

ITW-1 UNIX SHELL PROGRAMMING

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Files included:-

- myhelp_b.sh
- help_b.sh
- file_b.sh
- text_b.sh
- sys_b.sh
- load.sh *

(* additional file for animation)

This shell program is a menu system that allows users to use wild cards. This program has error checking mechanism.

It has 2 modes:-

- Expert mode
- Novice mode

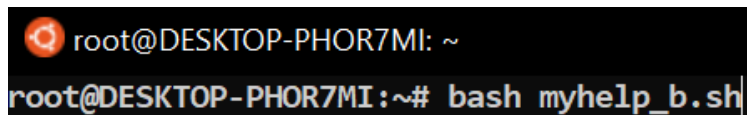
1.Launching the program

The UNIX help main menu

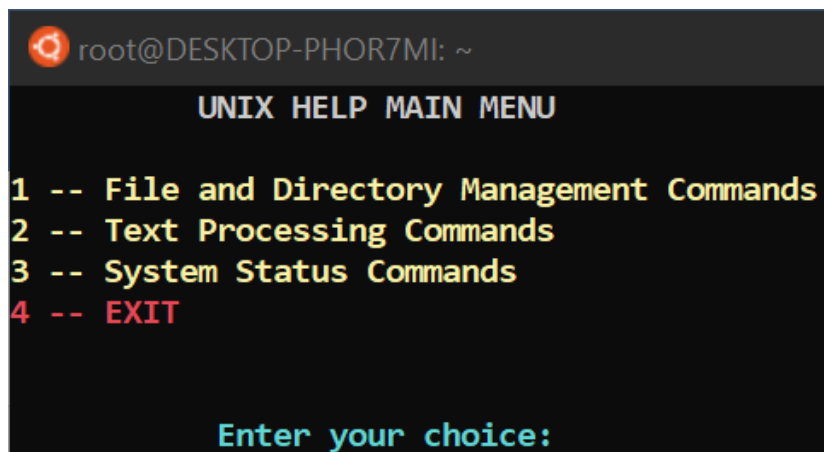
The menu system will be saved as a shell script: myhelp_b.sh

1. myhelp_b.sh without arguments

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



```
root@DESKTOP-PHOR7MI: ~  
root@DESKTOP-PHOR7MI:~# bash myhelp_b.sh
```



```
root@DESKTOP-PHOR7MI: ~  
UNIX HELP MAIN MENU  
  
1 -- File and Directory Management Commands  
2 -- Text Processing Commands  
3 -- System Status Commands  
4 -- EXIT  
  
Enter your choice:
```

2. myhelp_b.sh with one argument

The user may enter one argument with the command (considered the expert mode). That argument will be either:

- help
- file
- text
- status

If it is argument is help, you are to clear the screen and display a short message telling the user how to use your help command. Otherwise, your script is to display the appropriate sub-menu.

NOTE: The last item on each sub-menu is different based on whether help was started in the expert mode or not.

EXPERT MODE

myhelp_b.sh with one argument. (expert mode)

1. help argument

```
root@DESKTOP-PHOR7MI: ~  
  
          UNIX EXPERT MODE HELP  
  
This mode has four arguments - help, file, text and status.  
  
1 -- help : shows the method to use the EXPERT mode.  
2 -- file  : lists files and directory management commands like cat, rm, cp ,ls etc.  
3 -- text  : shows the list of text processing commands like grep, wc , diff , etc  
4 -- status : shows date, time, current disk usage, size, lists local and environmental, processes status info.  
  
Exit Program option is available in each argument's Expert Mode.  
  
THIS PROJECT HAS BEEN CREATED BY:- BHOOMIKA GOTHWAL  
  
O R E O
```

2. file argument

```
root@DESKTOP-PHOR7MI: ~  
  
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 the program  
Enter your choice: |
```

3. text argument

```
root@DESKTOP-PHOR7MI: ~  
  
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

```
root@DESKTOP-PHOR7MI: ~  
  
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:|
```

2.The File Management Commands Sub-menu

Novice mode

```
root@DESKTOP-PHOR7MI: ~  
  
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. Display the contents of a file

```
root@DESKTOP-PHOR7MI: ~  
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  
Name of file to be displayed:  
f.txt  
  
1 2 3 4  
2 3 4  
a b c  
x y z  
  
Press enter to continue
```

(if the file do not exist)

```
root@DESKTOP-PHOR7MI: ~  
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  
Name of file to be displayed:  
file.txt  
file.txt :NOT FOUND.  
  
Press enter to continue
```

2 . Remove a file

```
root@DESKTOP-PHOR7MI: ~  
  
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  
Name of file to be deleted:  
f.txt  
File Deleted.  
  
Press enter to continue
```

(after deletion of f.txt)

```
root@DESKTOP-PHOR7MI: ~  
  
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  
Name of file to be deleted:  
f.txt  
f.txt :NOT FOUND.  
  
Press enter to continue|
```

3. Copy a file

```
root@DESKTOP-PHOR7MI: ~  
  
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  
Name of the file to be copied:  
f1.txt  
Destination file where you want to copy:  
f2.txt  
  
copied successfully.  
  
Press enter to continue|
```

```
root@DESKTOP-PHOR7MI: ~  
  
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  
Name of the file to be copied:  
f1.txt  
Destination file where you want to copy:  
file.txt  
file.txt :NOT FOUND.  
  
Press enter to continue|
```


4. List a file

root@DESKTOP-PHOR7MI: ~

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 file name:

f1.txt

-rw-r--r-- 1 root root 31 Jun 6 18:40 f1.txt

Press enter to continue

root@DESKTOP-PHOR7MI: ~

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 file name:

file.txt

file.txt :

NOT FOUND.

Press enter to continue

5 . Size of a file

root@DESKTOP-PHOR7MI: ~

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 name of the file to get it's size:

f1.txt

31B

Press enter to continue

root@DESKTOP-PHOR7MI: ~

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 name of the file to get it's size:

file.txt

file.txt :NOT FOUND.

Press enter to continue

3.The Text Processing Commands Sub-menu

Novice Mode

root@DESKTOP-PHOR7MI: ~

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. Search a file for a pattern

```
root@DESKTOP-PHOR7MI: ~  
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  
Name of the file in which you want to find the pattern:  
f1.txt  
Type the pattern which you want to search:  
2  
1 2 3 4  
  
Press enter to continue
```

```
root@DESKTOP-PHOR7MI: ~  
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  
Name of the file in which you want to find the pattern:  
f1.txt  
Type the pattern which you want to search:  
xyz  
The entered pattern does not exist  
  
Press enter to continue|
```

```
root@DESKTOP-PHOR7MI: ~  
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  
Name of the file in which you want to find the pattern:  
f.txt  
f.txt : NOT FOUND  
  
Press enter to continue|
```

2. . Count lines, words, and characters in specified files

```
root@DESKTOP-PHOR7MI: ~  
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  
Type the name of the file:  
file.txt  
file.txt : NOT FOUND  
  
Press enter to continue|
```

```
root@DESKTOP-PHOR7MI: ~  
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  
Type the name of the file:  
f1.txt  
number of lines in file :6  
number of words in file :13  
number of characters in file :31  
  
Press enter to continue
```

3. Display line differences between two files

```
root@DESKTOP-PHOR7MI: ~  
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  
Type the name of first file:  
file.txt  
file.txt : NOT FOUND  
  
Press enter to continue
```

```
root@DESKTOP-PHOR7MI: ~  
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  
Type the name of first file:  
f2.txt  
Type the name of second file:  
f3.txt  
1,6c1,5  
<  
< 1 4  
< 1 2 3 4  
< 6 7 8  
< a b c  
< apple  
---  
> 56783956  
> 23475  
> 3462346  
> 23423  
> 23  
  
Press enter to continue
```

3.The System Status Commands Sub-menu

Novice mode

```
root@DESKTOP-PHOR7MI: ~  
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. Display the current date and time

```
root@DESKTOP-PHOR7MI: ~  
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  
2021-06-06  
07:35:47 PM  
  
Press enter to continue
```

2. Current disk usage

```
root@DESKTOP-PHOR7MI: ~  
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  1.6G  255G   1% /  
tmpfs           3.3G    0  3.3G   0% /mnt/wsl  
tools          494G  309G  185G  63% /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:\             494G  309G  185G  63% /mnt/c  
  
Press enter to continue
```


3. List current local and environmental

root@DESKTOP-PHOR7MI: ~

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
BBlack
BBlue
BCyan
BGreen
BPurple
BRed
BYellow
COLUMNS
COMP_WORDBREAKS
DIRSTACK
EPOCHREALTIME
EPOCHSECONDS
EUID
GROUPS
HISTCMD
HOME
HOSTNAME

4 . Display process status information

```
root@DESKTOP-PHOR7MI: ~  
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  |
|------|-------|----------|------|
| 135  | pts/2 | 00:00:00 | bash |
| 4865 | pts/2 | 00:00:00 | bash |
| 4935 | pts/2 | 00:00:00 | bash |
| 4959 | pts/2 | 00:00:00 | bash |
| 5030 | pts/2 | 00:00:00 | ps   |

  
Press enter to continue
```

Note-

All functions in Expert mode are exactly same as the novice mode except the exit and quit command. Exit option is available in each argument of Expert mode.