

## Bash for Programmers

→ default interpreter  
→ PS \$ \$

|| changing default browser

→ chsh -s /Bin/Bash

# Symbolic Link

→ ln -s <source-name> <link-name>

Hard ~~1~~ Link

ln <source-name> <link-name>

# Searching in Bash

→ Locate →

Syntax → Locate [option] name(s)

Flags → [-g] → To suppress

wrong msg,

not having

permissions for  
those files

7 - n → followed by an integer  
limit the result

ug > ls cat -n 10 " " " "

> -i → to perform case sensitive  
search

> -v → to show which version  
of locate is used.

2 FIN ▷ 2  
find [path ...] [expression]

-aum / -name → b to match  
patterns

ug > find [path ..] -path  
" \* .Prog "

-type f → select files  
-type d → select directories

-prune → ignore whole directory tree  
-not → return do not match

case

# editing file content

editor → best [options] filename

-o → to write output to new  
file

ug > last file.txt -o new.txt

b -x → reverse  
ug > best -x file.txt

c -n → To "sort numerically"  
d -nx → reverse & sort "

e -L → To check if file is already  
sorted or not

f -u → to sort & remove duplicates

48 Visiting Beginning & ending context  
of for

beginning  $\rightarrow$  Head  
ending  $\rightarrow$  tail

[-nfp] integer representing no. of lines to be displayed

uag  $\rightarrow$  Head - or 3 following tail - or 3 following tail

[-v]  $\rightarrow$  print header also

scq  $\rightarrow$   $\Rightarrow$  first tail  $\Leftarrow$  =

\* Using command  $\rightarrow$  output for by tail followed by integer

> utility to filter & view.  
multiply repeated line.

option  $\Rightarrow$  using [option] [input][output]

option

description

-c

To check how many times  
by occurred

only prints duplicate items

-a

prints unique lines

-2

End line with zero by tail

-w

Compare no more than  
N characters in line

-i

Prints case - insensitive

-s

To avoid comparing  
N character before

determining uniqueness

## # Regular Expression

> Powerful way to define  
out specific rules of  
language by using various  
arithmetic & patterned to decide  
certain sets of strings

### Regular expression

?

Presenting there is  
at least one character  
at least once

+  
Repeating will be  
matched 0 or more time

{m}  
Repeating item matched  
exactly m times

{m, n}  
at least m times & not  
more than n times

\*

^  
beginning of line

1. Is the single character  
a single character  
inside bracket  
these include these 3  
characters  
Exclude these characters

[a-d]  
Character lies a to d  
including a & d also

Note 3  
x a x a x a x a x a  
→ exactly item from  
standard input or pipe

## Graph vs. EGraph vs. FGraph

graph  $\rightarrow$  Global Regular Expression

Diagram  $\rightarrow$  graph [Options] Pattern [File]

Print

graph [Options] Pattern [File]

Print

options  
-E (Extended) same graph to behavior

-F (Fixed Width) cause grep to

-G (Basic RegEx) To become standard

-R (Recursive) grep through an entire directory tree

-I (IgnoreCase) file or if it did not contain matching data

-C (no of times pattern matched)

-m (add no before line on output)

-n (match that do not contain given pattern)

[-L]

select exactly the specific pattern of patterns

[-L]

select files name of matched patterns

[-L]

opposite of [-L]

[-L]

grep -v 'this' \*

grep -c 'this' \*

grep -m 'this' \*

eg > find -type f -print | xargs grep "one"

#### 4. F Graph

Use F to view line number along the results

$\rightarrow$  graph -n 'Prog' \* .txt  
OR graph -n 'Prog'

OR line

graph -f -n 'Prog' \* .txt

#### 4. P processes

$\rightarrow$  PID  $\rightarrow$  Process 'Identify'  
always unique

$\rightarrow$  PID  $\rightarrow$  Process PID

Algorithm 2  
PS [option]

PS  $\rightarrow$  process status

$\rightarrow$  PS - P 21 -o content

#### option

-A Select all processes, identical to [-e]

-d Select all processes except session threads

-i pidlist 'OR'  
-p pidlist 'OR'  
-r pidlist

-s pidlist Select by session ID

-S Session ID Select by process ID

-t Session ID Select by process ID

-x  $\rightarrow$  To display process tree  
, PS -e i h

$\rightarrow$  PS - P 21 -o content

Group of process running  
sequentially or parallel  
is considered as job

Joblist

`jobs [ -l | -p | -s ] [ joblist ]`  
> jobs -X [ command [ arguments ] ]

options

-l list  
-p ps

↳ description

Kill command  
to kill any process  
`Kill [ signal or option ] pids`  
> Kill 9 or 11 terminate process  
of 10 498

Signal

`Kill [ signal or option ] pids`

-m info about changed jobs

-P put P, D of current jobs

-x display running jobs

-s display only stopped jobs

## Variables & its type

### Batch Parameters ↗

↳ Special Parameters

↳ Positional ↗

↳ Shell ↗

↳ Shell Variable  
↳ Local "

↳ Environment "

↳ Other Variables "

➢ to remove package including configuration file

aptitude → sudo apt-get purge ⟨package name⟩

➢ to search any package ↗

sudo apt-cache search ⟨Search term⟩

➢ outputting Expected

➢ env ↗

↳ known environment variables  
that are expected to present  
that you start in shell

↳ londa

➢ To check all available variable  
→ compgen ↗