

Lab 7 | Managing Data

Question 1

Ans:

```
abd007@cis240-fall21: ~/lab7/question1
abd007@cis240-fall21:~$ ls
cis106  Downloads  lab7      mandata.sh  Public    snap      website.html
Desktop hello.py   lab7.sh   Music       script3.sh Templates
Documents Lab5       managingData Pictures    script4.sh Videos
abd007@cis240-fall21:~$ cd lab7/
abd007@cis240-fall21:~/lab7$ ls
question1 question2 question3 question4
abd007@cis240-fall21:~/lab7$ cd question1
abd007@cis240-fall21:~/lab7/question1$ ls -a
. 89-Berries.svg Mangoes.svg mynotes.txt Pineapple-89.jpg something.txt
.. Banana_78.png my-fortune.txt Papaya.svg sentences.txt Video.mp4
abd007@cis240-fall21:~/lab7/question1$ tar cf allfiles.tar *.txt *[0-9]*.{jpg,png,svg} Video.mp4
abd007@cis240-fall21:~/lab7/question1$ tar -tf allfiles.tar
my-fortune.txt
mynotes.txt
sentences.txt
something.txt
Pineapple-89.jpg
Banana_78.png
89-Berries.svg
Video.mp4
abd007@cis240-fall21:~/lab7/question1$ lorem
Sit veniam officia dolorem voluptatem quia aut voluptatibus laudantium. Pariatur veniam distinctio quisqu
am facere facilis. Sed minus nihil id asperiores nesciunt sunt. Maiores repellendus qui qui. Quia consequ
atur quaerat possimus molestiae suscipit dolore recusandae. Sed earum autem hic consequatur vero harum do
lores inventore.abd007@cis240-fall21:~/lab7/question1$ lorem > randomtext.txt
abd007@cis240-fall21:~/lab7/question1$ cat randomtext.txt
Ut nemo ut eaque necessitatibus soluta. Totam consequatur exercitationem voluptas. Aut et nesciunt debiti
s.abd007@cis240-fall21:~/lab7/question1$ vim newfile.txt
abd007@cis240-fall21:~/lab7/question1$ tar rf allfiles.tar newfile.txt
abd007@cis240-fall21:~/lab7/question1$ tar tf allfiles.tar
my-fortune.txt
mynotes.txt
sentences.txt
something.txt
Pineapple-89.jpg
Banana_78.png
89-Berries.svg
Video.mp4
newfile.txt
abd007@cis240-fall21:~/lab7/question1$ tar rf allfiles.tar randomtext.txt
abd007@cis240-fall21:~/lab7/question1$ tar tf allfiles.tar
my-fortune.txt
mynotes.txt
sentences.txt
something.txt
Pineapple-89.jpg
Banana_78.png
89-Berries.svg
Video.mp4
newfile.txt
randomtext.txt
abd007@cis240-fall21:~/lab7/question1$
```

Question 2

Ans:

```
abd007@cis240-fall21: ~/lab7/question2
abd007@cis240-fall21: ~/lab7/question2
abd007@cis240-fall21:~/lab7/question1$ mv allfiles.tar ../question2/
abd007@cis240-fall21:~/lab7/question1$ cd ../question2
abd007@cis240-fall21:~/lab7/question2$ ls
allfiles.tar
abd007@cis240-fall21:~/lab7/question2$ cpio -iv < allfiles.tar
my-fortune.txt
mynotes.txt
sentences.txt
something.txt
Pineapple-89.jpg
Banana_78.png
89-Berries.svg
Video.mp4
randomtext.txt
9979 blocks
abd007@cis240-fall21:~/lab7/question2$ ls
89-Berries.svg  Banana_78.png  mynotes.txt      randomtext.txt  something.txt
allfiles.tar    my-fortune.txt  Pineapple-89.jpg sentences.txt     Video.mp4
abd007@cis240-fall21:~/lab7/question2$ rm *.tar
abd007@cis240-fall21:~/lab7/question2$ ls
89-Berries.svg  my-fortune.txt  Pineapple-89.jpg sentences.txt     Video.mp4
Banana_78.png   mynotes.txt     randomtext.txt   something.txt
abd007@cis240-fall21:~/lab7/question2$ ls | cpio -ov > allmyfiles.cpio
cpio: File allmyfiles.cpio grew, 853504 new bytes not copied
allmyfiles.cpio
Banana_78.png
my-fortune.txt
mynotes.txt
Pineapple-89.jpg
randomtext.txt
sentences.txt
something.txt
Video.mp4
11633 blocks
abd007@cis240-fall21:~/lab7/question2$ ls
89-Berries.svg  Banana_78.png  mynotes.txt      randomtext.txt  something.txt
allmyfiles.cpio my-fortune.txt  Pineapple-89.jpg sentences.txt     Video.mp4
abd007@cis240-fall21:~/lab7/question2$ ls | cpio -ovH -F allmyfiles.tar
cpio: invalid archive format '-F'; valid formats are:
crc newc odc bin ustar tar (all-caps also recognized)
Try 'cpio --help' or 'cpio --usage' for more information.
abd007@cis240-fall21:~/lab7/question2$ ls
89-Berries.svg  Banana_78.png  mynotes.txt      randomtext.txt  something.txt
allmyfiles.cpio my-fortune.txt  Pineapple-89.jpg sentences.txt     Video.mp4
```

```
abd007@cis240-fall21: ~/lab7/question2
abd007@cis240-fall21: ~/lab7/question2
abd007@cis240-fall21:~/lab7/question1$ mv allfiles.tar ../question2/
abd007@cis240-fall21:~/lab7/question1$ cd ../question2
abd007@cis240-fall21:~/lab7/question2$ ls
allfiles.tar
abd007@cis240-fall21:~/lab7/question2$ cpio -iv < allfiles.tar
my-fortune.txt
mynotes.txt
sentences.txt
something.txt
Pineapple-89.jpg
Banana_78.png
89-Berries.svg
Video.mp4
randomtext.txt
9979 blocks
abd007@cis240-fall21:~/lab7/question2$ ls
89-Berries.svg  Banana_78.png  mynotes.txt      randomtext.txt  something.txt
allfiles.tar    my-fortune.txt Pineapple-89.jpg sentences.txt    Video.mp4
abd007@cis240-fall21:~/lab7/question2$ rm *.tar
abd007@cis240-fall21:~/lab7/question2$ ls
89-Berries.svg  my-fortune.txt  Pineapple-89.jpg  sentences.txt  Video.mp4
Banana_78.png   mynotes.txt     randomtext.txt    something.txt
abd007@cis240-fall21:~/lab7/question2$ ls | cpio -ov > allmyfiles.cpio
89-Berries.svg
cpio: File allmyfiles.cpio grew, 853504 new bytes not copied
allmyfiles.cpio
Banana_78.png
my-fortune.txt
mynotes.txt
Pineapple-89.jpg
randomtext.txt
sentences.txt
something.txt
Video.mp4
11633 blocks
abd007@cis240-fall21:~/lab7/question2$ ls
89-Berries.svg  Banana_78.png  mynotes.txt      randomtext.txt  something.txt
allmyfiles.cpio my-fortune.txt Pineapple-89.jpg sentences.txt    Video.mp4
abd007@cis240-fall21:~/lab7/question2$ ls | cpio -ovH -F allmyfiles.tar
cpio: invalid archive format '-F'; valid formats are:
crc newc odc bin ustar tar (all-caps also recognized)
Try 'cpio --help' or 'cpio --usage' for more information.
abd007@cis240-fall21:~/lab7/question2$ ls
89-Berries.svg  Banana_78.png  mynotes.txt      randomtext.txt  something.txt
allmyfiles.cpio my-fortune.txt Pineapple-89.jpg sentences.txt    Video.mp4
```

Question 3

Ans:

```

abd007@cis240-fall21: ~/lab7/question3
abd007@cis240-fall21:~/lab7/question3$ ls
mynotes.txt
abd007@cis240-fall21:~/lab7/question3$ ls -lh
total 16K
-rw-rw-r-- 1 abd007 abd007 14K Dec 14 02:45 mynotes.txt
abd007@cis240-fall21:~/lab7/question3$ gzip -k mynotes.txt
abd007@cis240-fall21:~/lab7/question3$ bzip2 -k mynotes.txt
abd007@cis240-fall21:~/lab7/question3$ xz -k mynotes.txt
abd007@cis240-fall21:~/lab7/question3$ ls -lh
total 40K
-rw-rw-r-- 1 abd007 abd007 14K Dec 14 02:45 mynotes.txt
-rw-rw-r-- 1 abd007 abd007 4.5K Dec 14 02:45 mynotes.txt.bz2
-rw-rw-r-- 1 abd007 abd007 4.6K Dec 14 02:45 mynotes.txt.gz
-rw-rw-r-- 1 abd007 abd007 4.6K Dec 14 02:45 mynotes.txt.xz
abd007@cis240-fall21:~/lab7/question3$

```

Question 4

Ans:

```

abd007@cis240-fall21: ~/lab7/question4
abd007@cis240-fall21:~/lab7/question3$ ls
mynotes.txt mynotes.txt.bz2 mynotes.txt.gz mynotes.txt.xz
abd007@cis240-fall21:~/lab7/question3$ cd ../question4/
abd007@cis240-fall21:~/lab7/question4$ gzip -dkc < ../question3/mynotes.txt.gz > mynotes.txt
abd007@cis240-fall21:~/lab7/question4$ ls
mynotes.txt
abd007@cis240-fall21:~/lab7/question4$ mv mynotes.txt mynotes2.txt
abd007@cis240-fall21:~/lab7/question4$ bzip2 -dkc < ../question3/mynotes.txt.bz2 > mynotes.txt
abd007@cis240-fall21:~/lab7/question4$ ls
mynotes2.txt mynotes.txt
abd007@cis240-fall21:~/lab7/question4$ mv mynotes.txt mynotes2.txt
abd007@cis240-fall21:~/lab7/question4$ ls
mynotes2.txt
abd007@cis240-fall21:~/lab7/question4$ gzip -dkc < ../question3/mynotes.txt.gz > mynotes.txt
abd007@cis240-fall21:~/lab7/question4$ ls
mynotes2.txt mynotes.txt
abd007@cis240-fall21:~/lab7/question4$ mv mynotes.txt mynotes3.txt
Command 'mz' not found, but can be installed with:
sudo apt install mz
abd007@cis240-fall21:~/lab7/question4$ mv mynotes.txt mynotes3.txt
abd007@cis240-fall21:~/lab7/question4$ xz -dkc < ../question3/mynotes.txt.xz > mynotes.txt
abd007@cis240-fall21:~/lab7/question4$ ls
mynotes2.txt mynotes3.txt mynotes.txt
abd007@cis240-fall21:~/lab7/question4$ zip allmyfiles.zip mynotes.txt mynotes2.txt mynotes3.txt
  adding: mynotes.txt (deflated 65%)
  adding: mynotes2.txt (deflated 65%)
  adding: mynotes3.txt (deflated 65%)
abd007@cis240-fall21:~/lab7/question4$ 7z a allthefiles.7z allmyfiles.zip mynotes.txt mynotes2.txt mynotes3.txt
7-Zip [64] 16.02 : Copyright (c) 1999-2016 Igor Pavlov : 2016-05-21
7zip Version 16.02 (locale=en_US.UTF-8,Utf16=on,HugeFiles=on,64 bits,2 CPUs AMD Ryzen 5 4500U with Radeon Graphics (860F01),ASM,AES-NI)

Scanning the drive...
  files, 54764 bytes (54 KiB)

Creating archive: allthefiles.7z
  items to compress: 4
  files read from disk: 4
  archive size: 9755 bytes (10 KiB)
  everything is ok
abd007@cis240-fall21:~/lab7/question4$ ls
allmyfiles.zip allthefiles.7z mynotes2.txt mynotes3.txt mynotes.txt
abd007@cis240-fall21:~/lab7/question4$

```