

CS 409 Quiz 3

1. What is output by each of the following assuming that your current directory is `/home/rover` and the following bash command is executed first:
export TEST=pwd

Single right quotes prevent all shell expansions, double quotes prevent other expansions, but not variable expansion and single left quotes cause the inner string to be executed as a command.

- (a) `echo $TEST` `pwd`
 - (b) `echo '$TEST'` # Right quotes `$TEST`
 - (c) `echo "$TEST"` `pwd`
 - (d) `echo '$TEST'` # Left quotes `/home/rover`
2. What does the following script output if executed with the command:
testscript clowns bozo? (you can't give specifics).

Execute bash
#!/bin/bash

If fewer than two arguments, output a message
[\$# -lt 2] && echo "Two arguments needed"

Set variable LST to the filenames in the directory specified by argument 1
LST='ls \$1'

For each file in LST, execute the loop with f set to the filename
for f in \$LST
do

Output the file name
echo \$f

Output every line in f that matches the second argument
grep \$2 \$f
done

3. Briefly explain the commands and their usage for each of the following.

- (a) Your system is unexpectedly slow and you want to determine if it is due to high system usage.

You need to run one of the commands that will determine if your load average is higher than normal. *w*, *top*, *uptime*. If it is not, then you need to look elsewhere, low memory, high network activity or failing hardware generating delays.

- (b) You want to insure that your users have good passwords.

Run a password cracker against your shadow password file. Simply requiring long passwords won't work because users can pick passwords that are easy to guess.

- (c) You need to get everyone off the system and then run without users to do a complete backup.

First send a message with *shutdown -k* or *wall* telling them of the impending logouts. After a decent time (more than 2 seconds), set the *nologin* file in */etc* (by *touching* it) and then reboot or use *telinit* to drop to single user mode. To run a backup, you often need services that don't run at runlevel 1, so you probably will need to be at runlevel 3 or 5. That's why you need the *nologin* file.