

## Algorithm: BucketSort

```
1 Procedure BucketSort( $A$ )
2    $B \leftarrow$  Array of  $N$  empty lists
3   for  $i \leftarrow 0$  to  $n - 1$  do
4     |   associate  $k$  with  $A[i]$ 
5     |   append  $A[i]$  to  $B[k]$ 
6   end
7
8   for  $i \leftarrow 0$  to  $N' - 1$  do
9     |    $B[i] \leftarrow$  InsertionSort( $B[i]$ )
10  end
11
12   $j \leftarrow 0$ 
13  for  $k \leftarrow 0$  to  $N - 1$  do
14    |   for  $x \in B[k]$  do
15      |      $A[j] \leftarrow x$ 
16      |      $j \leftarrow j + 1$ 
17    |   end
18  end
19  return  $A$ 
```