# 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​,

**Solution:** unzip titanic.zip -d titanic

2. Provide the shape/dimensions of the file ​train.csv​?

**Solution:** awk -F, 'END {printf "Number of rows : %s\n Number of column = %s\n", NR, NF}' train.csv

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

**Solution:** head -n5 ​train.csv and tail -n5 ​train.csv

4. Print this file in your screen using ​cat​ now use the ​less​ command.

**Solution:** cat ​train.csv and less ​train.csv

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

**Solution :** cat ​train.csv | cut -d ‘,’ -f5 or awk -f “\”\*,\”\*” ‘{print $5}’ ​train.csv

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

**Solution:** tail -n5 train.csv > train\_tail.csv

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

**Solution:** sed -n ‘3,5p’ train.csv

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

**Solution:** It give disk space usage of top 20 files with more usage under current directory. All the files display in different lines in descending order.

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

**Solution:** split -l20 train.csv

**Write loops to iterate over lists**

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

**Solution:** $ unzip ultratrail-du-montblanc.zip -d /c/Users/Lovedhaliwal/ultratrail

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

**Solution:** 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;

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

**Solution:** for f in \*.csv; do mkdir /c/Users/Lovedhaliwal/Desktop/ultratrail/backups | cp -- "$f" "bkp-$f" ; mv "bkp-$f" /c/Users/Lovedhaliwal/Desktop/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!

**Solution:** for f in \*.ls;do ls;echo Choose your file extension; read varname; echo you selected$varname; echo test > selected$varname; done

2. 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?

**Solution:** Not found

Half command : head -n2 "/cygdrive/c/Users/Lovedhaliwal/Desktop/folder/train\_tail.csv"

demo: head -n2 "/cygdrive/c/Users/Lovedhaliwal/Desktop/folder/train\_tail.csv" > /cygdrive/c/Users/Lovedhaliwal/Desktop/akal.csv

Demo: head -n2 /cygdrive/c/Users/Lovedhaliwal/Desktop/folder/\*.csv > /cygdrive/c/Users/Lovedhaliwal/Desktop/akal.csv