

create a CDT with op and value

To create a linked list, we create a HEAD and link new entries to the tail, because we process the operations from head to tail and we need to know the 'next' in forward direction.

↳ i.e. the order of input

Basically, we first create a static HEAD node and store the current tail (init to HEAD). For each new entry, we link it to after the tail. When we want to read the operations, we go from our static HEAD and move forward.

Since we keep both head and tail, each insert after the tail is a $O(1)$ operation. Since we traverse from head directly when reading the list, it takes $O(n)$ to traverse through the list.