

Q1

task1	task2	task3
2ms	168ms	36ms

Q2

task1	task2	task3
2ms	166ms	39ms

Nearly the same as in Q1. The time of two algorithms doesn't vary a lot. It may be because that the task load isn't so big that the time difference is mainly because the code complexity and some random things.

Q3

mma_sz =	1	2	3	4	5	6	7	8	9	10
CLOCK	164	174	169	165	169	166	166	169	168	168
FIFO	163	166	164	169	168	166	165	166	164	166

The average execution time of CLOCK algorithm is slightly slower than FIFO algorithm. The reason is that the pattern of the task cannot materialize the difference of the two algorithms (access pattern has poor locality).

Q4

thread_num =	10	11	12	13	14	15	16	17	18	19	20
Time =	32	103	162	166	164	151	194	166	211	217	230

When thread number increases, the execution time increases in a small amount. Since more threads indicate more task load, here the physical memory, which means the execution time will increase. And due to the implementation of concurrency, the execution time only increases a small amount. Some fluctuation is because of the randomness in multi-thread execution.