

# Command Line Basics

## 1/2

Linux Essentials  
Session-2

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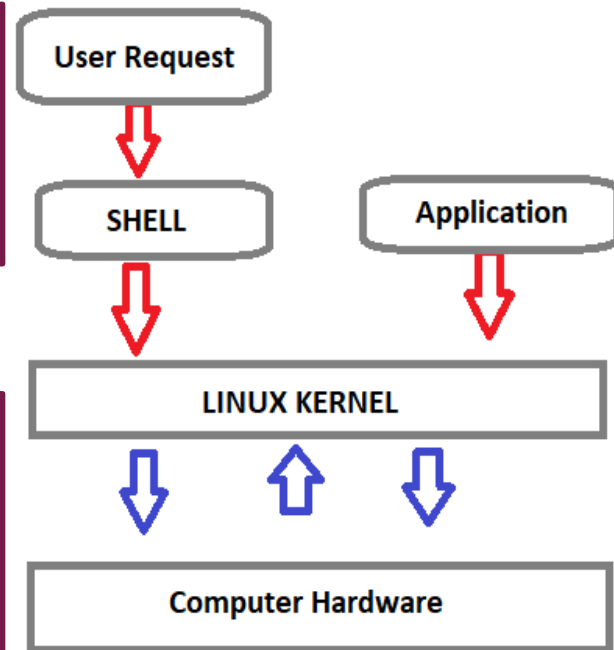
# What is SHELL?



# 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.

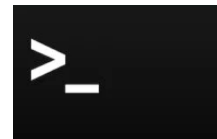
Bash (**B**ourne **A**gain **S**hell) is an enhanced version of Steve Bourne's first Unix shell application, and serves as the shell program on most Linux systems.



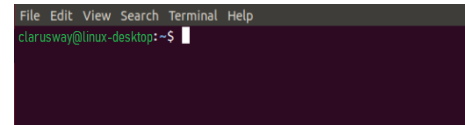


# What is SHELL?

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**.

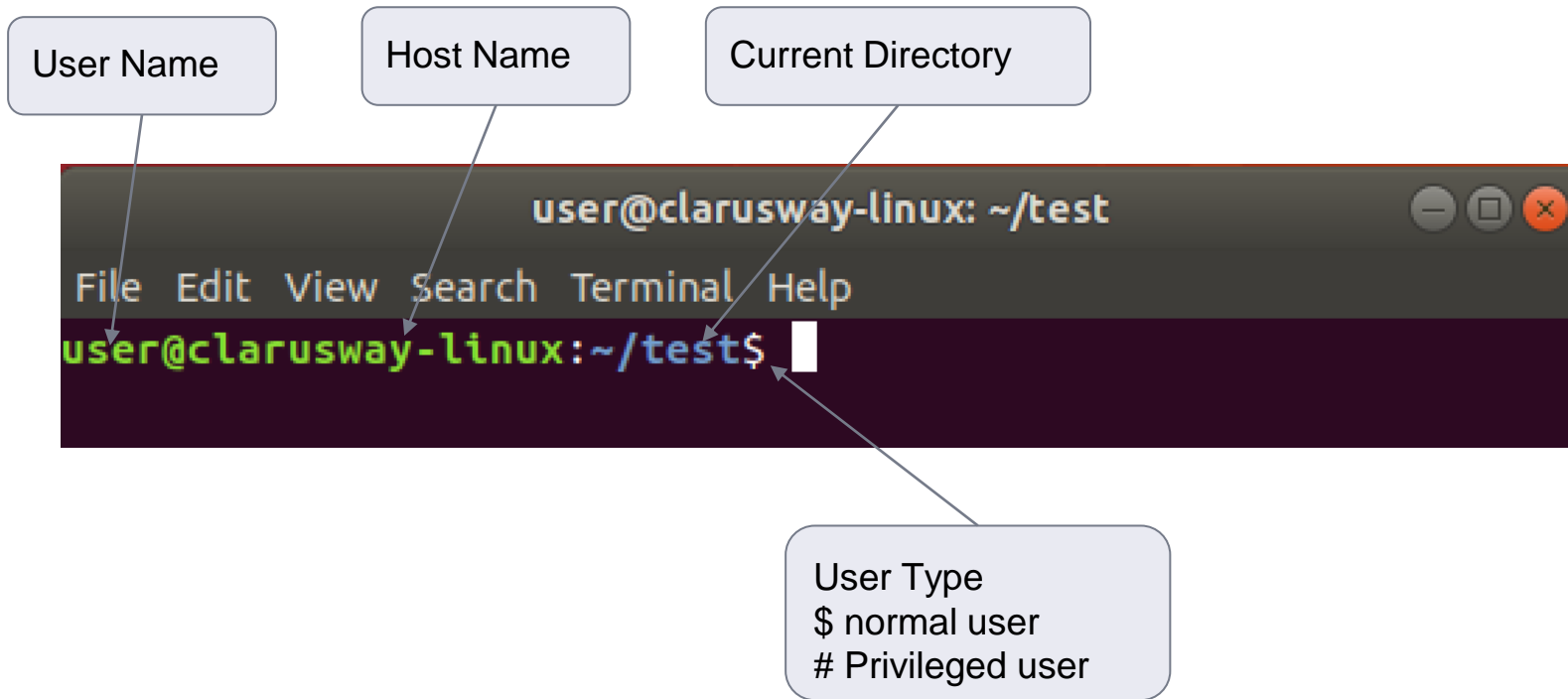


At the end of the prompt list, the \$(dollar sign) signifies the current user being unprivileged, and the device is ready to receive feedback.

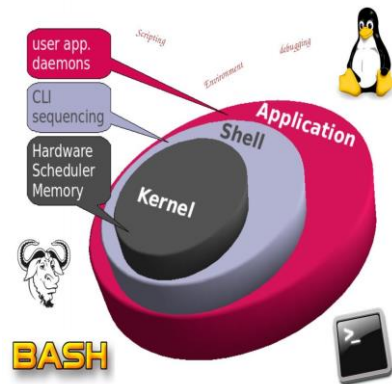
The input is sent for parsing and execution to the interpreter.



# Command Prompt



# Basic SHELL Commands

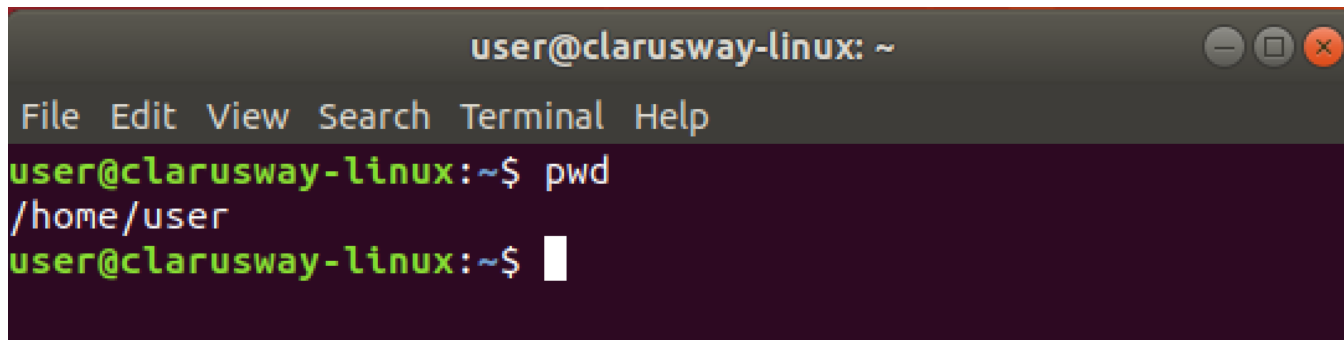




# Basic Shell Commands

**pwd**

show current path



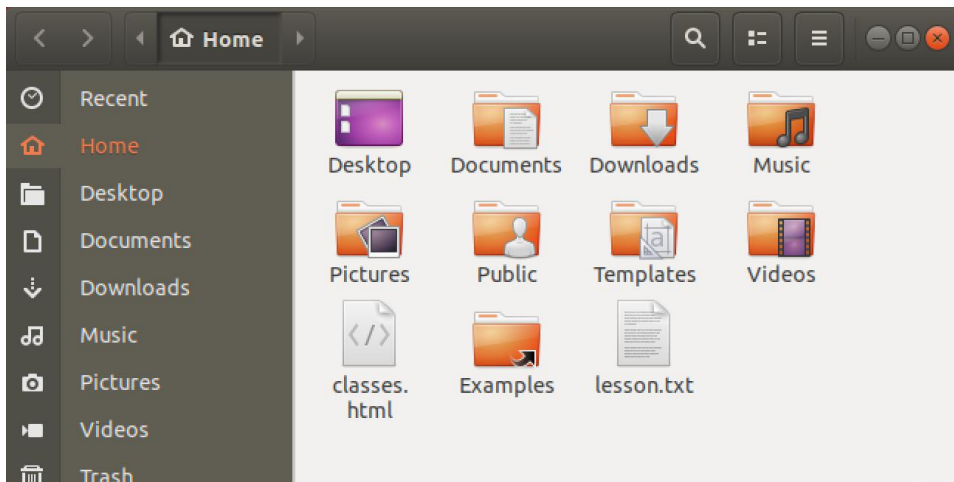
```
user@clarusway-linux: ~  
File Edit View Search Terminal Help  
user@clarusway-linux:~$ pwd  
/home/user  
user@clarusway-linux:~$
```



# 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

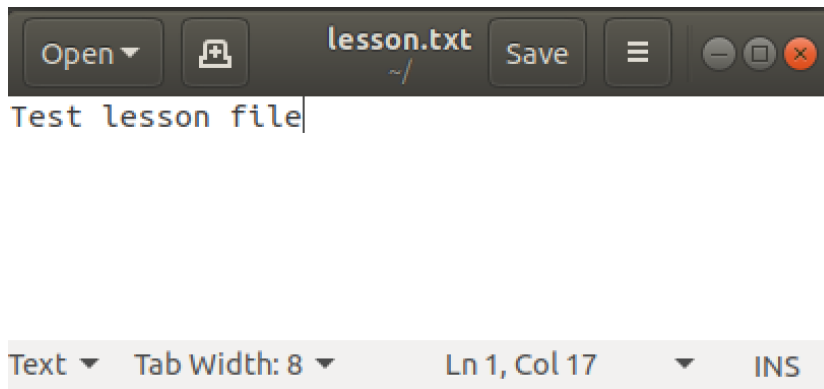
**echo > [file]** print message into a file

```
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:~$
```

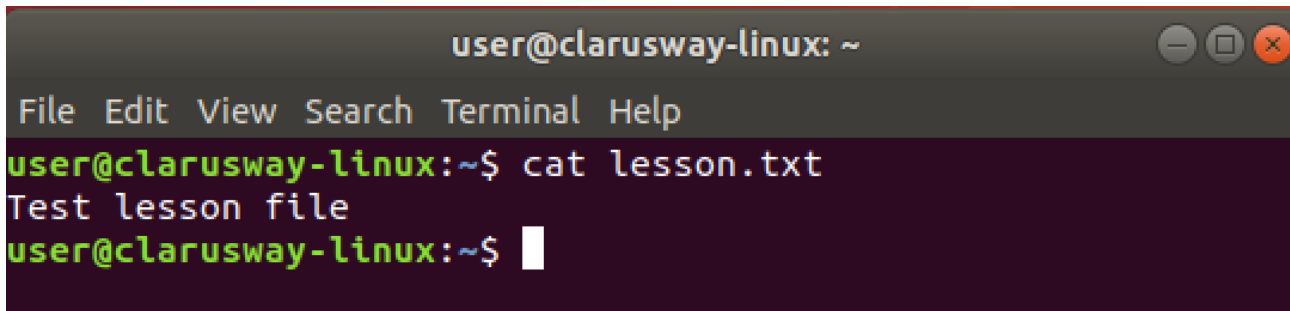


# Basic Shell Commands

**cat** show file contents



A screenshot of a text editor window. The title bar shows 'lesson.txt' and the file path '~/'. The window 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.

# Linux Commands Cheat Sheet

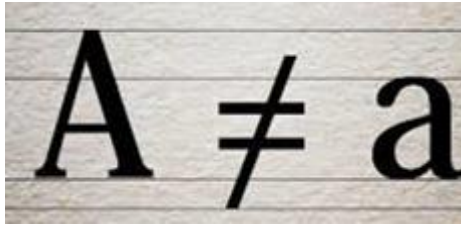
# Kahoot!



# 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**

**website”**

**“I can create a**



**materials**



**lms.txt**

**pre-class**



**try-it.txt**

**class**

**post-**

# 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
```



# 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
<b>?</b>	<b>Question mark</b>	<b>Match any single character</b>
<b>*</b>	<b>Asterisk</b>	<b>Match any number of character(s)</b>
<b>[]</b>	Brackets	Match character from a range
<b>^</b>	Caret	Used to match starting character
<b>\$</b>	Dollar sign	Used to match ending character
<b>{ }</b>	Curly brace	Used to match more than one pattern
<b> </b>	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:~$
```



# THANKS !

**Any questions?**