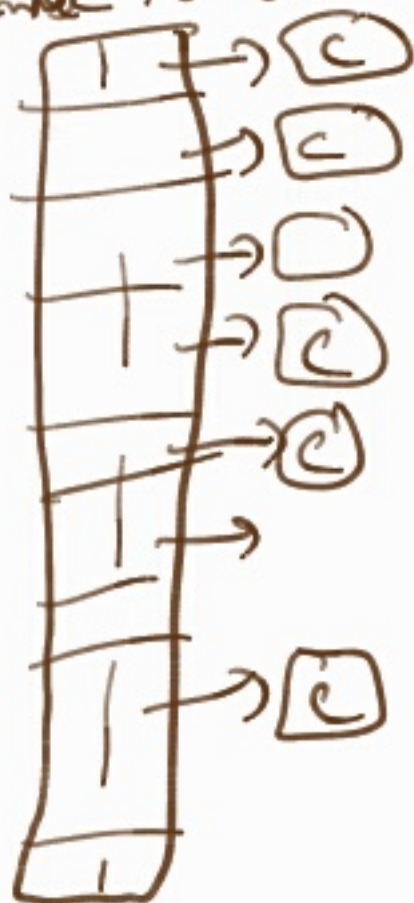


# Memory Diagram

Customer

Hash with Quadratic collision  
Inter Pointer



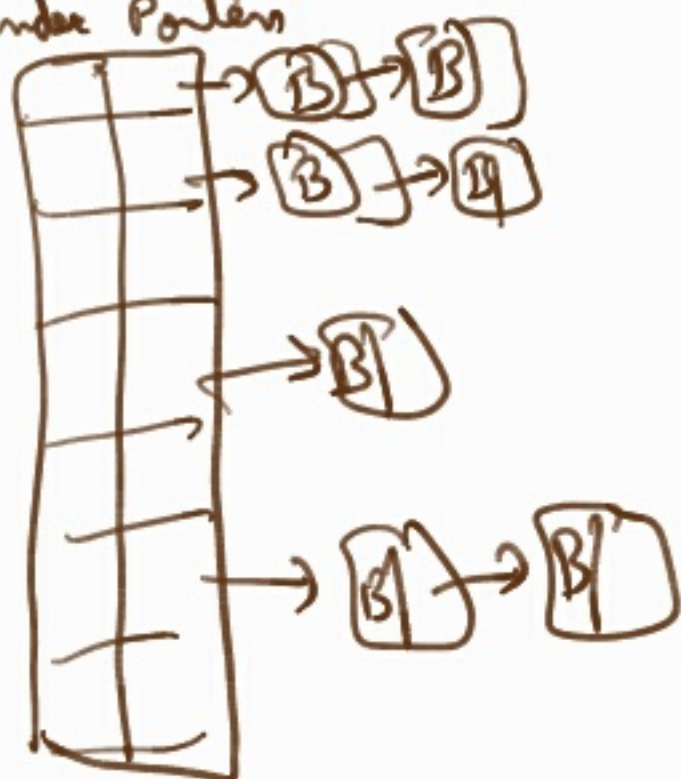
Memory

-  $O(n_c)$  where

$n_c$  is the no. of customers

- For this case hash size is 223

Books Hash with buckets  
Inter Pointer

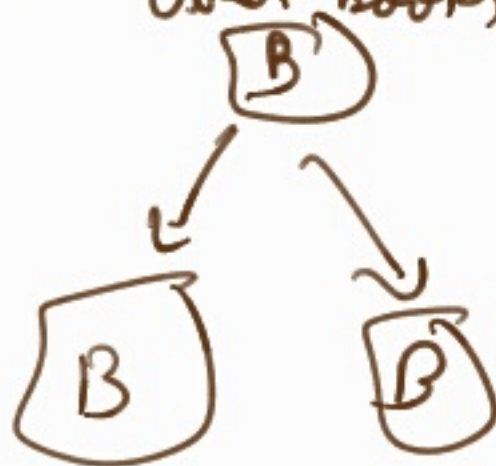
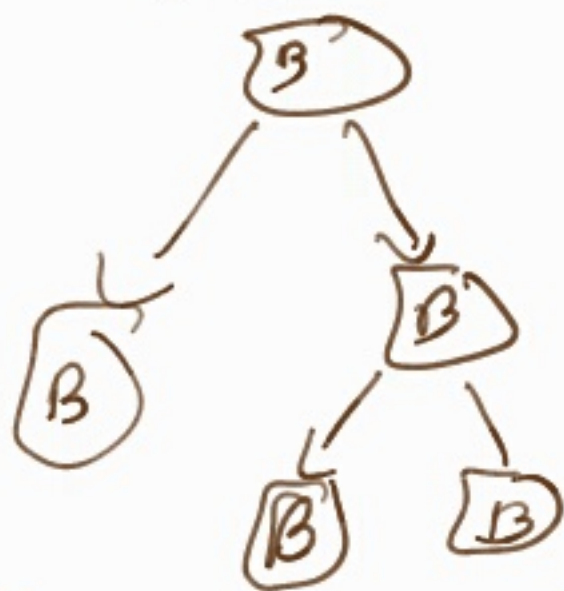


Memory

-  $O(n_b)$  where

$n_b$  is the no. of books

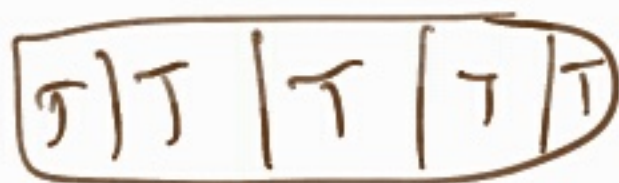
Also for Books home <sup>BST</sup> other books for traversal



But since it just store pointers to the books which already exist in heap and already shown with hash it would not be taking any more data

Transaction

STL  $\rightarrow$  queue



$O(n_t)$  where  $n_t$  is the number of transactions. This would be at worst case when none of the transactions have been executed