```
       _____
      | Diogo Araujo Miranda      |
      | Matricula: 705657         |
      |_____|
```

Exercicio 1)

12 4 8 2 14 17 6 18 10 16 15 5 13 9 1 11 7 3

count:

(19 movimentações)
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Incrementar o número de ocorrências do vetor de contagem
(18 movimentações)

#	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0

#	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0

#	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0

#	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	0	0	1	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0

#	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	0	0	1	0	1	0	0	0	1	0	0	0	1	0	1	0	0	0	0

#	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	0	0	1	0	1	0	0	0	1	0	0	0	1	0	1	0	0	1	0

#	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	0	0	1	0	1	0	1	0	1	0	0	0	1	0	1	0	0	1	0

#	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	0	0	1	0	1	0	1	0	1	0	0	0	1	0	1	0	0	1	1

#	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	0	1	1

#	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1	1

#	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1	1	1	1

#	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	0	0	1	0	1	1	1	1	0	1	0	1	0	1	0	1	1	1	1

#	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	0	0	1	0	1	1	1	1	0	1	0	1	0	1	1	1	1	1	1

#	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	0	0	1	0	1	1	1	0	1	1	1	0	1	1	1	1	1	1	1

#	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	0	1	1	0	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1

#	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

```
   0 1 1 0 1 1 1 1 1 1  1  1  1  1  1  1  1  1  1

#  0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
   0 1 1 1 1 1 1 1 1 1  1  1  1  1  1  1  1  1  1
```

Fazer com que cada posição i contenha todos elementos menos ou iguais a i

(19 movimentações)
```
#  0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
   0 1 1 1 1 1 1 1 1 1  1  1  1  1  1  1  1  1  1

#  0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
   0 1 2 1 1 1 1 1 1 1  1  1  1  1  1  1  1  1  1

#  0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
   0 1 2 3 1 1 1 1 1 1  1  1  1  1  1  1  1  1  1

#  0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
   0 1 2 3 4 1 1 1 1 1  1  1  1  1  1  1  1  1  1

#  0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
   0 1 2 3 4 5 1 1 1 1  1  1  1  1  1  1  1  1  1

#  0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
   0 1 2 3 4 5 6 1 1 1  1  1  1  1  1  1  1  1  1

#  0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
   0 1 2 3 4 5 6 7 1 1  1  1  1  1  1  1  1  1  1

#  0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
   0 1 2 3 4 5 6 7 8 1  1  1  1  1  1  1  1  1  1

#  0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
   0 1 2 3 4 5 6 7 8 9  1  1  1  1  1  1  1  1  1

#  0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
   0 1 2 3 4 5 6 7 8 9 10  1  1  1  1  1  1  1  1

#  0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
   0 1 2 3 4 5 6 7 8 9 10 11  1  1  1  1  1  1  1

#  0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
   0 1 2 3 4 5 6 7 8 9 10 11 12  1  1  1  1  1  1

#  0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
   0 1 2 3 4 5 6 7 8 9 10 11 12 13  1  1  1  1  1

#  0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
   0 1 2 3 4 5 6 7 8 9 10 11 12 13 14  1  1  1  1

#  0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
   0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15  1  1  1

#  0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
   0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16  1  1

#  0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
   0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17  1

#  0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
   0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
```

Preencher o array de saída

Entrada :

```
#   0  1 2 3 4  5   6 7  8  9  10 11 12 13 14 15 16 17
    12 4 8 2 14 17  6 18 10 16 15 5  13 9  1  11 7  3
```

Count :

```
#  0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
   0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
```

==

Saída :

```
#    0 1 2 3 4 5 6 7 8 9  10 11 12 13 14 15 16
     0 0 1 0 0 0 0 0 0 0  0  0  0  0  0  0  0
```

Count :

```
#  0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
   0 1 2 2 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
```

Saída :

```
#    0 1 2 3 4 5 6 7 8 9  10 11 12 13 14 15 16
     0 0 3 0 0 0 7 0 0 0  0  0  0  0  0  0  0
```

Count :

```
#  0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
   0 1 2 2 4 5 6 6 8 9 10 11 12 13 14 15 16 17 18
```

Saída :

```
#    0 1 2 3 4 5 6 7 8 9  10 11 12 13 14 15 16
     0 0 3 0 0 0 7 0 0 0  11 0  0  0  0  0  0
```

Count :

```
#  0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
   0 1 2 2 4 5 6 6 8 9 10 10 12 13 14 15 16 17 18
```

Saída :

```
#    0 1 2 3 4 5 6 7 8 9  10 11 12 13 14 15 16
     1 0 3 0 0 0 7 0 0 0  11 0  0  0  0  0  0
```

Count :

```
#  0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
   0 0 2 2 4 5 6 6 8 9 10 10 12 13 14 15 16 17 18
```

Saída :

```
#    0 1 2 3 4 5 6 7 8 9  10 11 12 13 14 15 16
     1 0 3 0 0 0 7 0 9 0  11 0  0  0  0  0  0
```

Count :

```
#  0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
   0 0 2 2 4 5 6 6 8 8 10 10 12 13 14 15 16 17 18
```

Saída :

```
#     0 1 2 3 4 5 6 7 8 9  10 11 12 13 14 15 16
      1 0 3 0 0 0 7 0 9 0  11 0  13 0  0  0  0
```

Count :

```
#  0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
   0 0 2 2 4 5 6 6 8 8 10 10 12 12 14 15 16 17 18
```

Saída :

```
#     0 1 2 3 4 5 6 7 8 9  10 11 12 13 14 15 16
   0  1 0 3 0 5 0 7 0 9 0  11 0  13 0  0  0  0
```

Count :

```
#  0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
   0 0 2 2 4 4 6 6 8 8 10 10 12 12 14 15 16 17 18
```

Saída :

```
#     0 1 2 3 4 5 6 7 8 9  10 11 12 13 14 15 16
      1 0 3 0 5 0 7 0 9 0  11 0  13 0  15 0  0
```

Count :

```
#  0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
   0 0 2 2 4 4 6 6 8 8 10 10 12 12 14 14 16 17 18
```

Saída :

```
#     0 1 2 3 4 5 6 7 8 9  10 11 12 13 14 15 16
      1 0 3 0 5 0 7 0 9 0  11 0  13 0  15 16 0
```

Count :

```
#  0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
   0 0 2 2 4 4 6 6 8 8 10 10 12 12 14 14 15 17 18
```

Saída :

```
#     0 1 2 3 4 5 6 7 8 9  10 11 12 13 14 15 16
      1 0 3 0 5 0 7 0 9 10 11 0  13 0  15 16 0
```

Count :

```
#  0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
   0 0 2 2 4 4 6 6 8 8  9 10 12 12 14 14 15 17 18
```

Saída :

```
#     0 1 2 3 4 5 6 7 8 9  10 11 12 13 14 15 16
      1 0 3 0 5 0 7 0 9 10 11 0  13 0  15 16 18
```

Count :

```
#  0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
   0 0 2 2 4 4 6 6 8 8  9 10 12 12 14 14 15 17 18
```

   Saída :

```
#     0 1 2 3 4 5 6 7 8 9  10 11 12 13 14 15 16
      1 0 3 0 5 6 7 0 9 10 11 0  13 0  15 16 18
```

Count :

```
#   0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
    0 0 2 2 4 4 5 6 8 8  9 10 12 12 14 14 15 17 18

    Saída :

#     0 1 2 3 4 5 6 7 8 9  10 11 12 13 14 15 16 18
      1 0 3 0 5 6 7 0 9 10 11 0  13 0  15 16 17 18

Count :

#   0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
    0 0 2 2 4 4 5 6 8 8  9 10 12 12 14 14 15 16 17

    Saída :

#     0 1 2 3 4 5 6 7 8 9  10 11 12 13 14 15 16 18
      1 0 3 0 5 6 7 0 9 10 11 0  13 14 15 16 17 18

Count :

#   0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
    0 0 2 2 4 4 5 6 8 8  9 10 12 12 13 14 15 16 17

    Saída :

#     0 1 2 3 4 5 6 7 8 9  10 11 12 13 14 15 16 18
      1 2 3 0 5 6 7 0 9 10 11 0  13 14 15 16 17 18

Count :

#   0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
    0 0 1 2 4 4 5 6 8 8  9 10 12 12 13 14 15 16 17

    Saída :

#     0 1 2 3 4 5 6 7 8 9  10 11 12 13 14 15 16 18
      1 2 3 4 5 6 7 0 9 10 11 0  13 14 15 16 17 18

Count :

#   0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
    0 0 1 2 3 4 5 6 8 8  9 10 12 12 13 14 15 16 17

    Saída :

#     0 1 2 3 4 5 6 7 8 9  10 11 12 13 14 15 16 18
      1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

Count :

#   0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
    0 0 1 2 3 4 5 6 7 8  9 10 11 12 13 14 15 16 17


Saída : 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

Count: 0 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17
```