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Analysis Report

Runtimes for different implementations of countryIRSystem

	100 entries	500 entries
List	4.03 ms	17.0 ms
BST Dictionary	13.0 ms	10.9 ms
Linked List Dict	25.0 ms	108 ms
Sorted List Dict	16.9 ms	81.8 ms
Hash Table Dict	~ 0 ms	~ 0 ms

Observations:

- The hash table dictionary based information retrieval (IR) system is much faster than the other IR systems for both 100 entries and 500 entries.
- The list based IR system beats the other IR systems (except HT Dict) when the entries are small (< 100).
- The linked list based IR system is the slowest of them all, followed by the sorted list based IR system.

Conclusion:

From the runtime analysis above, we can clearly conclude that a Hash Table Dictionary based IRS is the clear winner in terms of speed. The HTDict IR system takes barely over

0 seconds to complete the processes that the other IR systems take upto 108 ms (milliseconds) to complete.