

## Ejercicio de clase 6

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1) Ordena la siguiente lista utilizando counting sort:

Lista =  $\{5, 3, 8, 1, 3, 1, 1, 3, 0, 2, 1, 4, 1, 1, 4, 7, 5, 1, 8\}$  Rango:  $[1-9]$ 

1	2	3	4	5	6	7	8	9
0	0	0	0	0	0	0	0	0
0	1	2	3	4	5	6	7	8

 $\Rightarrow$ 

1	2	3	4	5	6	7	8	9
7	1	3	2	2	0	1	2	1
0	1	2	3	4	5	6	7	8

 $\Rightarrow$ 

1	2	3	4	5	6	7	8	9
7	8	11	13	15	15	16	18	19
0	1	2	3	4	5	6	7	8

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	1	1	1	1	1	1	2	3	3	3	4	4	5	5	7	8	8	9

} Lista ordenada

2) Ordena la sig. lista utilizando Node Sort.

$L: \{5452, 5354, 2453, 4323, 2345, 5434, 2233, 3333, 3432, 3523\}$

$$1) \begin{cases} Q_2 = \{5452, 3432\} \\ Q_3 = \{2453, 4323, 2233, 3333, 3523\} \\ Q_4 = \{5354, 5434\} \\ Q_5 = \{2345\} \end{cases} \quad L: \{5452, 3432, 2453, 4323, 2233, 3333, 3523, 5354, 5434, 2345\}$$

$$2) \begin{cases} Q_2 = \{4323, 3523\} \\ Q_3 = \{3432, 2233, 3333, 5434\} \\ Q_4 = \{2345\} \\ Q_5 = \{5452, 2453, 5354\} \end{cases} \quad L: \{4323, 3523, 3432, 2233, 3333, 5434, 2345, 5452, 2453, 5354\}$$

$$3) \begin{cases} Q_2 = \{2233\} \\ Q_3 = \{4323, 3333, 2345, 5354\} \\ Q_4 = \{3432, 5434, 5452, 2453\} \\ Q_5 = \{3523\} \end{cases} \quad L: \{2233, 4323, 3333, 2345, 5354, 3432, 5434, 5452, 2453, 3523\}$$

$$4) \begin{cases} Q_2 = \{2233, 2345, 2453\} \\ Q_3 = \{3333, 3432, 3523\} \\ Q_4 = \{4323\} \\ Q_5 = \{5354, 5434, 5452\} \end{cases} \quad L: \{2233, 2345, 2453, 3333, 3432, 3523, 4323, 5354, 5434, 5452\}$$

3) Ordena el sig. archivo utilizando Polifase y un bloque de  $n=5$

Archivo A:  $\{ \underbrace{19, 39, 26, 59, 02}_{F_1}, \underbrace{10, 57, 64, 92, 04}_{F_2}, \underbrace{86, 67, 32, 07, 21}_{F_3}, \underbrace{63, 81, 74, 20, 03}_{F_4}, \underbrace{65, 92, 05}_{F_5} \}$

$$1) \begin{cases} F_1: \{ [02, 19, 26, 39, 59], [07, 21, 32, 67, 86], [05, 65, 92] \} \\ F_2: \{ [04, 10, 57, 64, 92], [03, 20, 63, 74, 81] \} \end{cases}$$

$$2) \begin{cases} F_0: \{ [02, 04, 10, 19, 26, 39, 57, 59, 64, 92], [05, 65, 92] \} \\ F_3: \{ [07, 03, 20, 21, 32, 63, 67, 74, 81, 86], \} \end{cases}$$

$$3) \begin{cases} F_1: \{ [07, 02, 03, 04, 10, 19, 20, 21, 26, 32, 39, 57, 59, 63, 64, 67, 74, 81, 86, 92] \} \\ F_2: \{ [05, 65, 92] \} \end{cases}$$

$$4) F_0: \{ [07, 02, 03, 04, 05, 10, 19, 20, 21, 26, 32, 39, 57, 59, 63, 64, 65, 67, 74, 81, 86, 92] \} \quad \therefore \text{lista}$$