OSOC LINUX ASSIGNMENT SOLUTION

Q.1.Ans: First open the terminal and type " bc " command and press enter, you will be prompted to calculator mode where you can submit your operands and operator and after pressing enter you will get the result. To set the limit of the number to display after particular constant we use **'ls -U'.**

Q.2. Ans: Program to implement binary search :

```
echo "Enter the limit:"

read n

echo "Enter the numbers"

for(( i=0 ;i<n; i++ ))

do

read m

a[i]=$m

done

for(( i=1; i<n; i++ ))

do

for(( j=0; j<n-i; j++))

do

if [ ${a[$j]} -gt ${a[$j+1]} ]

then

t=${a[$j]}

a[$j]=${a[$j+1]}

a[$j+1]=$t

fi

done

done

echo "Sorted array is"
```

```
for(( i=0; i<n; i++ ))
do
echo “${a[$i]}”
done
echo “Enter the element to be searched :”
read s
l=0
c=0
u=$(($n-1))
while [ $l -le $u ]
do
mid=$(((( $l+$u ))/2 ))
if [ $s -eq ${a[$mid]} ]
then
c=1
break
elif [ $s -lt ${a[$mid]} ]
then
u=$(($mid-1))
else
l=$(($mid+1))
fi
done
if [ $c -eq 1 ]
then
echo “Element found at position $(($mid+1))”
else
echo “Element not found”
fi
```

Program that takes argument as command line and perform basic arithmetic operation:

```
echo "Enter two numbers"
read num1 num2
sum = 'expr $num1 + $num2'
sub = 'expr $num1 - $num2'
mul = 'expr $num1 * $num2'
div = 'expr $num1 / $num2'

echo "The sum is = $sum"
echo "The sub is = $sub"
echo "The mul is = $mul"
echo "The div is = $div"
```

Q.3.ans: " top ", "vmstat", "free -m" command is used for finding memory usages.

Q.4.ans : command used for finding a word in a particular type of file: `grep --exclude=*.po --include=\*.{xml,py} -Rl ./ -e "Jason"`

Q.5.ans: To create directory type mkdir Dir_name1 and press enter, and use cd Dir_name1 to jump inside the directory. To create directory type mkdir Dir_name2 and press enter, to jump in parent directory we use cd ../..

Q.6.ans: Linux is more secure with comparison to other os :

1. A perk of accounts
2. strong community

3. Different working environment
4. recording in linux
5. Audience size

Q.7.ans : program for changing to absolute mode:

```
        $ ls -ld public_dir
drwxr--r--  1 ignatz   staff    6023 Aug  5 12:06 public_dir
$ chmod 755 public_dir
$ ls -ld public_dir
drwxr-xr-x  1 ignatz   staff    6023 Aug  5 12:06 public_dir
```

Symbolic mode into octal code :

```
$chmod o+wx testfile
$ls -l testfile
-rwxrwxrwx  1 amrood   users 1024  Nov 2 00:10  testfile
$chmod u-x testfile
$ls -l testfile
-rw-rwxrwx  1 amrood   users 1024  Nov 2 00:10  testfile
$chmod g = rx testfile
$ls -l testfile
-rw-r-xrwx  1 amrood   users 1024  Nov 2 00:10  testfile
```

Q.8.ans :

Boot up the machine, and *after* the BIOS screen, hold down the left `Shift` key. You will then be prompted by a menu,

We will be prompted to different booting mode, select recovery mode mode by press left shift key.

By default the first user's account is an administrative account, so if the UI is prompting you for a password it's probably that person's user password. If the user doesn't remember their password you need to reset it. To do this you need to boot into recovery mode.

Boot up the machine, and *after* the BIOS screen, hold down the left `Shift` key. You will then be prompted by a menu that looks something like this:

I've noticed on some systems that timing when to hit the left `Shift` key can be tricky, sometimes I miss it and need to try it again.

Hit the down arrow until you select the **2nd entry from the top** (the one with the **recovery mode in the description**) and then hit `Enter`.

Now you should see this menu:

Using the arrow keys scroll down to **root** and then hit `Enter`.

You should now see a root prompt, something like this:

```
root@ubuntu:~#
```

At this stage you should have a read-only filesystem. You have to remount it with write permissions:

```
mount -o remount,rw /
```

Now we can set the user's password with the `passwd` command. (In this example I will use jorge as the example, you need to substitute whatever the user's username is):

```
root@ubuntu:~# passwd jorge
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
root@ubuntu:~#
```

Type in what you want the new password to be at the prompt. After it's successful reboot the machine and the user will be able to log in with their new password.

Q.9

1.ans : 11 down vote

A good starting point, if you don't know the exact command name, is `apropos`. You'll find a with `man apropos`.

2. On **Linux** and other **Unix**-like operating systems, new files are created with a default set of permissions. Specifically, a new file's permissions may be restricted in a specific way by applying a permissions "mask" called the **umask**.

3. Command to delete a non empty directory together its files : rmdir -r Dir_name

Command for moving file from anywhere to everywhere : `find . -name '*.zip' -exec mv {} /path/to/single/target/directory \;`