System calls :

fork() and exit() commands :

#include <unistd.h>

#include <stdio.h>

#include <stdlib.h>

#include <sys/types.h>

#include <unistd.h>

void main()

{

int pid;

printf("Welcome\n");

pid = fork();

if(pid == 0)

{

exit(1);

printf("child\n");

printf("%d\n",j);

}

else if(pid > 0)

{

printf("parent\n");

}

else if(pid < 0)

printf("Failure\n");

printf("let us start learning\n");

}

getpid(),getppid(),exec() and sleep() commands:

#include <unistd.h>

#include <stdio.h>

#include <stdlib.h>

#include <sys/types.h>

#include <unistd.h>

#include <sys/types.h>

#include <sys/wait.h>

void main()

{

int pid;

printf("Welcome\n");

pid = fork();

if(pid == 0)

{

printf("%d\n",j);

printf("child\n");

printf("%d\n%d\n",getpid(),getppid());

}

else if(pid > 0)

{

wait(&pid);

scanf("%d",&j);

printf("parent\n");

sleep(1);

printf("%d\n%d\n",getpid(),getppid());

}

else if(pid < 0)

printf("Failure\n");

execl("/bin/ls","/bin/ls",NULL);

printf("%d\n",j);

printf("let us start learning\n");

}

file commands :

#include <sys/types.h>

#include <sys/stat.h>

#include <fcntl.h>

#include<stdio.h>

#include<stdlib.h>

#include <unistd.h>

void main()

{

int sz;

int fd = open("w1.c", O\_RDONLY);

char \*c = (char \*) calloc(100, sizeof(char));

if(fd > -1)

{

printf("file is opened\n");

sz = read(fd, c, 100);

c[sz] = '\0';

printf("The contents are : % s\n", c);

if(close(fd) < 0)

printf("File is not closed\n");

else

printf("File is closed\n");

}

else

{

printf("file is not opened\n");

int fc = creat("w2.c",O\_RDONLY | O\_WRONLY);

if(fc > 0)

printf("The file is created\n");

else

printf("The file is not created\n");

fd = open("w2.c", O\_WRONLY);

sz = write(fd, "This is new file\n", strlen("This is new file\n"));

printf("written % d %d %d\n", fd, strlen("This is new file\n"), sz);

close(fd);

}

}

System commands :

1. cp :

185001034@osnpl-c35:~/Desktop$ cat > copy.txt

This is source file.....

^C

185001034@osnpl-c35:~/Desktop$ cp copy.txt dest.txt

185001034@osnpl-c35:~/Desktop$ cat dest.txt

This is source file.....

185001034@osnpl-c35:~/Desktop$ cp -p copy.txt dest1.txt

185001034@osnpl-c35:~/Desktop$ cat dest1.txt

This is source file.....

185001034@osnpl-c35:~/Desktop$ cat > copy1.txt

this is new source file...

^C

185001034@osnpl-c35:~/Desktop$ cp -n copy1.txt dest.txt

185001034@osnpl-c35:~/Desktop$ cat dest.txt

This is source file.....

185001034@osnpl-c35:~/Desktop$ cp -s copy.txt dest2.txt

185001034@osnpl-c35:~/Desktop$ cat dest2.txt

This is source file.....

185001034@osnpl-c35:~/Desktop$ cp -u copy1.txt dest.txt

185001034@osnpl-c35:~/Desktop$ cat dest.txt

this is new source file...

2. mv

185001034@osnpl-c35:~$ cat > move.txt

This is source file to be moved......

^C

185001034@osnpl-c35:~$ mv move.txt dest.txt

185001034@osnpl-c35:~$ cat dest.txt

This is source file to be moved......

185001034@osnpl-c35:~$ cat move.txt

cat: move.txt: No such file or directory

amr@ubuntu:~/Desktop/OS$ mv -i src mv1/dest

mv: overwrite 'mv1/dest'? 1

amr@ubuntu:~/Desktop/OS$ mv -f src mv1/dest

amr@ubuntu:~/Desktop/OS$ cd mv1

amr@ubuntu:~/Desktop/OS/mv1$ cat dest

This is source!!

3. ls

amr@ubuntu:~/Desktop$ ls

OS Session1\_Recursion\_1034.zip session2\_bharath\_1034.zip

Session1\_Recursion\_1034 session2

amr@ubuntu:~/Desktop$ ls -l

total 20

drwxr-xr-x 3 amr amr 4096 Jan 12 08:32 OS

drwxr-xr-x 3 amr amr 4096 Jan 9 03:39 Session1\_Recursion\_1034

-rw-r--r-- 1 amr amr 3590 Jan 9 03:38 Session1\_Recursion\_1034.zip

drwxr-xr-x 3 amr amr 4096 Jan 9 09:35 session2

-rw-r--r-- 1 amr amr 2184 Jan 9 09:35 session2\_bharath\_1034.zip

amr@ubuntu:~/Desktop$ ls -a

. Session1\_Recursion\_1034 session2\_bharath\_1034.zip

.. Session1\_Recursion\_1034.zip

OS session2

amr@ubuntu:~/Desktop$ ls -ai

160420 . 161210 Session1\_Recursion\_1034 161234 session2\_bharath\_1034.zip

160383 .. 160803 Session1\_Recursion\_1034.zip

666635 OS 161357 session2

4. grep

amr@ubuntu:~/Desktop/OS/mv1$ grep '[aeiou]' dest

This is source!!

amr@ubuntu:~/Desktop/OS/mv1$ cat > new

ae

asu gip

^C

amr@ubuntu:~/Desktop/OS/mv1$ grep -w '[aeiou]\*' new

ae

amr@ubuntu:~/Desktop/OS/mv1$ grep -vw '[aeiou]\*' new

asu gip

amr@ubuntu:~/Desktop/OS/mv1$ grep -i '[aeiou]\*' new

ae

asu gip

5.chmod

amr@ubuntu:~/Desktop$ chmod -w -c new

mode of 'new' changed from 0644 (rw-r--r--) to 0444 (r—r--r--)

amr@ubuntu:~/Desktop$ chmod +x -v new

mode of 'new' changed from 0444 (r--r--r--) to 0555 (r-xr-xr-x)

6. cat

amr@ubuntu:~/Desktop/OS/mv1$ cat > doc

This is new document!!

^C

amr@ubuntu:~/Desktop/OS/mv1$ cat doc

This is new document!!

amr@ubuntu:~/Desktop/OS/mv1$ cat >> doc

add a line

^C

amr@ubuntu:~/Desktop/OS/mv1$ cat -n doc

1 This is new document!!

2 add a line

3

4 dis

5

6 ss

7

amr@ubuntu:~/Desktop/OS/mv1$ cat -b doc

1 This is new document!!

2 add a line

3 dis

4 ss

amr@ubuntu:~/Desktop/OS/mv1$ cat -E doc

This is new document!!$

add a line$

$

dis$

$

ss$

$

7. mkdir

amr@ubuntu:~/Desktop$ mkdir -m=r dir

amr@ubuntu:~/Desktop$ cd dir

bash: cd: dir: Permission denied

amr@ubuntu:~/Desktop$ mkdir dir1

amr@ubuntu:~/Desktop$ cd dir1

amr@ubuntu:~/Desktop/dir1$ mkdir -p parent

amr@ubuntu:~/Desktop$ mkdir -v newdir

mkdir: created directory 'newdir'

8. rm

amr@ubuntu:~/Desktop/OS/mv1$ rm -i new

rm: remove regular file 'new'? 1

amr@ubuntu:~/Desktop/OS/mv1$ rm doc

amr@ubuntu:~/Desktop/OS/mv1$ rm -v dest

removed 'dest'

amr@ubuntu:~/Desktop/OS$ rm -d mv1

9. rmdir

amr@ubuntu:~/Desktop$ rmdir -v OS

rmdir: removing directory, 'OS'

10. wc

amr@ubuntu:~/Desktop$ wc -c new

4 new

amr@ubuntu:~/Desktop$ wc -l new

1 new

amr@ubuntu:~/Desktop$ wc -m new

4 new

11. who

amr@ubuntu:~/Desktop$ who -a

system boot 2020-01-12 09:03

run-level 5 2020-01-12 09:03

amr ? :0 2020-01-12 09:04 ? 1504 (:0)

amr@ubuntu:~/Desktop$ who -b

system boot 2020-01-12 09:03

amr@ubuntu:~/Desktop$ who -H

NAME LINE TIME COMMENT

amr :0 2020-01-12 09:04 (:0)

amr@ubuntu:~/Desktop$ who -q

amr

# users=1

12. pipe

amr@ubuntu:~/Desktop$ ls | wc -w

9

amr@ubuntu:~/Desktop$ ls -l | wc -l

10

13. head,tail

amr@ubuntu:~/Desktop$ head -v newfile

==> newfile <==

AUTHOR

Written by David MacKenzie and Jim Meyering.

REPORTING BUGS

GNU coreutils online help: <https://www.gnu.org/software/coreutils/>

Report head translation bugs to <https://translationproject.org/team/>

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amr@ubuntu:~/Desktop$ head -n 5 newfile

AUTHOR

Written by David MacKenzie and Jim Meyering.

REPORTING BUGS

GNU coreutils online help: <<https://www.gnu.org/software/coreutils/>>

amr@ubuntu:~/Desktop$ tail -n 4 newfile

tail(1)

Full documentation at: <https://www.gnu.org/software/coreutils/head>

or available locally via: info '(coreutils) head invocation'

14. nl

amr@ubuntu:~/Desktop$ nl -bt newfile

1 AUTHOR

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3 REPORTING BUGS

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5 Report head translation bugs to <https://translationproject.org/team/>

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11 SEE ALSO

12 tail(1)

13 Full documentation at: <https://www.gnu.org/software/coreutils/head>

14 or available locally via: info '(coreutils) head invocation'

15. awk,sed

cs1057@splc38:~/Desktop/tutorial8$ cat file1.txt

hi this ssn

climate was so hot

unix is my fav sub

good day

--------------------------------------------------------------------------------

cs1057@splc38:~/Desktop/tutorial8$ sed 'a\ ' file1.txt

hi this ssn

climate was so hot

unix is my fav sub

good day

amr@ubuntu:~/Desktop$ seq 1 10 | sed -n '1!G;h;$p'

10

9

8

7

6

5

4

3

2

1

cs1034@splc37:~/Desktop/unix$ cat > new

hi

this is bharath

i am from cse-a

^C

cs1034@splc37:~/Desktop/unix$ awk 'END{print “The total number of lines : ”,NR}' new

The total number of lines : 3