Notes 8

awk

Definition

Is a scripting language used for processing and displaying text. `Awk` can work with a text file or from standard output. `Awk` was created in Bell Labs during the 70s by Alfred Aho, Peter Weinberger, and Brian Kernighan and its name comes from its authors' initials. There are several implementation of `Awk`: `nawk,` `mawk, gawk, and busybox` * `Awk` performs operations line by line*

Usage/Formula

`awk + options + {awk command} + file + file to save (optional)`

Examples

- Print the first column of every line of a file: `awk '{print $1}' ~/Documents/Csv/car.csv`
- Print first field of /etc/passwd file: `awk -F: '{print $1}' /etc/passwd`
- Print the last field of the /etc/passwd file:`awk -F: '{print $NF}' /etc/passwd`
- Print the first and last field of the /etc/passwd:`awk -F '{print $1, " = " ,$NF}' .etc.passwd`

Awk Variables

$0	Whole line
$1,$2..$NF	First, second… last field
NR	Total Number of Records
NF	N number of Fields
OFS	Output Field Separator (default " ")
FS	input Field Separator (default " ")
ORS	Output Record Separator (default "\n")
RS	input Record Separator (default "\n")
FILENAME	Name of the file
ARGC	Number or arguments

ARGV	Array of arguments
FNR	File Number of Records
OFMT	Format for numbers (default "%.6g")
RSTART	Location in the string
RLENGTH	Length of match
SUBSEP	Multi-dimensional array separator (default "\034")
ARGIND	Argument Index
ENVIRON	Environment variables
IGNORECASE	Ignore case
CONVFMT	Conversion format
ERRNO	System errors
FIELDWIDTHS	Fixed width fields

sed

Definition

Is a stream editor that performs operations on files and standard output. For instance it can search, find replace, insert, and deletion. By using SED you can edit files without opening them.

Usage/Formula

```
sed options + sed script + file
```

Examples

- Replacing a string in given file (replace pizza for rice): `sed 's/pizza/rice/' shopping-list.lst`
- Replacing only the fourth occurrence per line in a file:`sed 's/pizza/rice/4' shopping-list.lst`
- Replacing all the occurrence of the pattern in a file:`sed 's/pizza/rice/g' shopping-list.lst`

less

Definition

Is a Linux terminal pager that shows a file's contents one screen at a time.

Usage/Formula

`less + options + file_path`

Examples

- Load a text file into `less` by specifying the file path: `less /etc/updatedb.conf`
- Display specified text file with line numbers:`less -N /etc/init/mysql.conf`

`>-`

`>>` - adds to a file

`|`-pipe

Definition

The pipe allows you to redirect the standard output of a command to the standard input of another.

Usage/Formula

`command_1 | command_2 | command_3 |... | command_N`

Examples

- Use `grep` to look for a string in a particular man page:`man ls | grep "human-readable"`
- Display only the options of any command from its man page:`man ls | grep "^[[:space:]]* [[:punct:]]"`