Random Sequence

==================== BST Upper Bounds ====================

[Run] BasicBST
Comparisons: 25634972
Rotations: 0
Execution Time: 289 ms

[Run] SplayTree
Comparisons: 30482255
Rotations: 29696390
Execution Time: 603 ms

[Run] TangoTree
Comparisons: 13079630
Rotations: 262712
Execution Time: 868 ms

==================== Wilber I Lower Bound ====================
Estimated Wilber I Lower Bound: 11521705

Summary Report

Algorithm	Comparisons	Rotations	Time(ms)	C/Wilber	R/C (%)
BasicBST	25634972	0	289.00	2.22	0.00%
SplayTree	30482255	29696390	603.00	2.65	97.42%
TangoTree	13079630	262712	868.00	1.14	2.01%

Monotonic Sequence

==================== BST Upper Bounds ====================

[Run] BasicBST
Comparisons: 25634972
Rotations: 0
Execution Time: 105 ms

[Run] SplayTree
Comparisons: 18612271

Rotations: 17870628

Execution Time: 53 ms

[Run] TangoTree

Comparisons: 13079630

Rotations: 262314

Execution Time: 596 ms

==================== Wilber I Lower Bound ====================

Estimated Wilber I Lower Bound: 524287

Summary Report

Algorithm	Comparisons	Rotations	Time(ms)	C/Wilber	R/C (%)
BasicBST	25634972	0	105.00	48.89	0.00%
SplayTree	18612271	17870628	53.00	35.50	96.02%
TangoTree	13079630	262314	596.00	24.95	2.01%

HotSpot Sequence

==================== BST Upper Bounds ====================

[Run] BasicBST

Comparisons: 26660220

Rotations: 0

Execution Time: 109 ms

[Run] SplayTree

Comparisons: 20373269

Rotations: 19605235

Execution Time: 102 ms

[Run] TangoTree

Comparisons: 14104878

Rotations: 71969

Execution Time: 690 ms

==================== Wilber I Lower Bound ====================

Estimated Wilber I Lower Bound: 10901120

Summary Report

Algorithm	Comparisons	Rotations	Time(ms)	C/Wilber	R/C (%)

BasicBST	26660220	0	109.00	2.45	0.00%
SplayTree	20373269	19605235	102.00	1.87	96.23%
TangoTree	14104878	71969	690.00	1.29	0.51%

ZigZag Sequence

==================== BST Upper Bounds ====================

[Run] BasicBST
Comparisons: 25634972
Rotations: 0
Execution Time: 111 ms

[Run] SplayTree
Comparisons: 19658353
Rotations: 18916803
Execution Time: 63 ms

[Run] TangoTree
Comparisons: 13079630
Rotations: 261682
Execution Time: 600 ms

==================== Wilber I Lower Bound ====================
Estimated Wilber I Lower Bound: 11804428

Summary Report

Algorithm	Comparisons	Rotations	Time(ms)	C/Wilber	R/C (%)
BasicBST	25,634,972	0	111.00	2.17	0.00%
SplayTree	19,658,353	18,916,803	63.00	1.67	96.23%
TangoTree	13,079,630	261,682	600.00	1.11	2.00%

Wilber I Lower Bound: 11,804,428

Bit-Reversal Sequence

==================== BST Upper Bounds ====================

[Run] BasicBST
Comparisons: 25634972
Rotations: 0
Execution Time: 269 ms

[Run] SplayTree
Comparisons: 34720945
Rotations: 33910530
Execution Time: 512 ms

[Run] TangoTree
Comparisons: 13079630
Rotations: 262008
Execution Time: 807 ms

=================== Wilber I Lower Bound ===================
Estimated Wilber I Lower Bound: 12137338

Summary Report

Algorithm	Comparisons	Rotations	Time(ms)	C/Wilber	R/C (%)
BasicBST	25634972	0	269.00	2.11	0.00%
SplayTree	34720945	33910530	512.00	2.86	97.67%
TangoTree	13079630	262008	807.00	1.08	2.00%