

Assignment: Bash Shell Basics

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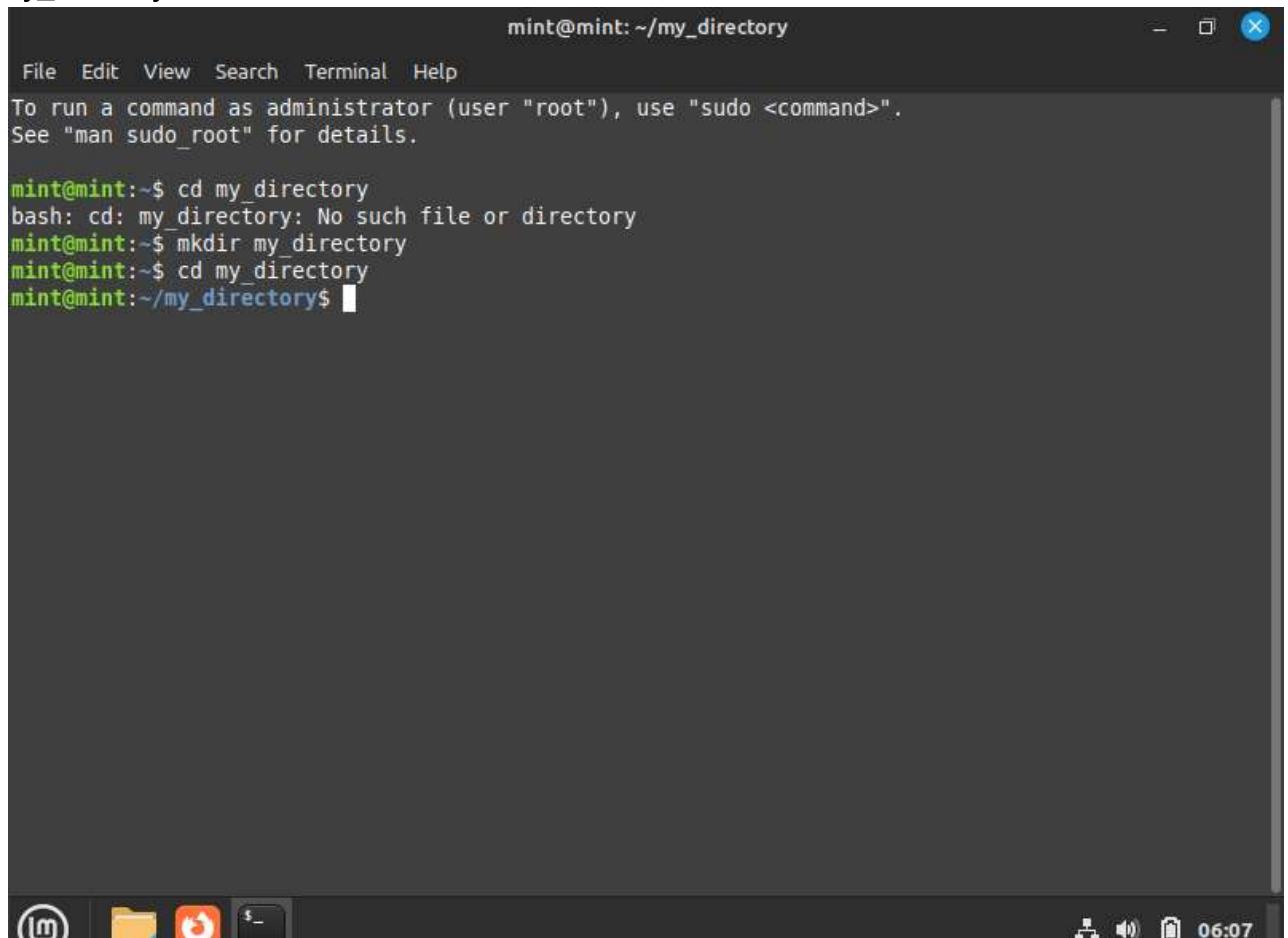
Task 1: File and Directory Manipulation

1. Create a directory called "my_directory".

Mkdir my_directory

2. Navigate into the "my_directory".

cd my_directory

A terminal window titled 'mint@mint: ~/my_directory' with a menu bar (File, Edit, View, Search, Terminal, Help). It displays the following commands and output:

```
mint@mint:~$ cd my_directory
bash: cd: my_directory: No such file or directory
mint@mint:~$ mkdir my_directory
mint@mint:~$ cd my_directory
mint@mint:~/my_directory$
```

The terminal window has a dark background and a light-colored text. The bottom of the window shows a taskbar with icons for a terminal, a folder, a terminal window, and a terminal window, along with system icons for network, volume, and battery, and the time 06:07.

3. Create an empty file called "my_file.txt".

Touch my_file.txt

4. List all the files and directories in the current directory.

ls

```
mint@mint: ~/my_directory
File Edit View Search Terminal Help
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

mint@mint:~$ cd my_directory
bash: cd: my_directory: No such file or directory
mint@mint:~$ mkdir my_directory
mint@mint:~$ cd my_directory
mint@mint:~/my_directory$ touch my_file.txt
mint@mint:~/my_directory$ ls
my_file.txt
mint@mint:~/my_directory$
```

5. Rename "my_file.txt" to "new_file.txt".
Mv my_file.txt new_file.txt

```
mint@mint: ~/my_directory
File Edit View Search Terminal Help
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

mint@mint:~$ cd my_directory
bash: cd: my_directory: No such file or directory
mint@mint:~$ mkdir my_directory
mint@mint:~$ cd my_directory
mint@mint:~/my_directory$ touch my_file.txt
mint@mint:~/my_directory$ ls
my_file.txt
mint@mint:~/my_directory$ mv my_file.txt new_file.txt
mint@mint:~/my_directory$ ls
new_file.txt
mint@mint:~/my_directory$
```

6. Display the content of "new_file.txt" using a pager tool of your choice.

Cat new_file.txt

7. Append the text "Hello, World!" to "new_file.txt".

Echo "Hello,World!" >> new_file.txt

```
mint@mint: ~/my_directory
File Edit View Search Terminal Help
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

mint@mint:~$ cd my_directory
bash: cd: my_directory: No such file or directory
mint@mint:~$ mkdir my_directory
mint@mint:~$ cd my_directory
mint@mint:~/my_directory$ touch my_file.txt
mint@mint:~/my_directory$ ls
my_file.txt
mint@mint:~/my_directory$ mv my_file.txt new_file.txt
mint@mint:~/my_directory$ ls
new_file.txt
mint@mint:~/my_directory$ cat new_file.txt
mint@mint:~/my_directory$ pg new_file.txt
pg: command not found
mint@mint:~/my_directory$ cat new_file.txt
mint@mint:~/my_directory$ echo "Hello,World!" >> new_file.txt
mint@mint:~/my_directory$ cat new_file.txt
Hello,World!
mint@mint:~/my_directory$
```

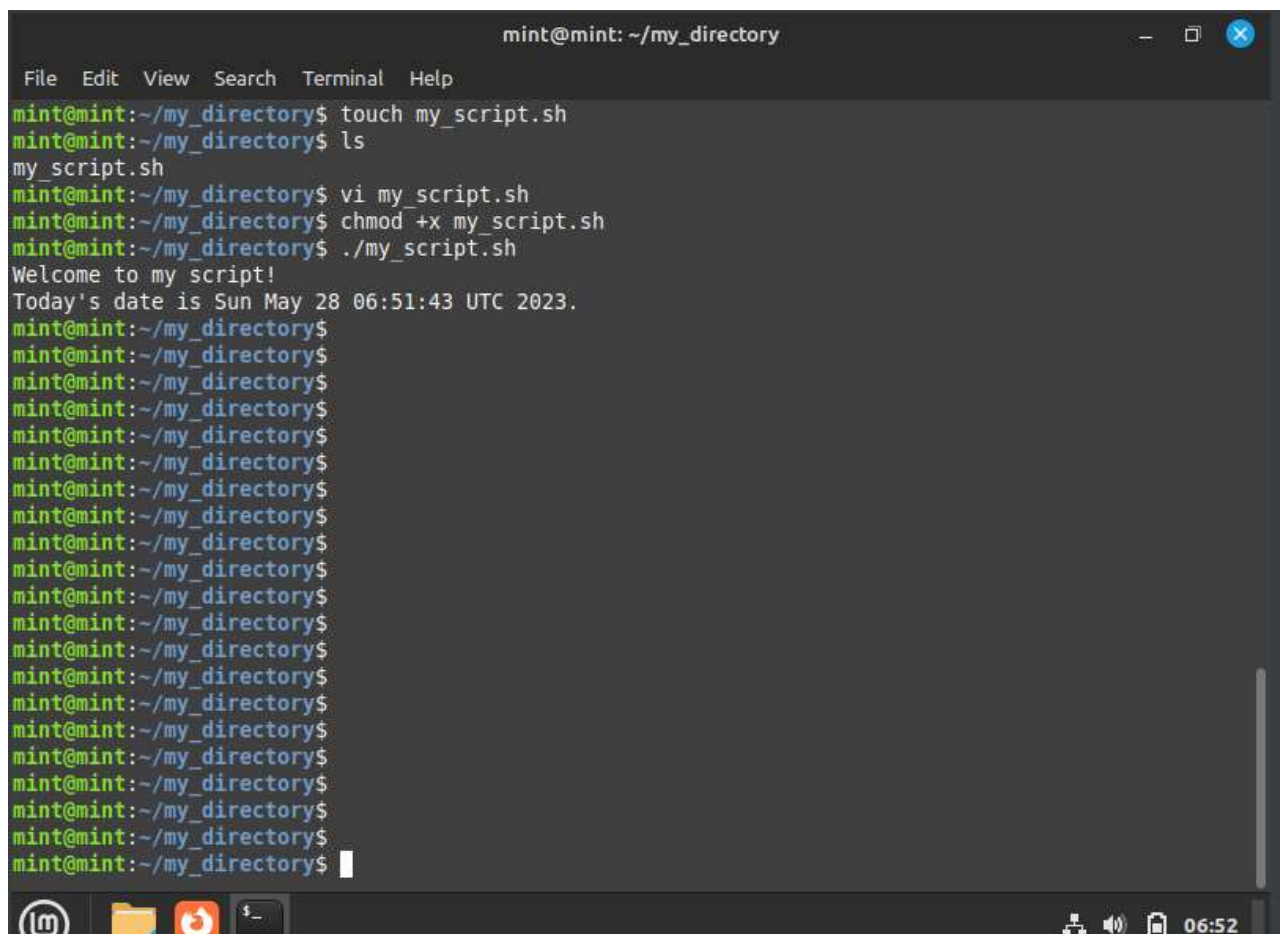
8. Create a new directory called "backup" within "my_directory".
Mkdir backup
9. Move "new_file.txt" to the "backup" directory.
Mv new_file.txt backup
10. Verify that "new_file.txt" is now located in the "backup" directory.
Cd backup
Ls

Task 2: Permissions and Scripting

- Create a new file called "my_script.sh".
Touch my_script.sh
- Edit "my_script.sh" using a text editor of your choice and add the following lines:
Vi my_script.sh

```
#!/bin/bash
echo "Welcome to my script!"
echo "Today's date is $(date)."
Save and exit the file.
```

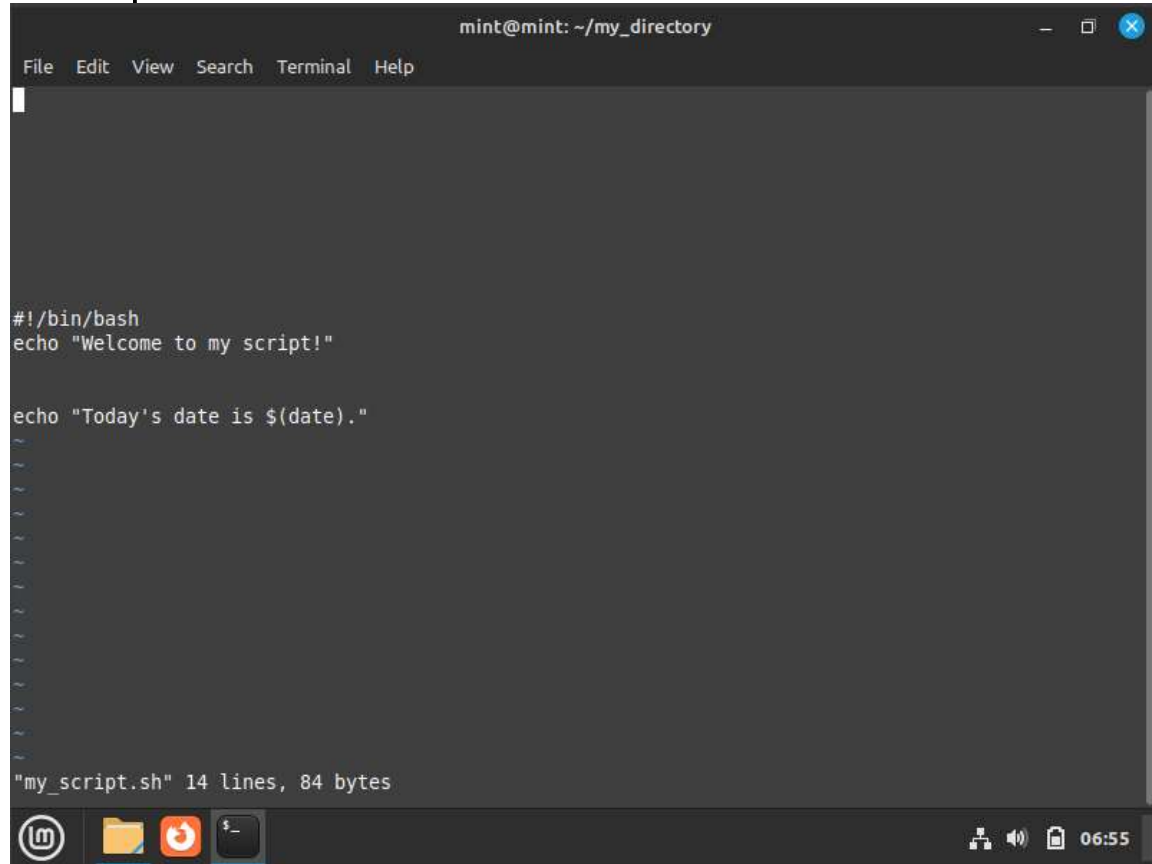
- Make "my_script.sh" executable.
Chmod +x my_script.sh
- Run "my_script.sh" and verify that the output matches the expected result.
./my_script.sh

A terminal window titled 'mint@mint: ~/my_directory' with a menu bar (File, Edit, View, Search, Terminal, Help). The terminal shows the following commands and output:

```
mint@mint:~/my_directory$ touch my_script.sh
mint@mint:~/my_directory$ ls
my_script.sh
mint@mint:~/my_directory$ vi my_script.sh
mint@mint:~/my_directory$ chmod +x my_script.sh
mint@mint:~/my_directory$ ./my_script.sh
Welcome to my script!
Today's date is Sun May 28 06:51:43 UTC 2023.
mint@mint:~/my_directory$
mint@mint:~/my_directory$
mint@mint:~/my_directory$
mint@mint:~/my_directory$
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mint@mint:~/my_directory$
mint@mint:~/my_directory$
mint@mint:~/my_directory$
mint@mint:~/my_directory$
```

The terminal window has a dark background with green text. At the bottom, there is a taskbar with icons for a terminal, a folder, a terminal icon, and a terminal icon, along with a system tray showing network, volume, and a clock at 06:52.

Bash script



```
#!/bin/bash
echo "Welcome to my script!"

echo "Today's date is $(date)."
```

"my_script.sh" 14 lines, 84 bytes

Task 3: Command Execution and Pipelines

- List all the processes running on your system using the "ps" command.
- Use the "grep" command to filter the processes list and display only the processes with "bash" in their name.


```
mint@mint:~/my_directory$
mint@mint:~/my_directory$
mint@mint:~/my_directory$
mint@mint:~/my_directory$
mint@mint:~/my_directory$
mint@mint:~/my_directory$
mint@mint:~/my_directory$
mint@mint:~/my_directory$
mint@mint:~/my_directory$
mint@mint:~/my_directory$
mint@mint:~/my_directory$ vi my_script.sh
mint@mint:~/my_directory$ cd /~
bash: cd: /~: No such file or directory
mint@mint:~/my_directory$ cd ~
mint@mint:~$ ps
  PID TTY          TIME CMD
  2181 pts/0    00:00:00 bash
  3276 pts/0    00:00:00 ps
mint@mint:~$ grep bash
bash
bash
^C
mint@mint:~$ wc my_script.sh
wc: my_script.sh: No such file or directory
mint@mint:~$ cd my_directory
mint@mint:~/my_directory$ wc my_script.sh
14 11 84 my_script.sh
mint@mint:~/my_directory$ grep bash
^C
mint@mint:~/my_directory$
```

- Use the "wc" command to count the number of lines in the filtered output.
Wc my_script.sh

Submission:

Provide a document or text file containing the commands used to complete the tasks above, along with any relevant output or screenshots. Include your explanations or observations where necessary.