**Lab 1 Assignment**

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Q1: Yes. A session will be created by opening a new terminal window using ‘Ctrl + Alt + T’ command. Using these command we can run multiple commands in multiple window.

We can delete each window using ‘exit’.

Q2: Unicode(UTF-8)

Q3:

1 Executable programs or shell commands

2 System calls (functions provided by the kernel)

3 Library calls (functions within program libraries)

4 Special files (usually found in /dev)

5 File formats and conventions eg /etc/passwd

6 Games

7 Miscellaneous (including macro packages and conventions), e.g.

man(7), groff(7)

8 System administration commands (usually only for root)

9 Kernel routines [Non standard]

Q4: Executable programs or shell commands (1)

Q5: File formats and conventions eg /etc/passwd (5)

Q6:

a) List directory contents

b)

size => -s, --size, -S

owner => -l, -o

group => -g, --group-directories-first, -G, --no-group

permissions => -u

c) ls -R command list subdirectories recursively

Q7:

a) ssh (Hence, we have already in last directory where ssh is a file)

b) cd ../../bin

Q8:

Suppose a command ‘ls -l ssh’ , it tells us some information like:

1. When the file is created that is date

2. permission modes of user, group and others.

3. First character ‘d’ indicates directory and ‘-’ indicates plain file.

Q9:

a) chmod u=rw filename; chmod g+r filename; chmod o+r filename [‘+’ means give && ‘-’ means deny]

b) chmod -R g+w filename

c) chmod u+x, g+x filename

Q10:

a) 666 => rw-rw-rw-

b) 770 => rwxrwx---

c) 640 => rw-r-----

d) 444 => r--r--r--

Q11: chmod -R 755

Q12: a) “chmod -R 660 dir “ command is most appropriate because for user and group to read and write permissions we use 6 and 0 for no permission that is for others.

Q13: “cd ..“ command goes back one directory from the current directory.

Q14: “cd ../..” command goes back two directory from the current directory.

Q15: The command “ls -la folder\_name” gives some information like:

1. When the file is created that is date

2. permission modes of user, group and others.

3. First character ‘d’ indicates directory and ‘-’ indicates plain file.

Q16: Standard out from command “command 2>&1” to standard error written to file1

Q17: The output (standard out) from “command 2>&1” is used as the input (standard in) to “grep –i fail”

Q18:

#!/bin/bash

read first\_name

read last\_name

read birth\_place

echo "First name: $first\_name" >> input

echo "last name: $last\_name" >> input

echo "birth place: $birth\_place" >> input

echo "First name: $first\_name"

echo "last name: $last\_name"

echo "birth place: $birth\_place"

Q19:

#!/bin/bash

read n1

read n2

read n3

add=$((n1+n2+n3))

sub=$((n1 - n3))

multi=$((n1\*n2\*n3))

div=$((n3/n2))

echo "Results of the number's addition, subtraction, multiplication and \

division are: $add, $sub, $multi, $div " >> math

printf "\n"

Q20:

#!/bin/bash

read n1

read n2

read n3

if (($n1 >= $n2)) && (($n1 >= $n3)); then

echo "Highest value is: $n1"

elif (($n2 >= $n1)) && (($n2 >= $n3)); then

echo "Highest value is: $n2"

elif (($n3 >= $n1)) && (($n3 >= $n2)); then

echo "Highest value is: $n3"

fi

printf "\n"

if (($n1 <= $n2)) && (($n1 <= $n3)); then

echo "Lowest value is: $n1"

elif (($n2 <= $n1)) && (($n2 <= $n3)); then

echo "Lowest value is: $n2"

elif (($n3 <= $n1)) && (($n3 <= $n2)); then

echo "Lowest value is: $n3"

fi

printf "\n"