Practical 2

St. Tran Quy Ban
March 11, 2020

1 EXERCISE 2

- 1. Draw Gantt chart of these processes with FCFS, SJF, SRTF, RR, (s = 1ms).

  Answer:

  Here is my answer.

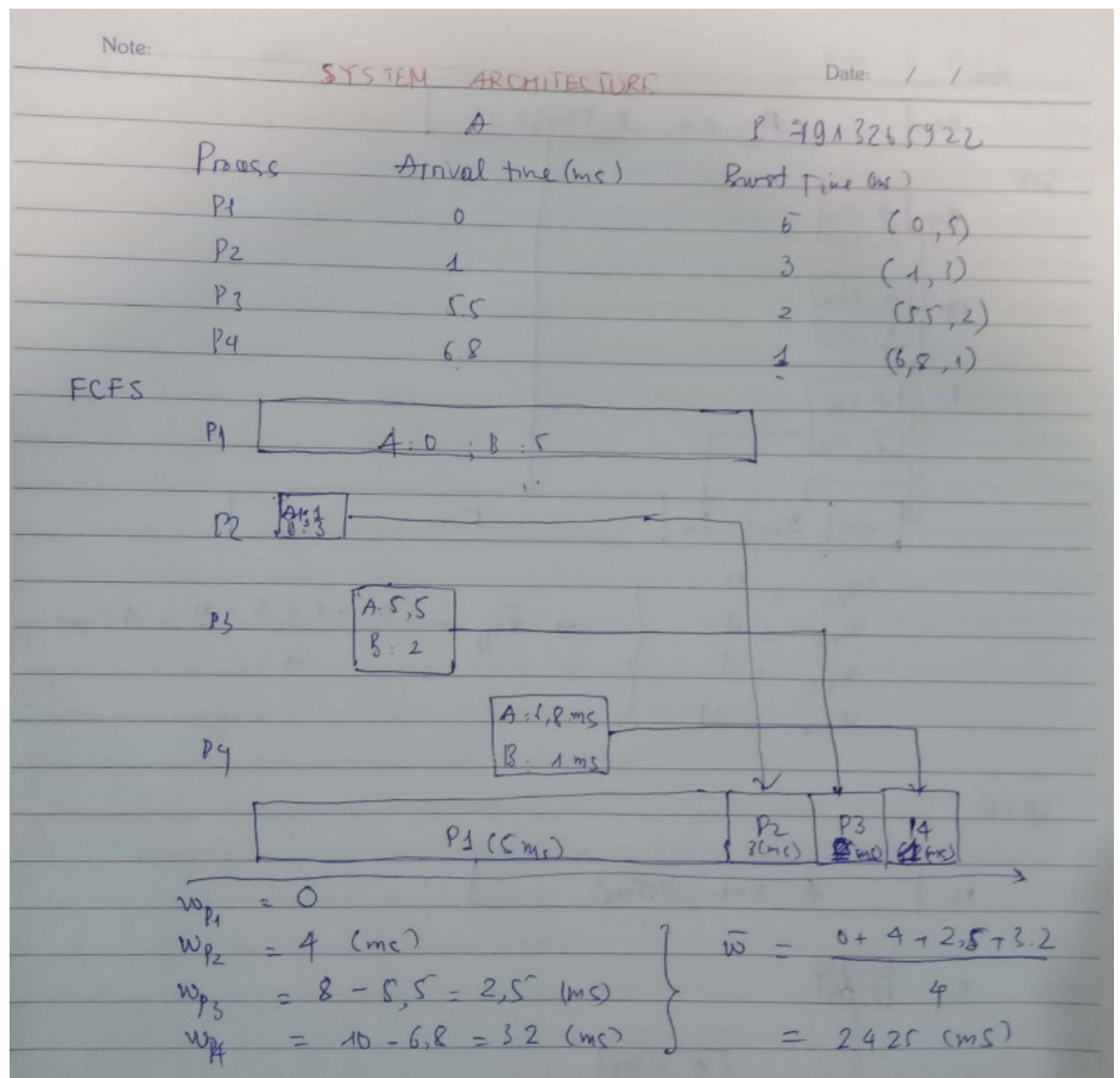<u>SYSTEM ARCHITECTURE</u>

P 7913245922

A		
Process	Arrival time (ms)	Burst Time (ms)
P1	0	5 (0,5)
P2	1	3 (1,3)
P3	5.5	2 (5.5,2)
P4	6.8	1 (6,8,1)

FCFS

P1   A: 0 ; B: 5

P2   A:1 / B:3

P3   A: 5,5 / B: 2

P4   A: 6,8 ms / B: 1 ms

P1 (5 ms)   P2 3(ms)   P3 2(ms)   P4 1(ms)

$W_{P1} = 0$

$W_{P2} = 4 \ (ms)$

$W_{P3} = 8 - 5,5 = 2,5 \ (ms)$

$W_{P4} = 10 - 6,8 = 3.2 \ (ms)$

$$\bar{W} = \frac{0 + 4 + 2,5 + 3.2}{4} = 2.425 \ (ms)$$

Figure 1.1: FCFS, SJF, SRFS.

P1 | A: 0ms , B: 5(ms)

SJF

P4 | A: 0ms / B: 1ms

P3 | A: 0ms / B: 2ms

P2 | A: 0ms / B: 3ms

| 1ms | 2ms | 3ms | 5 ms |

$w_{P4} = 0$

$w_{P3} = 1$

$w_{P2} = 6$

$w_{P1} = 11$

$\Rightarrow \overline{w}_{SJF} = \dfrac{0 + 1 + 6 + 11}{4} = 4.5\ ms$

SRTF

P1 | A: 0 ms , B: 5(ms)

P2 | A: 1ms / B: 2ms

P3 | A: 5.5ms / B: 2ms

P4 | A: 6.8ms / B: 1ms

| 3 ms | P2 2ms | 1ms | 1ms |

$w_{P1} = 0 + 3 + 2 + 1 = 6$
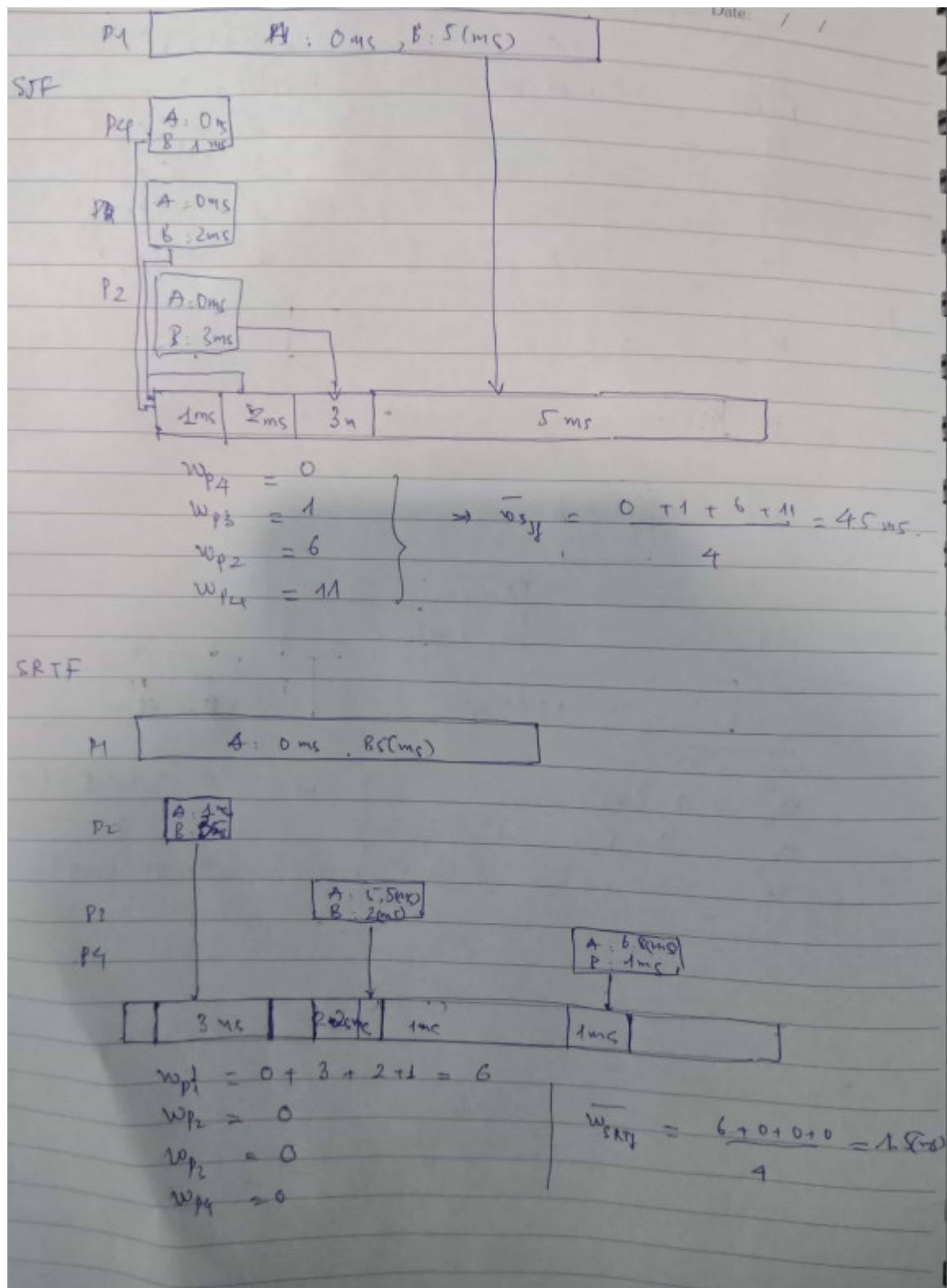
$w_{P2} = 0$

$w_{P3} = 0$

$w_{P4} = 0$

$\overline{w}_{SRTF} = \dfrac{6 + 0 + 0 + 0}{4} = 1.5\ (ms)$

Figure 1.2: FCFS, SJF, SRFS ....

3