

1) Using system package manager, install package figlet, run command figlet hello ubuntu, remove package figlet

[illegible]

2) Using system package manager, install package figlet, run command figlet hello ubuntu, remove package figlet

```
axoy@AxoyUX5401: ~/hw1  ×  axoy@AxoyUX5401: ~/hw1  ×  +  ∨  
axoy [13:20:26]:~/hw1$ touch file{1..10}  
axoy [13:20:50]:~/hw1$ ls  
file1  file10  file2  file3  file4  file5  file6  file7  file8  file9  
axoy [13:20:51]:~/hw1$ find file{4..6}  
file4  
file5  
file6  
axoy [13:21:04]:~/hw1$ find file{4..6} -delete  
axoy [13:21:07]:~/hw1$ ls  
file1  file10  file2  file3  file7  file8  file9  
axoy [13:21:08]:~/hw1$ |
```

3) List the contents of your current directory, including the ownership and permissions, and redirect the output to a file called contents.txt within your home directory.

```
axoy@AxoyUX5401: ~/hw1  ×  +  ∨  
axoy [13:23:16]:~/hw1$ ls -la > ~/contents.txt  
axoy [13:23:59]:~/hw1$ ls ~  
contents.txt  hw1  
axoy [13:24:05]:~/hw1$ cat ~/contents.txt  
total 8  
drwxr-xr-x  2 axoy axoy 4096 Oct  9 13:21 .  
drwxr-x--- 12 axoy axoy 4096 Oct  9 13:23 ..  
-rw-r--r--  1 axoy axoy   0 Oct  9 13:20 file1  
-rw-r--r--  1 axoy axoy   0 Oct  9 13:20 file10  
-rw-r--r--  1 axoy axoy   0 Oct  9 13:20 file2  
-rw-r--r--  1 axoy axoy   0 Oct  9 13:20 file3  
-rw-r--r--  1 axoy axoy   0 Oct  9 13:20 file7  
-rw-r--r--  1 axoy axoy   0 Oct  9 13:20 file8  
-rw-r--r--  1 axoy axoy   0 Oct  9 13:20 file9  
axoy [13:24:25]:~/hw1$ |
```

4) Count the number of files called test within the /usr/share directory and its subdirectories. Note: each line output from the find command represents a file.

```
axoy@AxoyUX5401: ~/hw1
axoy [13:26:48]:~/hw1$ find /usr/share -type f -name "test" | wc -l
0
axoy [13:26:53]:~/hw1$ find /usr/share -type f -name "test"
axoy [13:26:59]:~/hw1$
```

5) Sort the /etc/passwd file, place the results in a file called foo.txt, and trap any errors in a file called err.txt

```
axoy@AxoyUX5401: ~/hw1
axoy [13:30:17]:~/hw1$ sort /etc/passwd > foo.txt 2> err.txt
axoy [13:30:19]:~/hw1$
```

6) Create a directory named Box where all the files are automatically owned by the group users, and can only be deleted by the user who created them.

```
axoy@AxoyUX5401: ~/hw1
axoy [13:36:45]:~/hw1$ mkdir Box
axoy [13:36:46]:~/hw1$ ls -l | grep Box
drwxr-xr-x 2 axoy axoy 4096 Oct  9 13:36 Box
axoy [13:36:53]:~/hw1$ chown :users Box
chown: changing group of 'Box': Operation not permitted
axoy [13:37:09]:~/hw1$ sudo chown :users Box
axoy [13:37:16]:~/hw1$ ls -l | grep Box
drwxr-xr-x 2 axoy users 4096 Oct  9 13:36 Box
axoy [13:37:30]:~/hw1$ chmod 755 Box
axoy [13:39:07]:~/hw1$ ls -l | grep Box
drwxr-xr-x 2 axoy users 4096 Oct  9 13:36 Box
axoy [13:39:11]:~/hw1$
```

7) In the provided data practical_1_unix_local_machine_1.zip, count the number of txt files residing at the first depth level (e.g. at practical_1_unix_local_machine_1/ but not deeper)

```
axoy@AxoyUX5401: ~/hw1
axoy [13:46:07]:~/hw1$ ls
Box      file1  file2  file7  file9  practical_1_unix_local_machine_1
err.txt  file10 file3  file8  foo.txt practical_1_unix_local_machine_1.zip
axoy [13:46:09]:~/hw1$ find practical_1_unix_local_machine_1.zip -maxdepth 1 -type f -name "*.txt" | wc -l
0
axoy [13:46:21]:~/hw1$
```

8) In the provided data practical_1_unix_local_machine_1.zip, count the number of txt files residing at any depth level and with the prefix "00221"

```
axoy@AxoyUX5401: ~/hw1
axoy [13:47:53]:~/hw1$ ls
Box      file1    file2    file7    file9    practical_1_unix_local_machine_1
err.txt  file10   file3    file8    foo.txt  practical_1_unix_local_machine_1.zip
axoy [13:47:53]:~/hw1$ find practical_1_unix_local_machine_1.zip -type f -name "00221*.txt" | wc -l
0
axoy [13:47:56]:~/hw1$ |
```

9) In the provided data practical_1_unix_local_machine_1.zip, count the number of lines in each txt file

```
axoy [13:57:05]:~/hw1$ ls
Box err.txt file1 file10 file2 file3 file7 file8 file9 foo.txt practical_1_unix_local_machine_1 practical_1_unix_local_machine_1.zip
axoy [13:57:11]:~/hw1$ find practical_1_unix_local_machine_1.zip -type f -name "*.txt" -exec wc -l {} \;
axoy [13:57:20]:~/hw1$ find practical_1_unix_local_machine_1.zip -type f -name "*.txt" -exec wc -l {} \;
90 practical_1_unix_local_machine_1/practical_1_unix_local_machine_1/4096/00222038_60fb70c2d0d566b3508d9d4f_002_stats.txt
90 practical_1_unix_local_machine_1/practical_1_unix_local_machine_1/4096/00222173_343490fc7ac0a7ec5505c92d_005/00222173_343490fc7ac0a7ec5505c92d_005_stats.txt
90 practical_1_unix_local_machine_1/practical_1_unix_local_machine_1/4096/00222228_0ca1bb5d8d4ee172802d84c_003_stats.txt
90 practical_1_unix_local_machine_1/practical_1_unix_local_machine_1/4096/00222413_57576437f76e1bc3976ca308_000_stats.txt
90 practical_1_unix_local_machine_1/practical_1_unix_local_machine_1/4096/00222040_60fb70c2d0d566b3508d9d4f_004/00222040_60fb70c2d0d566b3508d9d4f_004_stats.txt
90 practical_1_unix_local_machine_1/practical_1_unix_local_machine_1/4096/00222154_9fec21f45aa56c9022e625f_000_stats.txt
90 practical_1_unix_local_machine_1/practical_1_unix_local_machine_1/8192/00221410_0a7e21b0760b39c09a373428_000_stats.txt
90 practical_1_unix_local_machine_1/practical_1_unix_local_machine_1/8192/00221960_be1332983e6a04a7ac3a5d0e_004_stats.txt
90 practical_1_unix_local_machine_1/practical_1_unix_local_machine_1/8192/00220230_b79b40ef8721383269a6542c_004_stats.txt
90 practical_1_unix_local_machine_1/practical_1_unix_local_machine_1/8192/00221425_7b0c6827c51bd442ddfc23c_011_stats.txt
90 practical_1_unix_local_machine_1/practical_1_unix_local_machine_1/8192/00221459_ce3275b91ab34c2dafd5da66_022_stats.txt
90 practical_1_unix_local_machine_1/practical_1_unix_local_machine_1/8192/00221909_fa32a7d1af74d41108997dd0_003_stats.txt
90 practical_1_unix_local_machine_1/practical_1_unix_local_machine_1/8192/00221010_fa32a7d1af74d41108997dd0_004_stats.txt
90 practical_1_unix_local_machine_1/practical_1_unix_local_machine_1/8192/00220226_b79b40ef8721383269a6542c_000_stats.txt
90 practical_1_unix_local_machine_1/practical_1_unix_local_machine_1/8192/00220340_65e929ab1fef8cf7f1d9a9d2_000_stats.txt
90 practical_1_unix_local_machine_1/practical_1_unix_local_machine_1/8192/the_rest/00221501_ce3275b91ab34c2dafd5da66_064/00221501_ce3275b91ab34c2dafd5da66_064_stats.txt
90 practical_1_unix_local_machine_1/practical_1_unix_local_machine_1/8192/the_rest/00221684_e630ec60d4d5148a45ac0fa0_000/00221684_e630ec60d4d5148a45ac0fa0_000_stats.txt
90 practical_1_unix_local_machine_1/practical_1_unix_local_machine_1/16384/00221960_be1332983e6a04a7ac3a5d0e_004_stats.txt
90 practical_1_unix_local_machine_1/practical_1_unix_local_machine_1/16384/00221961_be1332983e6a04a7ac3a5d0e_005_stats.txt
90 practical_1_unix_local_machine_1/practical_1_unix_local_machine_1/16384/00222000_57b7ac86e4b08c5528961f00_001_stats.txt
90 practical_1_unix_local_machine_1/practical_1_unix_local_machine_1/16384/00221909_fa32a7d1af74d41108997dd0_003_stats.txt
90 practical_1_unix_local_machine_1/practical_1_unix_local_machine_1/16384/00221501_ce3275b91ab34c2dafd5da66_064_stats.txt
90 practical_1_unix_local_machine_1/practical_1_unix_local_machine_1/16384/00221684_e630ec60d4d5148a45ac0fa0_000_stats.txt
0 practical_1_unix_local_machine_1/_MACOSX/practical_1_unix_local_machine_1/4096/._00222154_9fec21f45aa56c9022e625f_000_stats.txt
0 practical_1_unix_local_machine_1/_MACOSX/practical_1_unix_local_machine_1/4096/._00222228_0ca1bb5d8d4ee172802d84c_003_stats.txt
0 practical_1_unix_local_machine_1/_MACOSX/practical_1_unix_local_machine_1/4096/00222173_343490fc7ac0a7ec5505c92d_005/._00222173_343490fc7ac0a7ec5505c92d_005_stats.txt
0 practical_1_unix_local_machine_1/_MACOSX/practical_1_unix_local_machine_1/4096/._00222413_57576437f76e1bc3976ca308_000_stats.txt
0 practical_1_unix_local_machine_1/_MACOSX/practical_1_unix_local_machine_1/4096/._00222038_60fb70c2d0d566b3508d9d4f_002_stats.txt
0 practical_1_unix_local_machine_1/_MACOSX/practical_1_unix_local_machine_1/4096/00222040_60fb70c2d0d566b3508d9d4f_004/._00222040_60fb70c2d0d566b3508d9d4f_004_stats.txt
0 practical_1_unix_local_machine_1/_MACOSX/practical_1_unix_local_machine_1/8192/._00220230_b79b40ef8721383269a6542c_004_stats.txt
0 practical_1_unix_local_machine_1/_MACOSX/practical_1_unix_local_machine_1/8192/._00221410_0a7e21b0760b39c09a373428_000_stats.txt
0 practical_1_unix_local_machine_1/_MACOSX/practical_1_unix_local_machine_1/8192/._00221459_ce3275b91ab34c2dafd5da66_022_stats.txt
0 practical_1_unix_local_machine_1/_MACOSX/practical_1_unix_local_machine_1/8192/._00221425_7b0c6827c51bd442ddfc23c_011_stats.txt
0 practical_1_unix_local_machine_1/_MACOSX/practical_1_unix_local_machine_1/8192/._00220340_65e929ab1fef8cf7f1d9a9d2_000_stats.txt
0 practical_1_unix_local_machine_1/_MACOSX/practical_1_unix_local_machine_1/8192/._00221960_be1332983e6a04a7ac3a5d0e_004_stats.txt
0 practical_1_unix_local_machine_1/_MACOSX/practical_1_unix_local_machine_1/8192/._00221910_fa32a7d1af74d41108997dd0_004_stats.txt
0 practical_1_unix_local_machine_1/_MACOSX/practical_1_unix_local_machine_1/8192/._00222226_b79b40ef8721383269a6542c_000_stats.txt
0 practical_1_unix_local_machine_1/_MACOSX/practical_1_unix_local_machine_1/8192/the_rest/00221501_ce3275b91ab34c2dafd5da66_064/._00221501_ce3275b91ab34c2dafd5da66_064_stats.txt
0 practical_1_unix_local_machine_1/_MACOSX/practical_1_unix_local_machine_1/8192/the_rest/00221684_e630ec60d4d5148a45ac0fa0_000/._00221684_e630ec60d4d5148a45ac0fa0_000_stats.txt
0 practical_1_unix_local_machine_1/_MACOSX/practical_1_unix_local_machine_1/8192/._00221909_fa32a7d1af74d41108997dd0_003_stats.txt
0 practical_1_unix_local_machine_1/_MACOSX/practical_1_unix_local_machine_1/16384/._00221961_be1332983e6a04a7ac3a5d0e_005_stats.txt
0 practical_1_unix_local_machine_1/_MACOSX/practical_1_unix_local_machine_1/16384/._00221684_e630ec60d4d5148a45ac0fa0_000_stats.txt
0 practical_1_unix_local_machine_1/_MACOSX/practical_1_unix_local_machine_1/16384/._00222000_57b7ac86e4b08c5528961f00_001_stats.txt
0 practical_1_unix_local_machine_1/_MACOSX/practical_1_unix_local_machine_1/16384/._00221960_be1332983e6a04a7ac3a5d0e_004_stats.txt
0 practical_1_unix_local_machine_1/_MACOSX/practical_1_unix_local_machine_1/16384/._00221501_ce3275b91ab34c2dafd5da66_064_stats.txt
0 practical_1_unix_local_machine_1/_MACOSX/practical_1_unix_local_machine_1/16384/._00221909_fa32a7d1af74d41108997dd0_003_stats.txt
axoy [13:57:55]:~/hw1$ |
```

10) Calculate the size of each root (/) subdirectory and sort them by size

```
axoy@AxoyUX5401: ~  
root@b0ae139a6d3d: /  
root@b0ae139a6d3d:/# du -h --max-depth=1 / 2>/dev/null | sort -h  
0      /dev  
0      /proc  
0      /sys  
4.0K   /boot  
4.0K   /media  
4.0K   /mnt  
4.0K   /opt  
4.0K   /srv  
4.0K   /tmp  
12K    /root  
20K    /home  
20K    /run  
648K   /etc  
4.4M   /var  
71M    /usr  
76M    /  
root@b0ae139a6d3d:/#
```

11) Calculate the size of all directories located at filesystem root (/) except the /sys and print the results for the largest one

```
axoy@AxoyUX5401: ~  
root@b0ae139a6d3d: /  
root@b0ae139a6d3d:/# du -h --max-depth=1 --exclude=/sys / 2>/dev/null | sort -rh  
76M    /  
71M    /usr  
4.4M   /var  
648K   /etc  
20K    /run  
20K    /home  
12K    /root  
4.0K   /tmp  
4.0K   /srv  
4.0K   /opt  
4.0K   /mnt  
4.0K   /media  
4.0K   /boot  
0      /proc  
0      /dev  
root@b0ae139a6d3d:/# du -h --max-depth=1 --exclude=/sys / 2>/dev/null | sort -rh | head -n 1  
76M    /  
root@b0ae139a6d3d:/#
```

12) Calculate the size of all directories located at filesystem root (/) except the /sys and excluding zerosized directories, and print all results

```
axoy@AxoyUX5401: ~  
root@b0ae139a6d3d: /  
root@b0ae139a6d3d:/# du -h --max-depth=1 --exclude=/sys --threshold=1 / 2>/dev/null | sort -rh  
76M    /  
71M    /usr  
4.4M   /var  
648K   /etc  
20K    /run  
20K    /home  
12K    /root  
4.0K   /tmp  
4.0K   /srv  
4.0K   /opt  
4.0K   /mnt  
4.0K   /media  
4.0K   /boot  
root@b0ae139a6d3d:/#
```