

[Scheduling Algorithm]

Proses	Burst time	Waktu kedatangan
A	12	0
B	4	3
C	9	5
D	2	7

(1) FCFS

- Turnaround time (TAT) = waktu selesai - waktu kedatangan.

$$A = 12 - 0 = 12$$

$$B = 16 - 3 = 13$$

$$C = 25 - 5 = 20$$

$$D = 27 - 7 = 20$$

$$\left\{ \begin{array}{l} \text{Rata-rata (TAT)} = 16,25 \text{ ms} \\ \text{Rata-rata (WT)} = 9,5 \text{ ms} \end{array} \right.$$

- Waiting Time = TAT - burst time

$$A = 12 - 12 = 0$$

$$B = 13 - 4 = 9$$

$$C = 20 - 9 = 11$$

$$D = 20 - 2 = 18$$

(2) Round Robin ($q=4$)

- first round

A (4ms, sisa 8ms), b (4ms, selesai), c (4ms, sisa 5ms), d (2ms, selesai)

- second round

A (4ms, sisa 4ms), c (4ms, sisa 1ms)

- third round

A (4ms, selesai), c (1ms, selesai)

• Turnaround Time (TAT) :

$$A = 26 - 0 = 26 \text{ ms}$$

$$B = 9 - 3 = 3 \text{ ms}$$

$$C = 27 - 5 = 22 \text{ ms}$$

$$D = 14 - 7 = 7 \text{ ms}$$

• Waiting Time :

$$A = 26 - 12 = 14 \text{ ms}$$

$$B = 5 - 4 = 1 \text{ ms}$$

$$C = 22 - 9 = 13 \text{ ms}$$

$$D = 7 - 2 = 5 \text{ ms}$$

$$\text{Avg}^{\text{th}} (\text{TAT}) = 15 \text{ ms}$$

$$\text{Avg}^{\text{th}} (\text{WT}) = 8.25 \text{ ms}$$

(3) **SPN**

Prases:

A (0-12), d(12-14), b(14-18), c (18-27)

• Turnaround Time :

$$A = 12 - 0 = 12$$

$$B = 18 - 3 = 15$$

$$C = 27 - 5 = 22$$

$$D = 14 - 7 = 7$$

• Waiting Time :

$$A = 12 - 12 = 0$$

$$B = 15 - 4 = 11$$

$$C = 22 - 9 = 14$$

$$D = 7 - 2 = 5$$

$$\text{Avg}^{\text{th}} \text{TAT} : 11 \text{ ms}$$

$$\text{Avg}^{\text{th}} \text{WT} : 7.25 \text{ ms}$$

(4) **SRT**

A(0-3), B(3-7), D(7-9), A(9-18), C(18-27)

• Turnaround time :

$$A = 18 - 0 = 18$$

$$B = 7 - 3 = 4$$

$$C = 27 - 5 = 22$$

$$D = 9 - 7 = 2$$

• Waiting Time :

$$A = 18 - 12 = 6$$

$$B = 4 - 4 = 0$$

$$C = 22 - 9 = 13$$

$$D = 2 - 2 = 0$$

$$\text{Avg}^{\text{th}} \text{TAT} = 11.5 \text{ ms}$$

$$\text{Avg}^{\text{th}} \text{WT} = 4.75 \text{ ms}$$

Kesimpulan :

Algorithm	\overline{TAT}	\overline{WT}
FCFS	16,25	9,5
RR(q=4)	15	8,25
SPN	14	7,25
SRT	11,5	4,75

Best Algorithm:
SRT (Shortest Remaining Time)