

Question:

Which of the symbol-table implementations in this section would you use for an application that does 10^6 put() operations and 10^3 get() operations, randomly intermixed?

Answer:

I use Symbol Table implementation using Binary Search Tree because of its complexity.

In Linked List:

Complexity for put() : $O(N)$

Complexity for get() : $O(N)$

In Binary Search Tree:

Complexity for put() : $O(\log N)$

Complexity for get() : $O(\log N)$

For larger operations like 10^6 and 10^3 , it would be efficient of using Binary Search Tree to implement Symbol Table.