OS ASSIGNMENT 1

CREATING Basic Linux/Unix Shell

ALL DEFINITIONS OF COMMANDS:

INTERNAL:

- cd (used for changing the working shell directory)
    - -P (use the physical directory structure without following symbolic links: resolve symbolic links in DIR before processing instances of '..')
    - -L (force symbolic links to be followed: resolve symbolic links in DIR after processing instances of '..')
    - --help
- pwd (Print the name of the current working directory.)
    - -L (print the value of $PWD if it names the current working Directory.)
    - -P (print the physical directory, without any symbolic links.)
    - --help
- echo (Used to display a text)
    - -n (it does not go to newline after printing the text)
    - -E (disables of backslash escapes)
    - --help
- exit (Used to terminate the shell)

EXTERNAL:

- ls (List information about the FILEs (the current directory by default).)
    - -l (use a long listing format)
    - -a (do not ignore entries starting with ".")
- cat (Concatenate FILE(s) to standard output. Or read standard input or file given)
    - -E (display $ at end of each line)
    - -T (display TAB characters as ^I)
- date (Display the current time in the given FORMAT, or set the system date.)
    - -u (print or set Coordinated Universal Time (UTC))
    - -R (output date and time in RFC 5322 format.)
- rm (Remove (unlink) the FILE(s).)
    - -d (remove empty directories)
    - -v (explain what is being done)
- mkdir (Create the DIRECTORY(ies), if they do not already exist.)
    - -v (print a message for each created directory)

- -m (set file mode, need to input file mode)

ERROR HANDLINGs DONE:

- Wrong command entered
- Directory existing while changing in cd
- Can't delete directories by default
- file not present
- handled flags and errors
- given right command after the main command such as for date -r is wrong but date -R is correct
- reading files is empty then error
- while creating directory entering right mode for creation
- if no output shown then error handle by assumption made the user input right thing
- many more….

TESTCASES:

- ls
- ls -l
- ls -a
- date
- date -u
- date -R
- cat (filename)
- cat filename1 filename2
- cat -E filename
- cat -T filename
- mkdir filename
- mkdir -v filename
- mkdir -m filename mode
- cd .
- cd directoryname
- cd ..
- cd -P path
- cd -L path
- cd --help
- rm filename
- rm -d directoryname
- rm -v filename
- pwd

- pwd -P
- pwd -L
- pwd –help
- echo text
- echo -n text
- echo -E text
- echo –help
- and many more extra
- exit