**Algorithm:** BucketSort

**Input:** A list of integers $A$ with $n$ elements
**Output:** $A$ ordered from smallest to largest

```
1  Procedure BucketSort(A)
2      if n < 2 then
3          return A
4      B ← Array of N empty lists
5      for i ← 0 to n − 1 do
6          associate k with A[i]
7          append A[i] to B[k]
8      end
9      for i ← 0 to |B| − 1 do
10         B[i] ← BubbleSort (B[i])
11     end
12     j ← 0
13     for k ← 0 to N do
14         for x ∈ B[k] do
15             A[j] ← x
16             j ← j + 1
17         end
18     end
19     return A
```