a. Best Performing Search Algorithm:
After conducting a thorough analysis, it was observed that Interpolation Search Algorithm performed the best overall. This conclusion is based on the data gathered in testing the speed of each search algorithm finding search data through 100, 1000, 10000 data sets.

b. Algorithm Performance on Specific Data Sets:
Upon examining individual data sets, it became evident that certain search algorithms excelled in specific scenarios. For instance, the Ternary search algorithm demonstrated superior performance on 100 data sets, while the Interpolation search algorithm outperformed others in both 1000 and 10000 data sets.

c. Impact of Data Set Size on Algorithm Performance:
The size of the data set had a noticeable impact on the performance of the search algorithms. It was observed that certain algorithms such as Interpolation search algorithm scaled well with larger data sets, while algorithms such as ternary search algorithm showed better efficiency with smaller datasets. Despite the difference in algorithms, smaller data sets showed faster response than those of the bigger sets ahead.

d. Conclusion:
In conclusion, the study highlights the performance of different search algorithms. While Interpolation emerged as the overall top performer, the context of the data set significantly influenced the algorithm's efficacy. This emphasizes the importance of selecting an algorithm tailored to the specific characteristics of the data at hand. Furthermore, as the data set size increased, certain algorithms demonstrated scalability and efficiency, contributing to a more comprehensive understanding of their applicability in various scenarios. Overall, the findings underscore the need for a thoughtful and context-dependent selection of search algorithms based on the characteristics of the data to achieve optimal results.

APPENDIX A
TABLE OF ANALYSIS FOR DIFFERENT SEARCH ALGORITHMS

		Linear	Binary	Ternary	Exponential	Interpolation	Jump
Target Set	Search data	Time in Milliseconds					
100	23	0.004900001	0.004599999	0.006099999	0.0091	0.0052	0.024500001
	34	0.005899998	0.005000002	0.0043	0.006800001	0.006499999	0.011099997
	68	0.0067	0.004700003	0.008399998	0.007300001	0.012299999	0.008500003
	80	0.016800001	0.005500002	0.0067	0.008799998	0.004400001	0.014699999
	99	0.008200001	0.005999998	0.006099999	0.006599999	0.006400001	0.009299998
1000	12	0.012299999	0.028200004	0.035199999	0.021600004	0.018899998	0.048999995
	34	0.041300002	0.021599997	0.021500004	0.018599996	0.017400002	0.022300002
	566	0.06829993799328804	0.021500047	0.026999973	0.030300114	0.010800082	0.034800265
	899	0.118500087	0.019500032	0.014699996	0.022300053	0.015700236	0.084000174
	987	0.119599979	0.010900199	0.029799994	0.029799994	0.017599668	0.040899962
10000	100	0.0096	0.018200008	0.030199997	0.013099998	0.010499993	0.026399997
	3000	0.589099989	0.01209999	0.041099993	0.017300001	0.011299999	0.065999993
	6000	0.633699994	0.010599993	0.017600003	0.0172	0.007899987	0.031999996
	7666	0.446000005	0.012499993	0.014699996	0.018999999	0.007300012	0.029200004
	9877	0.948799992	0.009200012	0.018199993	0.01779999	0.008099989	0.026099995

	LEAST VALUE IN MILLISECONDS							
Target Set	Linear	Binary	Ternary	Exponential	Interpolation	Jump	Average milliseconds in every target sets	FASTEST SEARCH ALGORITHM
100	0.004900001	0.004599999	0.0043	0.006599999	0.004400001	0.008500003	0.00555	Ternary
1000	0.012299999	0.010900199	0.014699996	0.018599996	0.010800082	0.022300002	0.014933379	Interpolation
10000	0.0096	0.009200012	0.014699996	0.013099998	0.007300012	0.026099995	0.009527794	Interpolation
TOTAL	0.008933333	0.008233403	0.01123333	0.012766664	0.007500032	0.008500003	0.00555 FASTEST TARGET SET: 100	0.007500032 Interpolation