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1 Memory Allocation

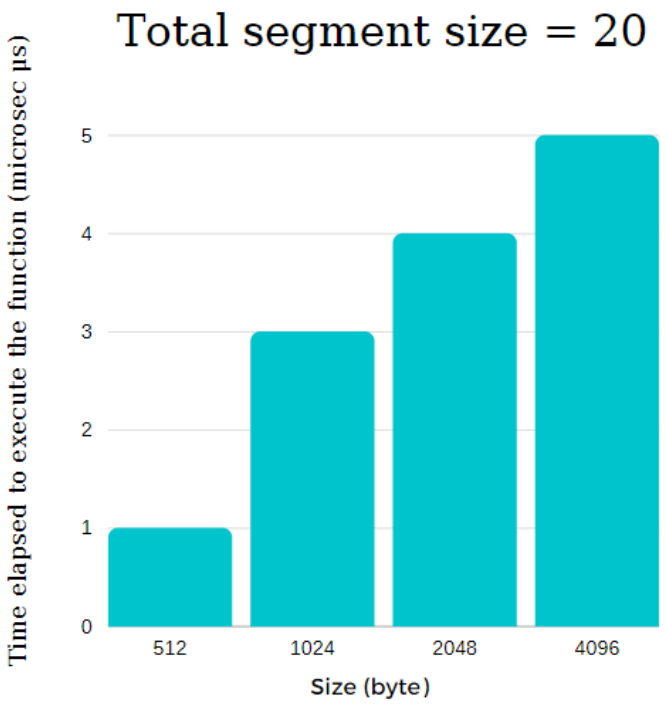

Figure 1: Time elapsed to allocate memory of various sizes with total segment size (m) 20.

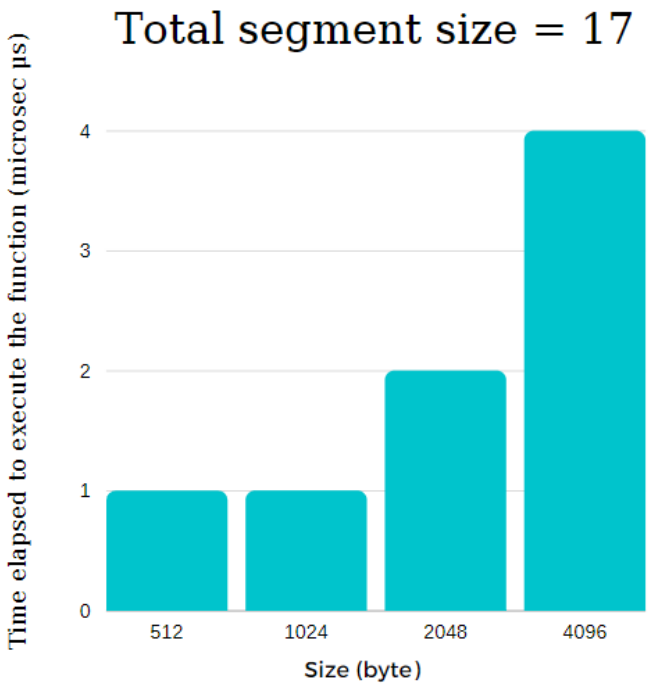

Figure 2: Time elapsed to allocate memory of various sizes with total segment size (m) 17.

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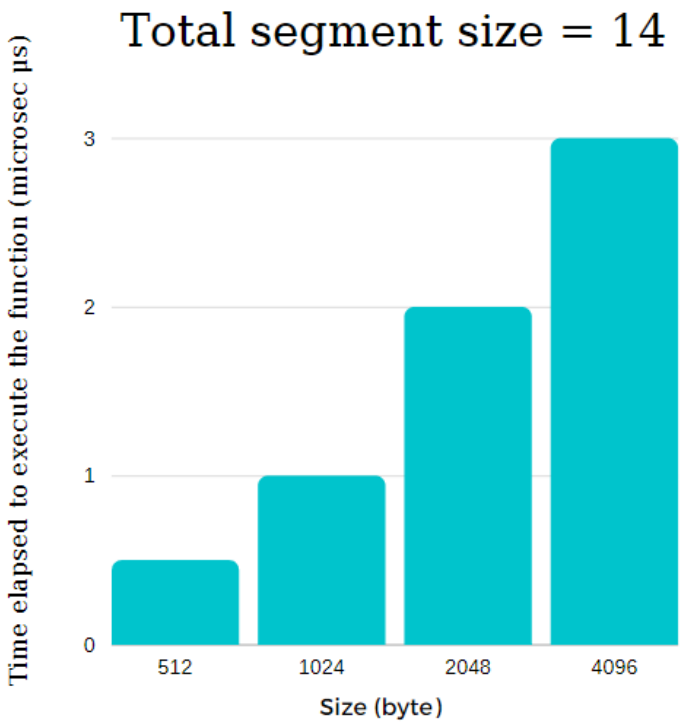

Figure 3: Time elapsed to allocate memory of various sizes with total segment size 14.

When the total segment size decreases, the time required to allocate memory decreases, too. From the examples with total segment size of 20, 17, and 14 respectively, we can observe the correlation between total segment size and run time. This relation can be also seen in the figures 1, 2 and 3.

Also, allocation size also has an effect on the time required to allocate memory. When allocation size is increased, the run time increases. When we run the code several times for different allocation sizes, the run time changes in microseconds in an increasing manner.

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2 Memory Release

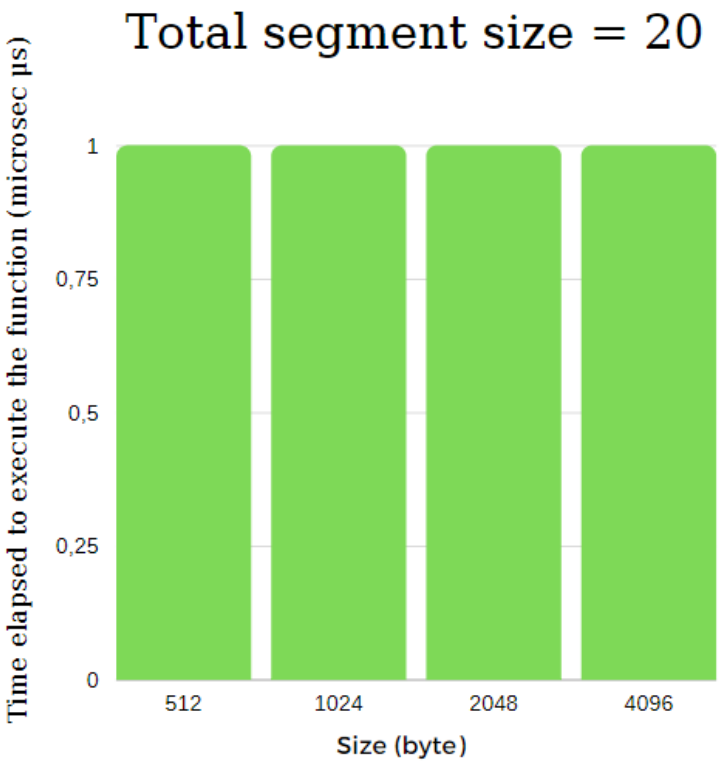

Figure 4: Time elapsed to release various sizes of memories with total segment size (m) 20.

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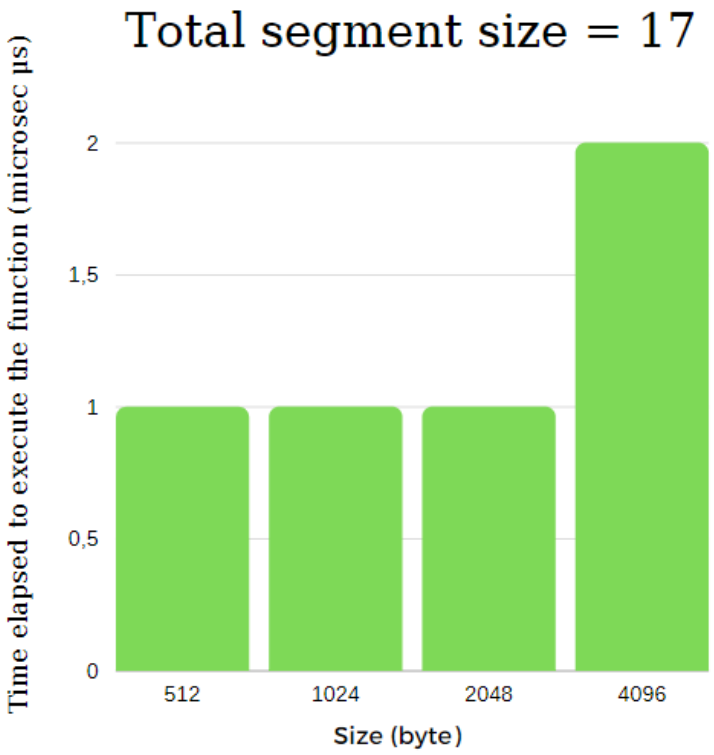

Figure 5: Time elapsed to release various size of memories with total segment size (m) 17

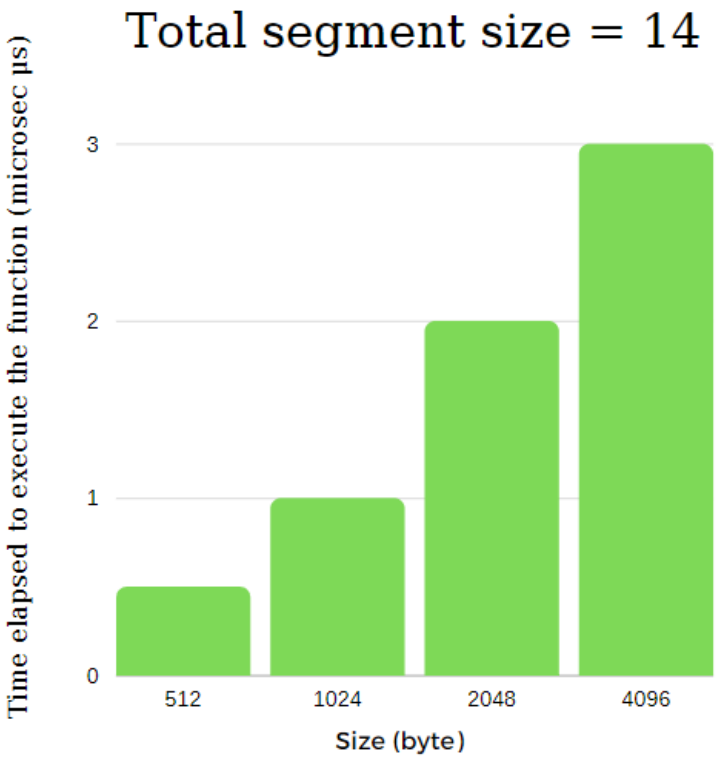

Figure 6: Time elapsed to release various sizes of memories with total segment size (m) 14.

To release memory, there is not such an obvious correlation between segment size and the time required to free memory. For segment size 14, as release size increases the time increase can be seen. However, in the segment sizes 17 and 20, time increase is not observed. Since it is known that there is not a direct relation in free memory with segment size, our codes prove the theory.