GALGOTIAS UNIVERSITY

(Established under Galgotias University Uttar Pradesh Act No. 14 of 2011)

Plot No.2, Sector 17-A, Yamuna Expressway, Greater Noida, Gautam Buddh Nagar, U.P., India

Operating System

R1UC403B

B.Tech. (*Fourth semester*)

Practical File

Submitted by: Submitted to:

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Q1) Explain different types of basics Linux commands.

```
bat@man:~/temp$ touch file1 file2
bat@man:~/temp$ ls
file1  file2
bat@man:~/temp$ pwd
/home/bat/temp
bat@man:~/temp$ mkdir newdir
bat@man:~/temp$ ls
file1  file2  newdir
bat@man:~/temp$ cd newdir/
bat@man:~/temp/newdir$ cd ..
bat@man:~/temp$ rmdir newdir/
bat@man:~/temp$ cp ../Desktop/temp.txt .
bat@man:~/temp$ ls -l
total 4
-rw-r--r-- 1 bat bat  0 Apr 14 19:59 file1
-rw-r--r-- 1 bat bat  0 Apr 14 19:59 file2
-rw-r--r-- 1 bat bat 63 Apr 14 20:00 temp.txt
bat@man:~/temp$ mv temp.txt newname.txt
bat@man:~/temp$ ls -l
total 4
-rw-r--r-- 1 bat bat  0 Apr 14 19:59 file1
-rw-r--r-- 1 bat bat  0 Apr 14 19:59 file2
-rw-r--r-- 1 bat bat 63 Apr 14 20:00 newname.txt
bat@man:~/temp$ rm file1
bat@man:~/temp$ ls
file2  newname.txt
```

Ans1) #Abhinav Jain 22SCSE1011721

Linux Commands Functions

ls	Displays information about files in the current directory.
pwd	Displays the current working directory.
mkdir	Creates a directory.

cd	
	Changes the working directory
rmdir	Removes empty directories from the directory lists.
cp	Moves files from one directory to another.
mv	Rename and Replace the files
rm	Delete files

```
bat@man:~/temp$ uname -s
Linux
bat@man:~/temp$ locate file2
/home/bat/temp/file2
/usr/lib/ruby/gems/3.1.0/gems/rake-13.0.6/doc/example/Rakefile2
/usr/share/metasploit-framework/modules/exploits/windows/browser/nctaudiofile2_setformatl
/usr/share/metasploit-framework/vendor/bundle/ruby/3.1.0/gems/rake-13.2.1/doc/example/Rak
/usr/share/rubygems-integration/all/gems/rake-13.0.6/doc/example/Rakefile2
/usr/share/texlive/texmf-dist/scripts/attachfile2
/usr/share/texlive/texmf-dist/scripts/attachfile2/pdfatfi.pl
/usr/share/texlive/texmf-dist/tex/latex/attachfile2
/usr/share/texlive/texmf-dist/tex/latex/attachfile2/atfi-dvipdfmx.def
/usr/share/texlive/texmf-dist/tex/latex/attachfile2/atfi-dvips.def
/usr/share/texlive/texmf-dist/tex/latex/attachfile2/atfi-luatex.def
/usr/share/texlive/texmf-dist/tex/latex/attachfile2/atfi-pdftex.def
/usr/share/texlive/texmf-dist/tex/latex/attachfile2/attachfile2.sty
/usr/share/texlive/texmf-dist/tex/latex/lwarp/lwarp-attachfile2.sty
bat@man:~/temp$ ln -s ~/Desktop/x.c ~/temp/link.c
bat@man:~/temp$ ls -l
total 4
-rw-r--r-- 1 bat bat  0 Apr 14 19:59 file2
lrwxrwxrwx 1 bat bat 21 Apr 14 20:04 link.c → /home/bat/Desktop/x.c
-rw-r--r-- 1 bat bat 63 Apr 14 20:00 newname.txt
bat@man:~/temp$ nano file1
bat@man:~/temp$ cat file1
contents xyz
```

uname Command to get basic information about the OS

locate Find a file in the database.

touch Create empty files

ln Create shortcuts to other files

cat Display file contents on terminal

clear Clear terminal

ps Display the processes in terminal

man Access manual for all Linux commands

grep Search for a specific string in an output

echo Display active processes on the terminal

wget download files from the internet.

```
bat@man:~/temp$ cat file1
contents xyz
jkh
iuy
togrep
jhg98
87
bat@man:~/temp$ cat file1 | grep togrep
togrep
bat@man:~/temp$ echo "i am vengeance" >> file2
bat@man:~/temp$ cat file2
i am vengeance
bat@man:~/temp$ wget https://hannahmontana.sourceforge.net/Site/Downloads_files/hannah_mo
bat@man:~/temp$ ls -l
total 60
-rw-r--r-- 1 bat bat    37 Apr 14 20:06 file1
-rw-r--r-- 1 bat bat    15 Apr 14 20:08 file2
-rw-r--r-- 1 bat bat 42213 Sep 30  2009 hannah_montana_linux_logo.png
lrwxrwxrwx 1 bat bat    21 Apr 14 20:04 link.c → /home/bat/Desktop/x.c
-rw-r--r-- 1 bat bat    63 Apr 14 20:00 newname.txt
-rw-r--r-- 1 bat bat   657 Apr 14 20:12 temp.png
bat@man:~/temp$ gwenview hannah_montana_linux_logo.png
MESA: error: ZINK: failed to choose pdev
glx: failed to create drisw screen
failed to load driver: zink
kf.i18n.kuit: "Unknown subcue ':whatsthis,' in UI marker in context {@info:whatsthis, %1
```

whoami Create or update passwords for existing users

sort   sort the file content

cal   View Calendar in terminal

whereis View the exact location of any command typed after this command

df   Check the details of the file system

wc   Check the lines, word count, and characters in a file using different options

```
bat@man:~/temp$ whoami
bat
bat@man:~/temp$ sort file1
87
contents xyz
iuy
jhg98
jkh
togrep
bat@man:~/temp$ whereis apt
apt: /usr/bin/apt /usr/lib/apt /etc/apt /usr/share/man/man8/apt.8.gz
bat@man:~/temp$ df -h /dev/vda2
Filesystem      Size  Used Avail Use% Mounted on
/dev/vda2        87G   21G   62G  25% /
bat@man:~/temp$ wc file1
 6  7 37 file1
bat@man:~/temp$ 
```

Q2) Write a shell script to print arithmetic operations.

```
a=10
b=20

val=`expr $a + $b`
echo "a + b : $val"

val=`expr $a - $b`
echo "a - b : $val"

val=`expr $a \* $b`
echo "a * b : $val"

val=`expr $b / $a`
echo "b / a : $val"

val=`expr $b % $a`
echo "b % a : $val"

if [ $a == $b ]
then
    echo "a is equal to b"
fi


if [ $a != $b ]
then
    echo "a is not equal to b"
```

```
a + b : 30
a - b : -10
a * b : 200
b / a : 2
b % a : 0
a is not equal to
```

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Q3) Write a shell script print largest among two numbers.

```
echo "Enter Num1"
read num1
echo "Enter Num2"
read num2
echo "Larger Number between $num1 and $num2 is"
if [ $num1 -gt $num2 ]
then
    echo $num1
else
    echo $num2
fi
```

```
Enter Num1
50
Enter Num2
62
Larger Number bet
62
```

Ans3) #Abhinav Jain 22SCSE1011721

Q4. Write a shell script to print factorial of given number.

```
echo "Enter a Number"
read n
 i=`expr $n - 1`
 p=1
while [ $i -ge 1 ]
 do
 n=`expr $n \* $i`
 i=`expr $i - 1`
 done
  echo "The Factorial of the given Number is $n"
```

```
5
```

Output

```
Enter a Number
The Factorial of the given Number is 120

[Execution complete with exit code 0]
```

Ans4) #Abhinav Jain 22SCSE1011721

Q5) Write a shell script to check number is even or odd

```
echo "Enter the Number"
read n
 r=`expr $n % 2`
 if [ $r -eq 0 ]
then
echo "$n is Even number"
else
echo "$n is Odd number"
 fi
```

```
25655
```

Output

```
Enter the Number
25655 is Odd number

[Execution complete with exit code 0]
```

Ans5) #Abhinav Jain 22SCSE1011721