

Performance Testing of Final Project of SSW-567 A

Report of Performance Testing

Conclusion of Result

Summary

From this assignment of the final project, I truly learned so much. According to not only the journey of achieving this homework but also the result of the performance testing, I realized the very importance and value of performance testing work.

From the outputted CSV file (attached as an Excel file), I saw the pattern of the linear escalation on values of the response time and comprehended the runtime and the run space resource consumed for running the application we implemented. Moreover, I also saw the pattern that the performance testing for counting the number of lines in respective encoded and decoded JSON files cost less usage of the operating system (Windows 10), yet the performance of decoding and encoding consumed more usage. Especially, the decoding of the needs without unit tests and with unit tests costs different system usages, the encoding even costs more than the decoding because they are based on discrepant algorithm efficiencies.

Nevertheless, you can see that the performance curve of the encoding has a different appearance compared to other curves. I assume that might be because of the impact of the processes or threads running in my operating system, which indicates that when we plan and do a performance testing task, before the execution, we need to be very cautious about the concerns of cleaning the test targeted platform well, each simultaneously running process or thread will definitely cause the deviation of the result of a performance testing.

URL of Repositories

1. https://github.com/fluencyk/SSW-567_Final-Project/tree/main/src - The Source Files
2. https://github.com/fluencyk/SSW-567_Final-Project/tree/main/docs - The Documents
3. https://github.com/fluencyk/SSW-567_Final-Project/blob/main/docs/perf_test_records.xlsx - The Excel File

Outputted Figures from the CSV File

Figure 1 - CSV

A	B	C	D	E	F	G	H
#	Response Time Scales	Decoding Number of Lines	Encoding Number of Lines	Decoding without Tests	Decoding with Unit Tests	Encoding without Tests	Encoding with Unit Tests
1	Seconds in 100 units	0.0005	0.0005	0.002	0.0531	0.0181	0.0762
2	Seconds in 500 units	0.0008	0.0009	0.0098	0.2373	0.0867	0.4087
3	Seconds in 1000 units	0.0011	0.0016	0.0194	0.4506	0.1775	0.7562
4	Seconds in 5000 units	0.0037	0.0079	0.0989	2.2919	0.8628	3.7864
5	Seconds in 10000 units	0.0068	0.0135	0.1855	4.5707	1.7212	7.795
6	Seconds in specific units	0.0933	0.0134				

Plotted Data Visualization

Figure 2 - Plotted Pic by Matplotlib Module in Python Programming

