Lab-06 Group-2

problem 2: Radix sort

Given: S = [125, 27, 728, 1, 27, 8, 64, 343, 216]

using radix = 9,

using three Buckets B1, B2, B3.

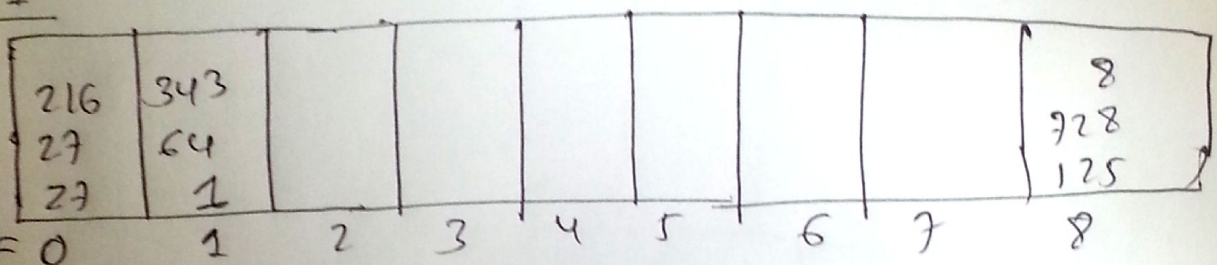
such that at B1 ⇒ x%9

B2 ⇒ (x/9)%9

B3 ⇒ (x/9)/9

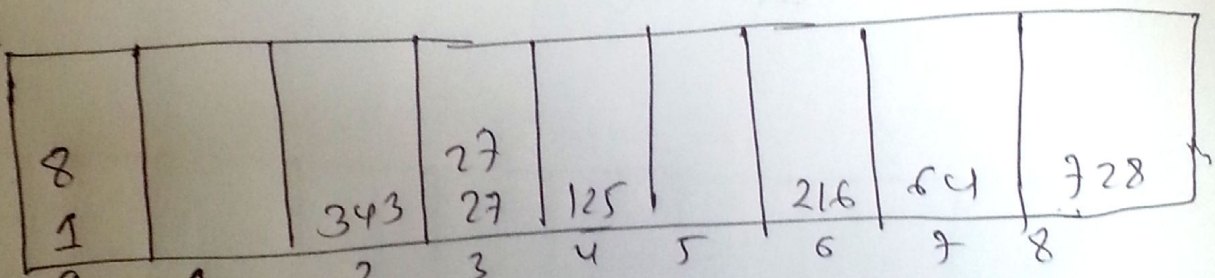
where x = element of S.

At B1



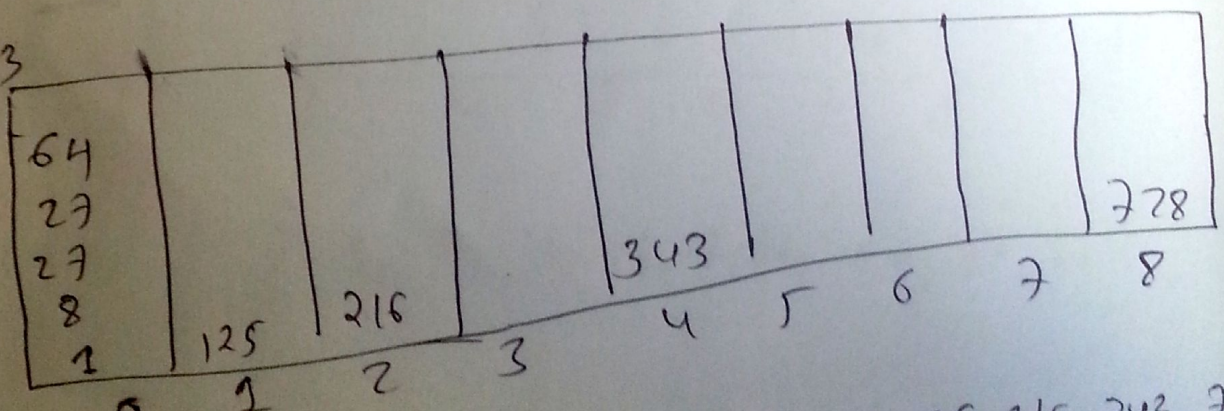
x%9 = 0

At B2



(x/9)%9 = 0

At B3



(x/9)/9 = 0

So, Final Sorted S = [1, 8, 27, 27, 64, 125, 216, 343, 728]

Lab-06 Group-2

Problem 3: Radix sort

Given: {80, 27, 72, 1, 27, 8, 64, 34, 16}

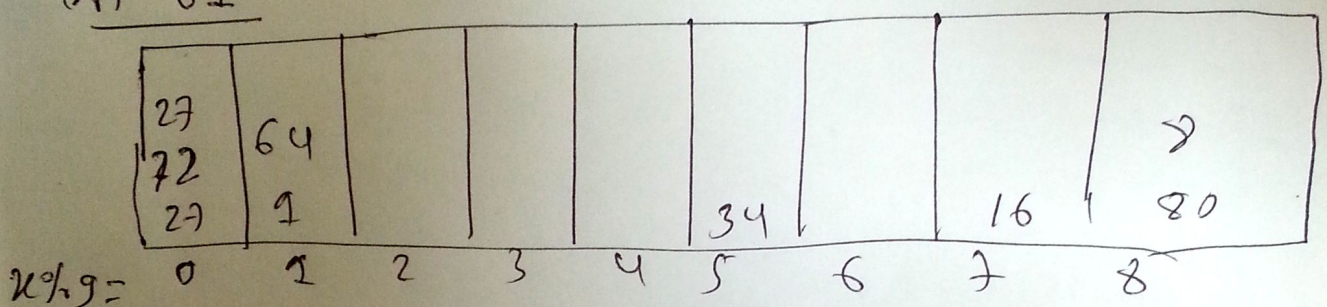
Here max = 80. < ($n^2 = 9^2 = 81$)

Using radix = 9.

since max = $80 \leq 9^2$ so, two Bucket is sufficient.

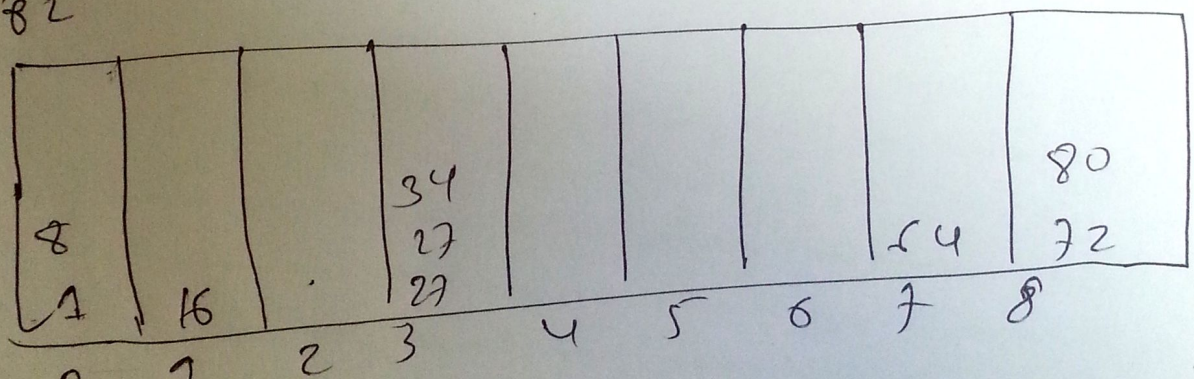
i.e B1, B2.

At B1



x%9 =

At B2



x/9 =

∴ final sorted = {1, 8, 16, 27, 27, 34, 64, 72, 80}