Counting Sort

```
CountingSort(A, B, k)
Let C[0 … k] be a new array
for i ← 0 to k do
  C[i] ← 0
for j ← 1 to size of A
  C[A[j]] ← C[A[j]] + 1
for i ← 1 to k do
  C[i] ← C[i] + C[i-1]
for j ← size of A downto 1
  B[C[A[j]]] ← A[j]
  C[A[j]] ← C[A[j]] - 1
```

- A = [2 1 2 0 3 1], k = ?