Assignment 7 Analysis Report

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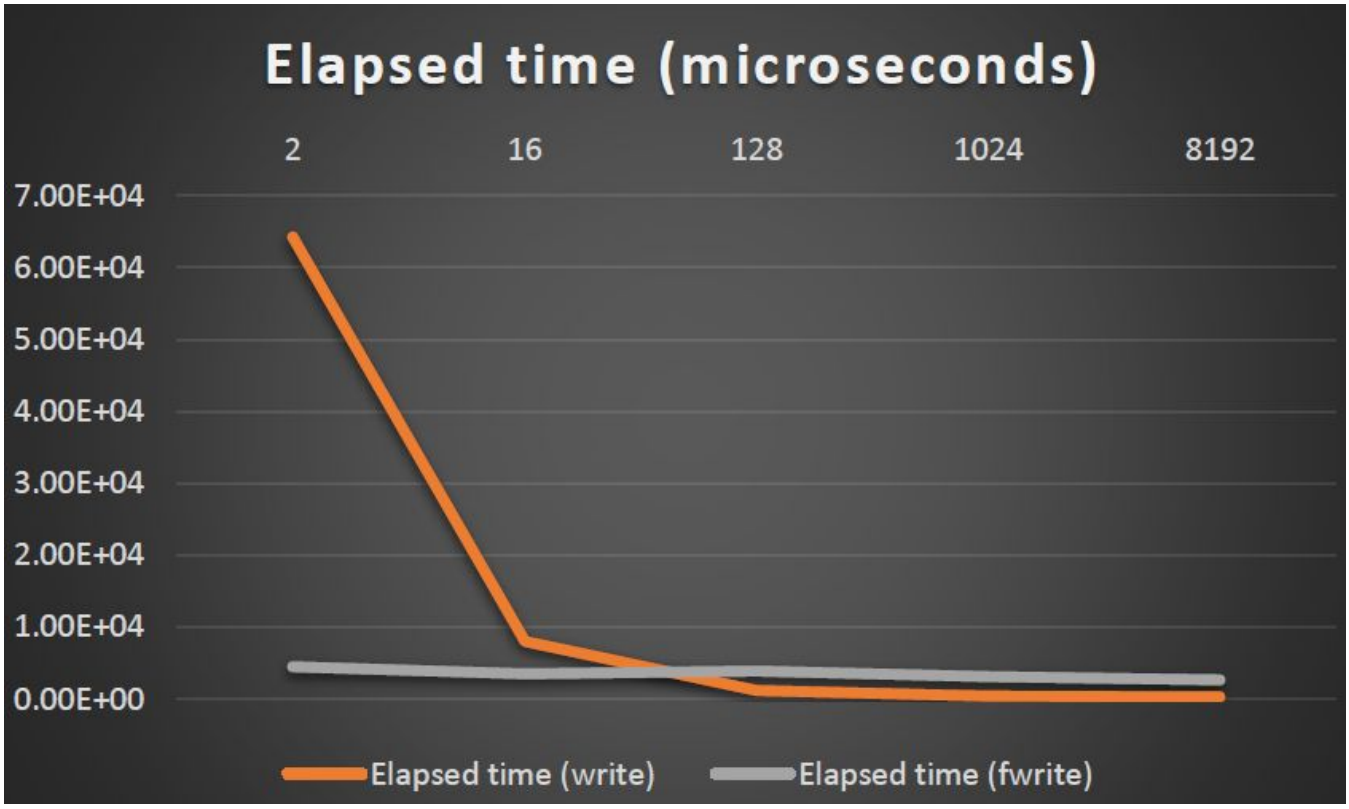
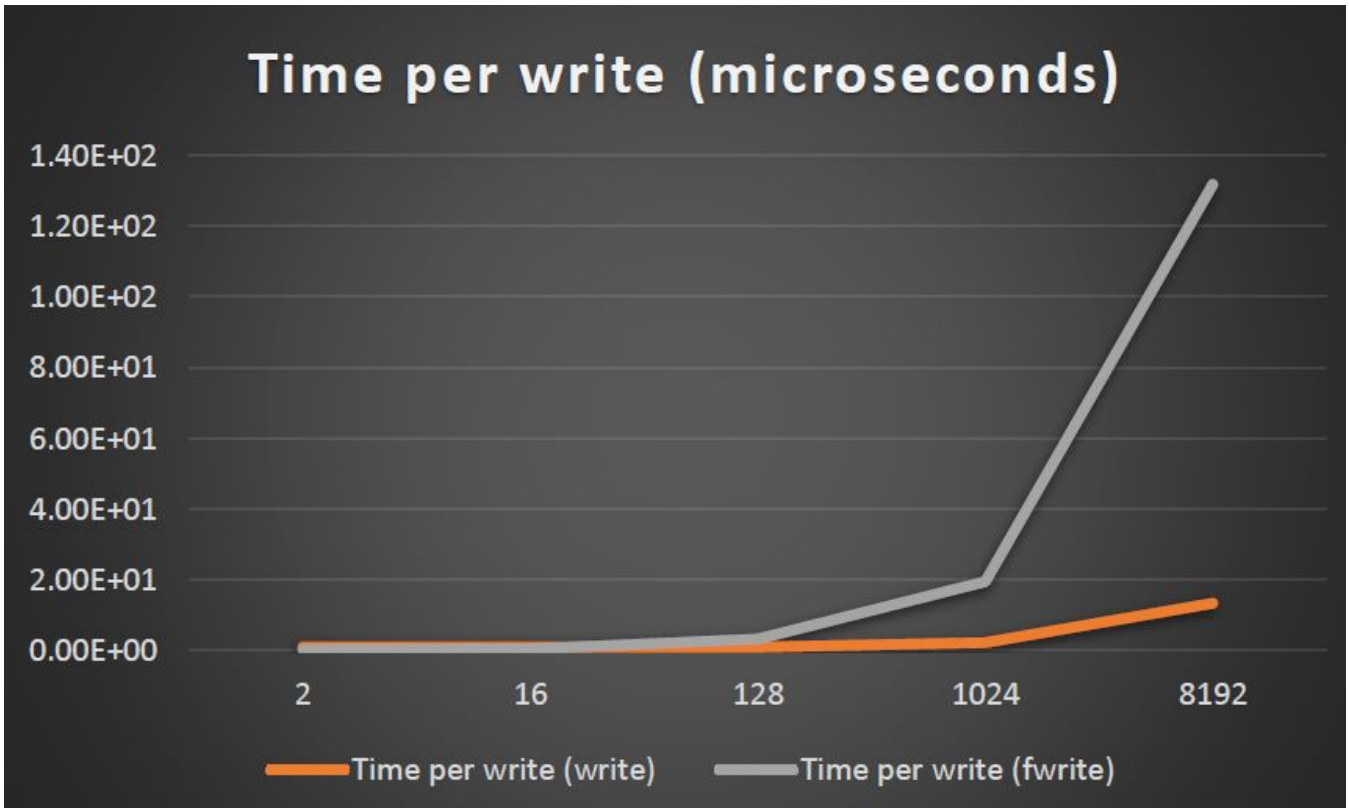
write() results:

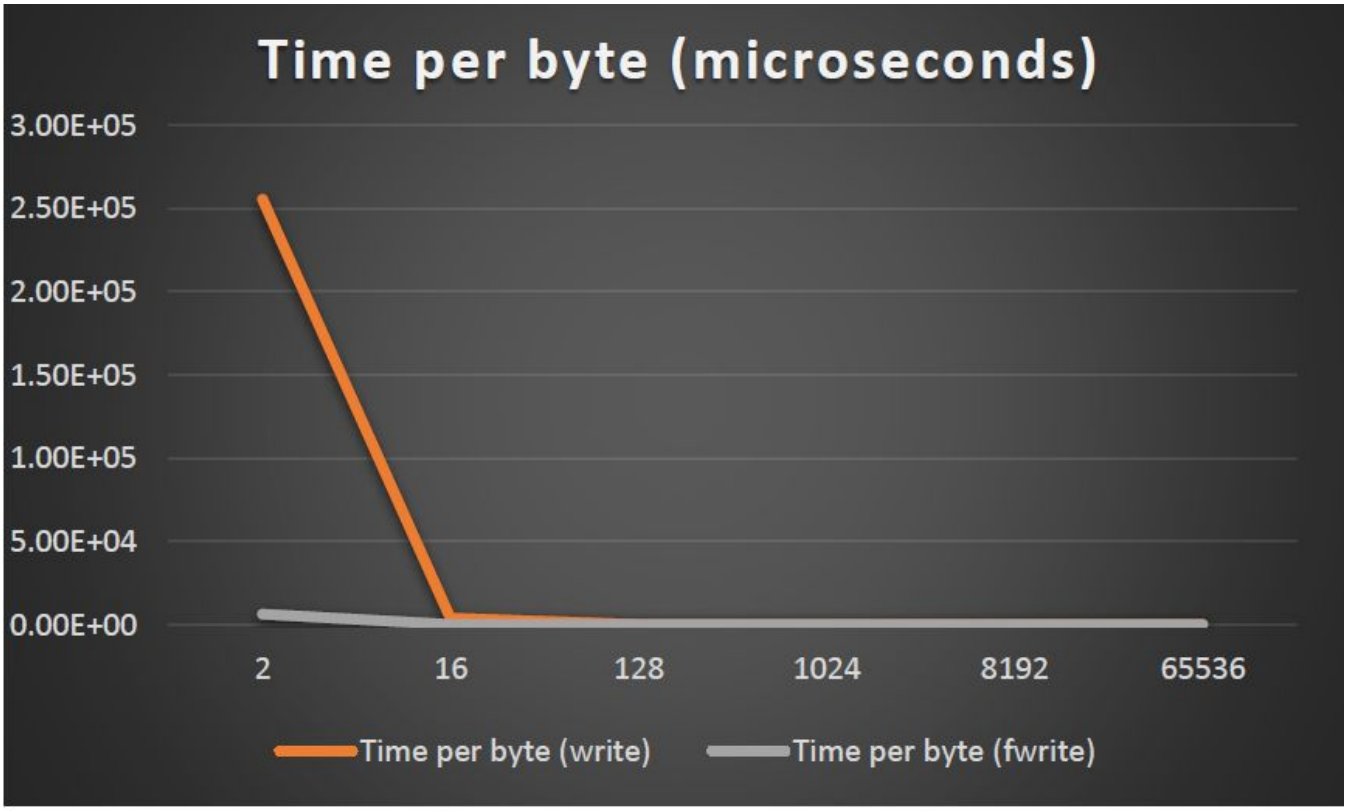
Buffer size (bytes)	Elapsed time (micros)	Number of function calls	Time per write (micros)	Time per byte (micros)
2	5.11E+05	655360	7.80E-01	2.56E+05
16	6.42E+04	81920	7.84E-01	4.01E+03
128	8.04E+03	10240	7.85E-01	6.28E+01
1024	1.12E+03	1280	8.78E-01	1.10E+00
8192	3.45E+02	160	2.16E+00	4.21E-02
65536	2.64E+02	20	1.32E+01	4.03E-03

fwrite() results:

Buffer size (bytes)	Elapsed time (micros)	Number of function calls	Time per write (micros)	Time per byte (micros)
2	1.25E+04	655360	1.91E-02	6.27E+03
16	4.47E+03	81920	5.45E-02	2.79E+02
128	3.43E+03	10240	3.35E-01	2.68E+01
1024	3.81E+03	1280	2.97E+00	3.72E+00
8192	3.10E+03	160	1.93E+01	3.78E-01
65536	2.64E+03	20	1.32E+02	4.02E-02


Elapsed time (microseconds)
2
16
128
1024
8192
7.00E+04
6.00E+04
5.00E+04
4.00E+04
3.00E+04
2.00E+04
1.00E+04
0.00E+00
Elapsed time (write)
Elapsed time (fwrite)


Time per write (microseconds)
1.40E+02
1.20E+02
1.00E+02
8.00E+01
6.00E+01
4.00E+01
2.00E+01
0.00E+00
2
16
128
1024
8192
Time per write (write)
Time per write (fwrite)



Summary:

- In this given graph, elapsed time of write() decreases as buffer size increases while elapsed time for fwrite() remains constant.
- Secondly, time per write of fwrite() grows faster than time per write of write().
- Moreover, for low buffer size, write() requires more time but it reduces as buffer size increases and time per byte of fwrite() mostly remains constant for all buffer sizes.