Hash, chaining

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- representation

  use : (semistatic) array,

  singly linked nodes for chaining

  elements are TKey (…TElement)

- add an element to the hash

  pseudocode

Assume: there is a hashFunc: TKey -> {0,…,m-1}

external to element and hash table

Open addressing

Consider inserting the keys

31, 60, 5, 29, 18, 16, 17

into a hash table of length $m = 11$

using open addressing with the primary hash function

$h'(k) = k \bmod m$.

Illustrate the result of inserting these keys by using

- linear probing
- quadratic probing with $c1 = 0$ and $c2 = 1$
- double hashing with $h2(k) = 1 + (k \bmod (m - 1))$

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Consider the keys to be inserted in a hash are the next 26 small letters:

a,b,c,d,e,f,g,h,l,j,k,l,m,n,o,p,q,r,s,t,u,v,w,x,y,z

Insert the keys

j, k, l, m, n, u, v, w, a, b, c

into a hash table of length m=11

Describe the steps and illustrate the result

1. a
2. b
3. c
4. d
5. e
6. f
7. g
8. h
9. l
10. j
11. k
12. l
13. m
14. n
15. o
16. p
17. q
18. r
19. s
20. t
21. u
22. v
23. w
24. x
25. y
26. z