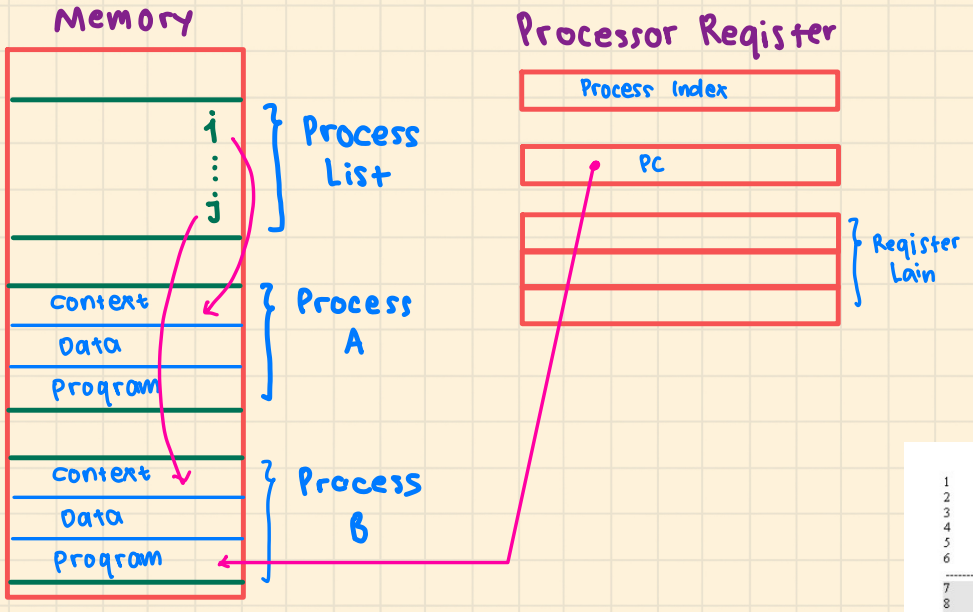
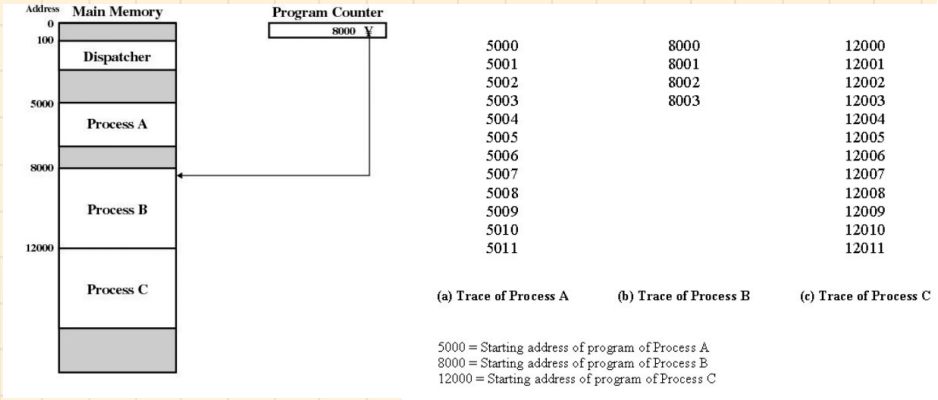
Process and Control

Process

Sebuah eksekusi program ; bisa di lacak (alamatnya)

Memory process





(a) Trace of Process A	(b) Trace of Process B	(c) Trace of Process C
5000	8000	12000
5001	8001	12001
5002	8002	12002
5003	8003	12003
5004		12004
5005		12005
5006		12006
5007		12007
5008		12008
5009		12009
5010		12010
5011		12011

5000 = Starting address of program of Process A
8000 = Starting address of program of Process B
12000 = Starting address of program of Process C

1	5000		27	12004	
2	5001		28	12005	
3	5002		----------	Time out	
4	5003		29	100	
5	5004		30	101	
6	5005		31	102	
----------	Time out		32	103	
7	100		33	104	
8	101		34	105	
9	102		35	5006	
10	103		36	5007	
11	104		37	5008	
12	105		38	5009	
13	8000		39	5010	
14	8001		40	5011	
15	8002		----------	Time out	
16	8003		41	100	
----------	I/O request		42	101	
17	100		43	102	
18	101		44	103	
19	102		45	104	
20	103		46	105	
21	104		47	12006	
22	105		48	12007	
23	12000		49	12008	
24	12001		50	12009	
25	12002		51	12010	
26	12003		52	12011	
			----------	Time out	

100 = Starting address of dispatcher program

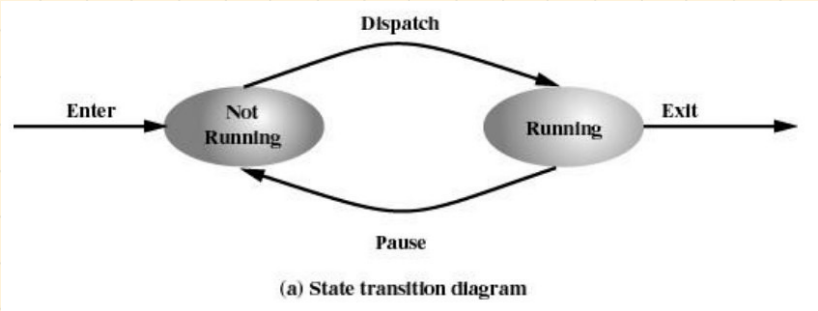
shaded areas indicate execution of dispatcher process;
first and third columns count instruction cycles;
second and fourth columns show address of instruction being executed

Figure 3.3 Combined Trace of Processes of Figure 3.1

Two State Process

terdiri dari 2 state :

- Running (sedang berjalan)
- Not-Running (belum selesai)



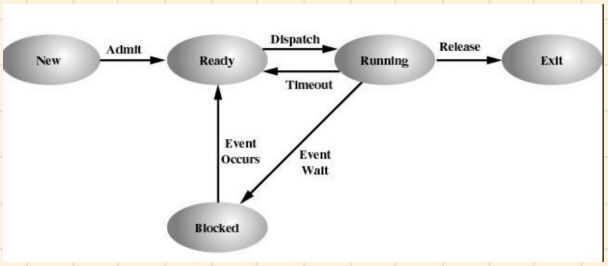
(a) State transition diagram

Saat program not-running ; maka akan di antri

Five State Process

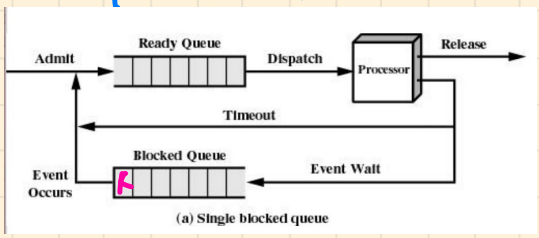
terdiri atas 5 state:

- Running (diproses)
- Ready (siap di proses)
- Blocked (menunggu I/O)
- New (memasukkan proses baru)
- Exit (proses selesai)

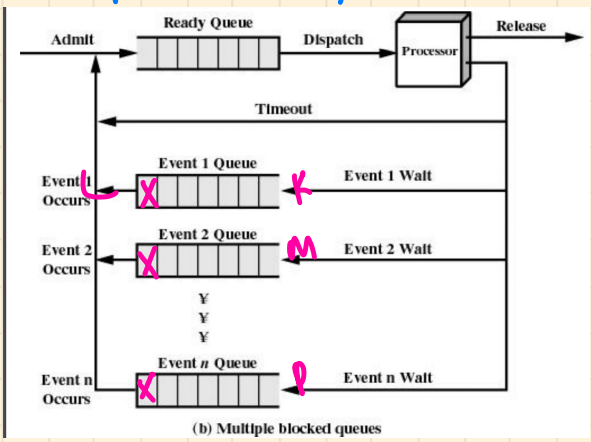


Berikut antrian pada ready dan blocked:

a. Single Block queue



b. Multiple blocked queue



Suspended Process

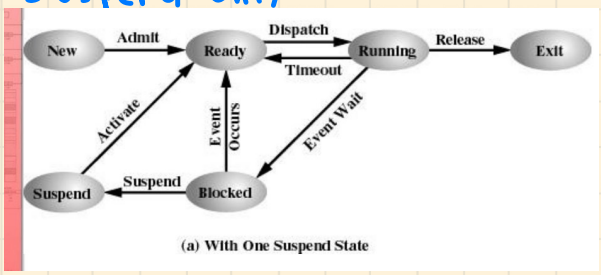
Suspension adalah proses yang dipindahkan ke external memory agar main memory lebih luang. Biasanya karna nunggu I/O ngaret.

terdiri atas 6/7 state:

- Running (diproses)
- Ready (siap di proses)
- Blocked (menunggu I/O)
- New (memasukkan proses baru)
- Exit (proses selesai)
- Ready/Suspend (ready namun di ext. memory)
- Blocked/Suspend (blocked ——— " ———)

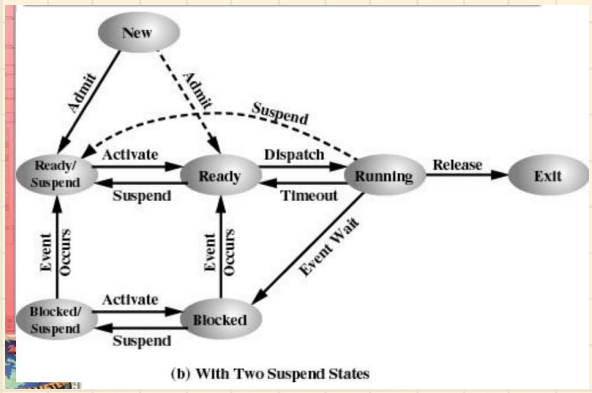
} atau suspend saja

* Suspend Only



(a) With One Suspend State

* Ready/suspend and blocked/suspend



(b) With Two Suspend States