REPORT

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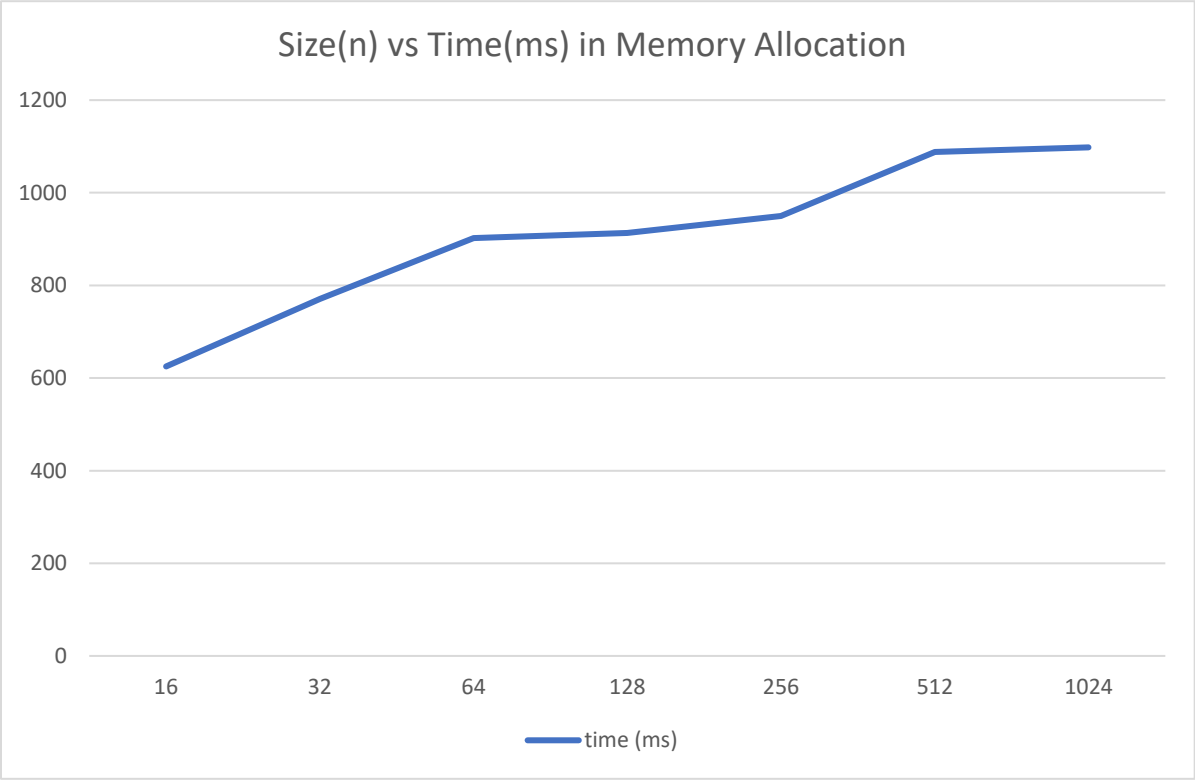
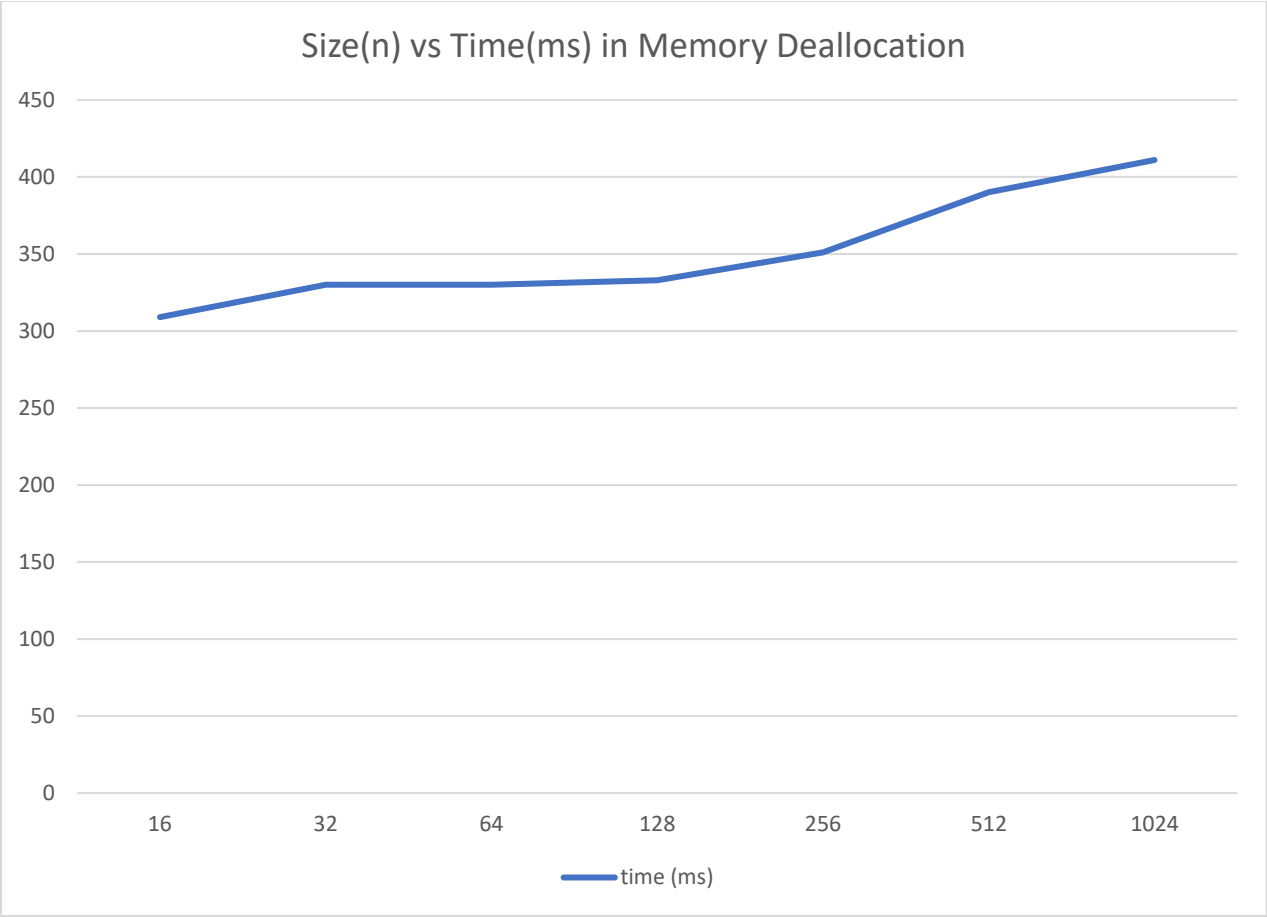


Graph 1: Size(n) vs Time(ms) in Memory Allocation

1) The results indicate that there exists a directly proportional relation between size of memory allocaiton and time elapsed, suggesting that when the memory allocation size increases it will take much more amount of time to make the allocation in the bitmap



Graph 2: Size(n) vs Time(ms) in Memory Deallocation

2) The results indicate that there exists a directly proportional relation between size of memory deallocaiton and time elapsed, suggesting that when the size to be deallocated increases, it will take much more amount of time to handle it in the bitmap.

Allocation Size (Bytes)	Request Success	Total Internal Fragmentation (Bytes)	Time taken for allocation (ms)
530886	YES	10	547
92777	YES	17	335
236915	YES	30	350
147793	YES	45	341
X	NO	45	-
X	NO	45	-
X	NO	45	-
X	NO	45	-
X	NO	45	-
X	NO	45	-

Table 1: Making 10 allocation requests with unknown (random) byte sizes.

3) The results demonstrate the effects of internal and external fragmentation where internal fragmentation occurs due to allocating fixed size blocks that is more than the requesting process's requirement. Effect of external fragmentation occurs when the overall internal fragmentation comes to a point that although there are sufficient amount of memory, they are included in used parts so that we cannot make the allocations anymore although the empty space is indeed enough since we allocate in a non-contiguous manner.