



Department of Computer Science
California State University, Channel Islands

COMP-524: Security
Lab Report

Lab Number: 1

Lab Topic: Lab System Setup and Prerequisite
Materials

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TASK-01: Virtual Machine Installation and Setup

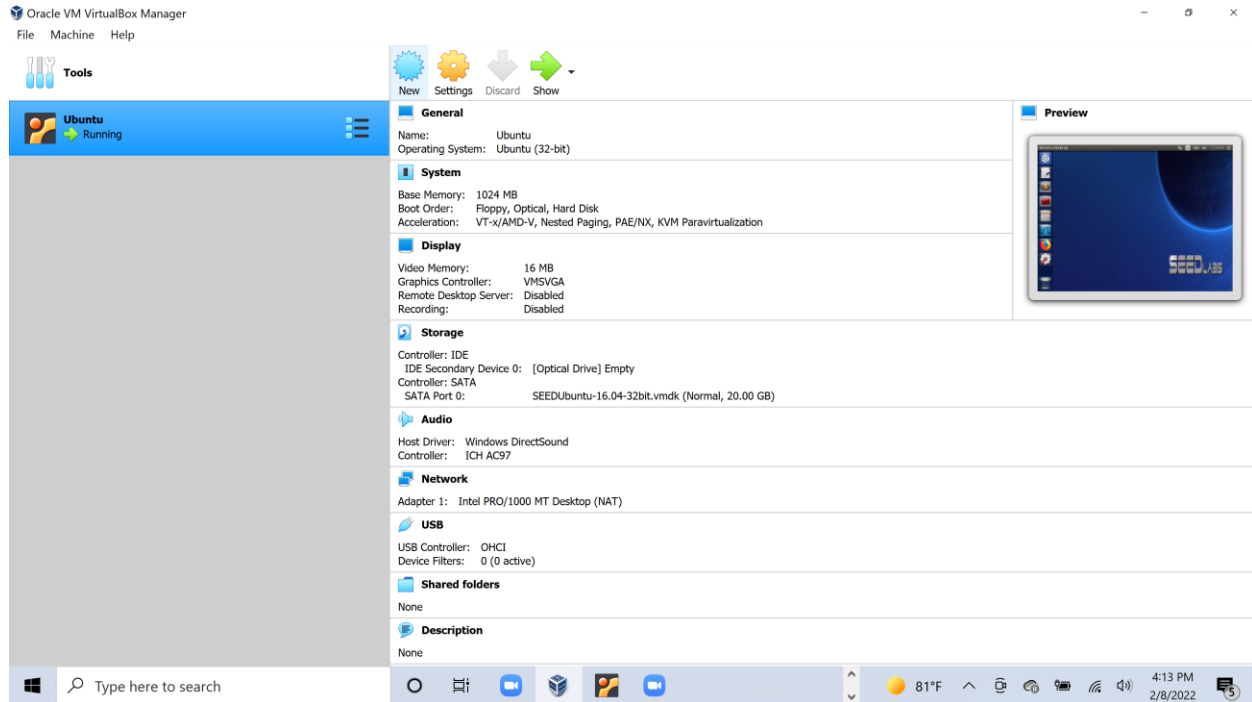


Fig 1.1

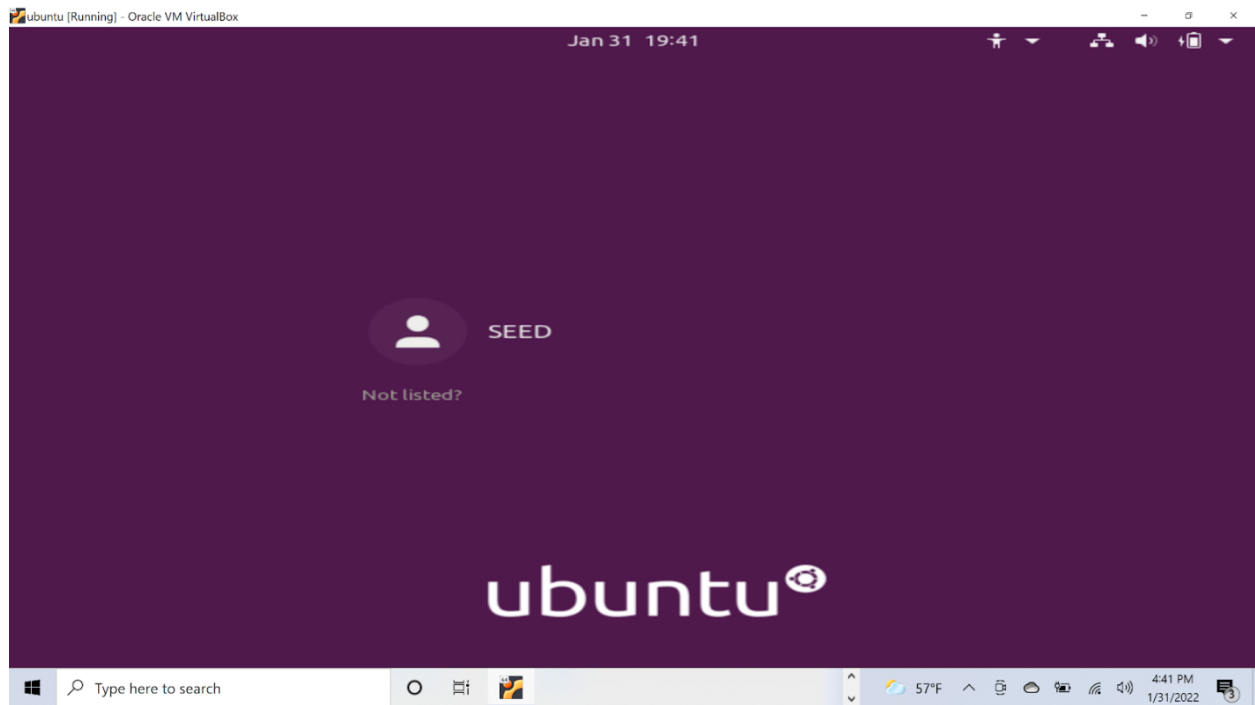


Fig 1.2

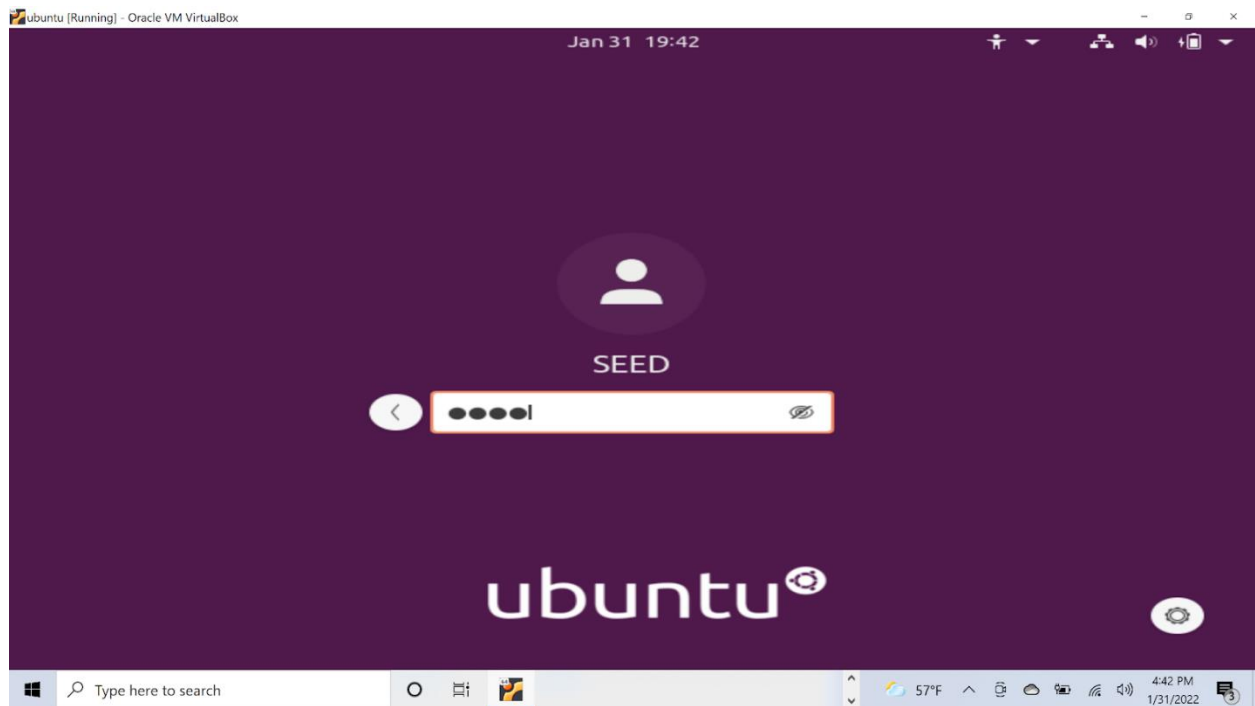


Fig 1.3

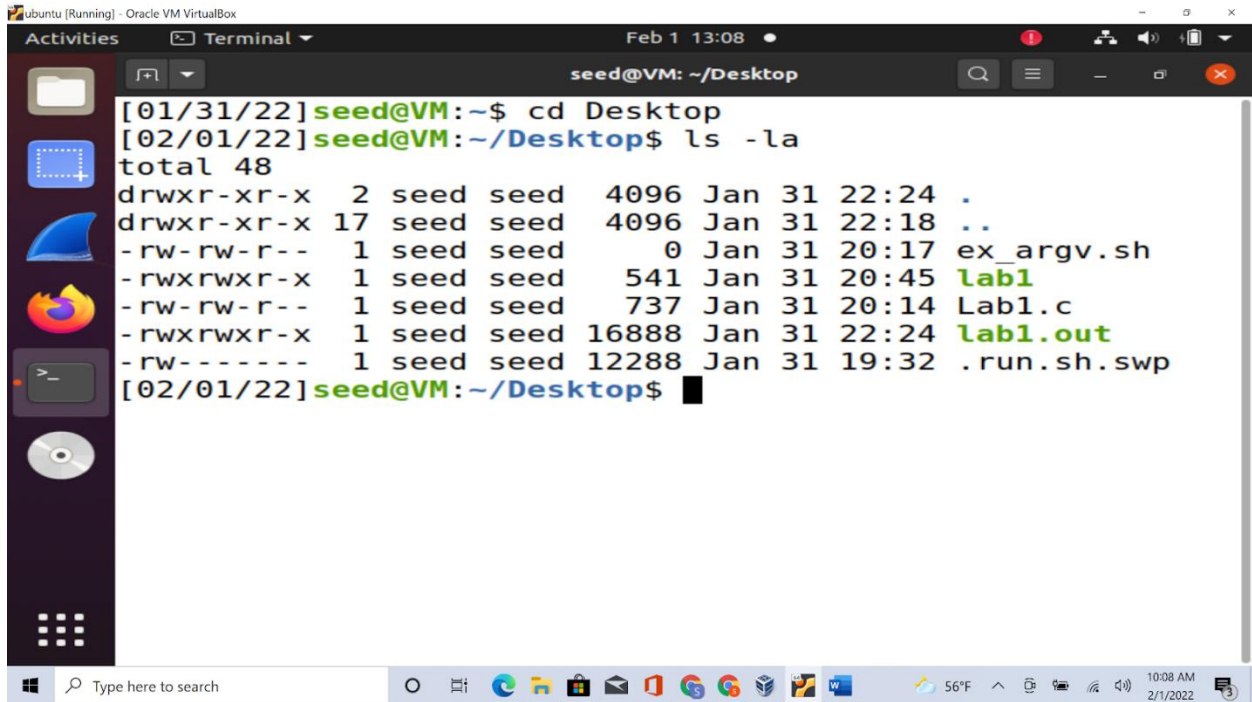


Fig 1.4

TASK-02: Review of Basic Linux Commands and Tools

Task-03: Review of C Programming Language

Step-01: I opened terminal in Ubuntu and write 2 commands which is shown in Fig 1.5.



The screenshot shows a terminal window titled 'Ubuntu (Running) - Oracle VM VirtualBox'. The window has a dark theme. The terminal output shows the following commands and results:

```
[01/31/22] seed@VM:~$ cd Desktop
[02/01/22] seed@VM:~/Desktop$ ls -la
total 48
drwxr-xr-x  2 seed seed 4096 Jan 31 22:24 .
drwxr-xr-x 17 seed seed 4096 Jan 31 22:18 ..
-rw-rw-r--  1 seed seed   0 Jan 31 20:17 ex_argv.sh
-rwxrwxr-x  1 seed seed  541 Jan 31 20:45 lab1
-rw-rw-r--  1 seed seed  737 Jan 31 20:14 Lab1.c
-rwxrwxr-x  1 seed seed 16888 Jan 31 22:24 lab1.out
-rw-----  1 seed seed 12288 Jan 31 19:32 .run.sh.swp
[02/01/22] seed@VM:~/Desktop$
```

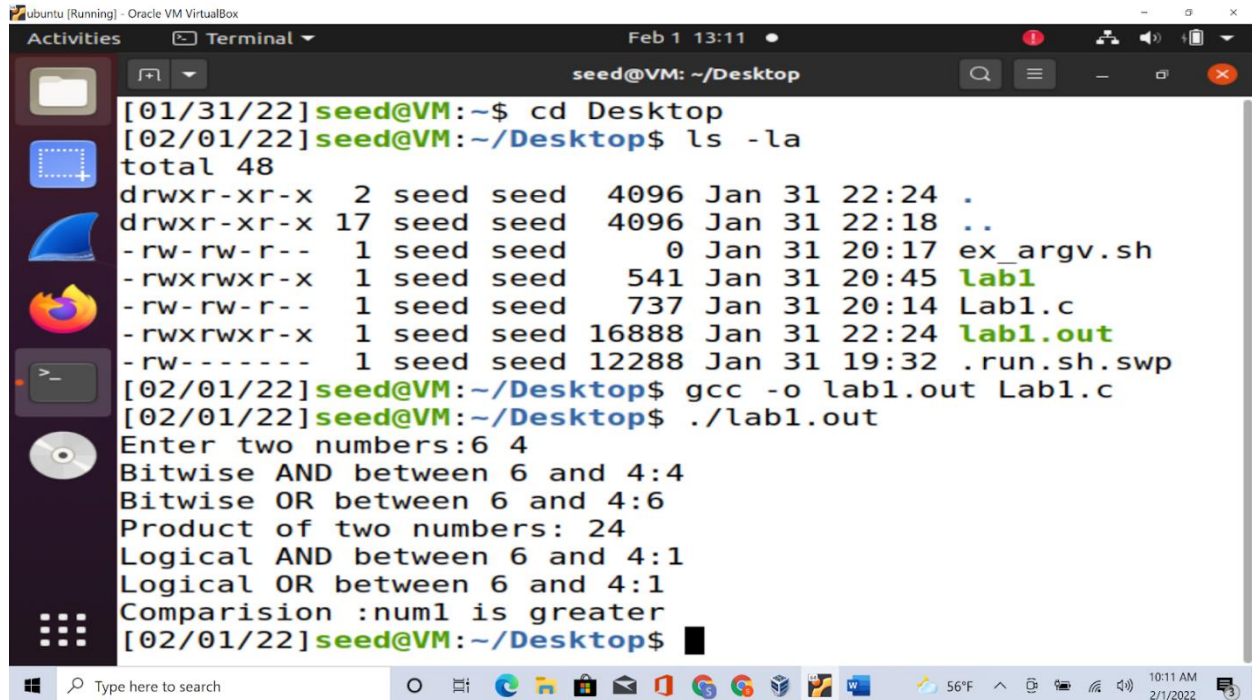
The terminal window is part of a desktop environment with a sidebar on the left containing icons for Activities, Terminal, and other applications. The bottom of the screen shows a taskbar with various application icons and system status indicators.

Fig 1.5

Step-02: After executing above two commands, I execute two more commands which are written as follows and shown in Fig 1.6:

“gcc -o lab1.out Lab1.c”

“./lab1.out”



The screenshot shows a terminal window titled 'seed@VM: ~/Desktop'. The user has navigated to the Desktop directory and listed files. Then, they compiled Lab1.c into lab1.out using gcc. Finally, they executed lab1.out, which performed bitwise AND, OR, and product operations on the numbers 6 and 4, and compared them.

```
[01/31/22]seed@VM:~$ cd Desktop
[02/01/22]seed@VM:~/Desktop$ ls -la
total 48
drwxr-xr-x  2 seed seed  4096 Jan 31 22:24 .
drwxr-xr-x 17 seed seed  4096 Jan 31 22:18 ..
-rw-rw-r--  1 seed seed    0 Jan 31 20:17 ex_argv.sh
-rwxrwxr-x  1 seed seed   541 Jan 31 20:45 lab1
-rw-rw-r--  1 seed seed   737 Jan 31 20:14 Lab1.c
-rwxrwxr-x  1 seed seed 16888 Jan 31 22:24 lab1.out
-rw-----  1 seed seed 12288 Jan 31 19:32 .run.sh.swp
[02/01/22]seed@VM:~/Desktop$ gcc -o lab1.out Lab1.c
[02/01/22]seed@VM:~/Desktop$ ./lab1.out
Enter two numbers:6 4
Bitwise AND between 6 and 4:4
Bitwise OR between 6 and 4:6
Product of two numbers: 24
Logical AND between 6 and 4:1
Logical OR between 6 and 4:1
Comparision :num1 is greater
[02/01/22]seed@VM:~/Desktop$
```

Fig 1.6

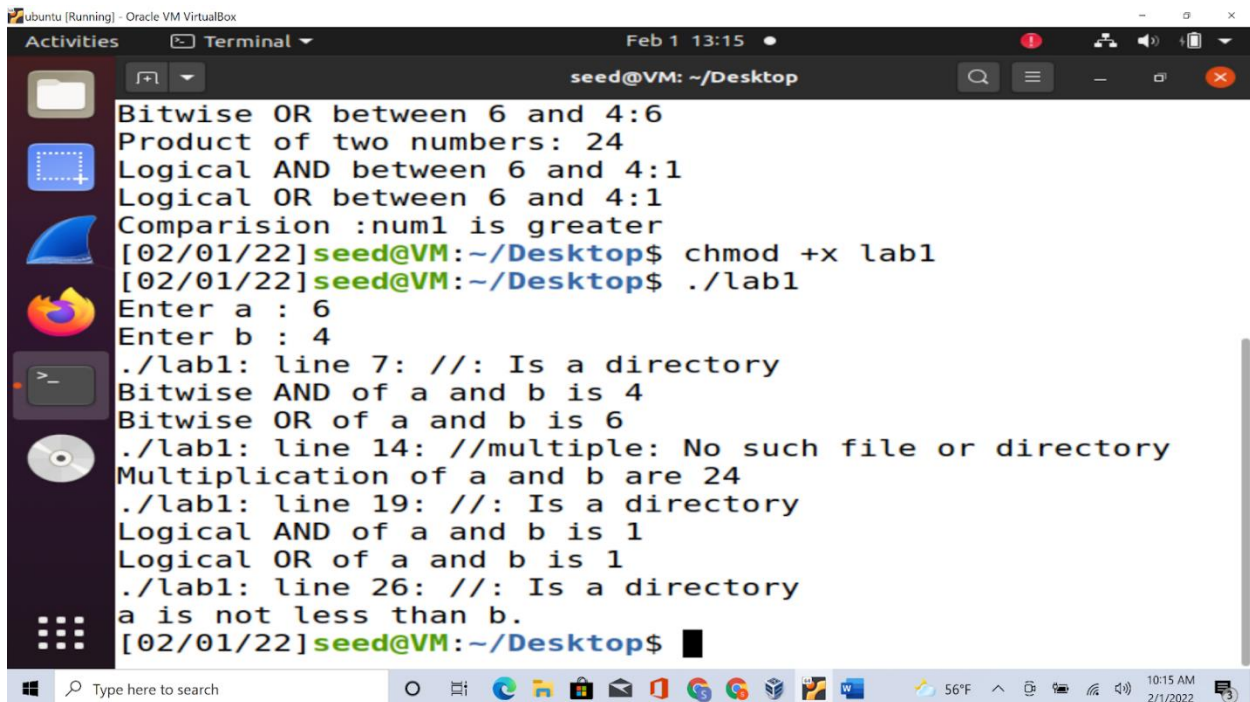
In Fig 1.7 you will see Hidden and Unhidden Files.

```
total 48
drwxr-xr-x  2 seed seed  4096 Jan 31 22:24 .
drwxr-xr-x 17 seed seed  4096 Jan 31 22:18 ..
-rw-rw-r--  1 seed seed    0 Jan 31 20:17 ex_argv.sh
-rwxrwxr-x  1 seed seed   541 Jan 31 20:45 lab1
-rw-rw-r--  1 seed seed   737 Jan 31 20:14 Lab1.c
-rwxrwxr-x  1 seed seed 16888 Jan 31 22:24 lab1.out
-rw-----  1 seed seed 12288 Jan 31 19:32 .run.sh.swp
```

Fig 1.7

Step-03: I have changed the permission of file (which is named as lab1) from readable to executable. After changing permission, I execute following command:

“./lab1”



```
Bitwise OR between 6 and 4:6
Product of two numbers: 24
Logical AND between 6 and 4:1
Logical OR between 6 and 4:1
Comparision :num1 is greater
[02/01/22]seed@VM:~/Desktop$ chmod +x lab1
[02/01/22]seed@VM:~/Desktop$ ./lab1
Enter a : 6
Enter b : 4
./lab1: line 7: //: Is a directory
Bitwise AND of a and b is 4
Bitwise OR of a and b is 6
./lab1: line 14: //multiple: No such file or directory
Multiplication of a and b are 24
./lab1: line 19: //: Is a directory
Logical AND of a and b is 1
Logical OR of a and b is 1
./lab1: line 26: //: Is a directory
a is not less than b.
[02/01/22]seed@VM:~/Desktop$
```

Fig 1.8