

# Practical 1

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## 1 BASH, PIPE AND I/O REDIRECTION

- 1. List everyone logged in and save the list in a file called "users" in your own home directory.

Answer: `w`

- 2. List all processes that are running and add this list to the end of the "users" file.

Answer: `ps A`

- 3. List everyone who is logged on sorted by their username.

Answer: `w | sort`

- 4. Count number of session each logged in user, sorted by this number in descending order.

Answer: `w | sort -r`

- 5. Show content of the first and last 3 lines of the file "/etc/fstab"

Answer: `head -3 /etc/fstab tail -3 /etc/fstab`

- 6. Retrieve line number 5 to 10 from the file "/etc/fstab" and write these files into a new file "extract.txt"

Answer: `sed -n '5, 10p' /etc/fstab`

- 7. List all files in current directory, recursively, to which the user has full permission.

Answer: `ls -rf`

- 8. Compare two files and show percentage of similarities between them.

Answer: `wdiff -s file1.txt file2.txt`

- 9. Find all files in current directory, recursively, that are at least 90 percent similar

Answer: similarites - calc the difference + diff + count the diff lines :=  $\text{diffLines} - \text{count A's lines} := \text{aLines} - \text{count B's lines} := \text{bLines}$   
 $\text{diffPercent} = \text{diffLines} / (\text{aLines} + \text{bLines}) * 100 * 2$  - similarity =  $100 - \text{diffPercent}$

## 2 APPENDIX

- Question 1.
- Question 2.
- Question 3.