

## Question 1 | Tar Utility

```
jorge@jorge-VirtualBox: ~/lab7/question1
jorge@jorge-VirtualBox:~/lab7$ ls
question1 question2 question3 question4
jorge@jorge-VirtualBox:~/lab7$ cd question1/
jorge@jorge-VirtualBox:~/lab7/question1$ ls
89-Berries.svg Banana_78.png Mangoes.svg my-fortune.txt mynotes.txt Papaya.svg Pineapple-89.jpg sentences.txt something.txt Video.mp4
jorge@jorge-VirtualBox:~/lab7/question1$ tar cf allfiles.tar *.txt *[0-9]*.{jpg,svg,png} Video.mp4
jorge@jorge-VirtualBox:~/lab7/question1$ tar -tf allfiles.tar
my-fortune.txt
mynotes.txt
sentences.txt
something.txt
Pineapple-89.jpg
89-Berries.svg
Banana_78.png
Video.mp4
jorge@jorge-VirtualBox:~/lab7/question1$ lorem > randontext.txt
jorge@jorge-VirtualBox:~/lab7/question1$ cat randontext.txt
Esse et nihil ipsa enim incidunt necessitatibus. Dicta qui aut ab fugiat molestiae autem. Exercitationem assumenda pariatum velit facere laudantium. Non delectus nobis natus voluptatem enim accusamus. Consequat
r incidunt veritatis vel quis culpa.
jorge@jorge-VirtualBox:~/lab7/question1$ tar -rf allfiles.tar randontext.txt
jorge@jorge-VirtualBox:~/lab7/question1$ tar -rf allfiles.tar
jorge@jorge-VirtualBox:~/lab7/question1$ tar -tf allfiles.tar
my-fortune.txt
mynotes.txt
sentences.txt
something.txt
Pineapple-89.jpg
89-Berries.svg
Banana_78.png
Video.mp4
randontext.txt
jorge@jorge-VirtualBox:~/lab7/question1$
```

## Question 2 | Cpio Utility

```
jorge@jorge-VirtualBox: ~/lab7/question2
jorge@jorge-VirtualBox:~/lab7/question1$ mv allfiles.tar ../question2/
jorge@jorge-VirtualBox:~/lab7/question1$ cd ../question2/
bash: cd: ../question2/: No such file or directory
jorge@jorge-VirtualBox:~/lab7/question1$ cd ../question2/
jorge@jorge-VirtualBox:~/lab7/question2$ ls
allfiles.tar
jorge@jorge-VirtualBox:~/lab7/question2$ cpio -iv < allfiles.tar
my-fortune.txt
mynotes.txt
sentences.txt
something.txt
Pineapple-89.jpg
89-Berries.svg
Banana_78.png
Video.mp4
randontext.txt
9964 blocks
jorge@jorge-VirtualBox:~/lab7/question2$ ls
89-Berries.svg allfiles.tar Banana_78.png my-fortune.txt mynotes.txt Pineapple-89.jpg randontext.txt sentences.txt something.txt Video.mp4
jorge@jorge-VirtualBox:~/lab7/question2$ rm *.tar
jorge@jorge-VirtualBox:~/lab7/question2$ ls
89-Berries.svg Banana_78.png my-fortune.txt mynotes.txt Pineapple-89.jpg randontext.txt sentences.txt something.txt Video.mp4
jorge@jorge-VirtualBox:~/lab7/question2$ ls | cpio -ovH tar -F burrito.tar
89-Berries.svg
Banana_78.png
cpio: File burrito.tar grew, 1181824 new bytes not copied
burrito.tar
my-fortune.txt
mynotes.txt
Pineapple-89.jpg
randontext.txt
sentences.txt
something.txt
Video.mp4
12117 blocks
jorge@jorge-VirtualBox:~/lab7/question2$ ls
89-Berries.svg Banana_78.png burrito.tar my-fortune.txt mynotes.txt Pineapple-89.jpg randontext.txt sentences.txt something.txt Video.mp4
jorge@jorge-VirtualBox:~/lab7/question2$
```

```
Applications Places
jorge@jorge-VirtualBox: ~/lab7/question2

jorge@jorge-VirtualBox:~/lab7/question2$ cpio -ldv -F burrito.tar
cpio: 89-Berries.svg not created: newer or same age version exists
89-Berries.svg
cpio: Banana_78.png not created: newer or same age version exists
Banana_78.png
cpio: Burrito.tar not created: newer or same age version exists
burrito.tar
cpio: my-fortune.txt not created: newer or same age version exists
my-fortune.txt
cpio: mynotes.txt not created: newer or same age version exists
mynotes.txt
cpio: Pineapple-89.jpg not created: newer or same age version exists
Pineapple-89.jpg
cpio: randomtext.txt not created: newer or same age version exists
randomtext.txt
cpio: sentences.txt not created: newer or same age version exists
sentences.txt
cpio: something.txt not created: newer or same age version exists
something.txt
cpio: Video.mp4 not created: newer or same age version exists
Video.mp4
12116 blocks
jorge@jorge-VirtualBox:~/lab7/question2$ ls
89-Berries.svg  Banana_78.png  burrito.tar  my-fortune.txt  mynotes.txt  Pineapple-89.jpg  randomtext.txt  sentences.txt  something.txt  Video.mp4
jorge@jorge-VirtualBox:~/lab7/question2$
```

### Question 3 | Gzip, bzip2, xz

```
Applications Places
jorge@jorge-VirtualBox: ~/lab7/question2

jorge@jorge-VirtualBox:~/lab7/question2$ ls -lh
total 11M
-rw-rw-r-- 1 jorge jorge 834K Dec 19 13:54 89-Berries.svg
-rw-rw-r-- 1 jorge jorge 241K Dec 19 13:54 Banana_78.png
-rw-rw-r-- 1 jorge jorge 6.0M Dec 19 13:55 burrito.tar
-rw-rw-r-- 1 jorge jorge 48 Dec 19 13:54 my-fortune.txt
-rw-rw-r-- 1 jorge jorge 1012 Dec 19 13:54 mynotes.txt
-rw-rw-r-- 1 jorge jorge 410K Dec 19 13:54 Pineapple-89.jpg
-rw-rw-r-- 1 jorge jorge 247 Dec 19 13:54 randomtext.txt
-rw-rw-r-- 1 jorge jorge 288 Dec 19 13:54 sentences.txt
-rw-rw-r-- 1 jorge jorge 75 Dec 19 13:54 something.txt
-rw-rw-r-- 1 jorge jorge 3.5M Dec 19 13:54 Video.mp4
jorge@jorge-VirtualBox:~/lab7/question2$ ls
89-Berries.svg  Banana_78.png  burrito.tar  my-fortune.txt  mynotes.txt  Pineapple-89.jpg  randomtext.txt  sentences.txt  something.txt  Video.mp4
jorge@jorge-VirtualBox:~/lab7/question2$ gzip -k mynotes.txt
jorge@jorge-VirtualBox:~/lab7/question2$ bzip2 -k mynotes.txt
jorge@jorge-VirtualBox:~/lab7/question2$ xz -k mynotes.txt
jorge@jorge-VirtualBox:~/lab7/question2$ ls -lh
total 11M
-rw-rw-r-- 1 jorge jorge 834K Dec 19 13:54 89-Berries.svg
-rw-rw-r-- 1 jorge jorge 241K Dec 19 13:54 Banana_78.png
-rw-rw-r-- 1 jorge jorge 6.0M Dec 19 13:55 burrito.tar
-rw-rw-r-- 1 jorge jorge 48 Dec 19 13:54 my-fortune.txt
-rw-rw-r-- 1 jorge jorge 1012 Dec 19 13:54 mynotes.txt
-rw-rw-r-- 1 jorge jorge 606 Dec 19 13:54 mynotes.txt.bz2
-rw-rw-r-- 1 jorge jorge 593 Dec 19 13:54 mynotes.txt.gz
-rw-rw-r-- 1 jorge jorge 700 Dec 19 13:54 mynotes.txt.xz
-rw-rw-r-- 1 jorge jorge 410K Dec 19 13:54 Pineapple-89.jpg
-rw-rw-r-- 1 jorge jorge 247 Dec 19 13:54 randomtext.txt
-rw-rw-r-- 1 jorge jorge 288 Dec 19 13:54 sentences.txt
-rw-rw-r-- 1 jorge jorge 75 Dec 19 13:54 something.txt
-rw-rw-r-- 1 jorge jorge 3.5M Dec 19 13:54 Video.mp4
jorge@jorge-VirtualBox:~/lab7/question2$
```

```
Applications Places
jorge@jorge-VirtualBox: ~/lab7/question2

jorge@jorge-VirtualBox:~/lab7/question2$ gzip -dk < ../question3/mynotes.txt.gz > mynotes.txt
bash: ../question3/mynotes.txt.gz: No such file or directory
jorge@jorge-VirtualBox:~/lab7/question2$ ls
89-Berries.svg  Banana_78.png  burrito.tar  my-fortune.txt  mynotes.txt  mynotes.txt.bz2  mynotes.txt.gz  mynotes.txt.xz  Pineapple-89.jpg  randomtext.txt  sentences.txt  something.txt  Video.mp4
jorge@jorge-VirtualBox:~/lab7/question2$ mv mynotes.txt mynotes2.txt
jorge@jorge-VirtualBox:~/lab7/question2$ ls
89-Berries.svg  Banana_78.png  burrito.tar  my-fortune.txt  mynotes2.txt  mynotes.txt.bz2  mynotes.txt.gz  mynotes.txt.xz  Pineapple-89.jpg  randomtext.txt  sentences.txt  something.txt  Video.mp4
jorge@jorge-VirtualBox:~/lab7/question2$ bzip2 -dk < ../question2/mynotes.txt.bz2 > mynotes.txt
Command 'bzip2' not found, but there are 21 similar ones.
jorge@jorge-VirtualBox:~/lab7/question2$ bzip2 -dk < ../question3/mynotes.txt.bz2 > mynotes.txt
bash: ../question3/mynotes.txt.bz2: No such file or directory
jorge@jorge-VirtualBox:~/lab7/question2$ bzip2 -dk < ../question2/mynotes.txt.bz2 > mynotes.txt
jorge@jorge-VirtualBox:~/lab7/question2$ ls
89-Berries.svg  Banana_78.png  burrito.tar  my-fortune.txt  mynotes2.txt  mynotes.txt  mynotes.txt.bz2  mynotes.txt.gz  mynotes.txt.xz  Pineapple-89.jpg  randomtext.txt  sentences.txt  something.txt  Video.mp4
jorge@jorge-VirtualBox:~/lab7/question2$ mv mynotes.txt mynotes4.txt
jorge@jorge-VirtualBox:~/lab7/question2$ ls
89-Berries.svg  Banana_78.png  burrito.tar  my-fortune.txt  mynotes2.txt  mynotes4.txt  mynotes.txt.bz2  mynotes.txt.gz  mynotes.txt.xz  Pineapple-89.jpg  randomtext.txt  sentences.txt  something.txt  Video.mp4
jorge@jorge-VirtualBox:~/lab7/question2$
```

## Question 4 | Zip, 7zip and Rar

```
Applications Places
jorge@jorge-VirtualBox ~/lab7/question2

jorge@jorge-VirtualBox:~/lab7/question2$ gzip -dkc < ../question2/mynotes.txt.gz > newfileq4
jorge@jorge-VirtualBox:~/lab7/question2$ bzip -dkc < ../question2/mynotes.txt.bz2 > newfileq42

Command 'bzip' not found, but there are 21 similar ones.

jorge@jorge-VirtualBox:~/lab7/question2$ bzip2 -dkc < ../question2/mynotes.txt.bz2 > newfileq42
jorge@jorge-VirtualBox:~/lab7/question2$ xz -dkc < ../question2/mynotes.txt.xz > newfileq423
jorge@jorge-VirtualBox:~/lab7/question2$ ls
89-Berries.svg  burrito.tar  mynotes2.txt  mynotes.txt.bz2  mynotes.txt.xz  newfileq42  Pineapple-89.jpg  sentences.txt  Video.mp4
Banana_78.png  my-fortune.txt  mynotes4.txt  mynotes.txt.gz  newfileq4  newfileq423  randomtext.txt  something.txt
jorge@jorge-VirtualBox:~/lab7/question2$ zip archive *
adding: 89-Berries.svg (deflated 24%)
adding: Banana_78.png (deflated 0%)
adding: burrito.tar (deflated 7%)
adding: my-fortune.txt (stored 0%)
adding: mynotes2.txt (deflated 44%)
adding: mynotes4.txt (deflated 44%)
adding: mynotes.txt.bz2 (stored 0%)
adding: mynotes.txt.gz (stored 0%)
adding: newfileq4 (deflated 44%)
adding: newfileq42 (deflated 44%)
adding: newfileq423 (deflated 44%)
adding: Pineapple-89.jpg (deflated 0%)
adding: randomtext.txt (deflated 35%)
adding: sentences.txt (deflated 39%)
adding: something.txt (deflated 3%)
adding: Video.mp4 (deflated 0%)
jorge@jorge-VirtualBox:~/lab7/question2$
```

```
Applications Places
jorge@jorge-VirtualBox ~/lab7/question2

jorge@jorge-VirtualBox:~/lab7/question2$ 7z a archive.7z *
7-Zip [64] 16.02 : Copyright (c) 1999-2016 Igor Pavlov : 2016-05-21
p7zip 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...
18 files, 21988307 bytes (21 MiB)

Creating archive: archive.7z
Items to compress: 18

Files read from disk: 18
Archive size: 7059292 bytes (6894 Kib)
Everything is OK
jorge@jorge-VirtualBox:~/lab7/question2$ ls
89-Berries.svg  archive.zip  burrito.tar  mynotes2.txt  mynotes.txt.bz2  mynotes.txt.xz  newfileq42  Pineapple-89.jpg  sentences.txt  Video.mp4
archive.7z     Banana_78.png  my-fortune.txt  mynotes4.txt  mynotes.txt.gz  newfileq4  newfileq423  randomtext.txt  something.txt
jorge@jorge-VirtualBox:~/lab7/question2$ ls -lh
total 28M
-rw-rw-r-- 1 jorge jorge 834K Dec 19 13:54 89-Berries.svg
-rw-rw-r-- 1 jorge jorge 6.8M Dec 19 14:17 archive.7z
-rw-rw-r-- 1 jorge jorge 11M Dec 19 14:10 archive.zip
-rw-rw-r-- 1 jorge jorge 241K Dec 19 13:54 Banana_78.png
-rw-rw-r-- 1 jorge jorge 6.8M Dec 19 13:55 burrito.tar
-rw-rw-r-- 1 jorge jorge 48 Dec 19 13:54 my-fortune.txt
-rw-rw-r-- 1 jorge jorge 1012 Dec 19 13:54 mynotes2.txt
-rw-rw-r-- 1 jorge jorge 1012 Dec 19 14:10 mynotes4.txt
-rw-rw-r-- 1 jorge jorge 600 Dec 19 13:54 mynotes.txt.bz2
-rw-rw-r-- 1 jorge jorge 593 Dec 19 13:54 mynotes.txt.gz
-rw-rw-r-- 1 jorge jorge 700 Dec 19 13:54 mynotes.txt.xz
-rw-rw-r-- 1 jorge jorge 1012 Dec 19 14:14 newfileq4
-rw-rw-r-- 1 jorge jorge 1012 Dec 19 14:15 newfileq42
-rw-rw-r-- 1 jorge jorge 1012 Dec 19 14:15 newfileq423
-rw-rw-r-- 1 jorge jorge 410K Dec 19 13:54 Pineapple-89.jpg
-rw-rw-r-- 1 jorge jorge 247 Dec 19 13:54 randomtext.txt
-rw-rw-r-- 1 jorge jorge 288 Dec 19 13:54 sentences.txt
-rw-rw-r-- 1 jorge jorge 75 Dec 19 13:54 something.txt
-rw-rw-r-- 1 jorge jorge 3.5M Dec 19 13:54 Video.mp4
jorge@jorge-VirtualBox:~/lab7/question2$
```