RADIX SORT

For example, assume that array `nums` contains the integers 380, 95, 345, 382, 260, 100, and 492. The sort will take three passes, because the largest integer in the array has 3 digits. The following diagram shows the sorting process. (For Pass II and III, only the non-empty buckets are shown in order to save space.)

```
        nums                                                    nums
       before                                                   after
        Pass                        bucket  front                Pass
                                            rear

                                       ↓             ↓
   Pass  [0]  380                  [0]  380  260  100        [0]   380
    I    [1]   95                  [1]                       [1]   260
         [2]  345                  [2]  382  492             [2]   100
         [3]  382        =>        [3]                 =>    [3]   382
         [4]  260       Step       [4]                Step   [4]   492
                          1                            2
         [5]  100                  [5]   95   345            [5]    95
         [6]  492                  [6]                       [6]   345
                                   [7]
                                   [8]
                                   [9]


   Pass  [0]  380                  [0]  100                  [0]   100
    II   [1]  260                  [4]  345                  [1]   345
         [2]  100        =>        [6]  260                  [2]   260
         [3]  382       Step       [8]  380  382      =>     [3]   380
                          1                          Step
                                                      2
         [4]  492                  [9]  492    95           [4]   382
         [5]   95                                           [5]   492
         [6]  345                                           [6]    95


   Pass  [0]  100                  [0]   95                  [0]    95
   III   [1]  345                  [1]  100                  [1]   100
         [2]  260        =>        [2]  260                  [2]   260
         [3]  380       Step       [3]  345  380  382  =>    [3]   345
                          1                          Step
                                                      2
         [4]  382                  [4]  492                  [4]   380
         [5]  492                                           [5]   382
         [6]   95                                           [6]   492
```