Easily forgettable Algo

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RadixSort (MSD → LSD)

```
RadixSort (A[1--n], d) {
    A ← BucketSort (A, d)

    // Find subarray whose numbers
    start with 0, 1, 2, --9
    digit = 0;
    start = 1;
    i = 1;

    while (true) {
        if i>n, break
        if dth digit of A(i) > digit
            end = i-1;
            if (end - start - 1) > 0
                RadixSort (A(start--end), d+1)
                digit++
                start = i
            else
                digit++
        else
            i++
    }
}
```

LSD → MSD

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* Radixsort (A[1..n], d)

for (i=1 to d)
sort the array using
dth digit using bucket

}

3.

* Randomized Quicksort

Quicksort (A, low, high)
if (low >= high)
return
Do { pivot = random no in A[L, H]
P< : no. less than pivot
P> : no more than i
} while pivot does not land somewhere
After this
QS (A, low, |P<|-1, p)
QS (A, low+|P<|-1, high)

2. $T(n) \leq T(\frac{n}{4}) + T(\frac{3n}{4}) + cn$

* BucketSort

BS (A[1..n], d) {
make a new array Q[0..q]
for (i=1 to n) {
if dth digit of A[i] is k
add A[i] to list in Q[k]
}
add elements from Q to A from
lefts to right.

expected no. of pivot