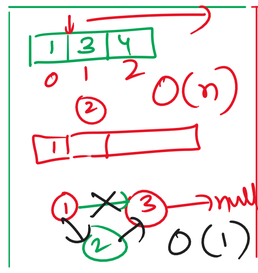
Standard Template Library (Built-in data structures in C++)

#include <lib>

* Stack → reversal
* queue → BFS traversal → Level Order Traversal
* list <> forward_list / list
* set → Unique Elements
* map → <k, v>
* Vector → Dynamic array



Array → 2 4 6 1 O(1)
0 1 2 3
Search → index arr[3]

Linked List → 1 → 2 → 3 → null
O(n)

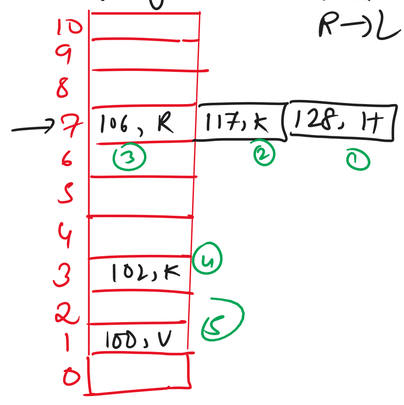
* Hashing
Hash Collision

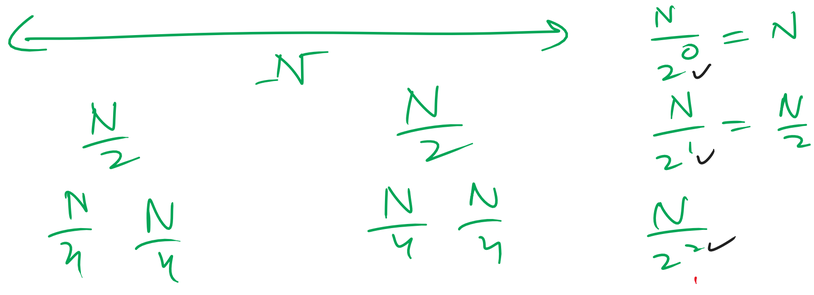
Hash Table <k, v>
↳ Array of Lists

T → B
R → L

ht.put <106, "Rahul">
ht.put <117, "Khushi">
ht.put <128, "Hari">
ht.put <102, "Kaushal">
ht.put <100, "Vaishnavi">

Initial size :→ 11





$k = 0, 1, 2, 3, \ldots$

$[\, k = \log_2 N \,]$

Big O
log N

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