2CB0S53

D D M M Y Y Y Y

Test-1

Mod-1

2a) **Virtual machine**

It is a illusion created by the computer that even the guest software looks like real (or) your software is only dedicated to that

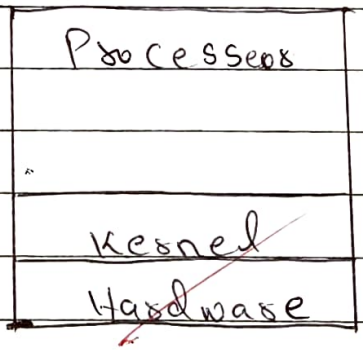
Ex:- when we download ubuntu in windows

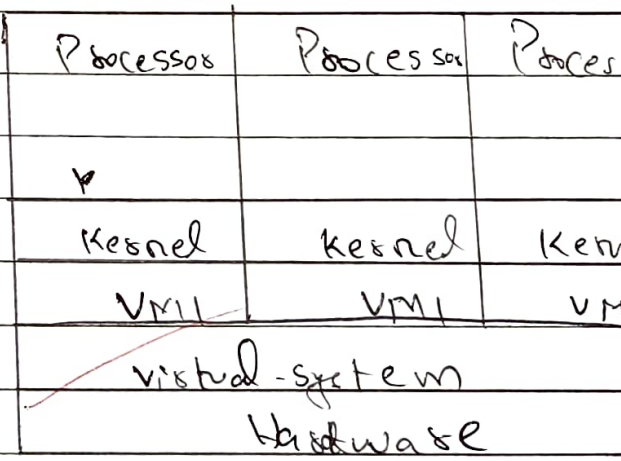
ubuntu → is a guest software (guest o.s)

windows → is a Host software (Host o.s)

- You will not feel that ubuntu is running on the windows software.
- users can experience variety of OS

Diagram





These VM (virtual machine) is a in kernel mode and virtual-system is only in user mode.

DD MM YYYY

• Users will assume that they have a separated dedicated Hardware, memory.

Advantages

• If we are using windows and linux Suppose You are updating (os) got system time out for linux (or) windows we can use the other alternating software ie, if linux is updated windows can be used

• The Resources between them can be shared

• If any one software got (or) virus (or) malware the other O.S in the computer will not effected

• Users can experience variety of O.S 's

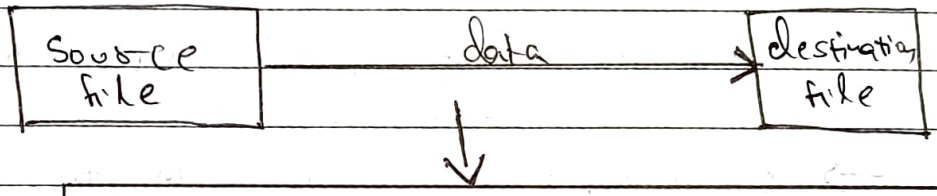
D D M M Y Y Y Y

2 b) System calls:-

It is a interface between the sesvices of operating system.

Ex: Suppose we can copying from sourcefile & writing in destination file

Process



- ask's for input file name
- displays on screen Ex: input [1... - - -]
- takes the name and check's (os) verify
  - If exits
  - If not terminate (os) ess
- ask's for output file name
- display's on sc Ex: Output [1- - - -]
- If not exits create's a new one
- after all this process enter loop
  - read's from source
  - write in destination file
  - terminate

D D M M Y Y Y Y

types of system calls:

- Process management
- File management
- Device management
- Information management
- Protection

- Process :- Start, stop, append, exit the process will be taken case by process management
  → like if a process is waiting for the instruction it will skip to next and come back when instruction is passed
  → If fraction of second (os) milliseconds.

- File management :- open, close, read, write the file is taken case by file management

- device management :- If the resources are used by others processes this device management is get back that resource from that processes and give it to another processes.

- Protection :- the information in the PC is protected safely and save the computers form the malware loss virus ie., Both hardware and software

D D M M Y Y Y Y

Mod-2

4b)

Process	Threads
• It processes the data (or) given instruction	• 1 Process has many threads under it
• uses system call	• does not uses system call
• Slow	• fast
• terminates slow	• terminates fast
• It is isolated	• It shares memory.

4a) W.T = ? (avg) (T.AT - B.T) T.AT. = ? (avg) (C.T - A.T)

1. FCFS

Process	A.T	B.T	C.T	T.AT	W.T
P1	0	9	9	9	0
P2	1	4	13	12	8
P3	2	9	22	20	12
P4	3	5	27	24	19
				Avg: 16.25	Avg: 9.75

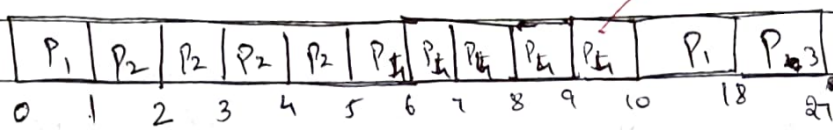
Gantt Chart

P1	P2	P3	P4
0	1	2	3	4

DD MM YYYY

SRTF

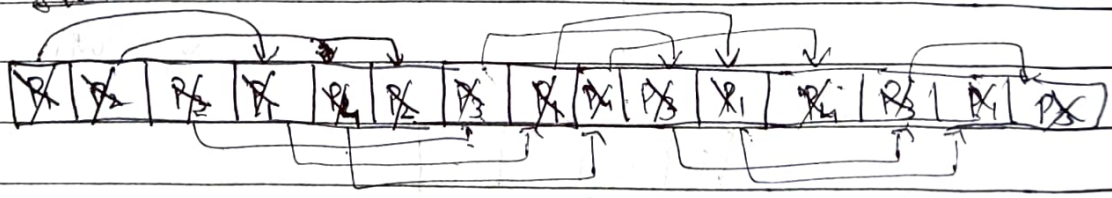
P	A.T	Burst time	C.T	T.A.T	W.T
P_1	0	8	18	18	9
P_2	1	4	5	4	0
P_3	2	9	27	25	14
P_4	3	7	10	7	7
				Avg: 13.5	Avg: 7.5



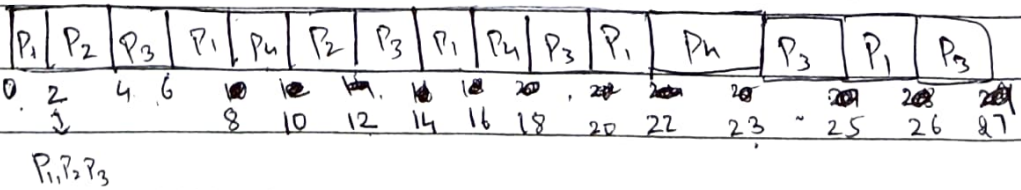
Round Robin:- q = 2ms

P	A.T	B.T	C.T	T.A.T	W.T
P_1	0	8	26	26	17
P_2	1	4	12	11	7
P_3	2	9	27	25	16
P_4	3	7	23	20	15
				Avg:- 20.5	Avg: 13.75

Ready queue



Running queue



D D M M Y Y Y Y

Priority

low priority for highest num.

Process	A.T	B.T	Priority	C.T	T.A.T	W.T
P_1	0	~~8~~	~~3~~ (3)	22	22	13
P_2	1	~~4~~ 10	~~2~~ (2)	14	13	9
P_3	2	9	1 (1)	11	9	0
P_4	3	5	4 (4)	27	24	19

Avg: 17 Avg: 10.25

P_1	P_2	P_3	P_2	P_1	P_4	~~X~~	~~X~~

0 1 2 11 14 22 27

Quiz

1) c) ~~[illegible]~~ ✗
2) b) ✗
3) b) ✓
4) b) ✓
5) b) ✓