

REPORT

Load Factor	Hash Function	Collision Handling	Collision Count	Indexing Time (ms)	Avg. Search Time (ns)	Min. Search Time (ns)	Max. Search Time (ns)
$\alpha=50\%$	SSF	LP	54673744	3234	46933	200	288600
		DH	2841872	1055	8445	100	145200
	PAF	LP	25480473	1874	2479	100	91900
		DH	21369418	1999	2813	100	66200
$\alpha=80\%$	SSF	LP	76513376	3244	47308	200	307400
		DH	3964474	1053	9209	200	156800
	PAF	LP	38191984	2052	2575	100	83300
		DH	30627536	1994	3118	200	74500

Performance Monitoring Table

A load factor of 0.5 collides less than a load factor of 0.8. Hash coding with SSF has more collisions than hash coding with PAF. Linear search does a lot more overlap than double hash. We can say that using 0.5 load factor, SSF, and double hashing on our data is the most appropriate way to avoid collisions. The indexing time with a load factor of 0.5 and the indexing time with a load factor of 0.8 is similar. Using PAF with the linear probe or double hashing for indexing times is similar. Using SSF with double hash is faster than these, but using SSF with linear search is slower than these. In our data SSF, DH is the fastest way to index all data. A load factor of 0.5 searches slightly faster than a load factor of 0.8. Double hash is better for search than linear search. PAF is much faster in search compared to SSF.