

What is probing

空間利用率 \leftarrow 擠壓

70%以下尤佳 $\alpha < 0.7$

collision 次數

Simulation 次數



key

same index

primary

clustering

Quadratic Probing

5855073...

Time Complexity

Separate Chaining

Operation	Best	Average	Worst	Remarks
Search	$O(1)$	$O(1 + \alpha)$	$O(n)$	Average-case constant if α small
Insert	$O(1)$	$O(1)$	$O(n)$	Append to short chain
Delete	$O(1)$	$O(1)$	$O(n)$	Search + unlink node

$$T_{avg} \approx O(1 + n/m) = O(1 + \alpha)$$

mod 值可正或

Double Hashing