

Working with cp command:

```
IoTdev$ ls -l
total 8
drwxrwxr-x 2 rohit rohit 4096 Oct 29 15:23 dest
drwxrwxr-x 2 rohit rohit 4096 Oct 29 15:23 source
```

Copy content

cp

```
IoTdev$ pwd
/home/rohit/Embedded-Linux-Pro/2022-sept/cp-practice/source
IoTdev$ echo "hello iot" > sourcefile.txt
IoTdev$ ls
sourcefile.txt
IoTdev$ cp sourcefile.txt ../dest/
IoTdev$ ls ../dest/
sourcefile.txt
```

Copy Multiple files to destination directory

```
IoTdev$ touch source{1..3}.txt
IoTdev$ ls
source1.txt source2.txt source3.txt sourcefile.txt
IoTdev$ ls ../dest/
sourcefile.txt
IoTdev$ cp source1.txt source2.txt source3.txt ../dest/
IoTdev$ ls ../dest/
source1.txt source2.txt source3.txt sourcefile.txt
```

Copy the content from one file to new file

```
IoTdev$ echo "Hello I am from source3" > source3.txt
IoTdev$ cat source3.txt
Hello I am from source3
IoTdev$ cp source3.txt newfile.txt
IoTdev$ ls
newfile.txt source1.txt source2.txt source3.txt sourcefile.txt
```

```
IoTdev$ cat newfile.txt
Hello I am from source3
```

copy the entire directory from one to another [-R --> Recursively]

```
IoTdev$ ls
newfile.txt  source1.txt  source2.txt  source3.txt  sourcefile.txt

IoTdev$ cd ..
IoTdev$ ls
dest  source

IoTdev$ pwd
/home/rohit/Embedded-Linux-Pro/2022-sept/cp-practice

IoTdev$ cp -R source dest
IoTdev$ ls
dest  source
IoTdev$ cd dest/

IoTdev$ ls
source  source1.txt  source2.txt  source3.txt  sourcefile.txt
IoTdev$ cd source/
IoTdev$ ls
newfile.txt  source1.txt  source2.txt  source3.txt  sourcefile.txt
```

Copy in the interactive mode:

```
IoTdev$ cp -i source1.txt newfile.txt
cp: overwrite 'newfile.txt'? yes
IoTdev$ cat source1.txt
IoTdev$ cat newfile.txt
```

backup -b

creates the backup of the destination file in the same folder with the different name and in different format.

```
IoTdev$ echo "Hello I am from source1" > source1.txt
IoTdev$ ls
newfile.txt  source1.txt  source2.txt  source3.txt  sourcefile.txt
IoTdev$ cat source1.txt
Hello I am from source1
IoTdev$ cp -b source1.txt source2.txt
```

```
IoTdev$ ls
newfile.txt  source1.txt  source2.txt  source2.txt~  source3.txt
sourcefile.txt
```

#Note -> observe the source2.txt~ which is backupfile

```
IoTdev$ cat source2.txt
Hello I am from source1
IoTdev$ cat source2.txt
source2.txt  source2.txt~
IoTdev$ cat source2.txt~
```

Now observe the output of source2.txt~ which has no content as source2.txt was empty file before we used the command cp to copy the content of source1

#use -f when files have read permission while copying

```
IoTdev$ cat source1.txt
Hello I am from source1
IoTdev$ chmod 444 source1.txt
IoTdev$ ls -l source1.txt
-r--r--r-- 1 rohit rohit 24 Oct 29 15:33 source1.txt

IoTdev$ chmod 444 source4.txt
IoTdev$ ls -l
total 20

-rw-rw-r-- 1 rohit rohit  0 Oct 29 15:32 newfile.txt
-r--r--r-- 1 rohit rohit 24 Oct 29 15:33 source1.txt
-rw-rw-r-- 1 rohit rohit 24 Oct 29 15:34 source2.txt
-rw-rw-r-- 1 rohit rohit  0 Oct 29 15:30 source2.txt~
-rw-rw-r-- 1 rohit rohit 24 Oct 29 15:30 source3.txt
-r--r--r-- 1 rohit rohit 24 Oct 29 15:37 source4.txt
-rw-rw-r-- 1 rohit rohit 10 Oct 29 15:30 sourcefile.txt
IoTdev$ cp source1.txt source4.txt

cp: cannot create regular file 'source4.txt': Permission denied
```

#lets try with -f option IoTdev\$ cp -f source1.txt source4.txt IoTdev\$ cat source4.txt Hello I am from source1

#How to preserve the state of the new file where we are copying the content

```
IoTdev$ ls -l source4.txt
-r--r--r-- 1 rohit rohit 24 Oct 29 15:38 source4.txt
IoTdev$ cp -p source4.txt source5.txt
```

```
IoTdev$ ls -l source5.txt
-r--r--r-- 1 rohit rohit 24 Oct 29 15:38 source5.txt
```

#here state is not preserved

```
IoTdev$ cp source4.txt source6.txt
IoTdev$ ls -l source6.txt
-r--r--r-- 1 rohit rohit 24 Oct 29 15:41 source6.txt
```

Note: A directory must have an executable permission to perform any action like cp , cd etc.

```
IoTdev$ mkdir test
IoTdev$ ls -l
total 16
-rw-rw-r-- 1 rohit rohit    7 Oct 29 19:35 source1.txt
-rw-rw-r-- 1 rohit rohit    0 Oct 29 18:19 source2.txt
-rw-rw-r-- 1 rohit rohit    0 Oct 29 18:19 source3.txt
-rw-rw-r-- 1 rohit rohit    7 Oct 29 19:35 source4.txt
-rw-rw-r-- 1 rohit rohit   10 Oct 29 19:35 source4.txt~
drwxrwxr-x 2 rohit rohit 4096 Oct 29 19:53 test

IoTdev$ cp source1.txt test/
IoTdev$ chmod 666 test

IoTdev$ ls -l
total 16
-rw-rw-r-- 1 rohit rohit    7 Oct 29 19:35 source1.txt
-rw-rw-r-- 1 rohit rohit    0 Oct 29 18:19 source2.txt
-rw-rw-r-- 1 rohit rohit    0 Oct 29 18:19 source3.txt
-rw-rw-r-- 1 rohit rohit    7 Oct 29 19:35 source4.txt
-rw-rw-r-- 1 rohit rohit   10 Oct 29 19:35 source4.txt~
drw-rw-rw- 2 rohit rohit 4096 Oct 29 19:54 test
IoTdev$ cp source2.txt test
cp: cannot stat 'test/source2.txt': Permission denied

IoTdev$ cd test/
bash: cd: test/: Permission denied
```

To move a content

```
mv <src> <dest>
```

```
IoTdev$ mv source1.txt test/  
IoTdev$ ls  
source1.1.txt  source2.txt  source4.txt  test  
source1.2.txt  source3.txt  source4.txt~
```

#How to rename a file

```
IoTdev$ mv source1.1.txt source1.1.txt  
IoTdev$ ls  
source1.1.txt  source2.txt  source4.txt  test  
source1.2.txt  source3.txt  source4.txt~
```

#to move dir #it works even src dir is having contents

```
mv <srcdirname> <destinationdirname>
```

Example:

```
touch src/1.txt src/2.txt  
mv src dest1/
```

```
sudo apt install tree  
IoTdev$ tree  
.  
├── source  
├── source1.1.txt  
├── source1.2.txt  
├── source1.txt  
├── source2.txt  
├── source3.txt  
├── source4.txt  
├── source4.txt~  
├── src  
│   ├── 1.txt  
│   └── 2.txt  
└── test  
    └── source1.txt  
  
3 directories, 10 files
```

- ctrl + atl + f4 ----> plain terminal mode

- alt + f2 ----> ui + terminal

```
IoTdev$ cat f1.txt
Hi
IoTdev$ cat f2.txt
Hello
IoTdev$ cat f1.txt f2.txt
Hi
Hello
IoTdev$ cat -n f1.txt f2.txt
  1  Hi
  2  Hello
```

#Write data from Stdin [Terminal] and to save [go to new line and then press ctrl+z]

```
IoTdev$ cat > f3.txt
hello I am writing in f3
^Z
[2]+  Stopped                  cat > f3.txt
IoTdev$ cat f3.txt
hello I am writing in f3
```

Append use >>

```
IoTdev$ cat >> f3.txt
Adding more data in f3
^Z
[4]+  Stopped                  cat >> f3.txt
IoTdev$ cat f3.txt
hello I am writing in f3
Adding more data in f3
```

#Append data of one file to another

```
IoTdev$ cat f3.txt >> f4.txt
IoTdev$ cat f4.txt
I am in f4
hello I am writing in f3
Adding more data in f3
```

#overwrite/write

```
IoTdev$ cat f3.txt > f4.txt
IoTdev$ cat f4.txt
hello I am writing in f3
Adding more data in f3
```

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