**Basic Use External Tools and Gnu Core Tools to enhance your shell skills. Compose them using pipes and filters.**

1. Unzip (using the terminal) our titanic.zip file to titanic

unzip titanic.zip -d titanic

1. Provide the shape/dimensions of the file train.csv ?

Use command:

awk -F, 'END {printf "Number of Rows : %s\nNumber of Columns = %s\n", NR, NF}' train.csv

Number of Rows : 892

Number of Columns = 13

1. List the first 5 rows of the file. Now list the last 5.

By using command:

For first 5 rows:

head -5 train.csv

For last 5 rows:

tail -5 train.csv

1. Print this file in your screen-using cat now use the less command.

cat train.csv

less train.csv

1. Can you print only the names of all people in the file?

Answer – By using command:

awk -F "," '{print $5}'train.csv

1. Print this file last 5 lines save the output to train\_tail.csv

Answer – By using command:

tail -5 train.csv > train\_tail.csv

1. Print only the lines 3 to 5 of the file?

Use Command:

awk 'FNR>=3 && FNR<=5' train.csv

1. Can you explain the command du -a . | sort -n -r | head -n 20 and why would  you use it?

*To show top 20 biggest directories (including subdirectories)*

1. Split the train.csv file in multiple files with 20 lines each.

 This will Split the file " train.csv " into files beginning with the name "new" each containing 20 lines of text.

split -l 20 train.csv new

**Write loops to iterate over lists**

1. Download the ultratrail-du-montblanc.zip file from Slack and unzip it to /Users/<myusername>/ultratrail

unzip ultratrail-du-montblanc.zip -d /Users/alammand/ultratrail

1. Write a loop that prints the name, dimension and first 2 lines for each of the .csv files.

for file in $(ls \*.csv); do echo ""; echo "......$file...."; echo ""; head -2 $file; awk -F, 'END {printf "Number of row : %s\n Number of column = %s\n", NR, NF}' $file; done;

1. Write a loop that copies each of the .csv files with the prefix bkp- to a folder /Users/<myusername>/ultratrail/backups .

for f in \*.csv; do cp -- "$f" "bkp-$f" | mkdir /Users/alammand/ultratrail/backups ; mv "bkp-$f" /Users/alammand/ultratrail/backups ; done

**Reach Create scripts to automate basic processes**

1. Write a script that suggests the data formats: csv, xlsx, pdf, doc and txt. It should allow the user to pick their desired extension then create a file named selected.<extension selected> . Use the read command to read the user input!

for f in \*.ls;

do ls;

echo Choose your file extension;

read varname;

echo you selected $varname;

echo > selected$varname;

1. Write a script that keeps only the first N number of lines of all files in '/Users//files\_to\_clean/\*.csv'. N should be an argument passed before starting the script! If other people depend on this being done daily, how can we automate it's daily execution at 8:00AM?