data libopusfile0 libsdl2-image-2.0-0 libsdl2-ttf-2.0-0
  libfmt10 libphysfs1 libsdl2-mixer-2.0-0 libxmp4

Summary:
  Upgrading: 0, Installing: 0, Removing: 8, Not Upgrading: 0
  Freed space: 7,495 kB

Continue? [Y/n] y
(Reading database ... 195179 files and directories currently installed.)
Removing cuyo-data (2.1.0-1) ...
Removing libfmt10:amd64 (10.1.1+ds1-4) ...
Removing libsdl2-mixer-2.0-0:amd64 (2.8.1+dfsg-2) ...
Removing libopusfile0:amd64 (0.12-4+b3) ...
Removing libphysfs1:amd64 (3.0.2-6+b2) ...
Removing libsdl2-image-2.0-0:amd64 (2.8.8+dfsg-1) ...
Removing libsdl2-ttf-2.0-0:amd64 (2.24.0+dfsg-2) ...
Removing libxmp4:amd64 (4.6.2-2) ...
Processing triggers for man-db (2.13.1-1) ...
Processing triggers for libc-bin (2.41-12) ...
Summary:
  Upgrading: 0, Installing: 0, Removing: 0, Not Upgrading: 0
map@cis106:~$ _
```

Question 2

The screenshot shows a Linux desktop environment with a terminal window titled "Tilix: map@cis106:~/scripts" and a code editor window titled "lab4-script1.sh". The terminal window displays the command `cd scripts` followed by `bash lab4-script1.sh`. The code editor window contains the following script:

```

1#!/bin/bash
2

```

Below the terminal window, there is a small note: "How to Setup Git and Github in Ubuntu 20.04" and "This site uses Just the Docs, a documentation theme for Jekyll."

A sidebar on the right lists options for "sudo apt clean": "No" (ensures local package cache), "Yes" (keeps cache clean without), and "Keep cache clean without".

The screenshot shows a Linux desktop environment with a terminal window titled "Tilix: map@cis106:~" and a code editor window titled "lab4-script2.sh". The terminal window displays the command `bash ~/scripts/lab4-script2.sh` followed by several "Hello World" messages with different variable values. The code editor window contains the following script:

```

1#!/bin/bash
2echo "Hello World"
3echo -e "Name:\tJoe"
4echo -e "Age:\t35"
5echo -e "Color:\tBlue\nGame:\tTetris"

```

Below the terminal window, there is a small note: "How to Setup Git and Github in Ubuntu 20.04" and "This site uses Just the Docs, a documentation theme for Jekyll."

The screenshot shows a Linux desktop environment with a terminal window titled "Tilix: map@cis106:~" and a code editor window titled "lab4-script3.sh". The terminal window displays the command `bash ~/scripts/lab4-script3.sh` followed by several "Hello World" messages with different variable values. The code editor window contains the following script:

```

1#!/bin/bash
2echo "Today's date is: "
3date
4echo -n "The current user is: "
5whoami
6# echo -n "The current user is: "; whoami
7echo "Memory Usage: "
8free -h

```

Below the terminal window, there is a small note: "How to Setup Git and Github in Ubuntu 20.04" and "This site uses Just the Docs, a documentation theme for Jekyll."

Question 3

The screenshot shows a terminal window with several lines of text output. At the top, it displays system information: DATE UTC: 10/18/25 17:59:57, HOSTNAME: cis106, UPTIME: up 2 hours, 33 minutes, and USER: map. Below this is a 'figlet' font rendering of the word 'System'. Following that is a 'free' command output showing memory usage: Mem: 3.8Gi total, 2.7Gi used, 439Mi free, 44Mi shared, 1.0Gi buff/cache, 1.1Gi available. Swap: 2.1Gi total, 10Mi used, 2.1Gi free. Another 'figlet' font rendering of 'Memory' follows. The next section shows disk usage with 'df -h' command output: Filesystem /dev/sda1, Size 38G, Used 8.8G, Avail 27G, Use% 25%, Mounted on /.

On the right side of the screen, there is a code editor window titled 'challenge_lab4.sh' which contains the following script:

```
#!/bin/bash
clear
echo "-----"
figlet System
echo "DATE UTC: $(date -u +'%m/%d/%y %H:%M:%S')"
echo "HOSTNAME: $(hostname)"
echo "UPTIME: $(uptime -p)"
echo "USER: $(whoami)"
echo
figlet Memory
free -h
echo
figlet Disk
df -h | awk 'NR==1 || NR==2 {print $0}'
echo
echo "-----"
```

[script](#)