**BUCKET SORT ALGORITHM**

1. Declare Array A with default values
2. Set n = length of Array A
3. Create bucket of size n:
   1. Set bucket = empty array
   2. Set i = 0
   3. While (i < n)
      1. Set bucket[i] = empty array
      2. i = i + 1
4. Inserting elements into their respective buckets:
   1. Set j = 0
   2. While (j < n)
      1. Set bucket\_ind = floor value of A[j]\*n
      2. Bucket[bucket\_ind] = A[j]
      3. j = j + 1
5. Sort the elements of each bucket:
   1. i = 0
   2. While (i < n)
      1. sort the bucket[i] using any sorting algorithm
      2. i = i + 1
6. Get the Sorted buckets
   1. Set i = 0, j = 0, k = 0
   2. While (i < n)
      1. While (j < length of bucket[i])
         1. A[k] = bucket[i][j]
         2. k = k + 1
7. Print Array A
8. Exit