1. Let base for the n integers V00837868 Let there be "d" number of digits in each of n integers

. Runtime for Radix sort > O(d×(n+b))

Range of values >> O- n²-1, hence d >> O(log (n)).

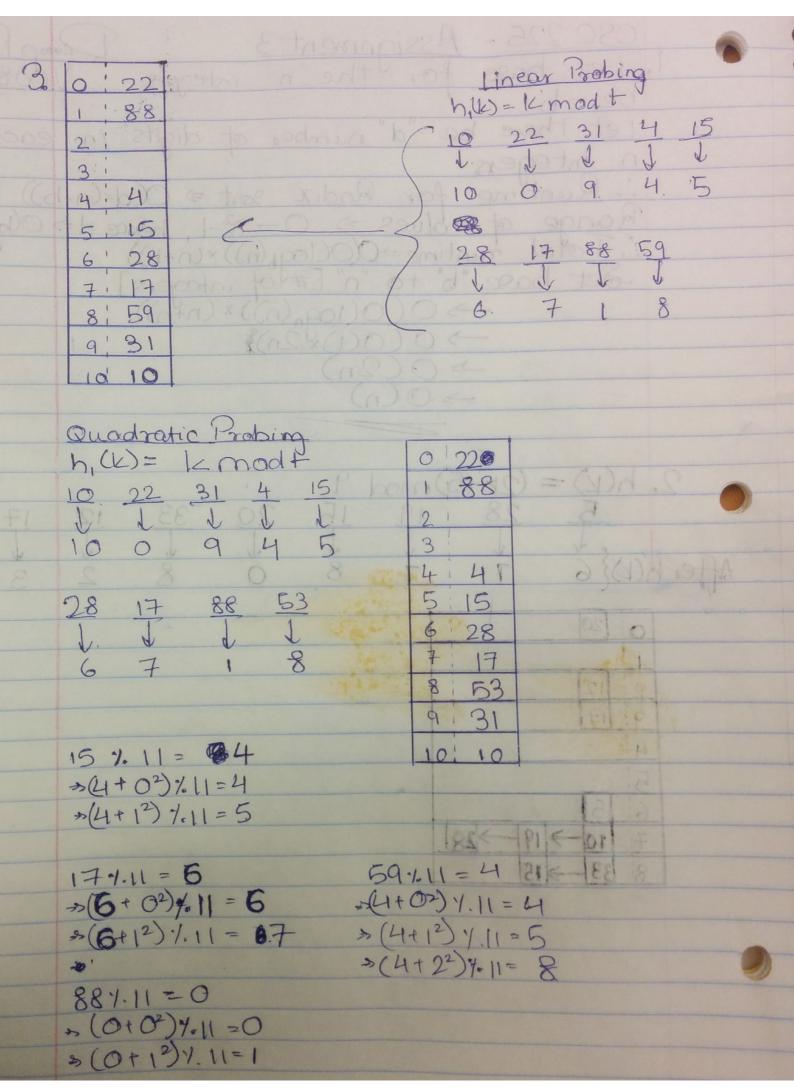
. Total runtime > O(O(log (n)) × (n+b))

Set base "b" to "n" [# of integers]

-> O(O(log (n)) × (n+n))

-> O(O(log (n))

-> O(O(log (n)) 2. h(k) = (2k+5) mod 9. $\frac{5}{5} = \frac{28}{19} = \frac{15}{15} = \frac{20}{33} = \frac{17}{17} = \frac{17}{19}$ Afterh(b) $\frac{17}{19} = \frac{15}{19} = \frac{20}{19} = \frac{33}{19} = \frac{17}{17} = \frac{10}{19}$



Double hashing h.(k)=k modt h2(16)= 1+ (1c mod (+-1)) (h,(k)+ihz(k))mad+ 3:17 10 -> 10 4:4 22-> 0 5:15 6:28 4-3 4 7:88 15 -> (4+6)4.11->(4+2-6)4.11->5 8: 9:31 28-36 17-3(6+87/11->3 10:10 88->(0+9)7.11->(0+2-97.11->7 59-X(4+10)7.11->(4+2-10)7.H>> 2 4. h(k,i) = (h,(k) + i h2(k) mod +)

Even or odd = Evenor odd = Even If t is even and so is h_(k), it obviously means that they are multiples of 2. The probe sequence will examine at most examine half the table because there will be a value for ixh2(x) which is a multiple of to When h, (x) is odd, all the odd and on the table are probe and first except for the h, (k) value, which would the last odd index to be probetal. Same applies when ho(k) is even, excepting all the even indices will be visited first (ho) being the last When i.b.(k) is a multiple of t, the mood leaves only h, (K) behind. m(L) = 8; + = 164 7i=1 2 3 4 5 6 0 3 1/2 0->8->2->10->4->12->61 h.(10)=6

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