

UNIX SHELL PROGRAMMING

BASIC MANUAL

Files Included

1. myHelp.sh
2. fmc.sh
3. ssc.sh
4. tpc.sh
5. help.sh
6. l.sh*
7. el.sh*

**Additional files for animations*

INTRODUCTION

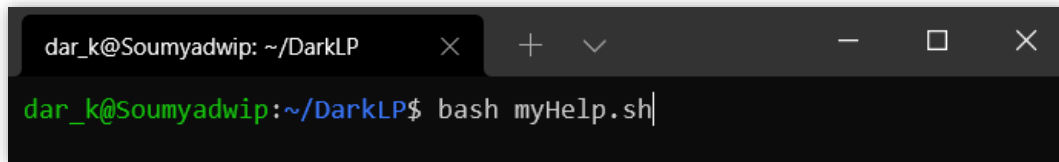
This UNIX shell program is a menu system for new user, which allows the user to use wild cards and also contains an error checking mechanism.

It has two modes, Expert and Novice.

LAUNCHING THE PROGRAM (*The UNIX help main menu*)

The menu system will be saved as a shell script: myHelp.sh

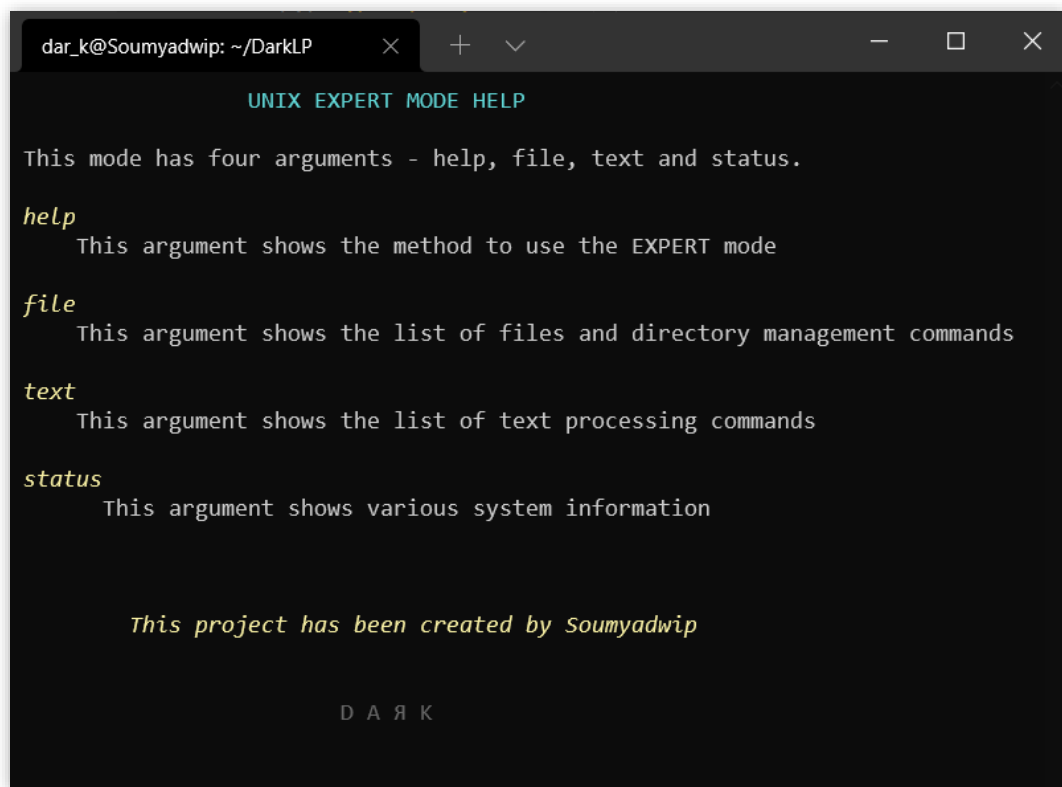
To launch the program, run the shell script with or without arguments.



```
dar_k@Soumyadwip: ~/DarkLP
dar_k@Soumyadwip:~/DarkLP$ bash myHelp.sh
```

With one Argument (Expert Mode)

1. help argument



```
dar_k@Soumyadwip: ~/DarkLP
UNIX EXPERT MODE HELP

This mode has four arguments - help, file, text and status.

help
  This argument shows the method to use the EXPERT mode

file
  This argument shows the list of files and directory management commands

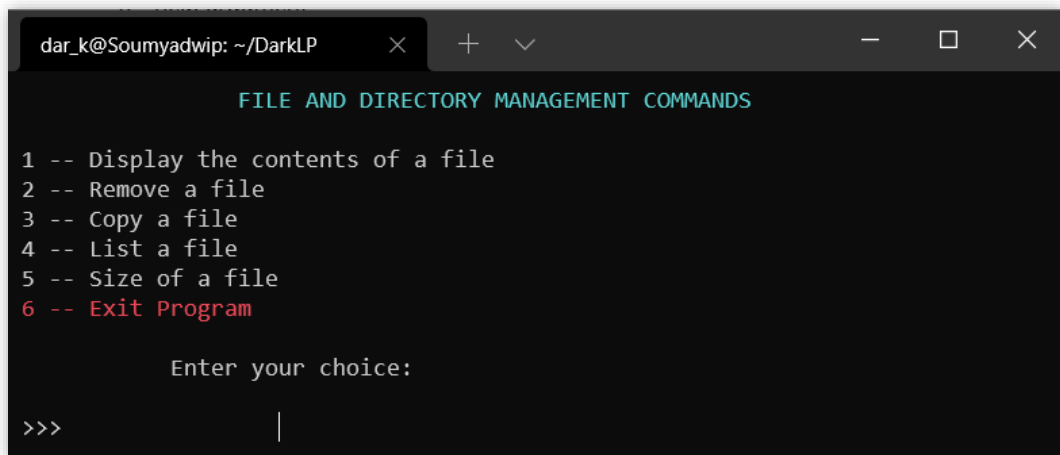
text
  This argument shows the list of text processing commands

status
  This argument shows various system information

  This project has been created by Soumyadwip

  D A R K
```

2. file argument



```
dar_k@Soumyadwip: ~/DarkLP
```

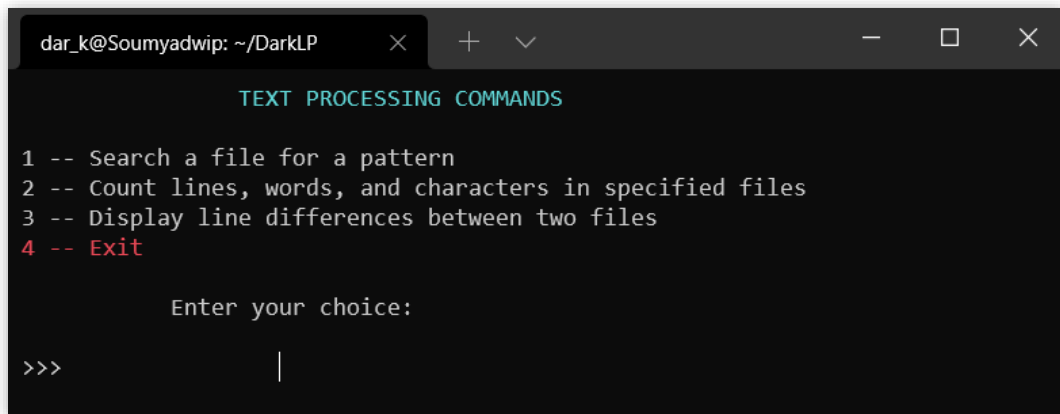
FILE AND DIRECTORY MANAGEMENT COMMANDS

- 1 -- Display the contents of a file
- 2 -- Remove a file
- 3 -- Copy a file
- 4 -- List a file
- 5 -- Size of a file
- 6 -- Exit Program

Enter your choice:

>>> |

3. text argument



```
dar_k@Soumyadwip: ~/DarkLP
```

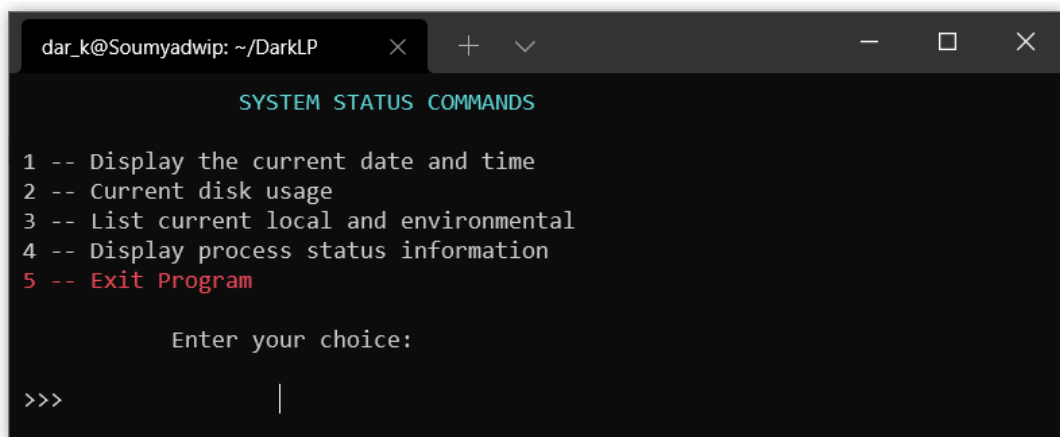
TEXT PROCESSING COMMANDS

- 1 -- Search a file for a pattern
- 2 -- Count lines, words, and characters in specified files
- 3 -- Display line differences between two files
- 4 -- Exit

Enter your choice:

>>> |

4. status argument



```
dar_k@Soumyadwip: ~/DarkLP
```

SYSTEM STATUS COMMANDS

- 1 -- Display the current date and time
- 2 -- Current disk usage
- 3 -- List current local and environmental
- 4 -- Display process status information
- 5 -- Exit Program

Enter your choice:

>>> |

Without Arguments (Novice Mode)

If there are no arguments, the user will be presented with the following menu on a cleared screen

```
dar_k@Soumyadwip: ~/DarkLP
UNIX HELP MAIN MENU

1 -- File and Directory Management Commands
2 -- Text Processing Commands
3 -- System Status Commands
4 -- Exit

Enter your choice:

>>> |
```

SUBMENUS (Novice Mode)

The File Management Commands Sub-menu

```
dar_k@Soumyadwip: ~/DarkLP
FILE AND DIRECTORY MANAGEMENT COMMANDS

1 -- Display the contents of a file
2 -- Remove a file
3 -- Copy a file
4 -- List a file
5 -- Size of a file
6 -- Quit -- Return to Main Menu

Enter your choice:

>>> |
```

```
dar_k@Soumyadwip: ~/DarkLP
FILE AND DIRECTORY MANAGEMENT COMMANDS

1 -- Display the contents of a file
2 -- Remove a file
3 -- Copy a file
4 -- List a file
5 -- Size of a file
6 -- Quit -- Return to Main Menu

Enter your choice:

>>> 7

Invalid choice - Try Again

Press enter to continue|
```

1. Displaying the contents of a file

```
dar_k@Soumyadwip: ~/DarkLP
FILE AND DIRECTORY MANAGEMENT COMMANDS

1 -- Display the contents of a file
2 -- Remove a file
3 -- Copy a file
4 -- List a file
5 -- Size of a file
6 -- Quit -- Return to Main Menu

Enter your choice:

>>> 1

Enter the address of the file to be displayed

>>> f1.txt

unix is great os. unix is opensource. unix is free os.
learn operating system.
Unix linux which one you choose.
uNix is easy to learn.unix is a multiuser os.Learn unix .unix is a powerful.

Press enter to continue|
```

```
dar_k@Soumyadwip: ~/DarkLP
FILE AND DIRECTORY MANAGEMENT COMMANDS

1 -- Display the contents of a file
2 -- Remove a file
3 -- Copy a file
4 -- List a file
5 -- Size of a file
6 -- Quit -- Return to Main Menu

Enter your choice:

>>> 1

Enter the address of the file to be displayed

>>> f.txt

File not found - Try Again

Press enter to continue|
```

2. Removing a file

```
dar_k@Soumyadwip: ~/DarkLP
FILE AND DIRECTORY MANAGEMENT COMMANDS

1 -- Display the contents of a file
2 -- Remove a file
3 -- Copy a file
4 -- List a file
5 -- Size of a file
6 -- Quit -- Return to Main Menu

Enter your choice:

>>> 2

Enter the address of the file to be deleted

>>> f3.txt

Removing

File successfully removed

Press enter to continue|
```

```
dar_k@Soumyadwip: ~/DarkLP
FILE AND DIRECTORY MANAGEMENT COMMANDS

1 -- Display the contents of a file
2 -- Remove a file
3 -- Copy a file
4 -- List a file
5 -- Size of a file
6 -- Quit -- Return to Main Menu

Enter your choice:

>>> 2

Enter the address of the file to be deleted

>>> f3.txt

File not found - Try Again

Press enter to continue|
```

3. Copying a file

```
dar_k@Soumyadwip: ~/DarkLP
```

```
FILE AND DIRECTORY MANAGEMENT COMMANDS
```

```
1 -- Display the contents of a file
2 -- Remove a file
3 -- Copy a file
4 -- List a file
5 -- Size of a file
6 -- Quit -- Return to Main Menu
```

```
Enter your choice:
```

```
>>> 3
```

```
Enter the address of the file to be copied
```

```
>>> f1.txt
```

```
Address of the destination file
```

```
>>> f4.txt
```

```
Copying
```

```
File successfully copied
```

```
Press enter to continue
```

```
dar_k@Soumyadwip: ~/DarkLP
```

FILE AND DIRECTORY MANAGEMENT COMMANDS

- 1 -- Display the contents of a file
- 2 -- Remove a file
- 3 -- Copy a file
- 4 -- List a file
- 5 -- Size of a file
- 6 -- Quit -- Return to Main Menu

Enter your choice:

```
>>> 3
```

Enter the address of the file to be copied

```
>>> f1.txt
```

Address of the destination file

```
>>> f3.txt
```

File not found - Try Again

Press enter to continue

4. Listing the files

```
dar_k@Soumyadwip: ~/DarkLP  ×  +  ∨  -  □  ×

FILE AND DIRECTORY MANAGEMENT COMMANDS

1 -- Display the contents of a file
2 -- Remove a file
3 -- Copy a file
4 -- List a file
5 -- Size of a file
6 -- Quit -- Return to Main Menu

Enter your choice:

>>> 4

Enter the address of the file

>>> f1.txt

-rw-r--r-- 1 dar_k dar_k 190 Jun  6 05:33 f1.txt

Press enter to continue|
```

```
dar_k@Soumyadwip: ~/DarkLP  ×  +  ∨  -  □  ×

FILE AND DIRECTORY MANAGEMENT COMMANDS

1 -- Display the contents of a file
2 -- Remove a file
3 -- Copy a file
4 -- List a file
5 -- Size of a file
6 -- Quit -- Return to Main Menu

Enter your choice:

>>> 4

Enter the address of the file

>>> f3.txt

File not found - Try Again

Press enter to continue|
```


5. Size of file (B = bytes)

```
dar_k@Soumyadwip: ~/DarkLP
FILE AND DIRECTORY MANAGEMENT COMMANDS

1 -- Display the contents of a file
2 -- Remove a file
3 -- Copy a file
4 -- List a file
5 -- Size of a file
6 -- Quit -- Return to Main Menu

Enter your choice:

>>> 5

Enter the address of the file

>>> f1.txt

190B

Press enter to continue|
```

```
dar_k@Soumyadwip: ~/DarkLP
FILE AND DIRECTORY MANAGEMENT COMMANDS

1 -- Display the contents of a file
2 -- Remove a file
3 -- Copy a file
4 -- List a file
5 -- Size of a file
6 -- Quit -- Return to Main Menu

Enter your choice:

>>> 5

Enter the address of the file

>>> f3.txt

File not found - Try Again

Press enter to continue|
```

The Text Processing Commands Sub-Menu

```
dar_k@Soumyadwip: ~/DarkLP  x + v - □ x

TEXT PROCESSING COMMANDS

1 -- Search a file for a pattern
2 -- Count lines, words, and characters in specified files
3 -- Display line differences between two files
4 -- Quit -- Return to Main Menu

Enter your choice:

>>> |
```

```
dar_k@Soumyadwip: ~/DarkLP  x + v - □ x

TEXT PROCESSING COMMANDS

1 -- Search a file for a pattern
2 -- Count lines, words, and characters in specified files
3 -- Display line differences between two files
4 -- Quit -- Return to Main Menu

Enter your choice:

>>> 5

Invalid choice - Try Again

Press enter to continue|
```

1. Searching for a pattern in a file

```
dar_k@Soumyadwip: ~/DarkLP
TEXT PROCESSING COMMANDS

1 -- Search a file for a pattern
2 -- Count lines, words, and characters in specified files
3 -- Display line differences between two files
4 -- Quit -- Return to Main Menu

Enter your choice:

>>> 1

Enter the address of the file

>>> f1.txt

Enter the pattern

>>> unix

unix is great os. unix is opensource. unix is free os.
uNix is easy to learn.unix is a multiuser os.Learn unix .unix is a powerful.

Press enter to continue|
```

```
dar_k@Soumyadwip: ~/DarkLP
TEXT PROCESSING COMMANDS

1 -- Search a file for a pattern
2 -- Count lines, words, and characters in specified files
3 -- Display line differences between two files
4 -- Quit -- Return to Main Menu

Enter your choice:

>>> 1

Enter the address of the file

>>> f1.txt

Enter the pattern

>>> 46

The entered pattern does not exist

Press enter to continue|
```

2. Count lines, words and characters in a file

```
dar_k@Soumyadwip: ~/DarkLP
TEXT PROCESSING COMMANDS
1 -- Search a file for a pattern
2 -- Count lines, words, and characters in specified files
3 -- Display line differences between two files
4 -- Quit -- Return to Main Menu

Enter your choice:

>>> 2

Enter the address of the file

>>> f1.txt
Lines in the file      4
Words in the file      34
Characters in the file 189

Press enter to continue|
```

```
dar_k@Soumyadwip: ~/DarkLP
TEXT PROCESSING COMMANDS
1 -- Search a file for a pattern
2 -- Count lines, words, and characters in specified files
3 -- Display line differences between two files
4 -- Quit -- Return to Main Menu

Enter your choice:

>>> 2

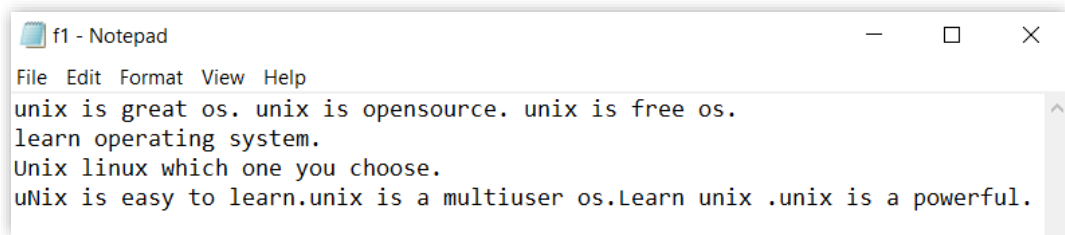
Enter the address of the file

>>> f3.txt

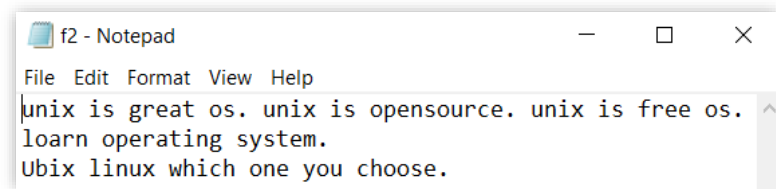
File not found - Try Again

Press enter to continue|
```

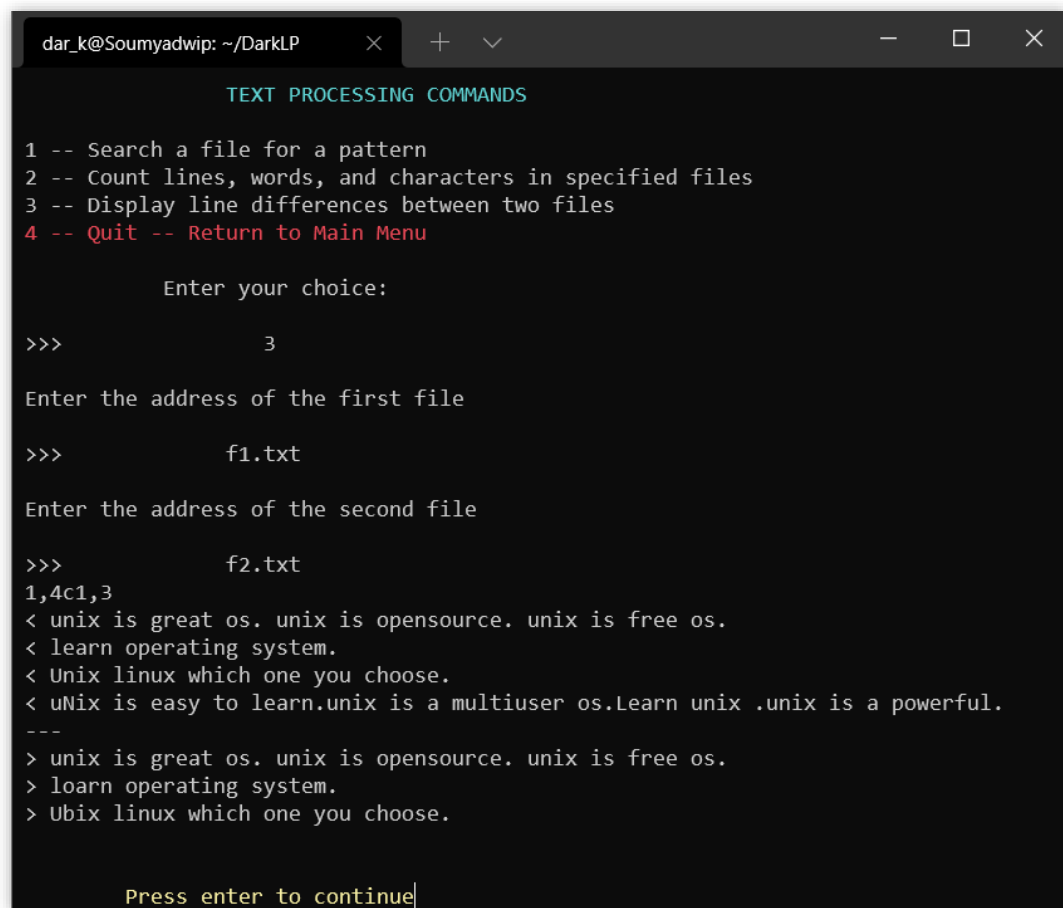
3. Display line differences



```
f1 - Notepad
File Edit Format View Help
unix is great os. unix is opensource. unix is free os.
learn operating system.
Unix linux which one you choose.
uNix is easy to learn.unix is a multiuser os.Learn unix .unix is a powerful.
```



```
f2 - Notepad
File Edit Format View Help
unix is great os. unix is opensource. unix is free os.
loarn operating system.
Ubix linux which one you choose.
```



```
dar_k@Soumyadwip: ~/DarkLP
TEXT PROCESSING COMMANDS
1 -- Search a file for a pattern
2 -- Count lines, words, and characters in specified files
3 -- Display line differences between two files
4 -- Quit -- Return to Main Menu

Enter your choice:
>>> 3

Enter the address of the first file
>>> f1.txt

Enter the address of the second file
>>> f2.txt
1,4c1,3
< unix is great os. unix is opensource. unix is free os.
< learn operating system.
< Unix linux which one you choose.
< uNix is easy to learn.unix is a multiuser os.Learn unix .unix is a powerful.
---
> unix is great os. unix is opensource. unix is free os.
> loarn operating system.
> Ubix linux which one you choose.

Press enter to continue|
```

The System Status Commands Sub-menu

```
dar_k@Soumyadwip: ~/DarkLP  ×  +  ∨  -  □  ×

SYSTEM STATUS COMMANDS

1 -- Display the current date and time
2 -- Current disk usage
3 -- List current local and environmental
4 -- Display process status information
5 -- Quit -- Return to Main Menu

Enter your choice:

>>> |
```

```
dar_k@Soumyadwip: ~/DarkLP  ×  +  ∨  -  □  ×

SYSTEM STATUS COMMANDS

1 -- Display the current date and time
2 -- Current disk usage
3 -- List current local and environmental
4 -- Display process status information
5 -- Quit -- Return to Main Menu

Enter your choice:

>>> 0

Invalid choice - Try Again

Press enter to continue|
```

1. Display the current date and time

```
dar_k@Soumyadwip: ~/DarkLP
SYSTEM STATUS COMMANDS

1 -- Display the current date and time
2 -- Current disk usage
3 -- List current local and environmental
4 -- Display process status information
5 -- Quit -- Return to Main Menu

Enter your choice:

>>> 1

DATE: 06/06/21
TIME: 19:23:28

Press enter to continue|
```

2. Current disk usage

```
dar_k@Soumyadwip: ~/DarkLP
SYSTEM STATUS COMMANDS

1 -- Display the current date and time
2 -- Current disk usage
3 -- List current local and environmental
4 -- Display process status information
5 -- Quit -- Return to Main Menu

Enter your choice:

>>> 2

Filesystem      Size  Used Avail Use% Mounted on
/dev/sdb        270G  1.9G  254G   1% /
tmpfs           3.3G    0  3.3G   0% /mnt/wsl
tools          512G  174G  338G  34% /init
none           3.3G    0  3.3G   0% /dev
none           3.3G  4.1k  3.3G   1% /run
none           3.3G    0  3.3G   0% /run/lock
none           3.3G    0  3.3G   0% /run/shm
none           3.3G    0  3.3G   0% /run/user
tmpfs           3.3G    0  3.3G   0% /sys/fs/cgroup
C:\             512G  174G  338G  34% /mnt/c

Press enter to continue|
```

3. List current local and environmental variables

```
dar_k@Soumyadwip: ~/DarkLP
SYSTEM STATUS COMMANDS

1 -- Display the current date and time
2 -- Current disk usage
3 -- List current local and environmental
4 -- Display process status information
5 -- Quit -- Return to Main Menu

Enter your choice:

>>> 3

BASH
BASHOPTS
BASHPID
BASH_ALIASES
BASH_ARGC
BASH_ARGV
BASH_ARGV0
BASH_CMDS
BASH_COMMAND
BASH_LINENO
BASH_SOURCE
BASH_SUBSHELL
BASH_VERSION
BICyan
BYellow
COLUMNS
COMP_WORDBREAKS
Color_Off
DIRSTACK
EPOCHREALTIME
EPOCHSECONDS
EUID
GROUPS
HISTCMD
HOME
HOSTNAME
HOSTTYPE
IFS
IGreen
```


4. Display process status information

```
dar_k@Soumyadwip: ~/DarkLP
SYSTEM STATUS COMMANDS
1 -- Display the current date and time
2 -- Current disk usage
3 -- List current local and environmental
4 -- Display process status information
5 -- Quit -- Return to Main Menu

Enter your choice:

>>> 4

PID TTY      TIME CMD
172 pts/1    00:00:00 bash
1696 pts/1   00:00:00 bash
1739 pts/1   00:00:00 bash
1745 pts/1   00:00:00 ps

Press enter to continue|
```

Exit:

```
dar_k@Soumyadwip: ~/DarkLP
UNIX HELP MAIN MENU
1 -- File and Directory Management Commands
2 -- Text Processing Commands
3 -- System Status Commands
4 -- Exit

Enter your choice:

>>> 4

Exiting

Have a nice day 😊

dar_k@Soumyadwip:~/DarkLP$ |
```

Note: All functions in Expert Mode are exactly same as the Novice Mode.

Exit Program option is available in each argument of Expert Mode.