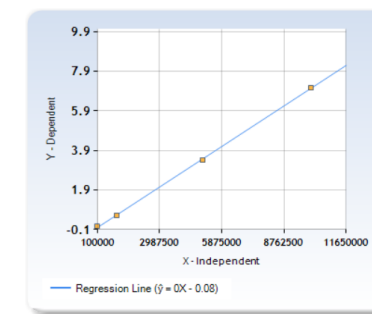
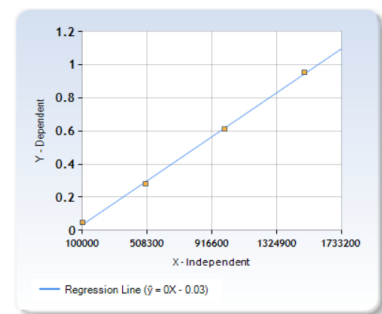
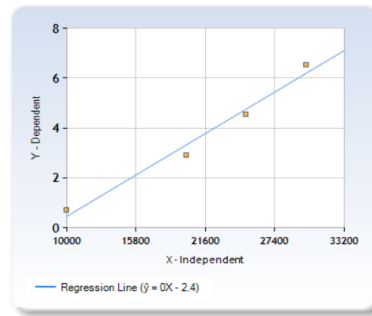
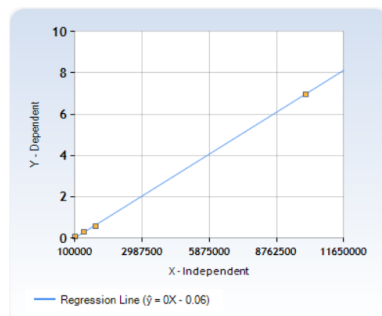


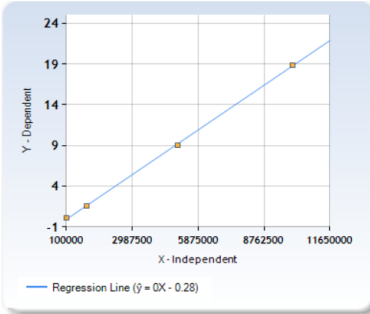
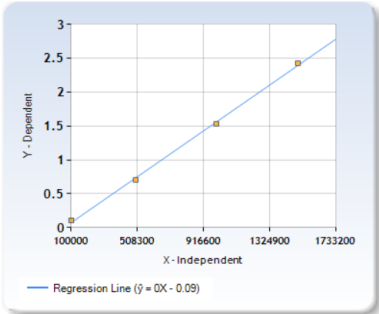
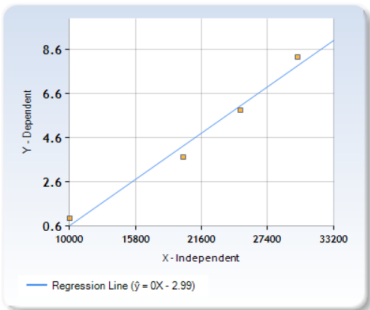
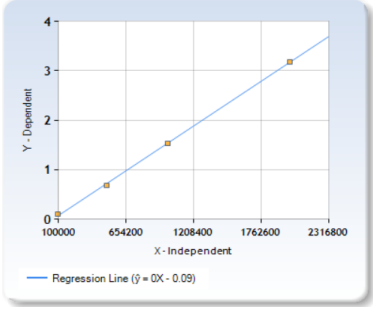
Operation Length of # of strings Load time (sec) Operation time (sec) Output time (sec)

Vector	5	Sort	100000	0.015625	0.0625	0.421875
			500000	0.0625	0.296875	2.21875
			1000000	0.140625	0.578125	4.26562
			10000000	1.3125	6.96875	42.7344
		remove_duplicates_same_order	10000	0	0.71875	0.046875
			20000	0	2.90625	0.09375
			25000	0	4.5625	0.09375
			30000	0	6.54688	0.09375
		remove_duplicates_any_order	100000	0.015625	0.046875	0.453125
			500000	0.0625	0.28125	2.125
			1000000	0.125	0.609375	4.23438
			1500000	0.1875	0.953125	6.09375
		mode	100000	0.015625	0.046875	0.015625
			1000000	0.125	0.609375	0.015625
			5000000	0.65625	3.40625	0.0625
			10000000	1.29688	7.0625	0.125

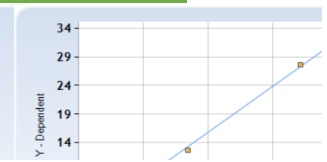


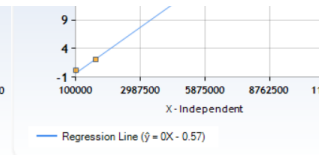
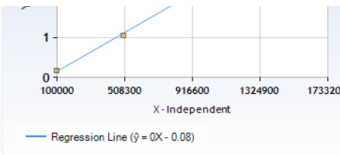
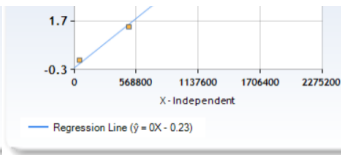
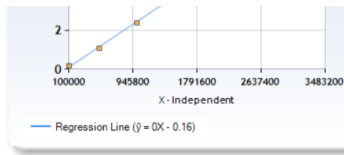
List	5	Sort	100000	0.015625	0.109375	0.421875
			500000	0.0625	0.6875	2.14062
			1000000	0.125	1.53125	4.32812
			2000000	0.265625	3.1875	8.75
		remove_duplicates_same_order	10000	0	0.9375	0.0625
			20000	0	3.71875	0.09375
			25000	0.015625	5.85938	0.109375
			30000	0.015625	8.26562	0.125
		remove_duplicates_any_order	100000	0.015625	0.109375	0.40625

remove_d ups_any_ order	500000	0.0625	0.703125	2.125
	1000000	0.125	1.53125	4.29688
	1500000	0.1875	2.42188	6.15625
	1000000	0	0.125	0
mode	1000000	0.125	1.53125	0.109375
	5000000	0.625	8.98438	0.859375
	10000000	1.26562	18.875	1.79688

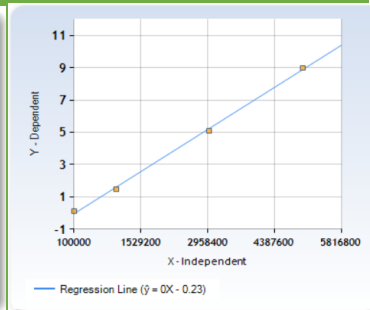
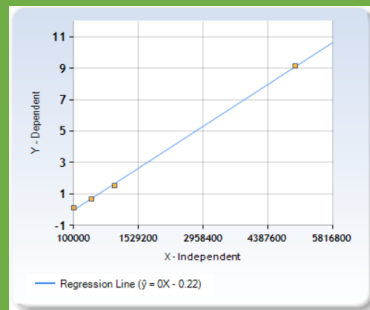
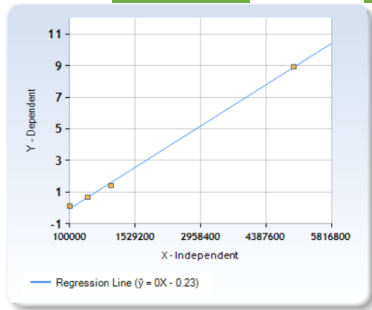


Binary Search Tree	Sort	5	100000	0.015625	0.1875	0.40625
			500000	0.0625	1.09375	2.1875
			1000000	0.125	2.40625	4.40625
			3000000	0.390625	7.71875	13.1719
	remove_d ups_same _order		50000	0.015625	0.09375	0.21875
			500000	0.0625	1.46875	2.15625
			1000000	0.125	3.1875	4.125
			2000000	0.25	7.01562	8.01562
	remove_d ups_any_ _order		100000	0.015625	0.171875	0.421875
			500000	0.0625	1.0625	2.10938
			1000000	0.125	2.35938	4.03125
			1500000	0.1875	3.48438	6.1875
	mode		100000	0	0.171875	0
			1000000	0.125	2.125	0.125
			5000000	0.640625	12.5781	0.75
			10000000	1.26562	27.6562	1.29688



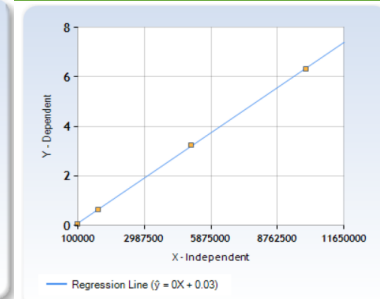
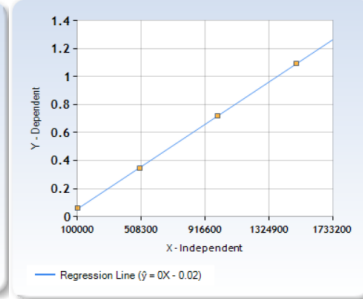
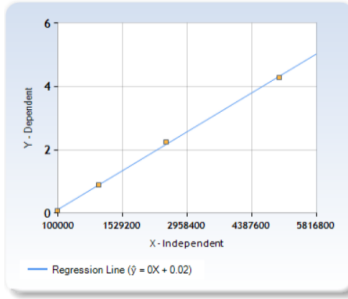


Priority Queue	Sort	5	100000	0	0.109375	0.4375
			500000	0.078125	0.65625	2.14062
			1000000	0.125	1.4375	4.29688
			5000000	0.625	8.9375	20.8281
	remove_d ups_same_order		not sensible implementation			
	remove_d ups_any_order		100000	0.015625	0.109375	0.4375
			500000	0.0625	0.671875	2.125
			1000000	0.125	1.51562	3.98438
			5000000	0.625	9.125	17.5781
	mode		100000	0.015625	0.109375	0.015625
			1000000	0.125	1.48438	0
			3000000	0.40625	5.09375	0.03125
			5000000	0.625	9	0.046875



Hash Table	Sort	5	not sensible implementation			
			100000	0.015625	0.0625	0.421875
			1000000	0.125	0.890625	4.25
			2500000	0.3125	2.25	9.5
			5000000	0.625	4.28125	17.4531
	remove_d ups_same_order		100000	0.015625	0.0625	0.40625
			500000	0.0625	0.34375	2.10938
			1000000	0.125	0.71875	4.125
			1500000	0.203125	1.09375	6.07812
	remove_d ups_any_order		100000	0.015625	0.0625	0

mode	1000000	0.125	0.65625	0.0625
	5000000	0.640625	3.25	0.234375
	10000000	1.26562	6.32812	0.375



Conclusion: They are all very much of linear( $O(N)$ ) complexity in actual program run



