

COMPUTER ARCHITECTURE AND OPERATING SYSTEMS

ASSIGNMENT - 0 PART-2

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Commands available in my shell are:

External Command:

- Ls
- Rm
- Mkdir
- Cat
- Date

Internal Command:

- History
- Cd
- Pwd
- Exit
- Echo

Assumptions one must keep in mind while using my shell:

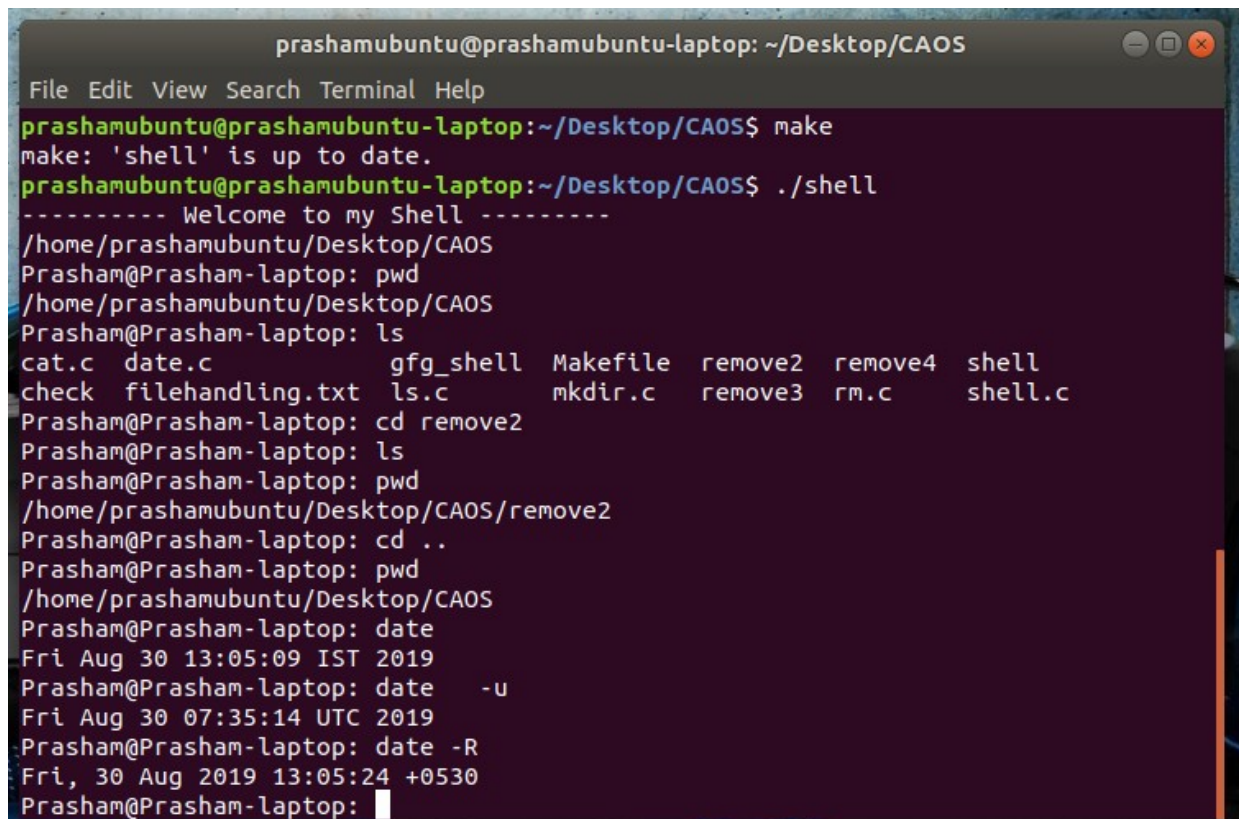
- Use only one option at a time for the commands provided below.
- Don't use tab to complete sentences.
- Follow the syntax provided below.
- Don't use spaces at the start of the command.
- Don't use any of the arrow keys.

My commands and its available options with Descriptions:

- **Ls:** Use this file to list contents in the directory of files and directories.
Syntax: ls [options]
 - -a: Use this option to list all files including all hidden files.
 - -l: This option is used to list files in long listing format.
- **Rm:** Use this command to remove file specified on the command line.
Syntax: rm [options] [filename]
 - -r: Use this command to delete directories and their contents.
 - -v: Use this command to delete in Verbose mode, which explains what is being currently done.
- **Mkdir:** Use this command to make directories.
Syntax: mkdir [options] [directory name]
 - -v: Use this to create the directory in verbose mode, explains what is being done.
 - -p: Use this to create parent directories and if the directory exists then no error is displayed.
- **Cat:** Use this to read data from the file and output its contents.
Syntax: cat [options] [Filename]
 - -e: This command displays "\$" at the end of every line.
 - -A: This command is combination of -vET, where it will display "^I" for every tab used, "\$" at the end of each line, use this "^" and M-notations.
- **Date:** Use this command to print or set date and time.
Syntax: date [options]
 - -u: Use this command to print date and time in Universal time format.
 - -R: Use this command to print current date and time in RFC 5322 format.
- **Echo:** Use this command to display a line of text in the command line.
Syntax: echo [option] [Text to be displayed]
 - *: Use this command to print all files and folders in the current working directory.
 - -E: Default echo mode.
- **History:** Use this to print the list of all commands entered in the shell.
Syntax: history [options]
 - -c: Use this command to clean the current history.

- **Cd:** Use this command to change directories. If you don't provide any name/ ".." then it will change the directory to the initial working directory. Syntax: cd [directory name or ".."], use ".." to go to the previous directory and to go to a certain directory use its name.
- **Pwd:** It prints the name of the current directories.
- **Exit:** Use this command to exit from shell.

Examples outputs:



```
prashamubuntu@prashamubuntu-laptop: ~/Desktop/CAOS
File Edit View Search Terminal Help
prashamubuntu@prashamubuntu-laptop:~/Desktop/CAOS$ make
make: 'shell' is up to date.
prashamubuntu@prashamubuntu-laptop:~/Desktop/CAOS$ ./shell
----- Welcome to my Shell -----
/home/prashamubuntu/Desktop/CAOS
Prasham@Prasham-laptop: pwd
/home/prashamubuntu/Desktop/CAOS
Prasham@Prasham-laptop: ls
cat.c  date.c          gfg_shell  Makefile  remove2  remove4  shell
check  filehandling.txt ls.c       mkdir.c   remove3  rm.c     shell.c
Prasham@Prasham-laptop: cd remove2
Prasham@Prasham-laptop: ls
Prasham@Prasham-laptop: pwd
/home/prashamubuntu/Desktop/CAOS/remove2
Prasham@Prasham-laptop: cd ..
Prasham@Prasham-laptop: pwd
/home/prashamubuntu/Desktop/CAOS
Prasham@Prasham-laptop: date
Fri Aug 30 13:05:09 IST 2019
Prasham@Prasham-laptop: date -u
Fri Aug 30 07:35:14 UTC 2019
Prasham@Prasham-laptop: date -R
Fri, 30 Aug 2019 13:05:24 +0530
Prasham@Prasham-laptop: 
```

```
prashamubuntu@prashamubuntu-laptop: ~/Desktop/CAOS
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prashamubuntu@prashamubuntu-laptop:~/Desktop/CAOS$ ./shell
----- Welcome to my Shell -----
/home/prashamubuntu/Desktop/CAOS
Prasham@Prasham-laptop: ls
cat.c  filehandling.txt  Makefile  remove3  shell
check  gfg_shell          mkdir.c   remove4  shell.c
date.c  ls.c               remove2   rm.c     tempfile
Prasham@Prasham-laptop: rm -v tempfile
rm: cannot remove 'tempfile': Is a directory
Prasham@Prasham-laptop: rm -r tempfile
Prasham@Prasham-laptop: ls
cat.c  date.c          gfg_shell  Makefile  remove2  remove4  shell
check  filehandling.txt  ls.c      mkdir.c   remove3  rm.c     shell.c
Prasham@Prasham-laptop: history
history
history
history
ls
ls
cat
cat
cat
```

```
prashamubuntu@prashamubuntu-laptop: ~/Desktop/CAOS
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prashamubuntu@prashamubuntu-laptop:~/Desktop/CAOS$ ./shell
----- Welcome to my Shell -----
/home/prashamubuntu/Desktop/CAOS
Prasham@Prasham-laptop: cat -e date.c
#include <unistd.h>$
$
int date(char c[10][100]){
    if(strcmp(c[1],"-u")==0){
        execl("/bin/date","date","-u",NULL);$
    }
    else if(strcmp(c[1],"-R")==0){
        execl("/bin/date","date","-R",NULL);$
    }
    else {
        execl("/bin/date","date",0,NULL);$
    }
}
Prasham@Prasham-laptop: █
```