

```
Last login: Thu Apr 7 01:30:46 on ttys000
MES20s-Mac-mini:~ mca$ cd desktop
MES20s-Mac-mini:desktop mca$ cd college
MES20s-Mac-mini:college mca$ ls
mca
MES20s-Mac-mini:college mca$ cd mca
MES20s-Mac-mini:mca mca$ ls
s1      s2      s3      s4
MES20s-Mac-mini:mca mca$ cd s1
MES20s-Mac-mini:s1 mca$ ls
s1.txt
MES20s-Mac-mini:s1 mca$ cp s1.txt
usage: cp [-R [-H | -L | -P]] [-fi | -n] [-opvX] source_file target_file
        cp [-R [-H | -L | -P]] [-fi | -n] [-opvX] source_file ... target_directory
MES20s-Mac-mini:s1 mca$ cp s1.txt ny.txt
MES20s-Mac-mini:s1 mca$ mv ny.txt ni.txt
MES20s-Mac-mini:s1 mca$ mkdir ar
MES20s-Mac-mini:s1 mca$ rm ar
rm: ar: is a directory
MES20s-Mac-mini:s1 mca$ mkdir ar
-bash: mkdir: command not found
MES20s-Mac-mini:s1 mca$ mkdir ar
MES20s-Mac-mini:s1 mca$ mv
usage: mv [-f | -i | -n] [-v] source target
        mv [-f | -i | -n] [-v] source ... directory
MES20s-Mac-mini:s1 mca$ cut -b 1,2,3 s1.txt
sub
nat
COA
ASE
ADS
Pyt
web
Dat
MES20s-Mac-mini:s1 mca$ cut -b 1-6 s1.txt
subject
maths
COA
ASE
ADS
Python
web
Data 5
MES20s-Mac-mini:s1 mca$ grep "s" s1.txt
subjects
maths
MES20s-Mac-mini:s1 mca$
MES20s-Mac-mini:s1 mca$ cut -b 1-3,5-7 s1.txt
subject
maths
COA
ASE
ADS
Python
web
Data St
MES20s-Mac-mini:s1 mca$ vi ni.txt
MES20s-Mac-mini:s1 mca$ vi ni.txt
MES20s-Mac-mini:s1 mca$ cat ni.txt
subjects
maths
COA
ASE
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subjects
maths
MES20s-Mac-mini:sl mca$
MES20s-Mac-mini:sl mca$ cut -b 1-3,5-7 sl.txt
subject
maths
COA
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ADS
Python
web
Dat St
```

```
MES20s-Mac-mini:sl mca$ vi ml.txt
MES20s-Mac-mini:sl mca$ vi ml.txt
MES20s-Mac-mini:sl mca$ cat ml.txt
subjects
maths
COA
ASE
ADS
Python
web
```

Data Structure

There was one limitation in the array implementation of Queue. If the rear reaches to the end position of the Queue then there might be possibility that some vacant spaces are left in the beginning which cannot be utilized. So, to overcome such limitations, the concept of the circular queue was introduced

```
MES20s-Mac-mini:sl mca$ head ml.txt
subjects
maths
COA
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ADS
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MES20s-Mac-mini:sl mca$ tail ml.txt
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```
MES20s-Mac-mini:sl mca$ vi ml.txt
MES20s-Mac-mini:sl mca$ head ml.txt
subjects
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COA
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Python
web
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```
MES20s-Mac-mini:s1 nca$ tail mi.txt
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MES20s-Mac-mini:s1 nca$ chmod a+x mi.txt
-bash: chmod: command not found
MES20s-Mac-mini:s1 nca$ chmod a+x mi.txt
MES20s-Mac-mini:s1 nca$ chmod a-r mi.txt
MES20s-Mac-mini:s1 nca$ cat mi.txt
cat: mi.txt: Permission denied
MES20s-Mac-mini:s1 nca$ chmod u+w mi.txt
MES20s-Mac-mini:s1 nca$ cat mi.txt
cat: mi.txt: Permission denied
MES20s-Mac-mini:s1 nca$ chmod a+x mi.txt
MES20s-Mac-mini:s1 nca$ cat mi.txt
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```
MES20s-Mac-mini:s1 nca$ █
```