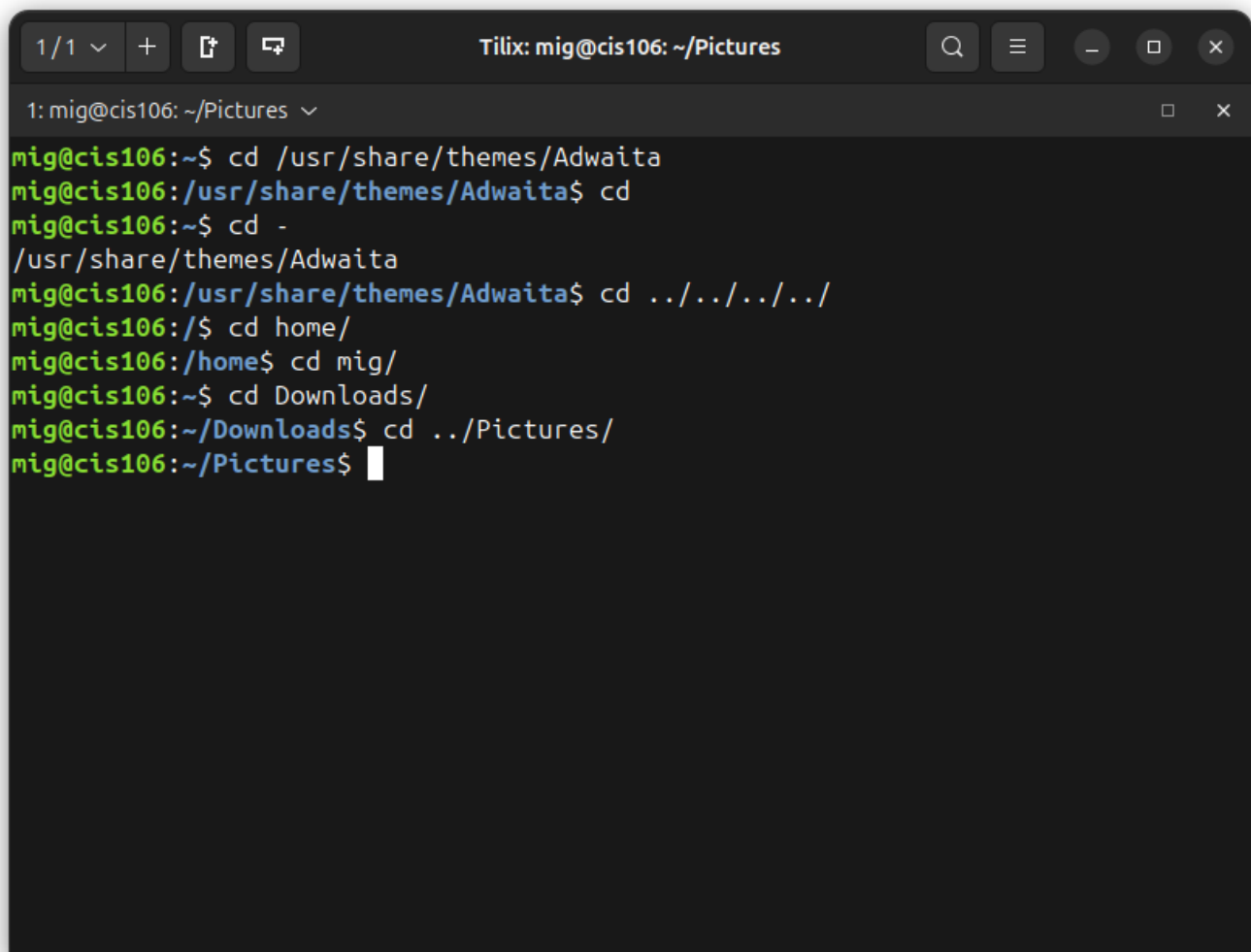


# Extra Credit 3: The Linux FS

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## Question 1



A terminal window titled "Tilix: mig@cis106: ~/Pictures" showing a series of directory navigation commands. The user starts in ~/Pictures, moves to /usr/share/themes/Adwaita, then to the root directory (/), then to /home, then to /home/mig, then to /home/mig/Downloads, and finally back to /home/mig/Pictures. The prompt is mig@cis106:~/Pictures\$.

```
1/1  +  [icon] [icon]
Tilix: mig@cis106: ~/Pictures
1: mig@cis106: ~/Pictures
mig@cis106:~$ cd /usr/share/themes/Adwaita
mig@cis106:/usr/share/themes/Adwaita$ cd
mig@cis106:~$ cd -
/usr/share/themes/Adwaita
mig@cis106:/usr/share/themes/Adwaita$ cd ../../../../
mig@cis106:/$ cd home/
mig@cis106:/home$ cd mig/
mig@cis106:~$ cd Downloads/
mig@cis106:~/Downloads$ cd ../Pictures/
mig@cis106:~/Pictures$
```

## Question 2

```
1/1 | + | 1: mig@cis106: ~/practicels
1: mig@cis106: ~/practicels
mig@cis106:~/practicels$ ls
book.txt      data.csv      document2.doc helloworld.cpp helloworld.sh homework.doc
cX movie.mp4  site.html    tux-nobg.png
countries.xml document1.doc document3.pdf helloworld.rb  history-debian.pdf image.png
people.csv    song.mp3     tux-penguin.gif
mig@cis106:~/practicels$ ls -l
total 5076
-rw-rw-r-- 1 mig mig 1043 Feb 27 2022 book.txt
-rw-rw-r-- 1 mig mig 23972 Feb 27 2022 countries.xml
-rw-rw-r-- 1 mig mig 284042 Dec 4 2023 data.csv
-rw-rw-r-- 1 mig mig 100352 Dec 4 2023 document1.doc
-rw-rw-r-- 1 mig mig 503296 Dec 4 2023 document2.doc
-rw-rw-r-- 1 mig mig 142786 Dec 4 2023 document3.pdf
-rw-rw-r-- 1 mig mig 87 Dec 4 2023 helloworld.cpp
-rw-rw-r-- 1 mig mig 43 Dec 4 2023 helloworld.rb
-rw-rw-r-- 1 mig mig 33 Dec 4 2023 helloworld.sh
-rw-rw-r-- 1 mig mig 163957 Feb 27 2022 history-debian.pdf
-rw-rw-r-- 1 mig mig 111303 Feb 22 2022 homework.docx
-rw-rw-r-- 1 mig mig 1006708 Dec 4 2023 image.png
-rw-rw-r-- 1 mig mig 1570024 Feb 27 2022 movie.mp4
-rw-rw-r-- 1 mig mig 284042 Feb 27 2022 people.csv
-rw-rw-r-- 1 mig mig 138696 Dec 4 2023 site.html
-rw-rw-r-- 1 mig mig 764176 Feb 27 2022 song.mp3
-rw-rw-r-- 1 mig mig 21314 Feb 27 2022 tux-nobg.png
-rw-rw-r-- 1 mig mig 44299 Jan 31 2020 tux-penguin.gif
mig@cis106:~/practicels$ ls -lsh
total 5.0M
-rw-rw-r-- 1 mig mig 1.5M Feb 27 2022 movie.mp4
-rw-rw-r-- 1 mig mig 984K Dec 4 2023 image.png
-rw-rw-r-- 1 mig mig 747K Feb 27 2022 song.mp3
-rw-rw-r-- 1 mig mig 492K Dec 4 2023 document2.doc
-rw-rw-r-- 1 mig mig 278K Dec 4 2023 data.csv
-rw-rw-r-- 1 mig mig 278K Feb 27 2022 people.csv
-rw-rw-r-- 1 mig mig 160K Feb 27 2022 history-debian.pdf
-rw-rw-r-- 1 mig mig 140K Dec 4 2023 document3.pdf
-rw-rw-r-- 1 mig mig 136K Dec 4 2023 site.html
-rw-rw-r-- 1 mig mig 109K Feb 22 2022 homework.docx
mig@cis106:~/practicels$ ls -lsh
total 5.0M
-rw-rw-r-- 1 mig mig 1.1K Feb 27 2022 book.txt
-rw-rw-r-- 1 mig mig 24K Feb 27 2022 countries.xml
-rw-rw-r-- 1 mig mig 44K Jan 31 2020 tux-penguin.gif
-rw-rw-r-- 1 mig mig 98K Dec 4 2023 document1.doc
-rw-rw-r-- 1 mig mig 109K Feb 22 2022 homework.docx
-rw-rw-r-- 1 mig mig 136K Dec 4 2023 site.html
-rw-rw-r-- 1 mig mig 140K Dec 4 2023 document3.pdf
-rw-rw-r-- 1 mig mig 160K Feb 27 2022 history-debian.pdf
-rw-rw-r-- 1 mig mig 278K Feb 27 2022 people.csv
-rw-rw-r-- 1 mig mig 278K Dec 4 2023 data.csv
-rw-rw-r-- 1 mig mig 492K Dec 4 2023 document2.doc
-rw-rw-r-- 1 mig mig 747K Feb 27 2022 song.mp3
-rw-rw-r-- 1 mig mig 984K Dec 4 2023 image.png
-rw-rw-r-- 1 mig mig 1.5M Feb 27 2022 movie.mp4
mig@cis106:~/practicels$ ls -lgch --full-time
total 5.0M
-rw-rw-r-- 1 1.1K 2022-02-27 13:39:05.000000000 -0500 book.txt
-rw-rw-r-- 1 24K 2022-02-27 13:46:18.000000000 -0500 countries.xml
-rw-rw-r-- 1 278K 2023-12-04 20:22:38.000000000 -0500 data.csv
-rw-rw-r-- 1 98K 2023-12-04 20:19:37.000000000 -0500 document1.doc
-rw-rw-r-- 1 492K 2023-12-04 20:19:50.000000000 -0500 document2.doc
-rw-rw-r-- 1 140K 2023-12-04 20:21:14.000000000 -0500 document3.pdf
-rw-rw-r-- 1 87 2023-12-04 20:27:00.000000000 -0500 helloworld.cpp
-rw-rw-r-- 1 43 2023-12-04 20:27:26.000000000 -0500 helloworld.rb
-rw-rw-r-- 1 33 2023-12-04 20:26:43.000000000 -0500 helloworld.sh
-rw-rw-r-- 1 160K 2022-02-27 13:41:40.000000000 -0500 history-debian.pdf
-rw-rw-r-- 1 109K 2022-02-22 14:14:35.000000000 -0500 homework.docx
-rw-rw-r-- 1 984K 2023-12-04 20:22:05.000000000 -0500 image.png
-rw-rw-r-- 1 1.5M 2022-02-27 13:42:49.000000000 -0500 movie.mp4
-rw-rw-r-- 1 278K 2022-02-27 13:45:15.000000000 -0500 people.csv
-rw-rw-r-- 1 136K 2023-12-04 20:23:56.000000000 -0500 site.html
```

### Question 3

```
1/1 ~ + ↵ ⌵ ⌵
Tilix: mig@cis106: ~

1: mig@cis106: ~
mig@cis106:~$ tree -p ~/practicels
[drwxrwxr-x] /home/mig/practicels
├── [-rw-rw-r--] book.txt
├── [-rw-rw-r--] countries.xml
├── [-rw-rw-r--] data.csv
├── [-rw-rw-r--] document1.doc
├── [-rw-rw-r--] document2.doc
├── [-rw-rw-r--] document3.pdf
├── [-rw-rw-r--] helloworld.cpp
├── [-rw-rw-r--] helloworld.rb
├── [-rw-rw-r--] helloworld.sh
├── [-rw-rw-r--] history-debian.pdf
├── [-rw-rw-r--] homework.docx
├── [-rw-rw-r--] image.png
├── [-rw-rw-r--] movie.mp4
├── [-rw-rw-r--] people.csv
├── [-rw-rw-r--] site.html
├── [-rw-rw-r--] song.mp3
├── [-rw-rw-r--] tux-nobg.png
└── [-rw-rw-r--] tux-penguin.gif

1 directory, 18 files
mig@cis106:~$ tree -pugHD ~/practicels
[drwxrwxr-x mig      4.0K Apr 27 18:39] /home/mig/practicels
├── [-rw-rw-r-- mig      1.0K Feb 27 2022] book.txt
├── [-rw-rw-r-- mig      23K Feb 27 2022] countries.xml
├── [-rw-rw-r-- mig     277K Dec  4 2023] data.csv
├── [-rw-rw-r-- mig      98K Dec  4 2023] document1.doc
├── [-rw-rw-r-- mig     492K Dec  4 2023] document2.doc
├── [-rw-rw-r-- mig     139K Dec  4 2023] document3.pdf
├── [-rw-rw-r-- mig       87 Dec  4 2023] helloworld.cpp
├── [-rw-rw-r-- mig      43 Dec  4 2023] helloworld.rb
├── [-rw-rw-r-- mig      33 Dec  4 2023] helloworld.sh
├── [-rw-rw-r-- mig     159K Feb 27 2022] history-debian.pdf
├── [-rw-rw-r-- mig     109K Feb 22 2022] homework.docx
├── [-rw-rw-r-- mig     983K Dec  4 2023] image.png
└── [-rw-rw-r-- mig      1.5M Feb 27 2022] movie.mp4
```

### Question 4

```
1/1 v + [ ] [ ]
Tilix: mig@cis106: ~/practicels

1: mig@cis106: ~/practicels
2: mig@cis106: ~/practicels

mig@cis106:~/practicels$ exa -l ~/practicels/

book.txt
countries.xml
data.csv
document1.doc
document2.doc
document3.pdf
helloworld.cpp
helloworld.rb
helloworld.sh
history-debian.pdf
homework.docx
image.png
movie.mp4
people.csv
site.html
song.mp3
tux-nobg.png
tux-penguin.gif
mig@cis106:~/practicels$ exa -l ~/practicels/

-rw-rw-r-- 1.0k mig 27 Feb 2022 book.txt
-rw-rw-r-- 24k mig 27 Feb 2022 countries.xml
-rw-rw-r-- 284k mig 4 Dec 2023 data.csv
-rw-rw-r-- 100k mig 4 Dec 2023 document1.doc
-rw-rw-r-- 503k mig 4 Dec 2023 document2.doc
-rw-rw-r-- 143k mig 4 Dec 2023 document3.pdf
-rw-rw-r-- 87 mig 4 Dec 2023 helloworld.cpp
-rw-rw-r-- 43 mig 4 Dec 2023 helloworld.rb
-rw-rw-r-- 33 mig 4 Dec 2023 helloworld.sh
-rw-rw-r-- 163k mig 27 Feb 2022 history-debian.pdf
-rw-rw-r-- 111k mig 22 Feb 2022 homework.docx
-rw-rw-r-- 1.0M mig 4 Dec 2023 image.png
-rw-rw-r-- 1.6M mig 27 Feb 2022 movie.mp4
-rw-rw-r-- 284k mig 27 Feb 2022 people.csv
-rw-rw-r-- 139k mig 4 Dec 2023 site.html
-rw-rw-r-- 764k mig 27 Feb 2022 song.mp3
-rw-rw-r-- 21k mig 27 Feb 2022 tux-nobg.png
-rw-rw-r-- 44k mig 31 Jan 2020 tux-penguin.gif
mig@cis106:~/practicels$ exa -T ~/practicels/

/home/mig/practicels
├── book.txt
├── countries.xml
├── data.csv
├── document1.doc
├── document2.doc
├── document3.pdf
├── helloworld.cpp
├── helloworld.rb
├── helloworld.sh
├── history-debian.pdf
├── homework.docx
├── image.png
├── movie.mp4
├── people.csv
├── site.html
├── song.mp3
├── tux-nobg.png
└── tux-penguin.gif
```