

Cuckoo hashing:

$$m = 11$$

0	1	2	3	4	5	6	7	8	9	10
	67					50			75	

0	1	2	3	4	5	6	7	8	9	10
	20			53					100	

$$h_1(k) = k \% 11$$

$$h_2(k) = (k \text{ div } 11) \% 11$$

20

9

1

50

6

4

53

9

4

75

9

6

100

1

9

67

1

6

Linked Hash Table:

Representation:

LHT Node:

info: T Elem

next: \uparrow LHT Node

next iterator: \uparrow LHT Node

prev iterator: \uparrow LHT Node

LHT:

head: \uparrow LHT Node

tail: \uparrow LHT Node

m: integer

h: \uparrow Function

table: (\uparrow LHT Node)[\uparrow]

Subalg remove (lht, v):

pos \leftarrow lht.h(v)

current \leftarrow lht.table[pos]

prev \leftarrow Nil

while current \neq Nil and [current].info \neq v ex:

prev \leftarrow current

current \leftarrow [current].next

if current \neq Nil then

// remove from hashing list

if prev = Nil then

lht.table[pos] \leftarrow [current].next

else

[prev].next \leftarrow [current].next

// remove from iteration list

if current = lht.head then

lht.head \leftarrow [lht.head].next + iterator

if lht.head = Nil then

lht.tail \leftarrow Nil

else [lht.head].previterator \leftarrow Nil
[]

else if current = lht.tail then
lht.tail \leftarrow [lht.tail].previterator
[lht.tail].nextiterator \leftarrow Nil

else
[current].previterator.nextiterator \leftarrow current.nextiterator
[current].nextiterator.previterator \leftarrow current.previterator

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