

Experiment No:2

Aim: To perform various Linux Commands on Terminal

Theory:

1) man

NAME

man - an interface to the on-line reference manuals

SYNOPSIS

```
man [-C file] [-d] [-D] [--warnings[=warnings]] [-R encoding] [-L
locale] [-m system,...] [-M path] [-S list] [-e extension] [-i|-I]
[--regex|--wildcard] [--names-only] [-a] [-u] [--no-subpages] [-P
pager] [-r prompt] [-7] [-E encoding] [--no-hyphenation] [--no-justifi-
cation] [-p string] [-t] [-T[device]] [-H[browser]] [-X[dpi]] [-Z]
[[section] page ...] ...
man -k [apropos options] regexp ...
man -K [-w|-W] [-S list] [-i|-I] [--regex] [section] term ...
man -f [whatis options] page ...
man -l [-C file] [-d] [-D] [--warnings[=warnings]] [-R encoding] [-L
locale] [-P pager] [-r prompt] [-7] [-E encoding] [-p string] [-t]
[-T[device]] [-H[browser]] [-X[dpi]] [-Z] file ...
man -w|-W [-C file] [-d] [-D] page ...
man -c [-C file] [-d] [-D] page ...
man [-?V]
```

DESCRIPTION:

man is the system's manual pager. Each page argument given to man is normally the name of a program, utility or function. The manual page associated with each of these arguments is then found and displayed. A section, if provided, will direct man to look only in that section of the manual. The default action is to search in all of the available sections following a pre-defined order ("1 n l 8 3 2 3posix 3pm 3perl 5 4 9 6 7" by default, unless overridden by the SECTION directive in /etc/manpath.config), and to show only the first page found, even if page exists in several sections.

WITHOUT OPTIONS:

```
151070031@ltsp144:~$ man
What manual page do you want?
```

OPTIONS:

```
1) 151070031@ltsp144:~$ man -V
man 2.6.7.1
```

```

2) 151070031@ltsp144:~$ man -f grep
grep (1)                - print lines matching a pattern

3) 151070031@ltsp144:~/Desktop$ man --usage
Usage: man [-dDfKlWciIau7tZ?V] [-C FILE] [-R ENCODING] [-L
LOCALE]
                [-m SYSTEM] [-M PATH] [-S LIST] [-s LIST] [-e
EXTENSION]
                [-P PAGER] [-r STRING] [-E ENCODING] [-p STRING] [-
T[DEVICE]]
                [-H[BROWSER]] [-X[RESOLUTION]] [--config-file=FILE]
[--debug]
                [--default] [--warnings[=WARNINGS]] [--whatis] [--
apropos]
                [--global-apropos] [--local-file] [--where] [--path]
[--location]
                [--where-cat] [--location-cat] [--catman] [--
recode=ENCODING]
                [--locale=LOCALE] [--systems=SYSTEM] [--
manpath=PATH]
                [--sections=LIST] [--extension=EXTENSION] [--ignore-
case]
                [--match-case] [--regex] [--wildcard] [--names-only]
[--all]
                [--update] [--no-subpages] [--pager=PAGER] [--
prompt=STRING]
                [--ascii] [--encoding=ENCODING] [--no-hyphenation]
[--nh]
                [--no-justification] [--nj] [--preprocessor=STRING]
[--troff]
                [--troff-device[=DEVICE]] [--html[=BROWSER]]
                [--gxditview[=RESOLUTION]] [--ditroff] [--help] [--
usage]
                [--version] [SECTION] PAGE...

```

2)) grep

NAME

grep, egrep, fgrep, rgrep - print lines matching a pattern

SYNOPSIS

```

grep [OPTIONS] PATTERN [FILE...]
grep [OPTIONS] [-e PATTERN | -f FILE] [FILE...]

```

DESCRIPTION

grep searches the named input FILES (or standard input if no files are named, or if a single hyphen-minus (-) is given as file name) for lines containing a match to the given PATTERN. By default, grep prints the matching lines.

In addition, three variant programs `egrep`, `fgrep` and `rgrep` are available. `egrep` is the same as `grep -E`. `fgrep` is the same as `grep -F`. `rgrep` is the same as `grep -r`. Direct invocation as either `egrep` or `fgrep` is deprecated, but is provided to allow historical applications that rely on them to run unmodified.

Options:

1) `-x, --line-regexp`

Select only those matches that exactly match the whole line.
(`-x` is specified by POSIX.)

```
151070031@ltsp144:~/Desktop$ grep -x vjti ostlab2
vjti
```

2) `-i, --ignore-case`

Ignore case distinctions in both the PATTERN and the input files. (`-i` is specified by POSIX.)

```
151070031@ltsp144:~/Desktop$ grep -i SEMESTER ostlab2
semester
```

3) `-v, --invert-match`

Invert the sense of matching, to select non-matching lines. (`-v` is specified by POSIX.)

```
151070031@ltsp144:~/Desktop$ grep -v vjti ostlab2
Hello Students
Good morning
students
subjects
college
semester
```

3) sort

NAME

`sort` - sort lines of text files

SYNOPSIS

```
sort [OPTION]... [FILE]...
sort [OPTION]... --files0-from=F
```

DESCRIPTION

Write sorted concatenation of all FILE(s) to standard output.

OPTIONS:

1) `-d, --dictionary-order`

consider only blanks and alphanumeric characters

```
151070031@ltsp122:~/Desktop$ sort -d lab
ABCD
HELLO
```

LAB
TUSHAR

2)-b, --ignore-leading-blanks ignore leading blanks

```
151070031@ltsp122:~/Desktop$ sort -b lab
ABCD
HELLO
LAB
TUSHAR
```

3) -r, --reverse : reverse the result of comparisons

```
151070031@ltsp122:~/Desktop$ sort -r lab
TUSHAR
LAB
HELLO
ABCD
```

4) ps

NAME

ps - report a snapshot of the current processes.

SYNOPSIS

ps [options]

DESCRIPTION

ps displays information about a selection of the active processes. If you want a repetitive update of the selection and the

displayed information, use top(1) instead.

OPTIONS:

1) -e

print each and every process.

```
151070031@ltsp122:~/Desktop$ ps-e
```

PID	TTY	TIME	CMD
1	?	00:00:01	init
2	?	00:00:00	kthreadd
3	?	00:00:06	ksoftirqd/0
5	?	00:00:00	kworker/0:0H
7	?	00:00:00	rcu_sched
8	?	00:00:00	rcu_bh
9	?	00:00:00	migration/0
10	?	00:00:00	watchdog/0
11	?	00:00:00	watchdog/1
12	?	00:00:00	migration/1

.....

2) -ejH

To print a process tree.

```
151070031@ltsp122:~/Desktop$ ps-ejH
```

PID	PGID	SID	TTY	TIME	CMD
2	0	0	?	00:00:00	kthreadd
3	0	0	?	00:00:06	ksoftirqd/0

5	0	0 ?	00:00:00	kworker/0:0H
7	0	0 ?	00:00:00	rcu_sched
8	0	0 ?	00:00:00	rcu_bh
9	0	0 ?	00:00:00	migration/0
10	0	0 ?	00:00:00	watchdog/0
11	0	0 ?	00:00:00	watchdog/1
12	0	0 ?	00:00:00	migration/1
13	0	0 ?	00:00:05	ksoftirqd/1
14	0	0 ?	00:00:00	kworker/1:0

3) --width n

Set screen width.

```
151070031@ltspl22:~/Desktop$ ps --width 50
  PID TTY          TIME CMD
 2487 pts/5      00:00:00 bash
 3078 pts/5      00:00:00 ps
```

5) kill

NAME

kill - send a signal to a process

SYNOPSIS\\

kill [options] <pid> [...]\\

DESCRIPTION

The default signal for kill is TERM. Use -l or -L to list available signals. Particularly useful signals include HUP, INT, KILL, STOP, CONT, and 0. Alternate signals may be specified in three ways: -9, -SIGKILL or -KILL. Negative PID values may be used to choose whole process groups; see the PGID column in ps command output. A PID of -1 is special; it indicates all processes except the kill process itself and init

Without Options

```
151070031@ltspl55:~ killkill: usage: kill [-s sigspec | -n signum | -sigspec] pid | jobspec ... or
kill -l [sigspec]\\
```

\\vspace{5mm}

Options

kill -9 -1 : Kill all processes you can kill

kill -l 11 : Translate number 11 into a signal name

kill -L : List the available signal choices in a nice table

kill 123 543 2341 3453 : Send the default signal, SIGTERM, to all those processes

6) du

NAME :

du - estimate file space usage

SYNOPSIS :

du [OPTION]... [FILE]...

du [OPTION]... --files0-from=F

DESCRIPTION :

Summarize disk usage of each FILE, recursively for directories.

WITHOUT OPTIONS:

```
151070031@ltsp219:~$ du
32    ./xvc/obj/Debug
36    ./xvc/obj
36    ./xvc/bin/Debug
40    ./xvc/bin
92    ./xvc
8     ./dftb/obj/Debug
12    ./dftb/obj
12    ./dftb/bin/Debug
16    ./dftb/bin
48    ./dftb
4     ./Music
4     ./Pictures
176   ./Desktop
4     ./mozilla/firefox/igfwxkjb.default/minidumps
8     ./mozilla/firefox/igfwxkjb.default/webapps
4     ./mozilla/firefox/igfwxkjb.default/healthreport
20    ./mozilla/firefox/igfwxkjb.default/bookmarkbackups
4     ./mozilla/firefox/igfwxkjb.default/extensions/trash
```

OPTIONS:

1) **--version** : output version information and exit

```
151070031@ltsp219:~$ du --version
```

```
du (GNU coreutils) 8.21
```

```
Copyright (C) 2013 Free Software Foundation, Inc.
```

```
License GPLv3+: GNU GPL version 3 or later
```

```
<http://gnu.org/licenses/gpl.html>.
```

```
This is free software: you are free to change and redistribute
it.
```

```
There is NO WARRANTY, to the extent permitted by law.
```

2) **--time**: show time of the last modification of any file in the directory,
or any of its subdirectories

```
151070031@ltsp219:~/Desktop$ du --time
```

```
176   2017-01-16 08:28    .
```

3) -s, --summarize : display only a total for each argument

```
151070031@ltsp219:~/Desktop$ du -s
176 .
```

7) top

NAME :

top - display Linux processes

SYNOPSIS :

top -hv|-bcHiOSs -d secs -n max -u|U user -p pid -o fld -w [cols]

The traditional switches '-' and whitespace are optional.

DESCRIPTION :

The top program provides a dynamic real-time view of a running system. It can display system summary information as well as a list of processes or threads currently being managed by the Linux kernel. The types of system summary information shown and the types, order and size of information displayed for processes are all user configurable and that configuration can be made persistent across restarts.

WITHOUT OPTIONS :

```
151070031@ltsp219:~/Desktop$ top
```

```
top - 08:40:03 up 14 min,  1 user,  load average: 0.33, 0.21, 0.15
```

```
Tasks: 168 total,   2 running, 166 sleeping,   0 stopped,   0 zombie
```

```
%Cpu(s):  0.8 us,   0.3 sy,   0.0 ni, 98.8 id,   0.0 wa,   0.0 hi, 0.0 si,   0.0 st
```

```
KiB Mem:   4052956 total,  1079988 used,  2972968 free,   114072 buffers
```

```
KiB Swap:           0 total,           0 used,           0 free.  552804 cached Mem
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM
1361	root	19	-1	146860	38100	31052	S	2.7	0.9
0:15.56 Xorg									
2641	1510700+	20	0	152724	18748	12256	S	2.3	0.5
0:11.89 gnome-term+									
1986	1510700+	20	0	348140	78708	28436	S	0.7	1.9
0:13.11 compiz									
1	root	20	0	4316	2356	1424	S	0.0	0.1
0:00.92 init									
2	root	20	0	0	0	0	S	0.0	0.0
0:00.00 kthreadd									

```

    3 root      20   0      0      0      0 S    0.0  0.0
0:00.03 ksoftirqd/0
    5 root       0 -20      0      0      0 S    0.0  0.0
0:00.00 kworker/0:++
    7 root      20   0      0      0      0 S    0.0  0.0
0:00.32 rcu_sched
    8 root      20   0      0      0      0 S    0.0  0.0
0:00.00 rcu_bh
    9 root      rt    0      0      0      0 S    0.0  0.0
0:00.00 migration/0
   10 root      rt    0      0      0      0 S    0.0  0.0
0:00.00 watchdog/0
   11 root      rt    0      0      0      0 S    0.0  0.0
0:00.00 watchdog/1
   12 root      rt    0      0      0      0 S    0.0  0.0
0:00.03 migration/1
   13 root      20   0      0      0      0 S    0.0  0.0
0:00.02 ksoftirqd/1
   14 root      20   0      0      0      0 S    0.0  0.0
0:00.00 kworker/1:0
   15 root       0 -20      0      0      0 S    0.0  0.0
0:00.00 kworker/1:++
   16 root      rt    0      0      0      0 S    0.0  0.0
0:00.00 watchdog/2

```

OPTIONS:

1) **-h|-v** :Help/Version : Show library version and the usage prompt, then quit.

```
151070031@ltsp219:~/Desktop$ top -h
```

```
procs-ng version 3.3.9
```

Usage:

```
top -hv | -bcHiOSs -d secs -n max -u|U user -p pid(s) -o field
-w [cols]
```

2) **-n** :Number-of-iterations limit as: **-n** number

Specifies the maximum number of iterations, or frames, top should produce before ending.

```
151070031@ltsp219:~/Desktop$ top -n 2
```

```
top - 08:44:22 up 19 min,  1 user,  load average: 0.01, 0.11, 0.13
```

```
Tasks: 167 total,   1 running, 166 sleeping,   0 stopped,   0 zombie
```

```
%Cpu(s):  0.3 us,  1.6 sy,  0.0 ni, 98.1 id,  0.0 wa,  0.0 hi,  0.0 si,  0.0 st
```

```
KiB Mem:  4052956 total, 1071416 used, 2981540 free,  114072 buffers
```

```
KiB Swap:         0 total,         0 used,         0 free. 542344 cached Mem
```


PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM
1361	root	19	-1	147024	38132	31076	S	5.0	0.9
0:19.17	Xorg								
2641	1510700+	20	0	152664	18724	12260	S	1.3	0.5
0:14.59	gnome-term+								
1986	1510700+	20	0	347948	78372	28436	S	0.7	1.9
0:15.47	compiz								
3030	1510700+	20	0	5424	1392	1012	R	0.3	0.0
0:00.01	top								
1	root	20	0	4316	2356	1424	S	0.0	0.1
0:00.92	init								
2	root	20	0	0	0	0	S	0.0	0.0
0:00.00	kthreadd								
3	root	20	0	0	0	0	S	0.0	0.0
0:00.04	ksoftirqd/0								
5	root	0	-20	0	0	0	S	0.0	0.0
0:00.00	kworker/0:+								
7	root	20	0	0	0	0	S	0.0	0.0
0:00.39	rcu_sched								
8	root	20	0	0	0	0	S	0.0	0.0
0:00.00	rcu_bh								
9	root	rt	0	0	0	0	S	0.0	0.0
0:00.00	migration/0								
10	root	rt	0	0	0	0	S	0.0	0.0
0:00.00	watchdog/0								
11	root	rt	0	0	0	0	S	0.0	0.0
0:00.00	watchdog/1								
12	root	rt	0	0	0	0	S	0.0	0.0
0:00.03	migration/1								
13	root	20	0	0	0	0	S	0.0	0.0
0:00.03	ksoftirqd/1								
14	root	20	0	0	0	0	S	0.0	0.0
0:00.00	kworker/1:0								
15	root	0	-20	0	0	0	S	0.0	0.0
0:00.00	kworker/1:+								

8) ssh

NAME :

ssh — OpenSSH SSH client (remote login program)

SYNOPSIS :

```
ssh [-1246AaCfGKkMnqsTtVvXxYy] [-b bind_address] [-c cipher_spec]
    [-D [bind_address:]port] [-E log_file] [-e escape_char]
    [-F configfile] [-I pkcs11] [-i identity_file]
    [-L [bind_address:]port:host:hostport] [-l login_name] [-m mac_spec]
    [-O ctl_cmd] [-o option] [-p port]
    [-Q cipher | cipher-auth | mac | kex | key]
    [-R [bind_address:]port:host:hostport] [-S ctl_path] [-W host:port]
    [-w local_tun[:remote_tun]] [user@]hostname [command]
```

DESCRIPTION :

ssh (SSH client) is a program for logging into a remote machine and for executing commands on a remote machine. It is intended to replace rlogin and rsh, and provide secure encrypted communications between two untrusted hosts over an insecure network. X11 connections and arbitrary TCP ports can also be forwarded over the secure channel.

Options:

1) -V Display the version number and exit.

```
151070031@ltsp219:~/Desktop$ ssh -V
```

```
OpenSSH_6.6.1p1 Ubuntu-2ubuntu2, OpenSSL 1.0.1f 6 Jan 2014
```

9) tail

NAME

tail - output the last part of files

SYNOPSIS

tail [OPTION]... [FILE]...

DESCRIPTION

Print the last 10 lines of each FILE to standard output. With more than one FILE, precede each with a header giving the file name. With no FILE, or when FILE is -, read standard input.

WITHOUT OPTIONS:

```
151070031@ltsp219:~/Desktop$ tail GradianceDiscent.m
h=x*theta
alpha=0.01
j=ones(1500,1)
for i=1:1500
temp1=theta(1,1)-alpha*(x*theta-y).*x(:,1)
temp2=theta(2,1)-alpha*(x*theta-y).*x(:,2)
theta=[temp1;temp2]
j(i,1)=sum(power(x*theta-y,2))/(2*size(x,1))
end
theta
```

OPTIONS:

1) -c, --bytes=K : output the last K bytes; alternatively, use -c +K to output bytes starting with the Kth of each file

```
151070031@ltsp219:~/Desktop$ tail -c 15 ostlab2
lege
semester
```

2) -n, --lines : output the last K lines, instead of the last 10; or use -n +K to output lines starting with the Kth

```
151070031@ltsp219:~/Desktop$ tail -n 3 GradianceDiscent.m
```

```
vjti  
college  
semester
```

3) --version

output version information and exit

```
151070031@ltsp219:~/Desktop$ tail --version  
tail (GNU coreutils) 8.21  
Copyright (C) 2013 Free Software Foundation, Inc.  
License GPLv3+: GNU GPL version 3 or later  
<http://gnu.org/licenses/gpl.html>.  
This is free software: you are free to change and redistribute  
it.  
There is NO WARRANTY, to the extent permitted by law.
```

10) ip

NAME

ip - show / manipulate routing, devices, policy routing and tunnels

SYNOPSIS

```
ip [ OPTIONS ] OBJECT { COMMAND | help }  
ip [ -force ] -batch filename  
OBJECT := { link | addr | addrlabel | route | rule | neigh | ntable |  
tunnel | tuntap | maddr | mroute | mrule | monitor | xfrm |  
netns | l2tp | tcp_metrics }  
  
OPTIONS := { -V[ersion] | -s[tatistics] | -r[esolve] | -f[amily] { inet  
| inet6 | ipx | dnet | link } | -o[nline] }
```

OPTIONS :

1) -V, -Version

Print the version of the ip utility and exit.

```
151070031@ltsp219:~/Desktop$ ip -V  
ip utility, iproute2-ss131122
```

11) ifconfig

NAME

ifconfig - configure a network interface

SYNOPSIS

```
ifconfig [-v] [-a] [-s] [interface]  
ifconfig [-v] interface [atype] options | address ...
```

DESCRIPTION

Ifconfig is used to configure the kernel-resident network interfaces.

It is used at boot time to set up interfaces as necessary. After that, it is usually only needed when debugging or when system tuning is needed.

WITHOUT OPTIONS:

```
/sbin/ifconfig
eth0      Link encap:Ethernet  HWaddr c0:3f:d5:fe:49:56
          inet addr:172.18.39.238  Bcast:172.18.39.255
          Mask:255.255.255.0
          inet6 addr: fe80::c23f:d5ff:fefe:4956/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:116342 errors:0 dropped:29 overruns:0 frame:0
          TX packets:42415 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:123861972 (123.8 MB)  TX bytes:6928727 (6.9 MB)

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          inet6 addr: ::1/128 Scope:Host
          UP LOOPBACK RUNNING  MTU:65536  Metric:1
          RX packets:93 errors:0 dropped:0 overruns:0 frame:0
          TX packets:93 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:0
          RX bytes:7103 (7.1 KB)  TX bytes:7103 (7.1 KB)
```

OPTIONS:

```
/sbin/ifconfig -V
          net-tools 1.60
          ifconfig 1.42 (2001-04-13)
```

12) touch

NAME

touch - change file timestamps

SYNOPSIS

touch [OPTION]... FILE...

DESCRIPTION

Update the access and modification times of each FILE to the current time.

A FILE argument that does not exist is created empty, unless -c or -h is supplied.

A FILE argument string of - is handled specially and causes touch to change the times of the file associated with standard output.

WITHOUT OPTIONS:

```
151070031@ltsp219:~/Desktop$ touch ostlab2
151070031@ltsp219:~/Desktop$
```

OPTIONS:

1) -c, --no-create

do not create any files

```
151070031@ltsp219:~/Desktop$ touch -c ostlab2
```

2) -d, --date=STRING

parse STRING and use it instead of current time

```
151070031@ltsp219:~/Desktop$ touch -d "2016-09-22" ostlab2
```

```
151070031@ltsp219:~/Desktop$ touch -c
```

13) find

NAME

find - search for files in a directory hierarchy

SYNOPSIS

```
find [-H] [-L] [-P] [-D debugopts] [-Olevel] [path...] [expression]
```

DESCRIPTION

This manual page documents the GNU version of find. GNU find searches the directory tree rooted at each given file name by evaluating the given expression

from left to right, according to the rules of precedence (see section OPERATORS), until the outcome is known (the left hand side is false for and operations, true for or), at which point find moves on to the next file name.

WITHOUT OPTIONS:

```
151070031@ltsp122:~/$ find Desktop
Desktop
Desktop/GradianceDiscent.m
Desktop/ost2.1
Desktop/ost2.1~
Desktop/A.txt~
Desktop/ABC.txt
Desktop/B.txt~
```

OPTIONS:

1) -depth : Process each directory's contents before the directory itself.

The -delete action also implies -depth.

```
151070031@ltsp219:~/Desktop$ find -depth
./tushar print
./ostlab2
./mysql 1 ~
./main.odt
./ostlab2~
./fds lab 2
./final
./main.cpp
./ost lab 1.odt
./mysql 1
.
```

2) -maxdepth levels

Descend at most levels (a non-negative integer) levels of directories below the command line arguments. -maxdepth 0 means only apply the tests and actions to the command line arguments.

```
151070031@ltsp219:~$ find -maxdepth 2
```

```
.  
./xvc  
./xvc/xvc.cbp  
./xvc/obj  
./xvc/main.cpp  
./xvc/bin  
./dftb  
./dftb/dftb.cbp  
./dftb/obj  
./dftb/dftb.layout  
./dftb/main.c  
./dftb/dftb.depend  
./dftb/bin  
./bash_history  
./Music  
./xsession-errors  
./Pictures  
./Desktop
```

14) ln

NAME

ln - make links between files

SYNOPSIS

```
ln [OPTION]... [-T] TARGET LINK_NAME (1st form)  
ln [OPTION]... TARGET (2nd form)  
ln [OPTION]... TARGET... DIRECTORY (3rd form)  
ln [OPTION]... -t DIRECTORY TARGET... (4th form)
```

DESCRIPTION

In the 1st form, create a link to TARGET with the name LINK_NAME. In the 2nd form, create a link to TARGET in the current directory. In the 3rd and 4th forms, create links to each TARGET in DIRECTORY. Create hard links by default, symbolic links with --symbolic. By default, each destination (name of new link) should not already exist. When creating hard links, each TARGET must exist. Symbolic links can hold arbitrary text; if later resolved, a relative link is interpreted in relation to its parent directory.

OPTIONS:

1) --version : output version information and exit

```
151070031@ltsp219:~/Desktop$ ln --version  
ln (GNU coreutils) 8.21
```

15) service

NAME

service - run a System V init script

SYNOPSIS

```
service SCRIPT COMMAND [OPTIONS]
service --status-all
service --help | -h | --version
```

DESCRIPTION

service runs a System V init script or upstart job in as predictable an environment as possible, removing most environment variables and with the current working directory set to /.

The **SCRIPT** parameter specifies a System V init script, located in /etc/init.d/SCRIPT, or the name of an upstart job in /etc/init.

WITHOUT OPTIONS:

```
151070031@ltsp219:~/Desktop$ service
Usage: service < option > | --status-all | [ service_name [
command | --full-restart ]
(NO OPTIONS AVAILABLE)
```

OPTIONS:

1)—status-all:

Gives the status of all running services.

```
service --status-all
[ + ] acpid
[ - ] anacron
[ - ] apparmor
[ ? ] apport
[ + ] avahi-daemon
[ ? ] binfmt-support
[ + ] bluetooth
[ - ] brltty
[ ? ] console-setup
[ - ] cron
[ + ] cups
[ + ] cups-browsed
[ - ] dbus
[ ? ] dns-clean
[ - ] friendly-recovery
```

2)—help:

```
service --help
Usage: service < option > | --status-all | [ service_name [ command |
--full-restart ] ]
151070031@ltsp238:~$ service --version
```

service ver. 0.91-ubuntu1

16) diff

NAME

diff - compare files line by line

SYNOPSIS

diff [OPTION]... FILES

DESCRIPTION

Compare FILES line by line

Mandatory arguments to long options are mandatory for short options too.

OPTIONS :

1) -s, --report-identical-files

report when two files are the same

```
151070031@ltsp219:~/Desktop$ diff -s ostlab2 ostlab22
```

```
2,4c2
```

```
< Good morning
```

```
< students
```

```
< subjects
```

```
---
```

```
> Good Evening
```

```
6,7c4
```

```
< college
```

```
< semester
```

```
---
```

```
> Hello World
```

2) --version

```
151070031@ltsp238:~$ diff --version
```

```
diff (GNU diffutils) 3.3
```

```
Copyright (C) 2013 Free Software Foundation, Inc.
```

```
License GPLv3+: GNU GPL version 3 or later
```

```
<http://gnu.org/licenses/gpl.html>.
```

```
This is free software: you are free to change and redistribute it.
```

```
There is NO WARRANTY, to the extent permitted by law.
```

Written by Paul Eggert, Mike Haertel, David Hayes,
Richard Stallman, and Len Tower.

<

WITHOUT OPTIONS:

```
151070031@ltsp219:~$ diff B.txt Desktop/A.txt
```

```
1,47c1,97
```


< 2104,3,399900
< 1600,3,329900
< 2400,3,369000
< 1416,2,232000
< 3000,4,539900
< 1985,4,299900
< 1534,3,314900
< 1427,3,198999
< 1380,3,212000
< 1494,3,242500
< 1940,4,239999
< 2000,3,347000
< 1890,3,329999
< 4478,5,699900
< 1268,3,259900
< 2300,4,449900
< 1320,2,299900
< 1236,3,199900
< 2609,4,499998
< 3031,4,599000
< 1767,3,252900
< 1888,2,255000
< 1604,3,242900
< 1962,4,259900
< 3890,3,573900
< 1100,3,249900
< 1458,3,464500
< 2526,3,469000
< 2200,3,475000
< 2637,3,299900
< 1839,2,349900
< 1000,1,169900
< 2040,4,314900
< 3137,3,579900
< 1811,4,285900
< 1437,3,249900
< 1239,3,229900
< 2132,4,345000
< 4215,4,549000
< 2162,4,287000
< 1664,2,368500
< 2238,3,329900
< 2567,4,314000
< 1200,3,299000
< 852,2,179900
< 1852,4,299900
< 1203,3,239500

> 6.1101,17.592
> 5.5277,9.1302
> 8.5186,13.662
> 7.0032,11.854

> 5.8598,6.8233
> 8.3829,11.886
> 7.4764,4.3483
> 8.5781,12
> 6.4862,6.5987
> 5.0546,3.8166
> 5.7107,3.2522
> 14.164,15.505
> 5.734,3.1551
> 8.4084,7.2258
> 5.6407,0.71618
> 5.3794,3.5129
> 6.3654,5.3048
> 5.1301,0.56077
> 6.4296,3.6518
> 7.0708,5.3893
> 6.1891,3.1386
> 20.27,21.767
> 5.4901,4.263
> 6.3261,5.1875
> 5.5649,3.0825
> 18.945,22.638
> 12.828,13.501
> 10.957,7.0467
> 13.176,14.692
> 22.203,24.147
> 5.2524,-1.22
> 6.5894,5.9966
> 9.2482,12.134
> 5.8918,1.8495
> 8.2111,6.5426
> 7.9334,4.5623
> 8.0959,4.1164
> 5.6063,3.3928
> 12.836,10.117
> 6.3534,5.4974
> 5.4069,0.55657
> 6.8825,3.9115
> 11.708,5.3854
> 5.7737,2.4406
> 7.8247,6.7318
> 7.0931,1.0463
> 5.0702,5.1337
> 5.8014,1.844
> 11.7,8.0043
> 5.5416,1.0179
> 7.5402,6.7504
> 5.3077,1.8396
> 7.4239,4.2885
> 7.6031,4.9981
> 6.3328,1.4233
> 6.3589,-1.4211

```
> 6.2742,2.4756
> 5.6397,4.6042
> 9.3102,3.9624
> 9.4536,5.4141
> 8.8254,5.1694
> 5.1793,-0.74279
> 21.279,17.929
> 14.908,12.054
> 18.959,17.054
> 7.2182,4.8852
> 8.2951,5.7442
> 10.236,7.7754
> 5.4994,1.0173
> 20.341,20.992
> 10.136,6.6799
> 7.3345,4.0259
> 6.0062,1.2784
> 7.2259,3.3411
> 5.0269,-2.6807
> 6.5479,0.29678
> 7.5386,3.8845
> 5.0365,5.7014
> 10.274,6.7526
> 5.1077,2.0576
> 5.7292,0.47953
> 5.1884,0.20421
> 6.3557,0.67861
> 9.7687,7.5435
> 6.5159,5.3436
> 8.5172,4.2415
> 9.1802,6.7981
> 6.002,0.92695
> 5.5204,0.152
> 5.0594,2.8214
> 5.7077,1.8451
> 7.6366,4.2959
> 5.8707,7.2029
> 5.3054,1.9869
> 8.2934,0.14454
> 13.394,9.0551
> 5.4369,0.61705
151070031@ltsp238:~$
```

Conclusion:

Thus, the various Linux commands were studied and executed with a terminal. Some of them could not be executed due to system constraints.