

UNIX Shell SW Carpentry

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akhil@LAPTOP-SOC9PPHS:~$ cd Desktop
akhil@LAPTOP-SOC9PPHS:~/Desktop$ cd shell-lesson-data
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data$ cd exercise-data
-bash: cd: exercise-data: No such file or directory
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data$ cd
exercise-data/
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data$ cd exercise-data
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data$ pwd
/home/akhil/Desktop/shell-lesson-data/exercise-data
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data$ ls -F
ls-F: command not found
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data$ ls -F
alkanes/ animal-counts/ creatures/ numbers.txt writing/
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data$ cd ..
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data$ ls -F -a
./ ../ exercise-data/ north-pacific-gyre/
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data$ cd
akhil@LAPTOP-SOC9PPHS:~$ cd ~/Desktop/shell-lesson-data
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data$ cd -
/home/akhil
akhil@LAPTOP-SOC9PPHS:~$ ls -s
total 8
4 Desktop 4 foo_dir 0 tl.txt
akhil@LAPTOP-SOC9PPHS:~$ cd ~/Desktop/shell-lesson-data
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data$ cd exercise-data/writing/
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/writing$ ls -F
LittleWomen.txt haiku.txt
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/writing$ mkdir thesis #creating a new directory
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/writing$ ls -F
LittleWomen.txt haiku.txt thesis/
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/writing$ ls -F thesis
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/writing$ mkdir -p ../project/data ../project/results
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/writing$ ls -FR ../project
ls: cannot access '-': No such file or directory
ls: cannot access 'FR': No such file or directory
../project:
data results
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/writing$ ls -FR ../project
../project:
data/ results/
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../project:
data/ results/

../project/data:

../project/results:
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/writing$ cd thesis
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/writing/thesis$ nano draft.txt
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/writing/thesis$ ls
draft.txt
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/writing/thesis$ touch my_file.txt
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/writing/thesis$ ls -l
draft.txt
my_file.txt
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/writing/thesis$ rm my_file.txt
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/writing/thesis$ mv thesis/draft.txt thesis/quotes.txt
mv: cannot stat 'thesis/draft.txt': No such file or directory
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/writing/thesis$ ls thesis
ls: cannot access 'thesis': No such file or directory
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/writing/thesis$ ls
draft.txt
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/writing/thesis$ cd ..
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/writing$ mv
thesis/draft.txt thesis/quotes.txt
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/writing$ ls
thesis
quotes.txt
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/writing$ mv
thesis/quotes.txt
mv: missing destination file operand after 'thesis/quotes.txt'
Try 'mv --help' for more information.
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/writing$ mv
thesis/quotes.txt
mv: missing destination file operand after 'thesis/quotes.txt'
Try 'mv --help' for more information.
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/writing$ mv
--help
mv: invalid option -- 'h'
Try 'mv --help' for more information.
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/writing$ mv
--help
```

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or available locally via: info '(coreutils) mv invocation'
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/writing$ mv thesis/quotes.txt .
$: command not found
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/writing$ mv thesis/quotes.txt .
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/writing$ ls
thesis
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/writing$ ls
littlewomen.txt haiku.txt quotes.txt thesis
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/writing$ cp quotes.txt thesis/quotations.txt
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/writing$ ls
thesis
quotations.txt
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/writing$ cd ..
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data$ mkdir backup
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data$ ls
alkanes animal-counts backup creatures numbers.txt project writing
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data$ cp creature s/minotaur.dat
alkanes/ backup/ numbers.txt writing/
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data$ cp creatures/minotaur.dat
alkanes/ backup/ numbers.txt writing/
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data$ cp creatures/minotaur.dat creatures/
basilisk.dat minotaur.dat unicorn.dat
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data$ cp creatures/minotaur.dat creatures/unicorn.dat backup/
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data$ cd creatures
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/creatures$ ls -F
basilisk.dat minotaur.dat unicorn.dat
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/creatures$ cp basilisk.dat minotaur.dat backup/
cp: target 'backup': No such file or directory
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/creatures$ cp basilisk.dat minotaur.dat ../backup/
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/creatures$ ls exercise-data/backup
ls: cannot access 'exercise-data/backup': No such file or directory
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/creatures$ cd ..
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data$ ls backup
basilisk.dat minotaur.dat unicorn.dat
```

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akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/creatures$ cd ..
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data$ ls backup
basilisk.dat minotaur.dat unicorn.dat
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data$ cd alkanes
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/alkanes$ ls
cubane.pdb ethane.pdb methane.pdb octane.pdb pentane.pdb propane.pdb
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/alkanes$ wc *.pdb
 20 156 1158 cubane.pdb
 12  84  622 ethane.pdb
  9  57  422 methane.pdb
 30 246 1828 octane.pdb
 21 165 1226 pentane.pdb
 15 111  825 propane.pdb
107 819 6081 total
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/alkanes$ wc *.pdb > length.txt
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/alkanes$ less length.txt
t -n length.txt
 9  57  422 methane.pdb
12  84  622 ethane.pdb
15 111  825 propane.pdb
20 156 1158 cubane.pdb
21 165 1226 pentane.pdb
30 246 1828 octane.pdb
107 819 6081 total
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/alkanes$ sort
t length.txt
 9  57  422 methane.pdb
12  84  622 ethane.pdb
15 111  825 propane.pdb
20 156 1158 cubane.pdb
21 165 1226 pentane.pdb
30 246 1828 octane.pdb
107 819 6081 total
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/alkanes$ echo the echo command prints text aka strings
the echo command prints text aka strings
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/alkanes$ echo hello > textfile01.txt
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/alkanes$ echo hello >> textfile02.txt
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/alkanes$ echo
```

```
akhil@LAPTOP-SOC9PPHS: ~  
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/alkanes$ echo the echo command prints text aka strings  
the echo command prints text aka strings  
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/alkanes$ echo  
o hello > textfile01.txt  
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/alkanes$ echo  
o hello >> textfile02.txt  
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/alkanes$ echo  
o hello >> textfile02.txt  
Command 'ech' not found, did you mean:  
  command 'echo' from deb corutils (9.4-2ubuntu2)  
  command 'dch' from deb devscripts (2.23.7)  
Try: sudo apt install <deb name>  
o: command not found  
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/alkanes$ echo hello >> textfile02.txt  
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/alkanes$ cat  
textfile02.txt  
hello  
hello  
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/alkanes$ echo hello > textfile01.txt  
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/alkanes$ cat  
textfile01.txt  
hello  
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/alkanes$ cd .  
.  
cd: command not found  
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/alkanes$ cd  
..  
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data$ cd animal-c  
ounts  
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/animal-counts$ ls  
animals.csv  
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/animal-counts$ head -n 3 animal.csv > animals-subset.csv  
head: cannot open 'animal.csv' for reading: No such file or directory  
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/animal-counts$ cd animal.csv  
-bash: cd: animal.csv: No such file or directory  
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/animal-counts$ c ../alkanes  
c: command not found  
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/animal-counts$ cd /alkanes  
-bash: cd: /alkanes: No such file or directory  
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/animal-counts$ cd ../alkanes  
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/alkanes$
```

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akhil@LAPTOP-SOC9PPHS: ~  
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/animal-counts$ cd /alkanes  
-bash: cd: /alkanes: No such file or directory  
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/animal-counts$ cd ../alkanes  
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/alkanes$  
cubane.pdb length.txt octane.pdb propane.pdb textfile01.txt textfile02.txt  
ethane.pdb methane.pdb pentane.pdb textfile01.txt  
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/alkanes$ sor  
t -n length.txt | head -n 1  
9 57 422 methane.pdb  
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/alkanes$ # f  
or loop  
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/alkanes$ cd  
../creatures  
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/creatures$ for file in basilik.dat minotaur.dat unicorn.dat  
> do  
> echo $file  
> head -n 2 $file | tail -n 1  
> done  
basilik.dat  
head: cannot open 'basilik.dat' for reading: No such file or directory  
minotaur.dat  
CLASSIFICATION: bos hominus  
unicorn.dat  
CLASSIFICATION: equus monoceros  
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/creatures$ f  
or x in {0..9}  
> echo $x  
-bash: syntax error near unexpected token 'echo'  
akhil@LAPTOP-SOC9PPHS:~/Desktop/shell-lesson-data/exercise-data/creatures$ f  
or c in {0..9}  
> do  
> echo $c  
> done  
0  
1  
2  
3  
4  
5  
6  
7
```

```
8
9
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/creatures$ l
s
basilisk.dat minotaur.dat unicorn.dat
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/creatures$ f
or x in *.dat
> do
> echo $x
> head -n 100 $x | tail -n 20
> done
basilisk.dat
CGGTACCGAA
AAGGTCGCG
CAAGTGTTC
CGGGACAATA
GTTCTGCTAA
GATAAGTATG
TGCCGACTTA
CCCCACCGTC
TAGGTATATA
GGCACACCG
CTTCACTGTA
GAGGTGTACA
AGGATCCGTT
GCGCGGCGG
CAGTCTATGT
TTTTCGACAC
TGGACTGCTT
CCCTTTGAGG
GTGGATTTTT
CGTAACGGGT
minotaur.dat
GGTTGACCG
AGTGAACGAA
GCGATTGATG
CCCAATATTG
GTTTCGGGTC
CCACCAGGAA
CAATGTTGGA
CTTTAGCACG
```

```
GTGGATTTTT
CGTAACGGGT
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/creatures$ for x in *.dat
> do
> cp $x original-$x
> done
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/creatures$ ls
basilisk.dat original-basilisk.dat original-unicorn.dat
minotaur.dat original-minotaur.dat unicorn.dat
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/creatures$ cd alkanes
-bash: cd: alkanes: No such file or directory
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/creatures$ cd ../../
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data$ ls
exercise-data north-pacific-gyre
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data$ cd exercise-data/alkanes
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/alkanes$ ls
cubane.pdb length.txt octane.pdb propane.pdb textfile02.txt
ethane.pdb methane.pdb pentane.pdb textfile01.txt
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/alkanes$ nano middle.sh
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/alkanes$ ls
cubane.pdb length.txt middle.sh pentane.pdb textfile01.txt
ethane.pdb methane.pdb octane.pdb propane.pdb textfile02.txt
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/alkanes$ bash middle.sh
head: cannot open 'octane.pb' for reading: No such file or directory
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/alkanes$ catmiddle.sh > head -n 15 octane.pdb | tail -n 5
catmiddle.sh: command not found
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/alkanes$ cat middle.sh > head -n 15 octane.pdb | tail -n 5
cat: 15: No such file or directory
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/alkanes$ cat head -n 15 octane.pdb | tail -n 5 > middle.sh
cat: 15: No such file or directory
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/alkanes$ ls
cubane.pdb length.txt octane.pdb textfile01.txt
ethane.pdb methane.pdb pentane.pdb textfile02.txt
head middle.sh propane.pdb
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/alkanes$ echo middle.sh
middle.sh
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/alkanes$ rm middle.sh
rm: cannot remove 'middle': No such file or directory
rm: cannot remove '.sh': No such file or directory
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/alkanes$ rm -r middle.sh
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/alkanes$ ls
```

```
akhil@LAPTOP-SOC9PPHS: ~$ cd ../../ north-pacific-gyre/
-bash: cd: too many arguments
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/alkanes$ cd ../../
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data$ cd north-pacific-gyre
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/north-pacific-gyre$ ls
NENE01729A.txt  NENE01812A.txt  NENE01978B.txt  NENE02043A.txt
NENE01729B.txt  NENE01843A.txt  NENE02018B.txt  NENE02043B.txt
NENE01736A.txt  NENE01843B.txt  NENE02040A.txt  gooddiff.sh
NENE01751A.txt  NENE01971Z.txt  NENE02040B.txt  goostats.sh
NENE01751B.txt  NENE01978A.txt  NENE02040Z.txt
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/north-pacific-gyre$ nano do-stats.sh
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/north-pacific-gyre$ bash do-stats.sh NENE*A.txt NENE*B.txt
NENE01729A.txt
NENE01736A.txt
NENE01751A.txt
NENE01812A.txt
NENE01843A.txt
NENE01978A.txt
NENE02040A.txt
NENE02043A.txt
NENE01729B.txt
NENE01751B.txt
NENE01843B.txt
NENE01978B.txt
NENE02018B.txt
NENE02040B.txt
NENE02043B.txt
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/north-pacific-gyre$ bash do-stats.sh NENE*A.txt NENE*B.txt >> output.txt
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/north-pacific-gyre$ less output.txt
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/north-pacific-gyre$ nano do-errors.sh
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/north-pacific-gyre$ bash -x do-errors.sh NENE*A.txt NENE*B.txt
+ for datafile in "$@"
+ echo
+ bash goostats.sh NENE01729A.txt stats-NENE01729A.txt
+ for datafile in "$@"
+ echo
+ bash goostats.sh NENE01736A.txt stats-NENE01736A.txt
+ for datafile in "$@"
```

```
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/alkanes$ cd ../../
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data$ cd north-pacific-gyre
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/north-pacific-gyre$ cd ~/D
esktop/shell-lesson-data/exercise-data/writing
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/writing$ cat
haiku.txt
The Tao that is seen
Is not the true Tao, until
You bring fresh toner.

With searching comes loss
and the presence of absence:
"My Thesis" not found.

Yesterday it worked
Today it is not working
Software is like that.
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/writing$ gre
p not haiku.txt
Is not the true Tao, until
"My Thesis" not found.
Today it is not working
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/writing$ gre
p -n "it" haiku.txt
5:With searching comes loss
9:Yesterday it worked
10:Today it is not working
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/writing$ gra
p -r Yesterday
Command 'grap' not found, did you mean:
  command 'wrap' from snap wrap (v0.3.2)
  command 'grep' from deb grep (3.11-3)
See 'snap info <snapname>' for additional versions.
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/writing$ grep -r yesterday
LittleWomen.txt:"Yes, I did! I told you I'd make you pay for being so cross
yesterday,
LittleWomen.txt:I made a 'pome' yesterday, when I was helping Hannah wash, and as
LittleWomen.txt:I telegraphed to your mother yesterday, and Brooke answered she'd come
LittleWomen.txt:office yesterday, for the doctor looked sober, and Hannah most took my
LittleWomen.txt:yesterday's failure by a grand success today, so she ordered the
LittleWomen.txt:not only shut, but locked, and yesterday's mud still adorned the steps.
akhil@LAPTOP-SOC9PPHS: ~/Desktop/shell-lesson-data/exercise-data/writing$
```

History of Commands and Codes used

```
1  pwd
2  /user/Desktop/git-tutorial
3  cd~ Desktop
4  cd ~/Desktop
5  /user/akhil/Desktop
6  pwd
7  ls
8  mkdir trial
9  ls
10 touch t1.txt
11 echo 'hello world'
12 clear
13 pwd
14 ls
15 pwd
16 cd
17 ls
18 cd trial
19 ls
20 pwd
21 cd ..
22 pwd
23 cd ~/trial
24 pwd
25 touch journa.txt
26 ls
27 wc journa.txt
28 cat journa.txt
29 echo 'hello, this is m first linux file' > journa.txt
30 cat journa.txt
31 nano journa.txt
32 cat journa.txt
33 nano jaourna.txt
34 cat jaourna.txt
35 ls
36 clear
37 cd ..
38 pwd
39 cclear
40 clear
41 %% akhil
42 clear
43 ## akhil
44 pwd
45 clear
46 mkdir foo_dir
47 cd foo_di
48 ls
49 cd ~/ foo_die
50 cd~/ foo_dir
51 pwd
52 ls
53 cd ~/foo_dir
54 touch text.txt
55 echo 'Hello, world' > text.txt
56 cat text.txt
57 cp text.txt text_copy.txt
58 ls
59 mkdir foo_sub_dir
60 cd ~/ foo_sub_dir
61 cd foo_sub_dir
62 cd ..
63 mv text_copy.txt foo_sub_dir
64 cd foo_sub_dir
```

```
65 ls
66 clear
67 cd ..
68 cd ~
69 pwd
70 ls
71 ls -F Desktop
72 ls
73 ls -F Desktop / shell-lesson-data
74 ls -F Desktop
75 cd Desktop
76 cd shell-lesson-data
77 cd excercise-data
78 cd exercise-data
79 pwd
80 ls-F
81 ls -F
82 cd ..
83 ls -F -a
84 cd
85 cd ~/Desktop/shell-lesson-data
86 ls -s
87 cd ~/Desktop/shell-lesson-data
88 cd exercise-data/writing/
89 ls -F
90 mkdir thesis #creating a new directory
91 ls -F
92 ls -F thesis
93 mkdir -p ../project/data ../project/results
94 ls -FR ../project
95 ls -FR ../project
96 cd thesis
97 nano draft.txt
98 ls
99 touch my_file.txt
100 ls -l
101 rm my_file.txt
102 mv thesis/draft.txt thesis/quotes.txt
103 ls thesis
104 ls
105 cd ..
106 mv thesis/draft.txt thesis/quotes.txt
107 ls thesis
108 mv thesis/quotes.txt
109 mv -help
110 mv --help
111 $ mv thesis/quotes.txt .
112 ls thesis
113 ls
114 cp quotes.txt thesis/quotations.txt
115 ls thesis
116 cd ..
117 mkdir backup
118 ls
119 cp creatures/minotaur.dat creatures/unicorn.dat backup/
120 cd creatures
121 ls -F
122 cp basilisk.dat minotaur.dat backup/
123 ls excercise-data/backup
124 cd ..
125 ls backup
126 cd alkanes
127 ls
128 wc *.pdb
```



```

129 wc *.pdb > length.txt
130 less length.txt
131 sort -n length.txt
132 sort length.txt
133 echo the echo command prints text aka strings
134 echo hello > textfile01.txt
135 echo hello >> textfile02.txt
136 ech
137 o hello >> textfile02.txt
138 echo hello >> textfile02.txt
139 cat textfile02.txt
140 echo hello > textfile01.txt
141 cat textfile01.txt
142 cd..
143 cd ..
144 cd animal-counts
145 ls
146 head -n 3 animal.csv > animals-subset.csv
147 cd animal.csv
148 c .. / alkanes
149 cd /alkanes
150 cd ../alkanes
151 ls
152 sort -n length.txt | head -n 1
153 # for loop
154 cd ../creatures
155 for file in basilik.dat minotaur.dat unicorn.dat; do echo $file; head
-n 2 $file | tail -n 1; done
156 for x in {0..9}; echo $x
157 for c in {0..9}; do echo $c; done
158 ls
159 for x in *.dat; do echo $x; head -n 100 $x | tail -n 20; done
160 for x in *.dat; do cp $x original-$x; done
161 ls
162 cd alkanes
163 cd ../../
164 ls
165 cd exercise-data/alkanes
166 ls
167 nano middle.sh
168 ls
169 bash middle.sh
170 catmiddle.sh > head -n 15 octane.pdb | tail -n 5
171 cat middle.sh > head -n 15 octane.pdb | tail -n 5
172 cat head -n 15 octane.pdb | tail -n 5 > middle.sh
173 ls
174 echo middle.sh
175 rm middle .sh
176 rm -r middle.sh
177 ls
178 nano middle.sh
179 bash middle.sh
180 nano middle.sh
181 nao middle.sh
182 nano middle.sh
183 bash methane.pdb
184 bash propan.pdb
185 bash propane.pdb
186 bash middle.sh propane.pdb
187 cd ../../ north-pacific-gyre/
188 cd ../../
189 cd north-pacific-gyre
190 ls
191 nano do-stats.sh

```



```
192 bash do-stats.sh NENE*A.txt NENE*B.txt
193 bash do-stats.sh NENE*A.txt NENE*B.txt >> output.txt
194 less output.txt
195 nano do-errors.sh
196 bash -x do-errors.sh NENE*A.txt NENE*B.txt
197 cd ~/Desktop/shell-lesson-data/exercise-data/writing
198 cat haiku.txt
199 grep not haiku.txt
200 grep -n "it" haiku.txt
201 grep -r Yesterday
202 grep -r yesterday
203 cd
204 histroy > session.txt
205 echo $0
206 type history
207 history > my_bash_history.txt
```