# 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

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

**Solution:** It gives top 20 lines including column names.

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