Vidyalankar Polytechnic	DEPARTMENT OF COMPUTER ENGINEERING

Subject: OSY	**Subject Code**:22516
Semester: 5th Semester	**Course:** Computer Engineering
Laboratory No: V118	**Name of Subject teacher:** Prof. Natasha Brahmne
Name of Student: Siddharth Shah	**Roll Id:** 22203A0041

Experiment No:	6
Title of Experiment:	Execute file and directory commands.

• Practical Related Questions

1. **What are the different options of ls command? Write down the command along with options and note down the output. (Use $man command to check options)**

→

2. **What are two different options of mv command?**

→

1. -i (interactive)
2. -f (Force)
3. -n (no-clobber)
4. -b(backup)
5. –version

3. **what is use of split commands**

→ The split command in Linux is a highly useful tool for dividing large files into smaller, more manageable pieces. This command is often used in scenarios where you need to break down a large file for easier data processing or distribution. In this article, we'll dissect the split command, its syntax, options, and some practical examples of its usage.

Syntax of split Command in Linux:
The basic syntax of the split command in Linux is as follows:
Split [option][file prefix]
Where:
• OPTIONS: These are optional parameters that modify the behavior of the split command.
• FILE: This is the input file that you want to split.
• PREFIX: This parameter specifies the prefix for the output files. The default prefix is 'x'.

4. **How to use join command?**

→ The Linux join command is a powerful tool that is used to merge two different files based on a common field. command reads contents of two files and merges them based on specified field, which can be a string or a numeric value. In this article, we will discuss various aspects of join command and its usage.
The syntax for join command is as follows −
join [options] file1 file2
t − This option is used to specify delimiter character used in files. By default, delimiter is a
blank space.
• -1 − This option is used to specify field number in first file.
• -2 − This option is used to specify field number in second file.
• -a − This option is used to print all lines from both files, including those that do not match.
• -e − This option is used to replace missing fields with a specified value.

Example 1

File 1 −
1 Alpha 2 Bravo 3 Charlie 4 Delta 5 Echo

File 2 −
2 20 3 30 4 40 5 50 6 60

We can join these two files based on first field in each file using following command − join file1 file2

The output will be as follows −
2 Bravo 20 3 Charlie 30 4 Delta 40 5 Echo 50

• **EXERCISE**

1.Write output of following commands

a) **Display all file names whose name starts with ‘a’ and ends with ‘y’.**

```
┌──(mc㉿kali)-[~/OSY]
└─$ man ls

┌──(mc㉿kali)-[~/OSY]
└─$ ls a*t
a1.txt  a1cp.txt  a2.txt  a3.txt
```

b) **Enlist all files beginning with ‘m’ and ending with any range 1 to 5.**

```
┌──(mc㉿kali)-[~/OSY]
└─$ ls a*[1-5]
a1  a2  a3
```

c) **Show the contents of the files whose file names contains exactly two characters.**

```
┌──(mc㉿kali)-[~/OSY]
└─$ cat ??
Hello
Mohit
Atharva
Shravan
Neel
Hitesh
Shelar
Parth
Abhishek
Vedant
Rane
Pranit
Hello Kali Linux
```

d) Create a file ABCD.txt, create a copy with XXXX.txt .Rename the original file with AACD.txt. Delete the file XXXX.txt.

```
┌──(mc㉿kali)-[~/OSY]
└─$ cat > ABCD.txt
Mohit Chaudhari
^C

┌──(mc㉿kali)-[~/OSY]
└─$ cp ABCD.txt XXXX.txt

┌──(mc㉿kali)-[~/OSY]
└─$ mv ABCD.txt AACD.txt

┌──(mc㉿kali)-[~/OSY]
└─$ ls
AACD.txt  a1cp.txt  a3      chapter1     combined1.txt  names    xz
XXXX.txt  a2        a3.txt  chapter2     dte            surname
a1        a2.txt    abc     combine.txt  name           xaa

┌──(mc㉿kali)-[~/OSY]
└─$ rm AACD.txt

┌──(mc㉿kali)-[~/OSY]
└─$ ls
XXXX.txt  a1cp.txt  a2.txt  a3.txt  chapter1  combine.txt    dte   names    xaa
a1        a2        a3      abc     chapter2  combined1.txt  name  surname  xz
```

e) Display the inodes of any 2 files at the same time.

```
┌──(mc㉿kali)-[~/OSY]
└─$ cat a1

┌──(mc㉿kali)-[~/OSY]
└─$ cat > a1
Mohit
Atharva
^C

┌──(mc㉿kali)-[~/OSY]
└─$ ls -i a1 a2
1966216 a1  1969438 a2
```

2. List all file processing commands.

→

- cat
- less
- more
- head
- tail
- file
- diff
- wc
- nano

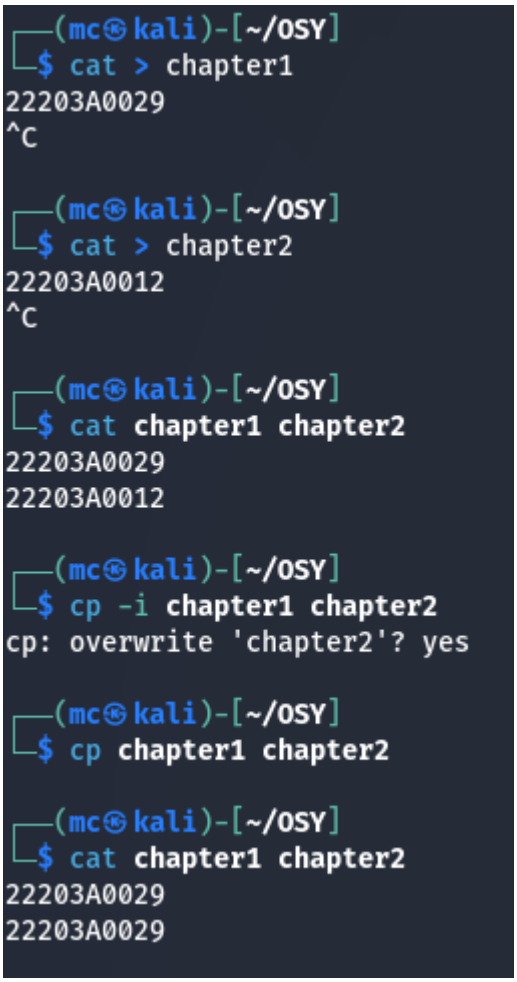
- vim
- sed
- awk

3. How many lines will be displayed with head command if number is not specified?

→ If the number of lines is not specified with the head command, it will display the first 10 lines of the file by default.

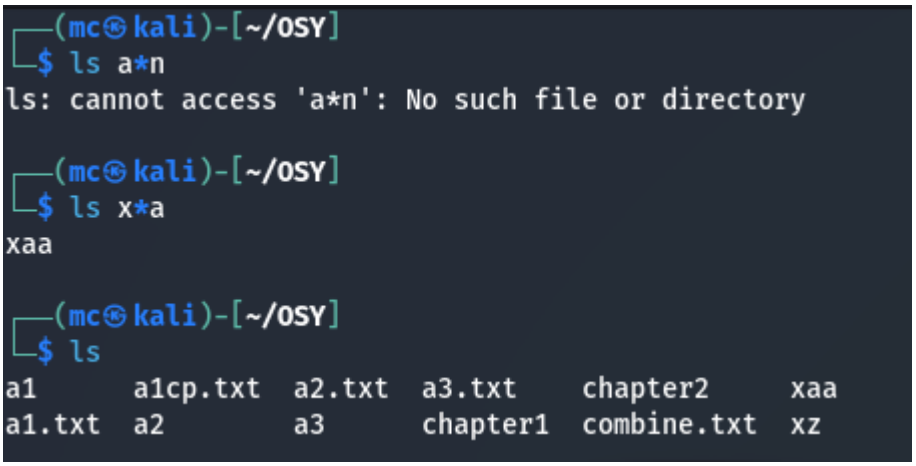
4. Create 2 files chapter1 and chapter2 and perform the following operations

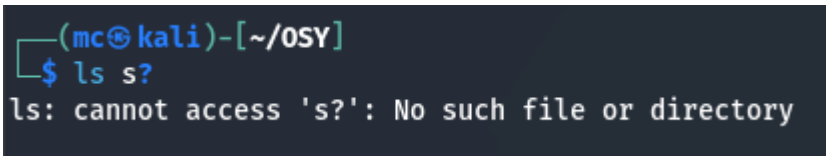
1) Copy content of chapter1 to chapter2 by asking the user before overwrite.
2) Display the inodes of 2 files
3)Rename the file ‘chapter1’ to ‘lesson1’.

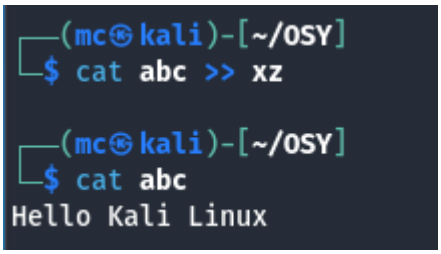


5. Execute the following command.

1) $ls a*n
2) $ls s?
3) $cat abc>> xz







- **Program code**

1. **Create four files a1,a2,a3**

→

```
┌──(mc㉿kali)-[~/OSY]
└─$ cat a1 a2 a3

┌──(mc㉿kali)-[~/OSY]
└─$ ls
a1        a2  abc       chapter2     xaa
a1cp.txt  a3  chapter1  combine.txt  xz
```

2. **Apply different commands like ls, mv, cp, rm, join, split, and check the list of files at the end**

   1. **ls**

```
┌──(mc㉿kali)-[~/OSY]
└─$ touch a1.txt a2.txt a3.txt

┌──(mc㉿kali)-[~/OSY]
└─$ ls
a1      a1cp.txt  a2.txt  a3.txt  chapter1  combine.txt  xz
a1.txt  a2        a3      abc     chapter2  xaa
```

   2. **mv**

```
┌──(mc㉿kali)-[~/OSY]
└─$ mv a1.txt /home/mc/Desktop

┌──(mc㉿kali)-[~/OSY]
└─$ la
a2.txt  a3.txt
```

```
┌──(mc㉿kali)-[~/OSY]
└─$ cd ..

┌──(mc㉿kali)-[~]
└─$ cd Desktop

┌──(mc㉿kali)-[~/Desktop]
└─$ ls
a1.txt
```

3. **rm**

```
┌──(mc㉿kali)-[~/OSY]
└─$ rm a1.txt

┌──(mc㉿kali)-[~/OSY]
└─$ ls
a1        a2      a3      abc       chapter2     xaa
a1cp.txt  a2.txt  a3.txt  chapter1  combine.txt  xz
```

4. **join**

```
┌──(mc㉿kali)-[~/OSY]
└─$ cat  a1.txt
Hello there! I'm Mohit

┌──(mc㉿kali)-[~/OSY]
└─$ cat  a2.txt
 Chaudhari from CO5IA
```

```
┌──(mc㉿kali)-[~/OSY]
└─$ cat combine.txt
Hello there! I'm Mohit
 Chaudhari from CO5IA

┌──(mc㉿kali)-[~/OSY]
└─$ ls
a1.txt  a1cp.txt  a2.txt  a3.txt  combine.txt
```

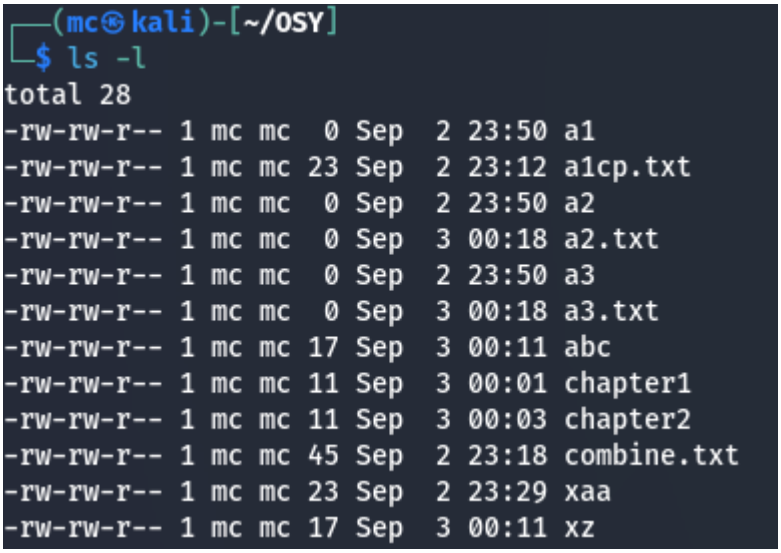
5. **split**

```
┌──(mc㉿kali)-[~/OSY]
└─$ split -12 a1.txt

┌──(mc㉿kali)-[~/OSY]
└─$ ls
a1.txt  a1cp.txt  a2.txt  a3.txt  combine.txt  xaa

┌──(mc㉿kali)-[~/OSY]
└─$ cat xaa
Hello there! I'm Mohit
```

6. **ls -l**


(mc㉿kali)-[~/OSY]
$ ls -l
total 28
-rw-rw-r-- 1 mc mc 0 Sep 2 23:50 a1
-rw-rw-r-- 1 mc mc 23 Sep 2 23:12 a1cp.txt
-rw-rw-r-- 1 mc mc 0 Sep 2 23:50 a2
-rw-rw-r-- 1 mc mc 0 Sep 3 00:18 a2.txt
-rw-rw-r-- 1 mc mc 0 Sep 2 23:50 a3
-rw-rw-r-- 1 mc mc 0 Sep 3 00:18 a3.txt
-rw-rw-r-- 1 mc mc 17 Sep 3 00:11 abc
-rw-rw-r-- 1 mc mc 11 Sep 3 00:01 chapter1
-rw-rw-r-- 1 mc mc 11 Sep 3 00:03 chapter2
-rw-rw-r-- 1 mc mc 45 Sep 2 23:18 combine.txt
-rw-rw-r-- 1 mc mc 23 Sep 2 23:29 xaa
-rw-rw-r-- 1 mc mc 17 Sep 3 00:11 xz

- **Set 5 questions**

1. **Execute file manipulation commands: ls, rm, mv, cp, join, split, ls), head, tail, touch.**

→

1. ls

```
┌──(mc㉿kali)-[~/OSY]
└─$ touch a1.txt a2.txt a3.txt

┌──(mc㉿kali)-[~/OSY]
└─$ ls
a1      a1cp.txt  a2.txt  a3.txt  chapter1  combine.txt  xz
a1.txt  a2        a3      abc     chapter2  xaa
```

2. mv

```
┌──(mc㉿kali)-[~/OSY]
└─$ mv a1.txt /home/mc/Desktop

┌──(mc㉿kali)-[~/OSY]
└─$ la
a2.txt  a3.txt
```

```
┌──(mc㉿kali)-[~/OSY]
└─$ cd ..

┌──(mc㉿kali)-[~]
└─$ cd Desktop

┌──(mc㉿kali)-[~/Desktop]
└─$ ls
a1.txt
```

3. rm

```
┌──(mc㉿kali)-[~/OSY]
└─$ rm a1.txt

┌──(mc㉿kali)-[~/OSY]
└─$ ls
a1        a2      a3      abc       chapter2     xaa
a1cp.txt  a2.txt  a3.txt  chapter1  combine.txt  xz
```

4. join

```
┌──(mc㉿kali)-[~/OSY]
└─$ cat  a1.txt
Hello there! I'm Mohit

┌──(mc㉿kali)-[~/OSY]
└─$ cat  a2.txt
 Chaudhari from CO5IA
```

```
┌──(mc㉿kali)-[~/OSY]
└─$ cat combine.txt
Hello there! I'm Mohit
 Chaudhari from CO5IA

┌──(mc㉿kali)-[~/OSY]
└─$ ls
a1.txt  a1cp.txt  a2.txt  a3.txt  combine.txt
```

5. split

```
┌──(mc㉿kali)-[~/OSY]
└─$ split -12 a1.txt

┌──(mc㉿kali)-[~/OSY]
└─$ ls
a1.txt  a1cp.txt  a2.txt  a3.txt  combine.txt  xaa

┌──(mc㉿kali)-[~/OSY]
└─$ cat xaa
Hello there! I'm Mohit
```

6. ls -l

```
┌──(mc㉿kali)-[~/OSY]
└─$ ls -l
total 28
-rw-rw-r-- 1 mc mc  0 Sep  2 23:50 a1
-rw-rw-r-- 1 mc mc 23 Sep  2 23:12 a1cp.txt
-rw-rw-r-- 1 mc mc  0 Sep  2 23:50 a2
-rw-rw-r-- 1 mc mc  0 Sep  3 00:18 a2.txt
-rw-rw-r-- 1 mc mc  0 Sep  2 23:50 a3
-rw-rw-r-- 1 mc mc  0 Sep  3 00:18 a3.txt
-rw-rw-r-- 1 mc mc 17 Sep  3 00:11 abc
-rw-rw-r-- 1 mc mc 11 Sep  3 00:01 chapter1
-rw-rw-r-- 1 mc mc 11 Sep  3 00:03 chapter2
-rw-rw-r-- 1 mc mc 45 Sep  2 23:18 combine.txt
-rw-rw-r-- 1 mc mc 23 Sep  2 23:29 xaa
-rw-rw-r-- 1 mc mc 17 Sep  3 00:11 xz
```

7. head

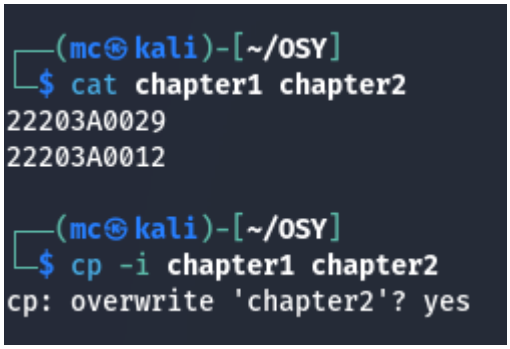
```
┌──(mc㉿kali)-[~/OSY]
└─$ cat > a2
Hello
Mohit
Atharva
Shravan
Neel
Hitesh
Shelar
Parth
Abhishek
Vedant
Rane
Pranit
^C

┌──(mc㉿kali)-[~/OSY]
└─$ head a2
Hello
Mohit
Atharva
Shravan
Neel
Hitesh
Shelar
Parth
Abhishek
Vedant
```

8. Touch

```
┌──(mc㉿kali)-[~/OSY]
└─$ ls
a1  a1cp.txt  a2  a2.txt  a3  a3.txt  abc  chapter1  chapter2  combine.txt  dte  xaa  xz
```

2. Write command to display prompt before copy the content of one file to another →



3. Explain the different use of cat command with example

→

The **cat** command is one of the most useful commands in Linux – it is used for displaying, combining, and manipulating text files.

1. for creating new file:

```
┌──(mc㉿kali)-[~/OSY]
└─$ cat > names
Mohit
Atharva
Shravan
```

2. For displaying content

```
┌──(mc㉿kali)-[~/OSY]
└─$ cat  names
Mohit
Atharva
Shravan
```

3. For combining files

```
┌──(mc㉿kali)-[~/OSY]
└─$ cat  names surname > combined1.txt

┌──(mc㉿kali)-[~/OSY]
└─$ cat combined1.txt
Mohit
Atharva
Shravan
Chaudhari
Jadhav
Salgaonkar
```

4. Append content to an existing file :

```
┌──(mc㉿kali)-[~/OSY]
└─$ cat surname >> name

┌──(mc㉿kali)-[~/OSY]
└─$ cat name
Chaudhari
Jadhav
Salgaonkar
```