FCFS Algorithm

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Process	Burst Time (BT)	Arrival Time (AT)
P1	24	0
P2	3	1
P3	3	2

Table 1: Process Data

Step 1: Compute Completion Time (CT)

Completion Time (CT) = Previous Completion Time + Burst Time (BT)

P1 starts at 0, so
$$CT_1 = 0 + 24 = 24$$
P2 starts immediately after P1 finishes (at 24), so
$$CT_2 = 24 + 3 = 27$$
P3 starts immediately after P2 finishes (at 27), so
$$CT_3 = 27 + 3 = 30$$

Process	Burst Time (BT)	Arrival Time (AT)	Completion Time (CT)
P1	24	0	24
P2	3	1	27
P3	3	2	30

Table 2: Process Data with Completion Times

Step 2: Compute Turnaround Time (TAT)

Turnaround Time (TAT) = Completion Time (CT) - Arrival Time (AT)

P1:
$$TAT_1 = 24 - 0 = 24$$
P2:
$$TAT_2 = 27 - 1 = 26$$
P3:
$$TAT_3 = 30 - 2 = 28$$

Process	Completion Time (CT)	Arrival Time (AT)	Turnaround Time (TAT)
P1	24	0	24
P2	27	1	26
P3	30	2	28

Table 3: Process Data with Turnaround Times

Step 3: Compute Waiting Time (WT)

Waiting Time (WT) = Turnaround Time (TAT) - Burst Time (BT)

$$P1:$$
$$WT_1 = 24 - 24 = 0$$
$$P2:$$
$$WT_2 = 26 - 3 = 23$$
$$P3:$$
$$WT_3 = 28 - 3 = 25$$

Process	Turnaround Time (TAT)	Burst Time (BT)	Waiting Time (WT)
P1	24	24	0
P2	26	3	23
P3	28	3	25

Table 4: Process Data with Waiting Times

Step 4: Compute Average TAT and WT

Average Turnaround Time (Avg TAT)

$$\text{Avg TAT} = \frac{TAT_1 + TAT_2 + TAT_3}{3} = \frac{24 + 26 + 28}{3} = \frac{78}{3} = 26$$

Average Waiting Time (Avg WT)

$$\text{Avg WT} = \frac{WT_1 + WT_2 + WT_3}{3} = \frac{0 + 23 + 25}{3} = \frac{48}{3} = 16$$

Process	Arrival Time (AT)	Burst Time (BT)	Completion Time (CT)	Turnaround Time (TAT)	Waiting Time (WT)
P1	0	24	24	24	0
P2	1	3	27	26	23
P3	2	3	30	28	25

Table 5: Final Results

Average Turnaround Time = 26 Average Waiting Time = 16