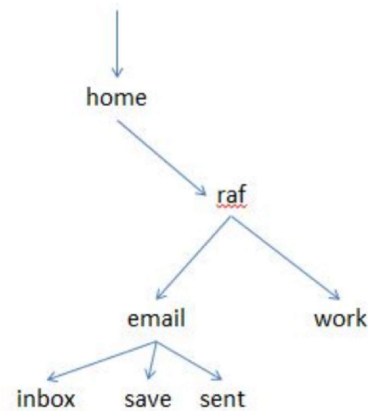


POP Quiz 4&5

Multiple Choice

Identify the choice that best completes the statement or answers the question.

1. Which of the following actions is performed by the following command?
`find / -name '*'`
 - a. List all files and directories recursively starting from /
 - b. Print a file with name * in /
 - c. List all files in / directory
 - d. List all files and directories in / directory
2. Which command creates an empty file if it does not exist?
 - a. cat
 - b. touch
 - c. ed
 - d. read
3. Which option of rm command is used to remove a directory including all its subdirectories?
 - a. -b
 - b. -o
 - c. -p
 - d. -r
4. What is the command to count the number of characters in a file?
 - a. grep
 - b. wc
 - c. count
 - d. cut
5. Which of the following commands displays one page of output at a time?
 - a. less
 - b. sed
 - c. pause
 - d. grep
6. Which of the following commands displays user id in its output?
 - a. ls
 - b. help
 - c. date
 - d. ls -l
7. Suppose you are in your home directory, /home/raf as in diagram above. What is the relative path for the file called "save" in the Email subdirectory?



- a. raf/email/save
- b. /email/save
- c. /home/raf/email/save
- d. email/save

Short Answer

8. What is BASH?
9. How do you change permissions on the command line?
10. What is the advantage of using open-source software?
11. What is the "chmod" command? What do you understand by this line "r-- -w- --x"?
12. What is the redirection operator? And how can it be used?
13. What is command used to kill a process or thread?

Problem

14. Write a command to list all the links from a directory?
15. Create a read-only file in your home directory? Assume you are currently the user 'tester' and are at the root of the directory.
16. In a file word.txt UNIX is appearing many times? How will you count number?
17. There is a file Unix_Test.txt which contains words Unix, how will you replace all Unix to UNIX?
18. How to find files larger than 10MB in size in /usr directory? Please use the command 'man find' to look up alternative flags.
19. How to find files in the /home directory which were modified more than 120 days ago ?
20. How to find files in the /home directory which were modified more than 120 days ago? Please use the 'man find' command to look up alternative flags.
21. How to find files in the /var directory that have not been accessed in the last 90 days? Please use the command 'man find' to use alternative flags.
22. Write a command to copy the contents in the Documents folder of User_46 into the evidence folder titled 'Evidence_Collected' under the Investigator's home directory.
23. Write a script that creates a text file under the user 'Temporary' with the name of the owner 'Moana'; change the owner and give Moana full rights to read, write. Everyone else only has read rights. Then move the file to Moana's directory and remove the original file created.
* Assume the user directory already exists.

At the end of your script write the following line '_____', and then write the command starting with \$ with the script MoanaFile.sh using sudo privileges.

Essay

24. What is a shell? Where are they located, and list the different shells available.
25. What is a root account and how do you access it without logging into the account?
26. Which are the 5 Linux Directory Commands and the syntax to use them?

POP Quiz 4&5

Answer Section

MULTIPLE CHOICE

1. ANS: A

Use the command <man find> if you need additional support.

The find command finds a file specified in the following directory.

The '/' represents the directory of the drive.

The flag -name is a specific

The * is a wildcard, for any character present.

PTS: 1

2. ANS: B

The command 'touch' creates an empty file. If the file exists, it will return as an error.

PTS: 1

3. ANS: D

The flag '-r' runs recursively through the last file in the directory and subdirectories.

PTS: 1

4. ANS: B

wc stands for word count

PTS: 1

5. ANS: A

less is a preview command, showing one page at a time.

PTS: 1

6. ANS: D

The flag -l shows all the reportable information.

PTS: 1

7. ANS: D

Absolute Path: /home/raf/email/save

Relative Path: <from where you are, /home/raf/>/email/save

PTS: 1

SHORT ANSWER

8. ANS:

BASH is a short form for Bourne Again Shell. Steve Bourne developed it as a replacement to the original Bourne Shell (represented by /bin/sh). It combines all the features from the original version of Bourne Shell, plus additional functions to make it easier and more convenient to use. Since then it has been adapted as the default shell for most running systems.

PTS: 1

9. ANS:

A system administrator or the owner of a file or directory can grant permission using the <chmod> command.

User adds permission to a file using “+” symbol and denies permission using “-” symbol, along with one or more of the following letters.

-u(user),
 -g(group),
 -o(others),
 -a(all),
 -r(read),
 -w(write), and
 -x(execute).

For example the command. -> chmod go+rw FILE1.TXT

It grants read and write access to the file FILE1.TXT, which is accessible to both groups and others.

PTS: 1

10. ANS:

Open source allows you to distribute your software including the source code, freely to anyone who is interested. Anyone can help by adding new features to the software and can even debug and correct errors present in the source code.

They can even make it run better and then redistribute the enhanced source code freely again. In this way, open-source benefits everyone in the community.

PTS: 1

11. ANS:

chmod command is used to change permission of a file or directory in UNIX. The line you see shows the permission for three different set of people : user, group and others. User is the currently logged in user, while group is for all other member which are part of certain group and others means anyone other than user and group member. Each group has three permissions rwx stands for read, write and execute and they are written as user_group_others. So in above line, user has only read permission, group members has write permissions and other people has only execute permission. If it is a directory then you need execute permission to go inside that directory.

PTS: 1

12. ANS:
The redirection operator is used to redirect the output of a particular command as an input to another command or file.

There are two ways of using this:

‘>’ overwrites the existing content of the file or creates a new file.

‘>>’ appends the new content to the end of the file or creates a new file.

PTS: 1

13. ANS:
kill

PTS: 1

PROBLEM

14. ANS:
ls -lrt | grep "^l"

PTS: 1

15. ANS:
cd /home/tester
touch file
chmod 400 file

Alternative:
touch /home/tester/file
chmod 400 file

PTS: 1

16. ANS:
grep -c "Unix" word.txt

PTS: 1

17. ANS:
sed s/Unix/UNIX/g Unix_Test.txt

PTS: 1

18. ANS:
find /usr -size +10M -exec ls -lah {} \;

PTS: 1

19. ANS:
find /home -mtime +12

PTS: 1

20. ANS:
find /home -mtime +120
- PTS: 1
21. ANS:
find /var -atime -90
- PTS: 1
22. ANS:
sudo cp -R /home/User_46/Documents/* /home/Investigator/Evidence_Collected/
- PTS: 1
23. ANS:
#!/bin/bash
- cd /home/Temporary
touch \$1.txt
chown \$1 \$1.txt
chmod 664 \$1.txt
mv \$1.txt /home/\$1/
rm \$1.txt
-
- \$ sudo sh MoanaFile.sh Moana
- PTS: 1

ESSAY

24. ANS:
Shell is a user program or it's environment provided for user interaction. It is a command language interpreter that executes the commands read from the standard input device like a keyboard or from a file.
- Shell is not part of the system kernel but uses the system kernel to execute programs and create files.
- Following Shells are available with Linux SH, BASH, CSH, TCSH, and KSH. Other functions of a shell include scripting capability, the path memory, multitasking, and file handling.
- The are found in /bin or /sbin.
- PTS: 1

25. ANS:

It is like a system administrators account that grants full control on the system. It allows creating and maintaining user accounts and assigning different permissions for each account, has access to all commands and files on the system. It is the default account that gets created at every new installation of Linux.

We can refer to it as the root user or a super user. There is a special command named <su> (for “super user”, or “switch user”) that allows to switch over to the root account on the command line. If you enter the correct root password, you enter into the root account to execute commands with full system privileges.

PTS: 1

26. ANS:

There are 5 main Directory Commands in Linux:

pwd: Displays the path of the present working directory | Syntax: \$ pwd

ls: Lists all the files and directories in the present working directory | Syntax: \$ ls

cd: Used to change the present working directory | Syntax: \$ cd <path to new directory>

mkdir: Creates a new directory | Syntax: \$ mkdir <name (and path if required) of new directory>

rmdir: Deletes a directory | Syntax: \$ rmdir <name (and path if required) of directory>

PTS: 1