

```
1 #####
2 #
3 #           USEFUL LINUX BASH COMMANDS           #
4 #           ~~~~~                               #
5 #           Version 0.0.1                         #
6 #
7 #           ~~~~~                               #
8 #           | HOST USED FOR EXAMPLES:  * ralice.xyz *   #
9 #           ~~~~~                               #
10 #
11 #           By: Alexis Leclerc                     #
12 #           Created: 07/23/2024                    #
13 #           Updated: 07/23/2024                   #
14 #           DWistled Knows The Current Chapter      #
15 #####
16
17 SSH: Use Putty SSH Client [Port 22]
18 User: Alexis
19 Pass: Toor5access
20 host used for examples
21
22
23 #l pt r
24 . X  X
25 . X  X
26 . .  X
27 . .  X
28 . .  X
29 . .  .
30
31 #lapter
32
33 =====
34 |                               Bash Terminal Commands                               |
35 =====
36
37
38 #####
39 #           File & Filepath Commands           #
40 #####
41
42 |
43 |-----|
44 | Show The Current Directory:                |
45 |-----|
46
47 ls
48
49
50 |-----|
51 | Home or root Directory:                    |
52 |-----|
53
54 cd
55
56 OR,
57
58 cd ~/      '~' Represents The Current user's home Directory.
59
60 |
```

```
|-----|
| Clear Terminal Screen:                |
|-----|

clear

|-----|
| Create A New File & Save W/ Any Extension:      |
|-----|

To Create the File/Script:
~~~~~

nano CreateDB&Tables.sql

<Write Or Copy+Paste Script>
```

61	-----			To Save the File/Script:
62	Change Directory:			~~~~~
63	-----			
64		keyboard		Ctrl-x --> hit 'y' on your keyboard --> hit 'ENTER' on your
65	Subdirectory of home/: cd ~/subdirectory/			
66	~~~~~			
67				-----
68				Resource Monitor In Bash Terminal:
69	Any Directory /: cd /path/to/folder/file.csv			-----
70	~~~~~			
71				Less Resource Intensive: top
72	Example: cd /usr/lib or cd /home/Alexis			~~~~~
73	~~~~~			
74				More Detailed & Resource Intensive: htop
75				~~~~~
76	-----			
77	Create A New Folder (Directory):			
78	-----			-----
79				:
80	mkdir <folder_name>			
	-----			
81				
82				
83				
84				
85				
86	.....			.....
87				
88				*****NEED TO EDIT*****
89				#####
90				# File & Folder Permissions #
91				#####
92				
93				
94	-----			-----
95	Show The Current Directory:			Clear Terminal Screen:
96	-----			-----
97				
98	ls			clear
99				
100				
101	-----			-----
102	Home or root Directory:			Create A New File & Save W/ Any Extension:
103	-----			-----
104				
105	cd			To Create the File/Script:
106				~~~~~
107	OR,			
108				nano CreateDB&Tables.sql
109	cd ~/ '~' Represents The Current user's home Directory.			<Write Or Copy+Paste Script>
110				
111				
112	-----			To Save the File/Script:
113	Change Directory:			~~~~~
114	-----			
115		keyboard		Ctrl-x --> hit 'y' on your keyboard --> hit 'ENTER' on your
116	Subdirectory of home/: cd ~/subdirectory/			
117	~~~~~			

```
118
119
120     Any Directory /:      cd /path/to/folder/file.csv
121     ~~~~~
122
123         Example:      cd /usr/lib or cd /home/Alexis
124         ~~~~~
125
126 -----
127 | Create A New Folder (Directory): |
128 -----
129
130     mkdir <folder_name>
131     -----
132
133
134
135
136
137 .....
138 .....
139
140 =====
141 | Running Tasks/Processes |
142 =====
143
144
145 #####
146 # I/O Priority #
147 #####
148 -----
149 | Set I/O Priority for a New Process: |
150 -----
151
152 ionice -c <class> -n <priority> command
153
154 -----
155 | Change I/O Priority of an Existing Process: |
156 -----
157
158 ionice -c <class> -n <priority> -p <PID>
159
160 ionice -c 2 -n 0 -p
161
162 -----
163
164 | <class>: The I/O scheduling class. Options are: |
165 | I) 1 for real-time |
166 | II) 2 for best-effort ***USE |
167 | III) 3 for idle |
168 | <priority>: The priority level. For classes 2 and 3, the priority ranges from 0 (highest) to 7 (lowest). |
169 -----
170 .....
171 .....
172
173 #####
174 # CPU Priority #
175
```

```
176 #####
177
178 -----
179 | Start a New Process with a Specific Nice Level: |
180 -----
181
182 nice -n <nice_value> command
183
184 -----
185 | Change the Nice Level of an Existing Process: |
186 -----
187
188 renice -n <nice_value> -p <PID>
189
190 renice -n -20 -p
191
192
193 -----
194 | <nice_value>: The CPU Priority . Options are: |
195 | I) -20 for Highest Priority (Not Nice To Other Tasks) |
196 | II) 0 for Normal Priority |
197 | III) 20 for Lowest Priority (Nice To Other Tasks) |
198 | |
199 -----
200 .....
201
202
203 #####
204 # Using Both #
205 #####
206
207 -----
208 | Using Both To Create A New Process and Modify It Process: |
209 -----
210 nice -n <nice_value> command
211 ionice -c 2 -n 0 -p <PID>
212
213 -----
214 | Using Both To Create A Modify An Existing Process: |
215 -----
216 renice -n -20 -p
217 ionice -c 2 -n 0 -p
218
219 .....
220
221
222 #####
223 # Running A Process In The Background #
224 #####
225
226 |
227 ----- | -----
228 | Starting A New Screen: | | Kill a Screen Session: |
229 ----- | -----
230
231 | exit
232 |
233 | screen -X -S <session_id> quit
```

```
234
235 -----
236 | List All Screens: |
237 -----
238
239 screen -ls
240
241 -----
242 | Detach from a Screen Session: |
243 -----
244
245 screen -r <session_id>
246
247 screen -r <session_name>
248
249
250 -----
251 | Detach from a Screen Session: |
252 -----
253
254 Ctrl-a d
255
256 .....
257
258 =====
259 | Setting Up Bash Aliases |
260 =====
261
262 -----
263 | Creating Shortcuts For 'root' User: |
264 -----
265
266 -----
267 | Step 1: |
268 -----
269
270 cd
271
272 -----
273 | Step 2: |
274 -----
275
276 nano .bashrc
277
278 -----
279 | Step 3: |
280 -----
281
282 #####
283 #
284 # ADD OR MODIFY: #
285 #
286 #####
287
288 -----
289 |
290 | alias m='mysql -u root -pAL\@12345'
291 |
292 | alias mvar='mysql -u root -pAL\@12345 Variables'
293 |
294 | alias largepipe='mysql -u root -pAL\@12345 FinalPipe'
295 |
296 | alias vars='cd /home/Alexis/FilesToCreateDatabase/9Variables'
```

```
294 |
295 |         alias a='cd /home/Alexis'
296 |
297 |-----|
298
299
300 |         #####
301 |         #           Bash Commands           #
302 |         #           -----                #
303 |         #           Host: ralice.xyz         #
304 |         #                                     #
305 |         #   LAST UPDATED: 07/24/2024   #
306 |         #####
307 |-----|
308
309 alias m='mysql -u root -pAL\@12345'
310 alias mvars='mysql -u root -pAL\@12345 Variables'
311 alias laylargepipe='mysql -u root -pAL\@12345 FinalPipe'
312 alias vars='cd /home/Alexis/FilesToCreateDatabase/9Variables'
313 alias alexis='cd /home/Alexis'
314 alias rserver='cd /home/rserver'
315 |
316 |-----|
317
318 |-----|
319 | Step 4: |
320 |-----|
321
322 ctrl-x
323
324 <wait for menu at the bottom of the screen>
325
326 Y
327
328 <Save file with filename (either rename or dont touch it i.e. let it be)>
329
330 *Press ENTER
331
332 |-----|
333 | Step 5: |
334 |-----|
335
336 SOURCE/"UPDATE" THE BASH COMMANDS
337 |-----|
338
339 In Terminal copy paste by right clicking:
340 |-----|
341 |
342 | if [ -f /etc/bashrc ]; then
343 | . /etc/bashrc
344 | fi
345 |
346 |-----|
347
348 .....
349
350
351
352 #2 pt r
353 . X X
```

```
354 . X X
355 . . X
356 . . X
357 . . X
358 . . .
359
360 #2apter
361
362 =====
363 | Automating A Bash Script |
364 =====
365
366 -----
367 | Using A Batch Script: |
368 -----
369 -----
370 | Command | Example |
371 |-----|-----|
372 |chmod +x <file_name>.sh | chmod +x manage_tasks.sh |
373 |-----|-----|
374 |./<file_name>.sh | ./manage_tasks.sh |
375 |-----|-----|
376
377 This script can be used to:
378 1) Login to MySQL with a. No DB selected OR b. Login to Variables DB
379 2) Run a python3 script with a selected filepath
380 3) Run an R script with a selected filepath
381
382 #####__START__OF__BASH__SCRIPT____#####
383 #!/bin/bash
384
385 # Function to handle MySQL login
386 mysql_login() {
387     echo "Choose database option:"
388     echo "1) No DB"
389     echo "2) Variables DB"
390     read -p "Enter choice [1-2]: " db_choice
391
392     case $db_choice in
393         1)
394             echo "Logging into MySQL with no database..."
395             echo "Enter your custom PID or press Enter to use default:"
396             read custom_pid
397             if [ -z "$custom_pid" ]; then
398                 mysql -u root -pAL\@12345
399             else
400                 nice -n -20 mysql -u root -pAL\@12345 &
401                 pid=$!
402                 if [ -n "$custom_pid" ]; then
403                     ionice -c 2 -n 0 -p $custom_pid
404                 else
405                     ionice -c 2 -n 0 -p $pid
406                 fi
407             fi
408             ;;
409         2)
410             echo "Logging into MySQL with Variables DB..."
411             echo "Enter your custom PID or press Enter to use default:"
412             read custom_pid
413             if [ -z "$custom_pid" ]; then
```

```
414         mysql -u root -pAL\@12345 Variables
415     else
416         nice -n -20 mysql -u root -pAL\@12345 Variables &
417         pid=$!
418         if [ -n "$custom_pid" ]; then
419             ionice -c 2 -n 0 -p $custom_pid
420         else
421             ionice -c 2 -n 0 -p $pid
422         fi
423     fi
424     ;;
425 *)
426     echo "Invalid choice."
427     ;;
428 esac
429 }
430
431 # Function to run a Python script
432 run_python_script() {
433     read -p "Enter the filepath of the Python script: " python_file
434     echo "Running Python script..."
435     echo "Enter your custom PID or press Enter to use default:"
436     read custom_pid
437     if [ -z "$custom_pid" ]; then
438         python3 "$python_file"
439     else
440         nice -n -20 python3 "$python_file" &
441         pid=$!
442         if [ -n "$custom_pid" ]; then
443             ionice -c 2 -n 0 -p $custom_pid
444         else
445             ionice -c 2 -n 0 -p $pid
446         fi
447     fi
448 }
449
450 # Function to run an R script
451 run_r_script() {
452     read -p "Enter the filepath of the R script: " r_file
453     echo "Running R script..."
454     echo "Enter your custom PID or press Enter to use default:"
455     read custom_pid
456     if [ -z "$custom_pid" ]; then
457         Rscript "$r_file"
458     else
459         nice -n -20 Rscript "$r_file" &
460         pid=$!
461         if [ -n "$custom_pid" ]; then
462             ionice -c 2 -n 0 -p $custom_pid
463         else
464             ionice -c 2 -n 0 -p $pid
465         fi
466     fi
467 }
468
469 # Main menu
470 echo "Choose an option:"
471 echo "1) Login to MySQL"
472 echo "2) Run a Python script"
473 echo "3) Run an R script"
```



```
474 read -p "Enter choice [1-3]: " choice
475
476 case $choice in
477     1)
478         mysql_login
479         ;;
480     2)
481         run_python_script
482         ;;
483     3)
484         run_r_script
485         ;;
486     *)
487         echo "Invalid choice."
488         ;;
489 esac
490 #####__END__OF__BASH__SCRIPT#####
491 .....
492
493
494
495
496 #3 pt r
497 . X X
498 . X X
499 . . X
500 . . X
501 . . X
502 . . .
503
504 #3apter
505
506 =====
507 |                                     Default Placeholder Text                                     |
508 =====
509
510
511
512
513
514
515
516
```