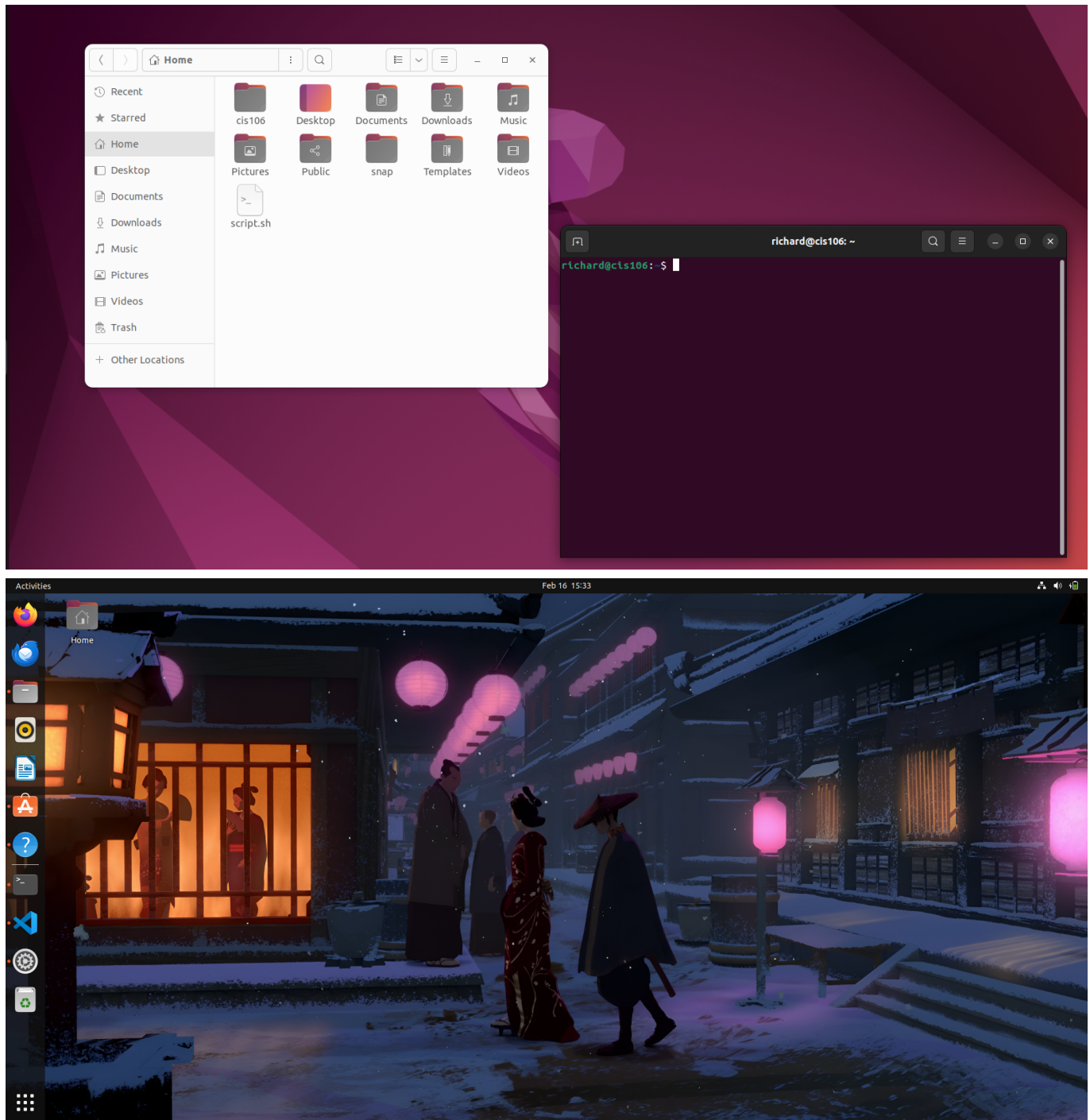
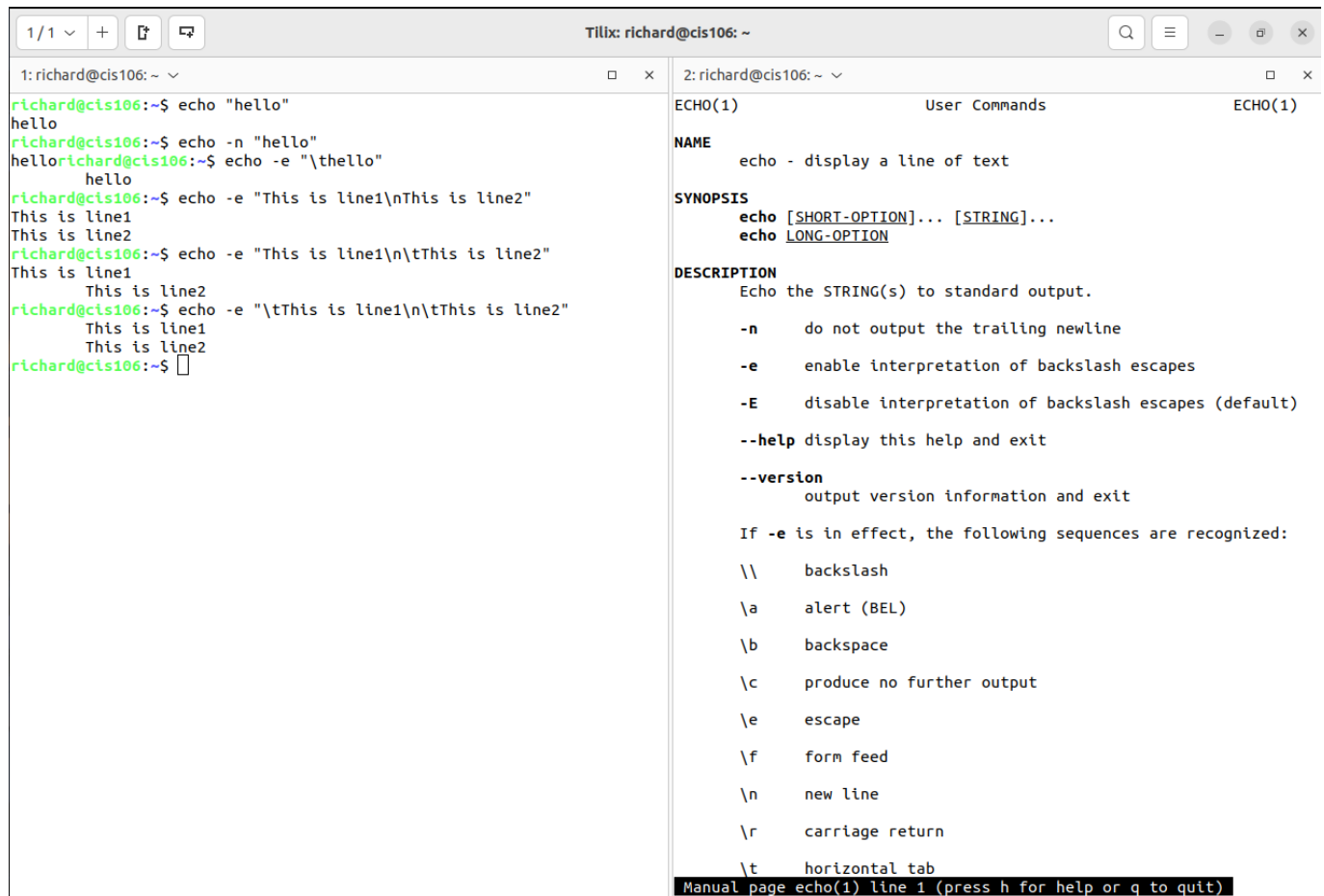


Lab 3 Submission

Question 1



Question 2



The screenshot shows a Tilix terminal window with two panes. The left pane shows a series of commands and their outputs for the `echo` command. The right pane shows the manual page for `echo(1)`.

Left Pane Output:

```
richard@cis106:~$ echo "hello"
hello
richard@cis106:~$ echo -n "hello"
hellorichard@cis106:~$ echo -e "\thello"
    hello
richard@cis106:~$ echo -e "This is line1\nThis is line2"
This is line1
This is line2
richard@cis106:~$ echo -e "This is line1\n\tThis is line2"
This is line1
    This is line2
richard@cis106:~$ echo -e "\tThis is line1\n\tThis is line2"
    This is line1
    This is line2
richard@cis106:~$
```

Right Pane (Manual Page for `echo(1)`):

ECHO(1) User Commands ECHO(1)

NAME

echo - display a line of text

SYNOPSIS

echo [**SHORT-OPTION**]... [**STRING**]...
echo **LONG-OPTION**

DESCRIPTION

Echo the **STRING(s)** to standard output.

-n do not output the trailing newline

-e enable interpretation of backslash escapes

-E disable interpretation of backslash escapes (default)

--help display this help and exit

--version
output version information and exit

If **-e** is in effect, the following sequences are recognized:

\\ backslash

\a alert (BEL)

\b backspace

\c produce no further output

\e escape

\f form feed

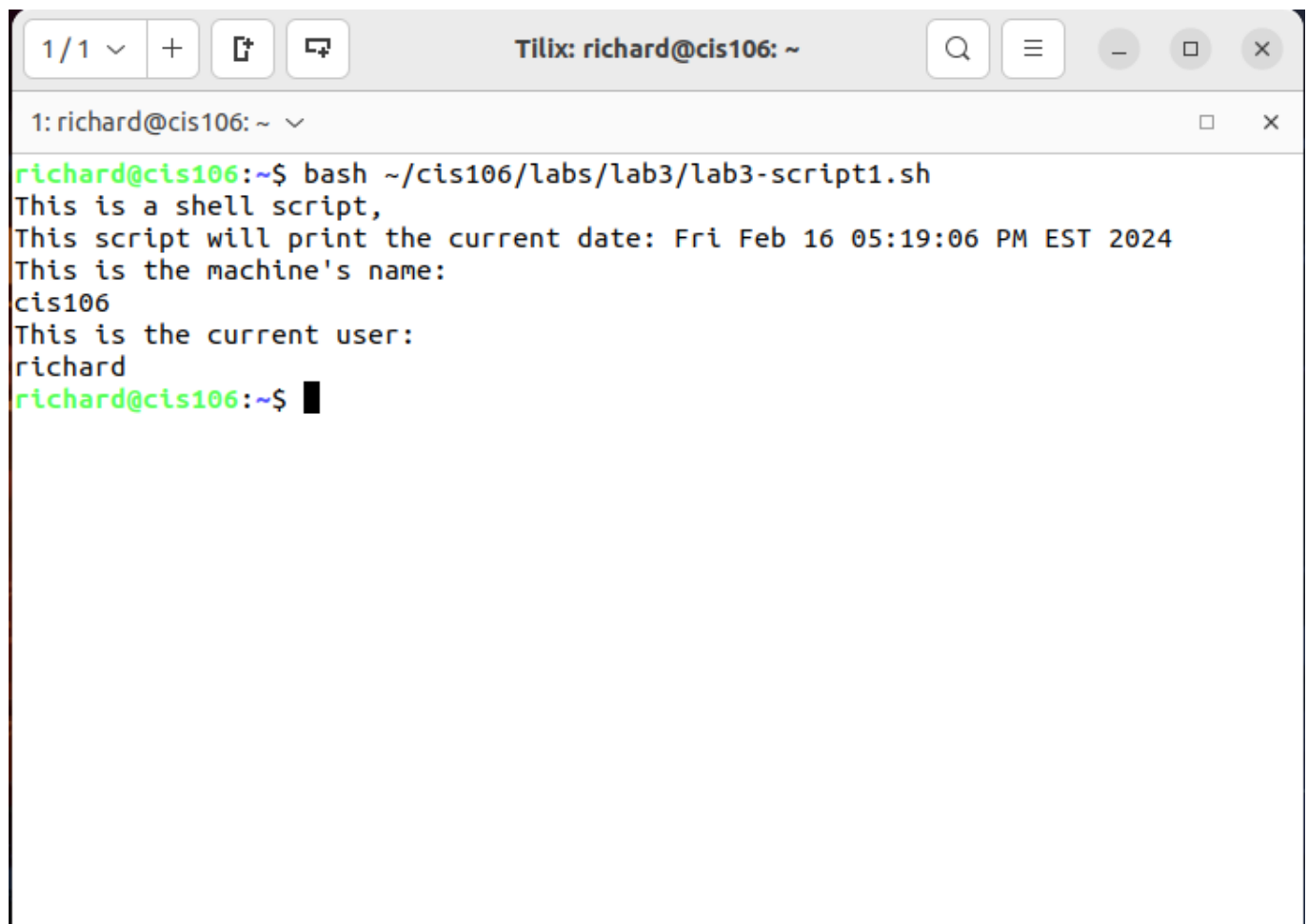
\n new line

\r carriage return

\t horizontal tab

Manual page echo(1) line 1 (press h for help or q to quit)

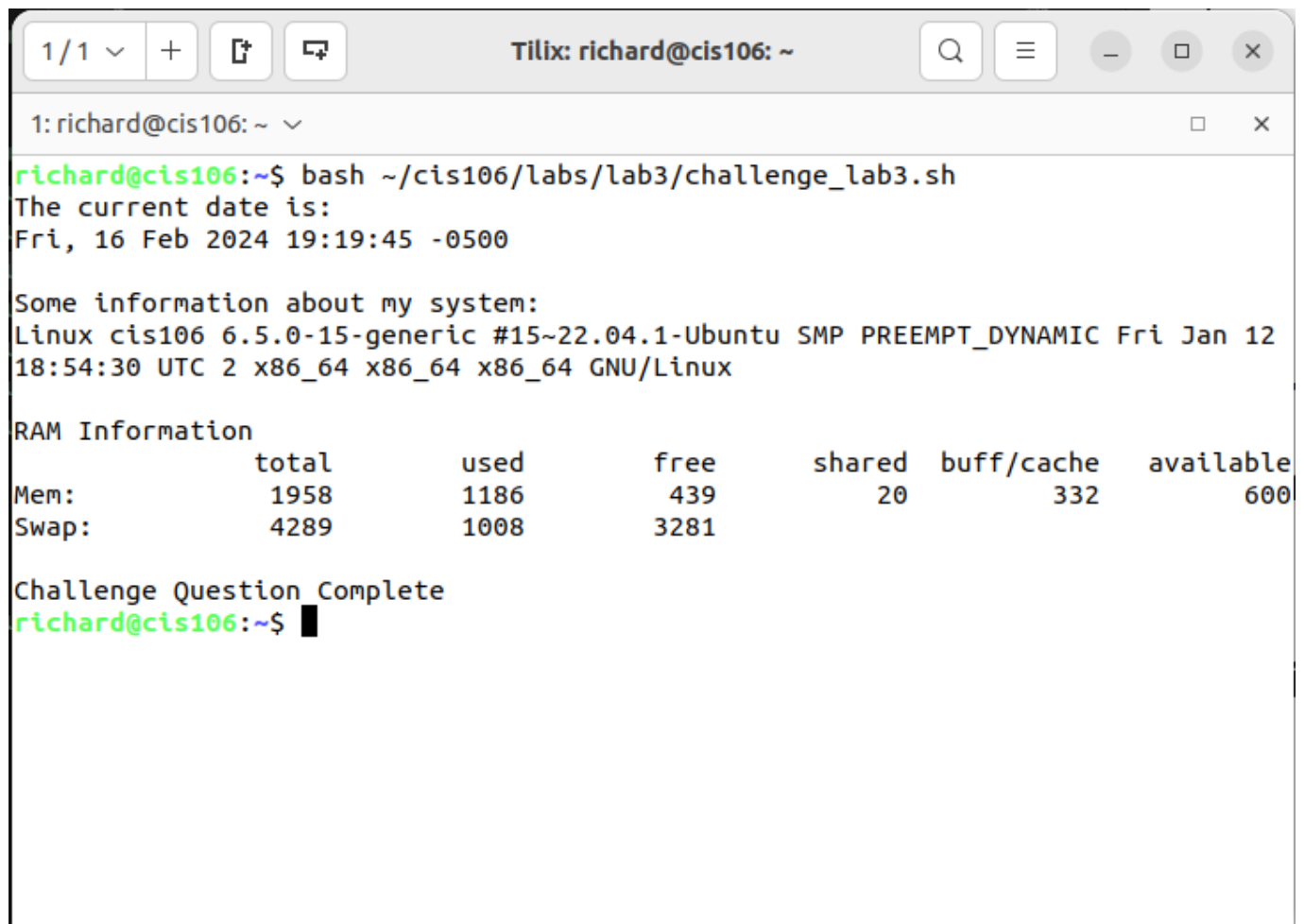
Question 3



The screenshot shows a Tilix terminal window with a single pane. The user has executed a shell script, and the output is displayed.

```
richard@cis106:~$ bash ~/cis106/labs/lab3/lab3-script1.sh
This is a shell script,
This script will print the current date: Fri Feb 16 05:19:06 PM EST 2024
This is the machine's name:
cis106
This is the current user:
richard
richard@cis106:~$
```

Challenge Question



The screenshot shows a terminal window titled "Tilix: richard@cis106: ~". The user has executed the command `bash ~/cis106/labs/lab3/challenge_lab3.sh`. The script outputs the current date and time, followed by system information and a table of RAM usage.

```
1: richard@cis106: ~  
richard@cis106:~$ bash ~/cis106/labs/lab3/challenge_lab3.sh  
The current date is:  
Fri, 16 Feb 2024 19:19:45 -0500  
  
Some information about my system:  
Linux cis106 6.5.0-15-generic #15~22.04.1-Ubuntu SMP PREEMPT_DYNAMIC Fri Jan 12  
18:54:30 UTC 2 x86_64 x86_64 x86_64 GNU/Linux  
  
RAM Information  
total      used      free      shared  buff/cache  available  
Mem:      1958      1186      439        20        332        600  
Swap:     4289      1008      3281  
  
Challenge Question Complete  
richard@cis106:~$
```

Script Source code:

[lab3](#)