

Command Line Basics

1/2

Linux Essentials
Session-2



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What is SHELL?

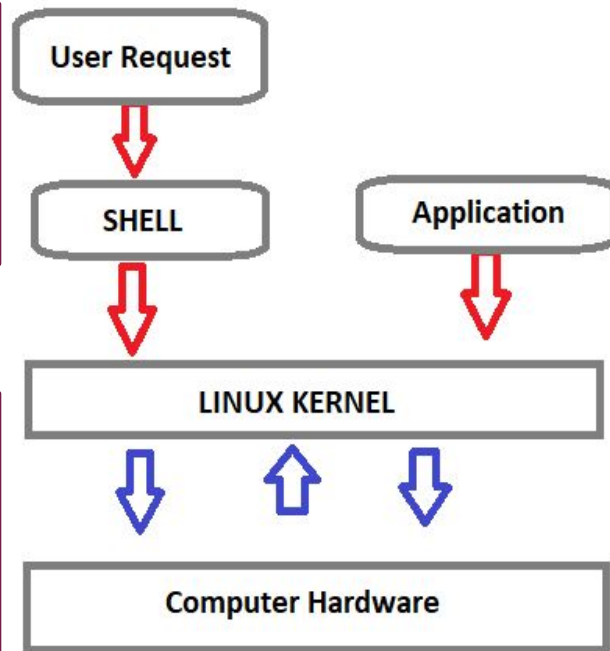




What is SHELL?

Shell is a program that receives the user's commands and gives them to the operating system to process and displays the output.

Bash (**B**ourne **A**gain **S**hell) is an enhanced version of Steve Bourne's first Unix shell application, and serves as the shell program on most Linux systems.



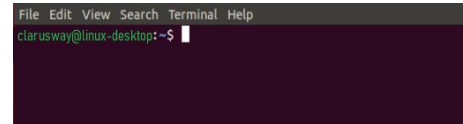


What is SHELL?

The standard Linux shell is both a command-line interpreter and a programming language.



The command prompt for Linux generally shows the current **user**, the current **host**, and the appropriate **directory**.

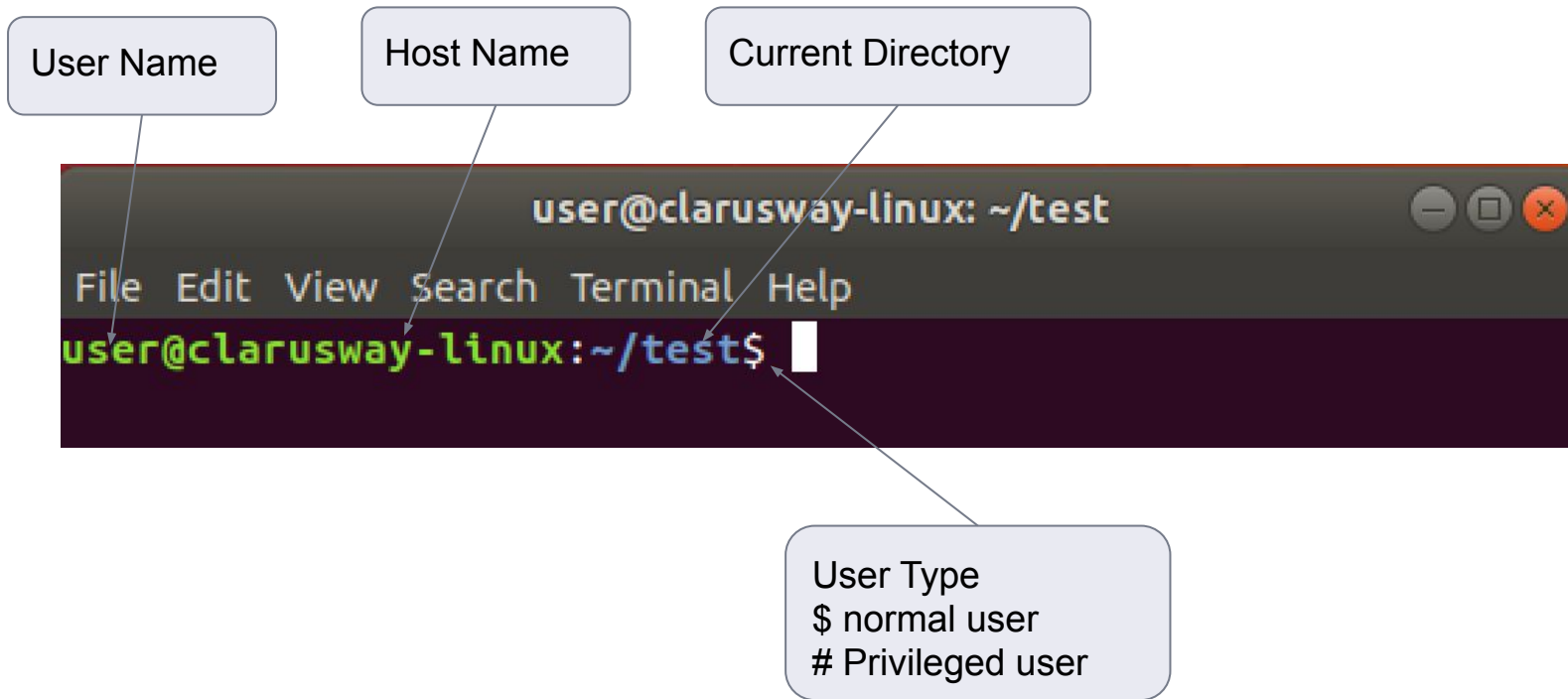


At the end of the prompt list, the \$(dollar sign) signifies the current user being unprivileged, and the device is ready to receive feedback.

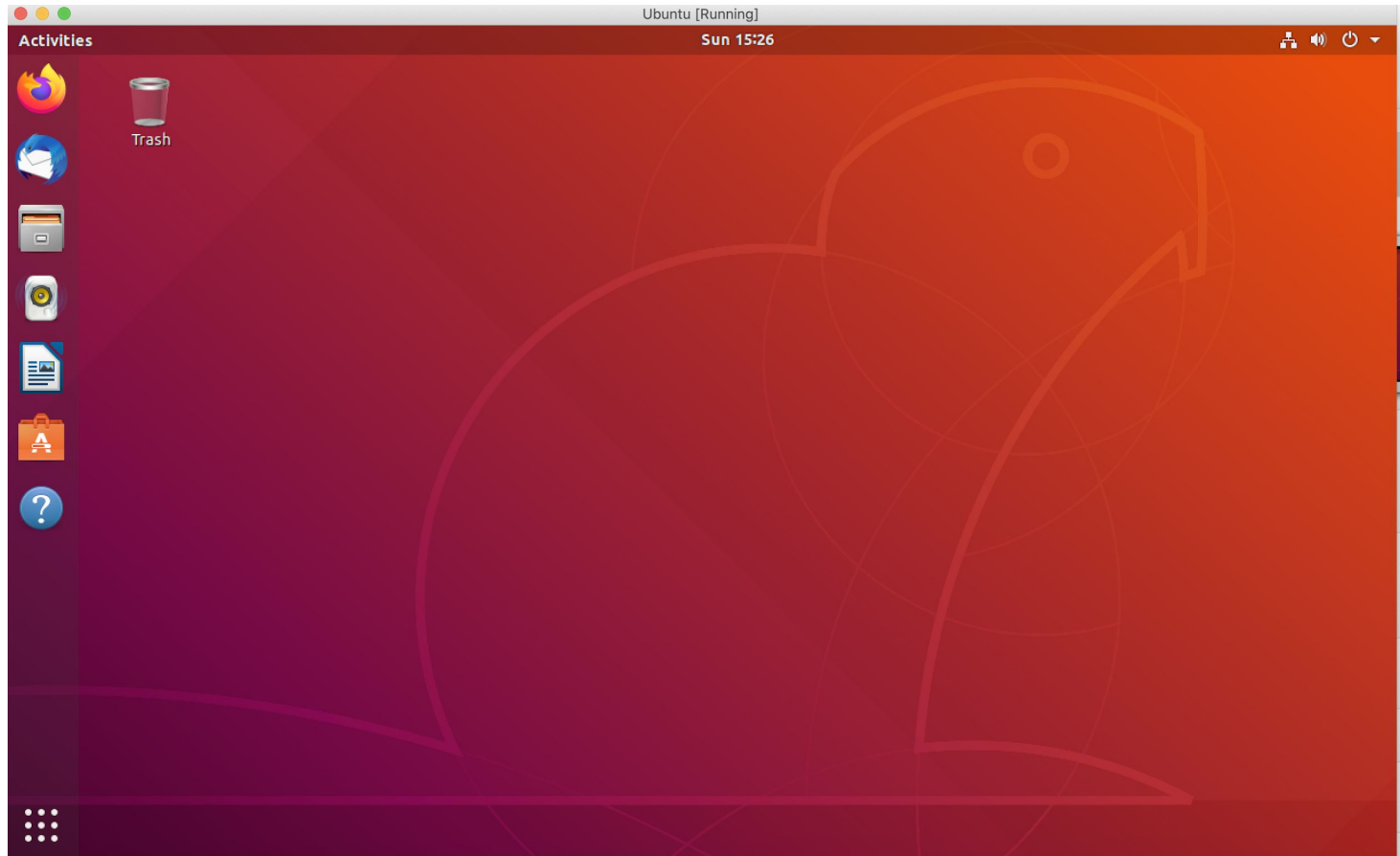
The input is sent for parsing and execution to the interpreter.



Command Prompt



GUI





Which one is not a user interface of Linux



Students choose an option

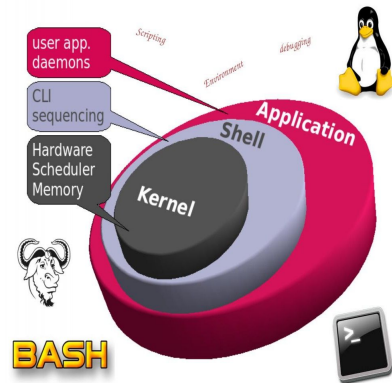
Draw or type 2 things you already know about Linux:

1

2



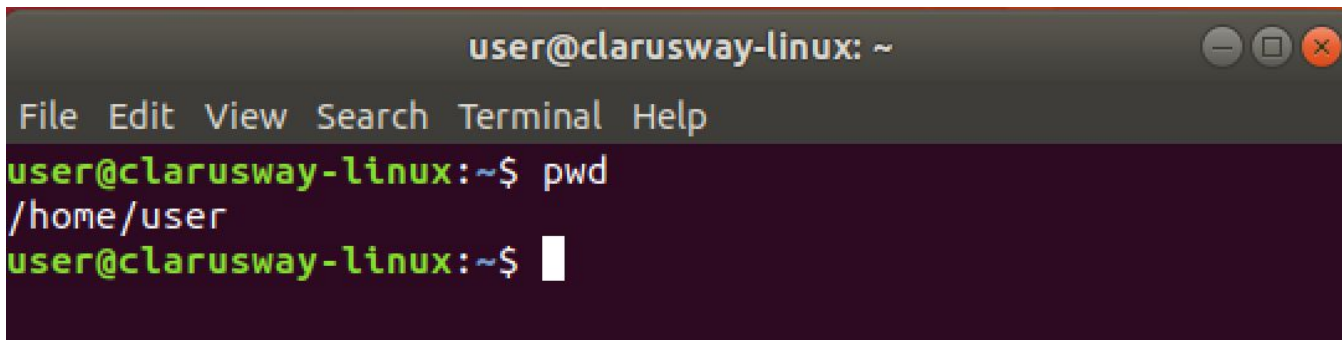
Basic SHELL Commands





Basic Shell Commands

pwd show current path



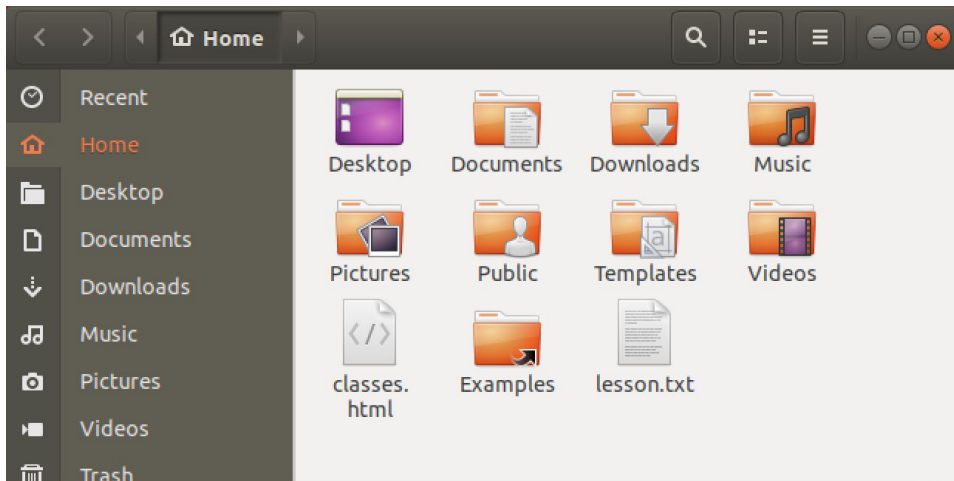
```
user@clarusway-linux: ~  
File Edit View Search Terminal Help  
user@clarusway-linux:~$ pwd  
/home/user  
user@clarusway-linux:~$
```

Basic Shell Commands



ls lists directory contents

ls -l lists directory contents with details



```
user@clarusway-linux: ~  
File Edit View Search Terminal Help  
user@clarusway-linux:~$ ls  
classes.html Downloads Music Templates  
Desktop examples.desktop Pictures Videos  
Documents lesson.txt Public  
user@clarusway-linux:~$
```

```
user@clarusway-linux: ~  
File Edit View Search Terminal Help  
user@clarusway-linux:~$ ls -l  
total 48  
-rw-r--r-- 1 user user 16 Mar 2 21:56 classes.html  
drwxr-xr-x 2 user user 4096 Mar 2 21:54 Desktop  
drwxr-xr-x 2 user user 4096 Mar 2 21:54 Documents  
drwxr-xr-x 2 user user 4096 Mar 2 21:54 Downloads  
-rw-r--r-- 1 user user 8980 Mar 2 21:53 examples.desktop  
-rw-r--r-- 1 user user 0 Mar 2 21:55 lesson.txt  
drwxr-xr-x 2 user user 4096 Mar 2 21:54 Music  
drwxr-xr-x 2 user user 4096 Mar 2 21:54 Pictures  
drwxr-xr-x 2 user user 4096 Mar 2 21:54 Public  
drwxr-xr-x 2 user user 4096 Mar 2 21:54 Templates  
drwxr-xr-x 2 user user 4096 Mar 2 21:54 Videos  
user@clarusway-linux:~$
```



Basic Shell Commands

- cd [dir]** change (current) directory
- cd ..** change current directory to one level up
- cd /** change current directory to the root directory
- cd ~** change current directory to the home directory

```
user@clarusway-linux: ~  
File Edit View Search Terminal Help  
user@clarusway-linux:~$ cd test  
user@clarusway-linux:~/test$ cd ..  
user@clarusway-linux:~$ cd /  
user@clarusway-linux:/$ cd ~  
user@clarusway-linux:~$
```



Basic Shell Commands

mkdir [dir] create a new directory

```
user@clarusway-linux: ~  
File Edit View Search Terminal Help  
user@clarusway-linux:~$ ls  
classes.html Downloads Music Templates  
Desktop examples.desktop Pictures test  
Documents lesson.txt Public Videos  
user@clarusway-linux:~$ mkdir clarusway  
user@clarusway-linux:~$ ls  
clarusway Downloads Pictures Videos  
classes.html examples.desktop Public  
Desktop lesson.txt Templates  
Documents Music test  
user@clarusway-linux:~$
```



Basic Shell Commands

rmdir [dir] delete an empty directory

```
user@clarusway-linux: ~  
File Edit View Search Terminal Help  
user@clarusway-linux:~$ ls  
clarusway Downloads Pictures Videos  
classes.html examples.desktop Public  
Desktop lesson.txt Templates  
Documents Music test  
user@clarusway-linux:~$ rmdir test  
user@clarusway-linux:~$ ls  
clarusway Documents lesson.txt Public  
classes.html Downloads Music Templates  
Desktop examples.desktop Pictures Videos  
user@clarusway-linux:~$
```

```
user@clarusway-linux: ~  
File Edit View Search Terminal Help  
user@clarusway-linux:~$ cd test  
user@clarusway-linux:~/test$ ls  
t.txt  
user@clarusway-linux:~/test$ cd ..  
user@clarusway-linux:~$ rmdir test  
rmdir: failed to remove 'test': Directory not empty  
user@clarusway-linux:~$ ls  
clarusway Downloads Pictures Videos  
classes.html examples.desktop Public  
Desktop lesson.txt Templates  
Documents Music test  
user@clarusway-linux:~$
```



Basic Shell Commands

touch create a file

```
user@clarusway-linux: ~  
File Edit View Search Terminal Help  
user@clarusway-linux:~$ ls  
clarusway      Downloads      Pictures      Videos  
classes.html   examples.desktop Public  
Desktop        lesson.txt     Templates  
Documents      Music          test  
user@clarusway-linux:~$ touch test-file.txt  
user@clarusway-linux:~$ ls  
clarusway      Downloads      Pictures      test-file.txt  
classes.html   examples.desktop Public      Videos  
Desktop        lesson.txt     Templates  
Documents      Music          test  
user@clarusway-linux:~$
```




Basic Shell Commands

rm delete a file

```
user@clarusway-linux: ~  
File Edit View Search Terminal Help  
user@clarusway-linux:~$ ls  
clarusway      Downloads      Pictures      test-file.txt  
classes.html  examples.desktop Public        Videos  
Desktop        lesson.txt     Templates  
Documents      Music          test  
user@clarusway-linux:~$ rm test-file.txt  
user@clarusway-linux:~$ ls  
clarusway      Downloads      Pictures      Videos  
classes.html  examples.desktop Public  
Desktop        lesson.txt     Templates  
Documents      Music          test  
user@clarusway-linux:~$
```



Basic Shell Commands

cp copy a file to another location

```
user@clarusway-linux: ~/test
File Edit View Search Terminal Help
user@clarusway-linux:~$ cd test
user@clarusway-linux:~/test$ ls
user@clarusway-linux:~/test$ cd ..
user@clarusway-linux:~$ cp test-file.txt test/
user@clarusway-linux:~$ ls
clarusway      Downloads      Pictures      test-file.txt
classes.html   examples.desktop Public         Videos
Desktop        lesson.txt     Templates
Documents      Music          test
user@clarusway-linux:~$ cd test
user@clarusway-linux:~/test$ ls
test-file.txt
user@clarusway-linux:~/test$
```



Basic Shell Commands

mv move a file to another location

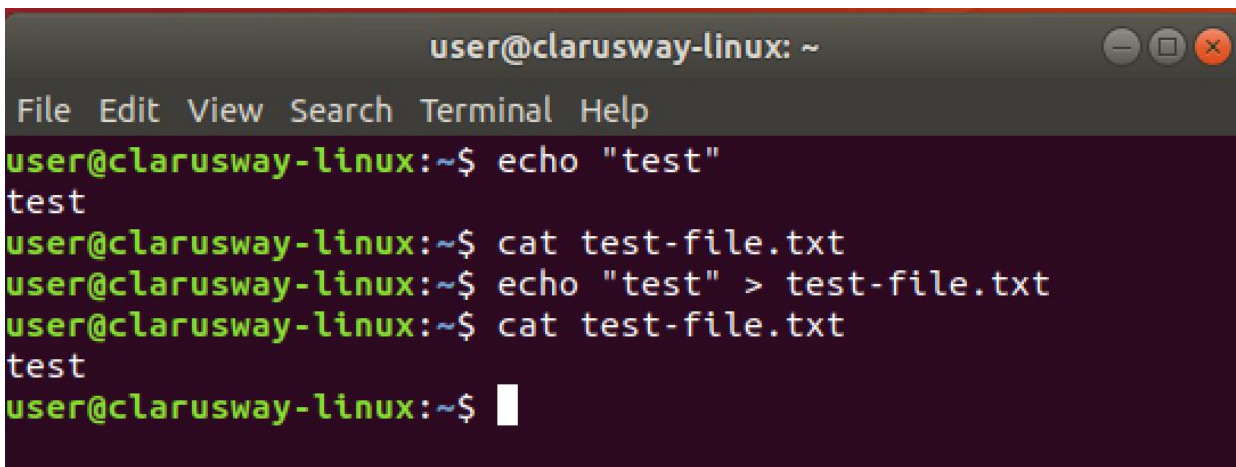
```
user@clarusway-linux: ~/test
File Edit View Search Terminal Help
user@clarusway-linux:~/test$ ls
user@clarusway-linux:~/test$ cd ..
user@clarusway-linux:~$ ls
clarusway      Downloads      Pictures      test-file.txt
classes.html   examples.desktop Public        Videos
Desktop        lesson.txt    Templates
Documents      Music         test
user@clarusway-linux:~$ mv test-file.txt test/
user@clarusway-linux:~$ ls
clarusway      Downloads      Pictures      Videos
classes.html   examples.desktop Public
Desktop        lesson.txt    Templates
Documents      Music         test
user@clarusway-linux:~$ cd test
user@clarusway-linux:~/test$ ls
test-file.txt
user@clarusway-linux:~/test$
```



Basic Shell Commands

echo print message to screen

echo > [file] print message into a file

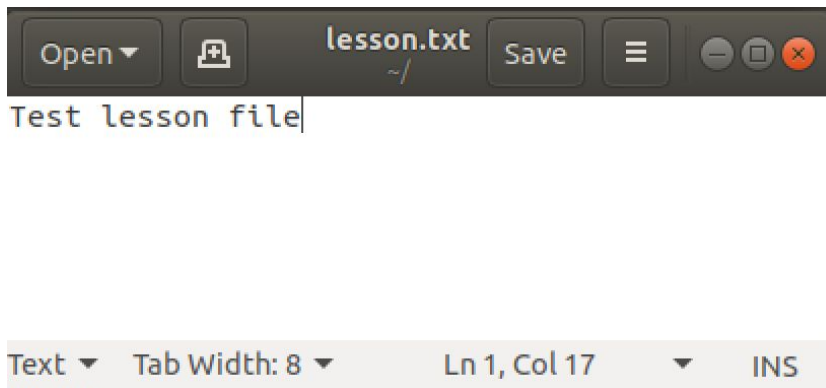


```
user@clarusway-linux: ~  
File Edit View Search Terminal Help  
user@clarusway-linux:~$ echo "test"  
test  
user@clarusway-linux:~$ cat test-file.txt  
user@clarusway-linux:~$ echo "test" > test-file.txt  
user@clarusway-linux:~$ cat test-file.txt  
test  
user@clarusway-linux:~$
```

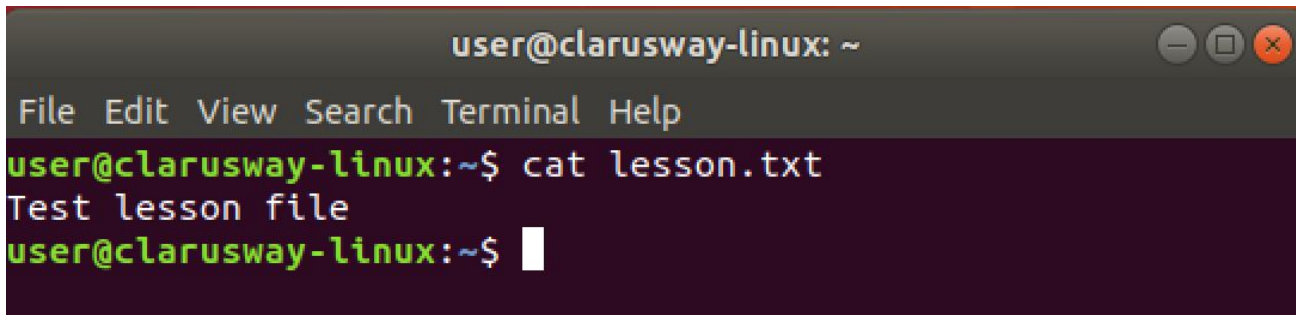


Basic Shell Commands

cat show file contents



A screenshot of a text editor window. The title bar shows 'lesson.txt' and the file path '~/'. The editor contains the text 'Test lesson file' on a single line. The status bar at the bottom indicates 'Text', 'Tab Width: 8', 'Ln 1, Col 17', and 'INS'.



A screenshot of a terminal window with the title 'user@clarusway-linux: ~'. The terminal shows the command 'cat lesson.txt' being executed, which outputs 'Test lesson file'. The prompt 'user@clarusway-linux:~\$' is visible before and after the command.



Basic SHELL Commands

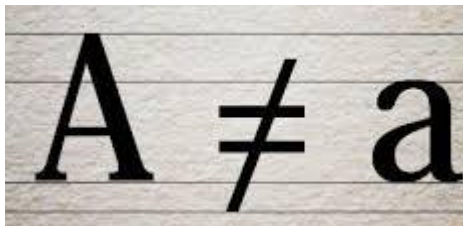


Kahoot!



Case Sensitivity

Most of the common Linux file systems are case sensitive; this is something to keep in mind when creating files or directories and moving through directories.



Lower-case and upper-case letters have different ASCII representation.



```
touch newfile  
touch Newfile
```

Will create two different files.



Task



clarusway



lessons



linux.txt

“I love linux”



html.txt

“I can create a website”



materials



lms.txt

pre-class



try-it.txt

post-class

Solution

```
136 ls
137 mkdir clarusway
138 cd clarusway
139 mkdir lessons
140 cd lessons
141 touch linux.txt
142 echo "I love linux" > linux.txt
143 touch html.txt
144 echo "I can create a web site" > html.txt
145 cd ..
146 mkdir materials
147 cd materials
148 mkdir pre-class
149 cd pre-class
150 touch lms.txt
151 cd ..
152 mkdir post-class
153 cd post-class
154 touch try-it.txt
```



THANKS !

Any questions?



Simple Globbing

Globbing is primarily used to match patterns in filenames or text by using a wildcard character to create a pattern.

Character	Name	Function
?	Question mark	Match any single character
*	Asterisk	Match any number of character(s)
[]	Brackets	Match character from a range
^	Caret	Used to match starting character
\$	Dollar sign	Used to match ending character
{ }	Curly brace	Used to match more than one pattern
 	Pipe	Used for applying more than one condition

Multiple File/Directory Operations



- ? used for a single character
- * used for multiple characters.

```
user@clarusway-linux: ~  
File Edit View Search Terminal Help  
user@clarusway-linux:~$ ls  
clarusway      examples.desktop  Music           Videos  
classes.html  html.txt          Pictures        xml.txt  
Desktop        lessons           Public  
Documents      lesson.txt        Templates  
Downloads      linux.txt         test  
user@clarusway-linux:~$ ls l*.*  
lesson.txt  linux.txt  
user@clarusway-linux:~$ ls ?tml.txt  
html.txt  xml.txt  
user@clarusway-linux:~$
```