JOY KARMOKAR
18-39263-3 [OS-D]

1. It depends on what you want to use. Personally I prefer windows because it's easier and familiar to me. There are lot of applications available for windows. And one more thing there are much more game available on windows.

2. CAT Command:

```
$ cat > Alpha.txt    (create file)
C
B
D
A

$ cat Alpha.txt      (view file)
C
B
D
A
```

3. SORT command helps in sorting out the contents of a file alphabetically. for Example-

→$cat Alpha.txt

C
B
D
A

→$sort Alpha.txt (sorting).

A
B
C
D

4. Linux divides authorization into two level. These are - ownership
- permission

→ Every file and directory on linux system is assigned 3 types of owner these are-

→ user - A user is the owner of the file.

→ Group - A user-group can contain multiple users.

→ Other - Any other user who has access to a file.

Permissions directory:

user	group	other
rwx	rwx	rwx
421	421	421

Current permission → rwx rwx rw-

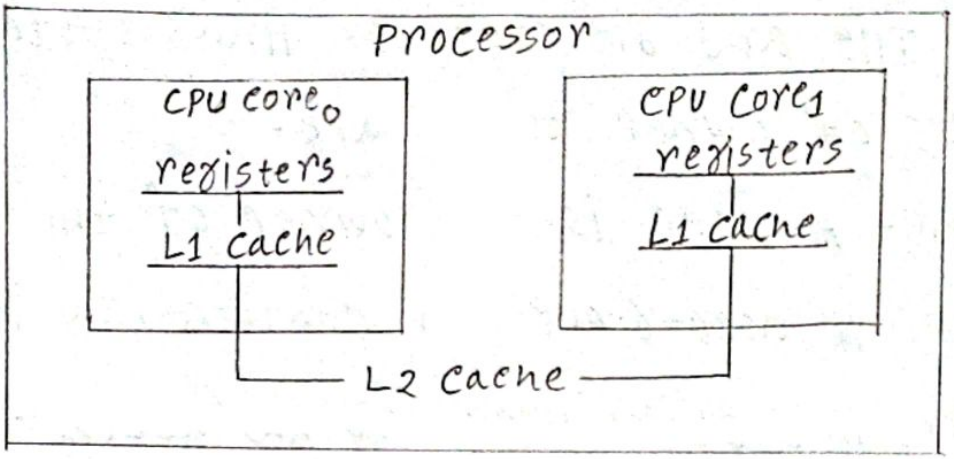
Change permission → 764

$ Chmod 764 Alpha.txt

$ ls -l Alpha.txt

-rwxrw-r--

5. Multicore- Is a computer Processor on a singe but Execute unit are Difference. for Example-



Multiprocessors- It's refers to a system that has two or more CPUs using at a time.

Multiprogramming- A computer running more than one program at a time. for Example. running teams, Chrome, word etc.

Multitasking- Task sharing a common resource (like 1 CPU)

Time-sharing- Is lorical extension in which CPU switches work so frequently that users can interact with each work while it is running. Response time should be < 1 second.

6. Process - A program in execution process execution must progress in sequential fashion. And program becomes process when executable file loaded into memory.

Thread - A thread is a lightweight process that can be managed independently by a scheduler. Multiple threads of control threads.

7. Amdahl's Law is a formula that identifies potential performance gains from adding additional computing core to an application that has both serial. If S is the portion of the application that must be performed serially on a system with N processing cores the formula appears as follows.

- $\text{speedup} \leq \frac{1}{S + \frac{1-S}{N}}$

$$\text{speedup if 2 processor} \leq \frac{1}{S=0 + \frac{1-S=0}{N=2}}$$

S = serial part (non parallel) Fraction of serial code (0---1)

N = Number of cores/processors/workers.