7 Post Experiment Exercise

B. Questions

1 Explain arrays in shell with an example

Ans. Shell supports array variable. This can hold multiple values at the same time. Array provide a method of grouping a set of variables. Instead of creating a new name for each variable that is required, you can use a single array variable that stores all the other variables.

ex
```
name[0]="lional"
name[1]="Richard"
name[3]="Stephen"
name[4]="Nikola"
```

```
echo "Second name is ${name[1]}"
echo "All names: ${name[@]}"
```

O/P Second name is Richard
All names: lional Richard Stephen Nikola.

2. Write a shell program to count no of files in a directory.

Ans.
```
#!/bin/bash
START=$HOME
#change directory to commandline if passed, otherwise use home.
[$#-eq 1] && START=$1 || :
if [! -d $START]
then
echo "$START not a directory!"
exit 1
fi
variable
DIRS=$(find "$START" -type d)
#loop through each dir to get all sub dir files
for d in $DIRS
do
  ["$d" != "." -a "$d" != ".." ] && echo "$d directory has
  $(ls -l $d | wc -l) files" || :
done.
```

Conclusion

In this experiment we performed shell scripting in Unix terminal. We searched for an element within a list, computed GCD & LCM of 2 numbers and checked whether a file is a directory or not.

Shellscripts are powerful tools that let us execute program directly from the OS.

References: 1. Yashwant Kanetkar, UNIX Shell Programming.
2. Sumitabha Das, UNIX Concepts & Applications.