# Estructuras de Datos

### Anexo Laboratorio 1

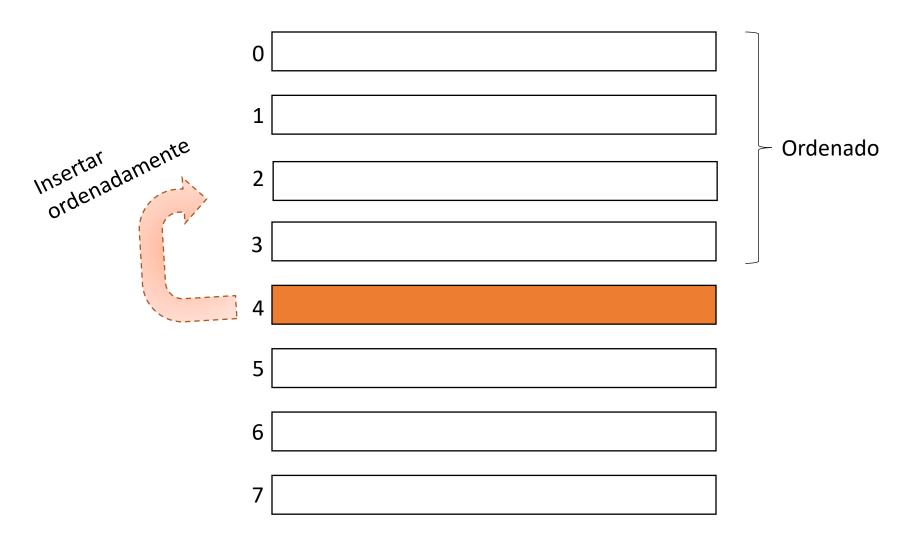
Algoritmos de ordenación

Curso 2021/2022

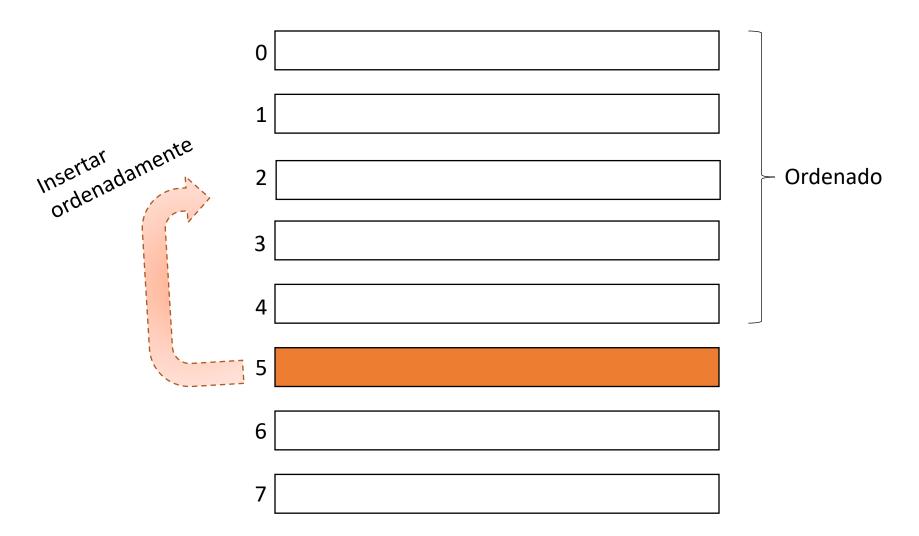




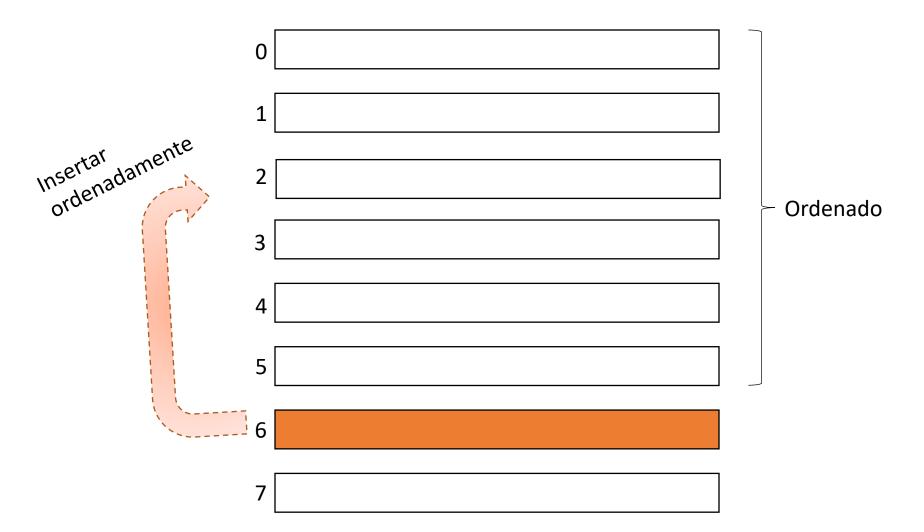
















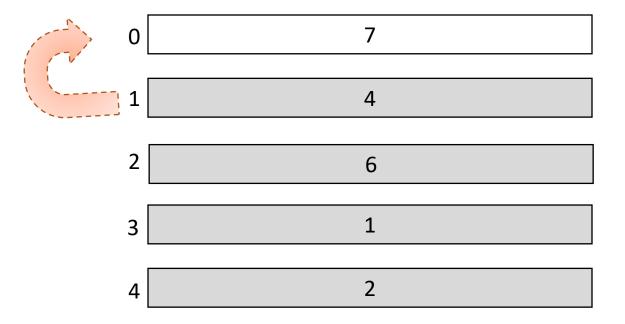


| 0 |  |            |
|---|--|------------|
| 1 |  |            |
| 2 |  |            |
| 3 |  |            |
| 4 |  | ≻ Ordenado |
| 5 |  |            |
| 6 |  |            |
| 7 |  |            |



| 0 | 7 |
|---|---|
| 1 | 4 |
| 2 | 6 |
| [ | 1 |
| 3 | 1 |
| 4 | 2 |

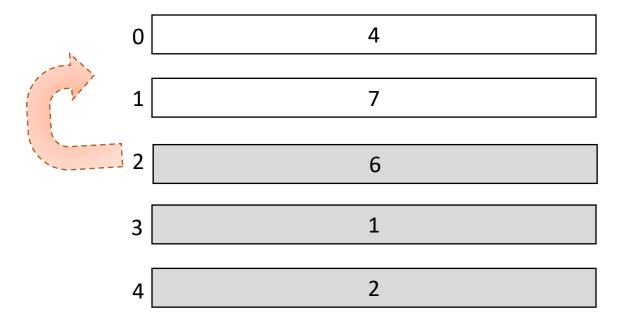






| 0 | 4 |
|---|---|
| 1 | 7 |
| 2 | 6 |
| 3 | 1 |
| 4 | 2 |

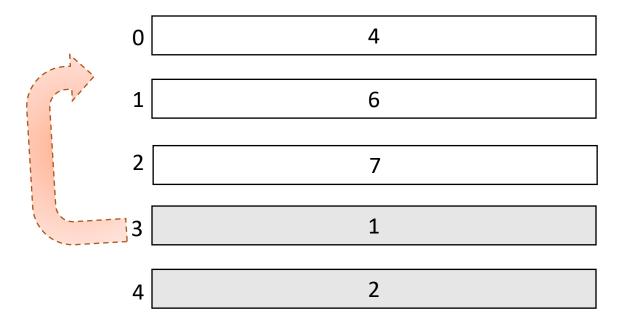






| 0 | 4 |
|---|---|
| 1 | 6 |
| 2 | 7 |
| 3 | 1 |
| 4 | 2 |

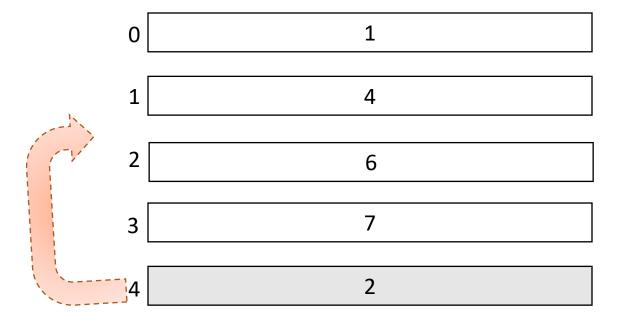






| 0 | 1 |
|---|---|
| 1 | 4 |
|   |   |
| 2 | 6 |
| 3 | 7 |
| 4 | 2 |







| 0 | 1 |
|---|---|
| 1 | 2 |
| 2 | 4 |
| 3 | 6 |
| 4 | 7 |



| 0 | 1 |
|---|---|
| 1 | 2 |
| 2 | 4 |
| 3 | 6 |
| 4 | 7 |



| 0 |             |
|---|-------------|
| 1 |             |
| 2 |             |
| 3 |             |
| 4 | No ordenado |
| 5 |             |
| 6 |             |
| 7 |             |



| VUELTA 1 | 0 |             |
|----------|---|-------------|
|          | 1 |             |
|          | 2 |             |
|          | 3 |             |
|          | 4 | No ordenado |
|          | 5 |             |
|          | 6 |             |
|          | 7 |             |



| VUELTA 1 | 0 |  |              |
|----------|---|--|--------------|
|          | 1 |  |              |
|          | 2 |  |              |
|          | 3 |  | No ordenado  |
|          | 4 |  | No oraciiado |
|          | 5 |  |              |
|          | 6 |  |              |
|          | 7 |  |              |



| VUELTA 1  |   |                 |
|-----------|---|-----------------|
| •         | 1 |                 |
| ;         | 2 |                 |
| <b>\$</b> | 3 | No ordenado     |
|           | 1 | THO OF GETTIGGO |
|           | 5 |                 |
| (         | 5 |                 |
| -         | 7 |                 |



| VUELTA? 0 |             |          |
|-----------|-------------|----------|
| 1         |             |          |
| 2         |             |          |
| 3         | No ordenado | <b>1</b> |
| 4         | ]           | ,        |
| 5         |             |          |
| 6         |             |          |
| 7         |             |          |



| VUELTA 1 | 0 |              |
|----------|---|--------------|
|          | 1 |              |
|          | 2 |              |
|          | 3 | No ordenado  |
|          | 4 | No oraciiado |
|          | 5 |              |
|          | 6 |              |
|          | 7 |              |



| VUELTA 1 |      |   |               |
|----------|------|---|---------------|
|          | -    |   |               |
|          |      |   |               |
| 3        |      |   | ─ No ordenado |
| 2        | ļ. [ | ] |               |
| Ę        |      | 1 |               |
| 6        |      | 1 |               |
| 7        |      |   |               |



| VUELTA 1 | • 0 |  |  |               |
|----------|-----|--|--|---------------|
|          | 1   |  |  |               |
|          | 2   |  |  |               |
|          | 3   |  |  | - No ordenado |
|          | 4   |  |  | No orachado   |
|          | 5   |  |  |               |
|          | 6   |  |  |               |
|          | 7   |  |  |               |



| VUELTA 1 | 0 | Ordenado    |
|----------|---|-------------|
|          | 1 |             |
|          | 2 |             |
|          | 3 |             |
|          | 4 | No ordenado |
|          | 5 |             |
|          | 6 |             |
|          | 7 |             |



| VUELTA 2 | 0 | Ordenado      |
|----------|---|---------------|
|          | 1 |               |
|          | 2 |               |
|          | 3 |               |
|          | 4 | ─ No ordenado |
|          | 5 |               |
|          | 6 |               |
|          | 7 |               |



| VUELTA 2 | 0 |  |  | - Ordenado    |
|----------|---|--|--|---------------|
|          | 1 |  |  |               |
|          | 2 |  |  |               |
|          | 3 |  |  |               |
|          | 4 |  |  | – No ordenado |
|          | 5 |  |  |               |
|          | 6 |  |  |               |
|          | 7 |  |  |               |



| VUELTA 2 | 0          | Ordenado      |
|----------|------------|---------------|
|          | 1          |               |
|          | 2          |               |
|          | 3          |               |
| /        | <b>~</b> 4 | ─ No ordenado |
|          | <b>5</b>   |               |
|          | 6          |               |
|          | 7          |               |

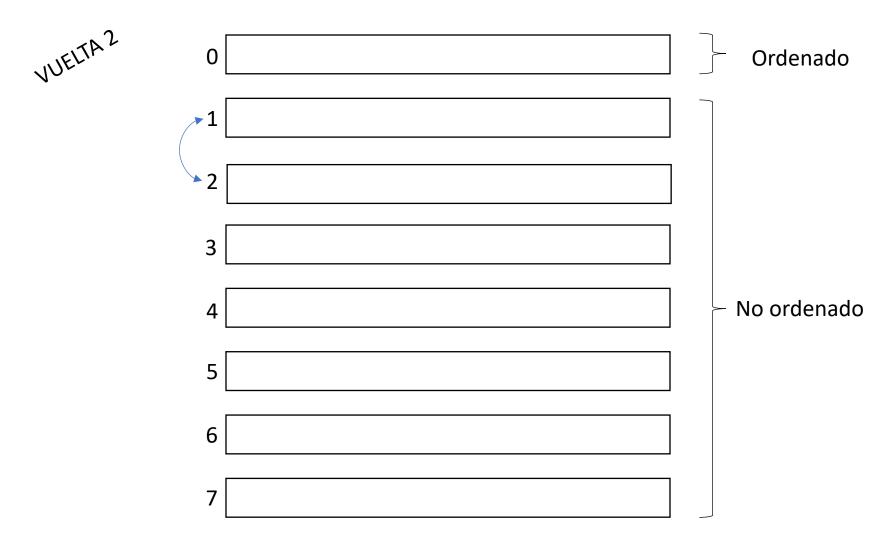


| VUELTA 2 |   | Ordenado    |
|----------|---|-------------|
|          | 1 |             |
| ;        | 2 |             |
|          | 3 |             |
|          | 1 | No ordenado |
| !        | 5 |             |
| (        | 5 |             |
| -        | 7 |             |



| VUELTA 2 |   | Ordenado      |
|----------|---|---------------|
| 1        |   |               |
| ~ 2      |   |               |
| 3        |   |               |
| 4        |   | ≻ No ordenado |
| 5        |   |               |
| 6        |   |               |
| 7        | , |               |







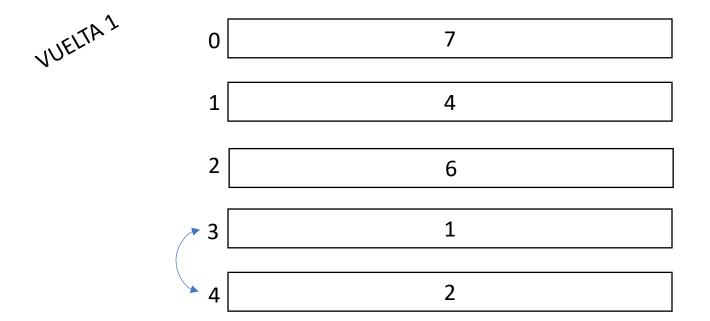
| VUELTA 2 | 1 | Ordenado      |
|----------|---|---------------|
|          | 2 |               |
|          | 3 |               |
|          | 4 | No and an ada |
|          | 5 | ├ No ordenado |
|          | 6 |               |
|          | 7 |               |



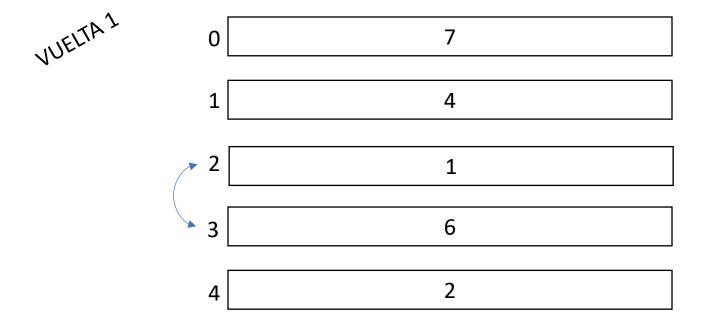
| VUELTA N-2                     | 0 |           |
|--------------------------------|---|-----------|
|                                | 1 |           |
|                                | 2 |           |
| Posible mejora: acabar si en   | 3 | Cordenado |
| una vuelta no hay intercambios | 4 | Ordenado  |
|                                | 5 |           |
|                                | 6 |           |
|                                | 7 |           |



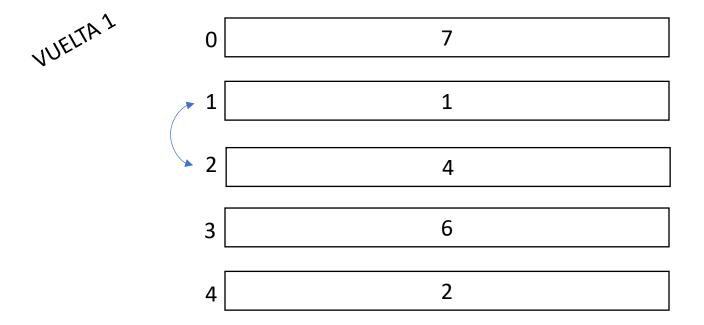
| 0 | 7 |
|---|---|
| 1 | 4 |
| 2 | 6 |
| 3 | 1 |
| 4 | 2 |



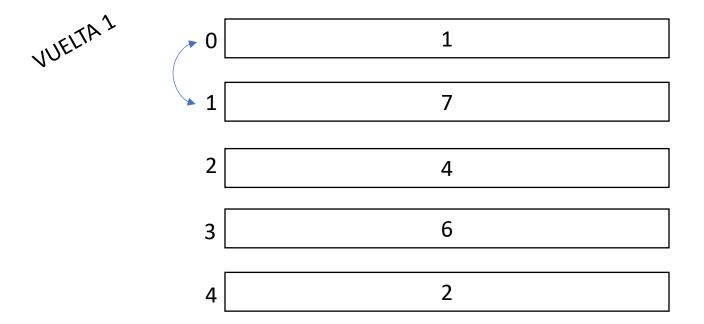




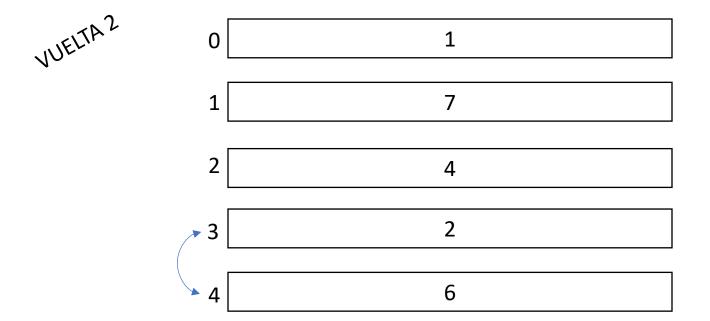




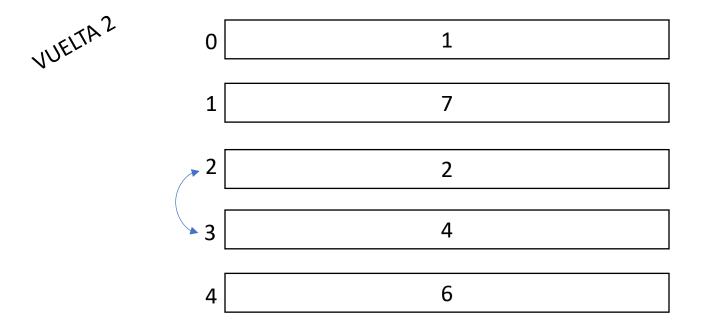




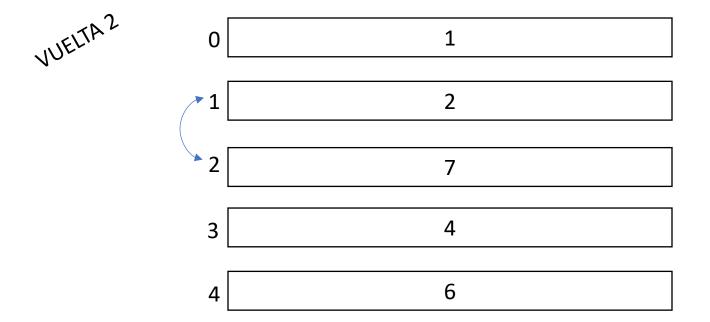




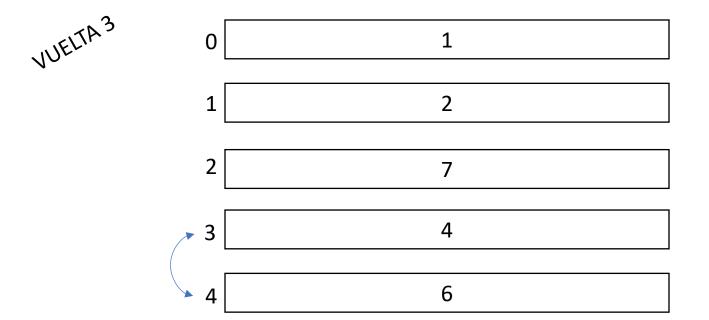




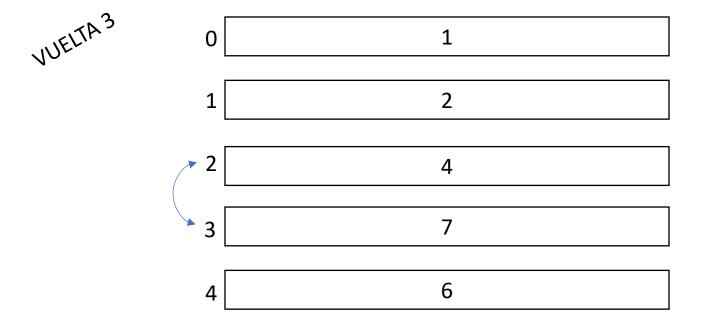




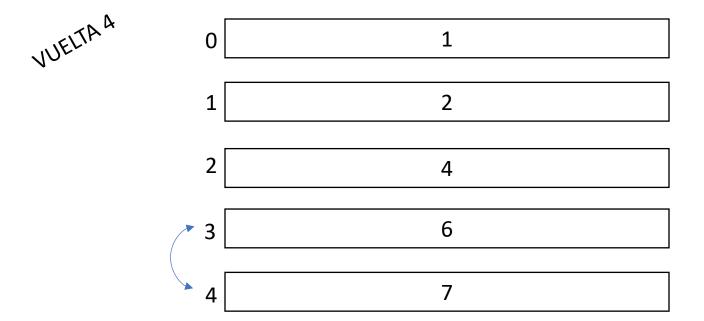






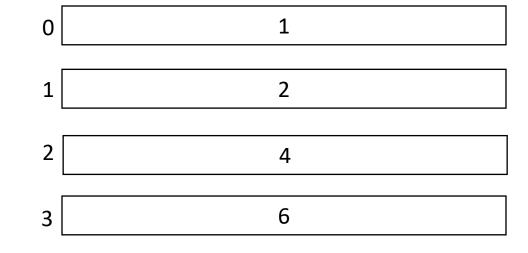








VUELTAA







|                    | 0 |             |
|--------------------|---|-------------|
|                    | 1 |             |
|                    | 2 |             |
| Buscar el<br>menor | 3 | No ordenado |
| menoi              | 4 | No ordenado |
|                    | 5 |             |
|                    | 6 |             |
|                    | 7 |             |



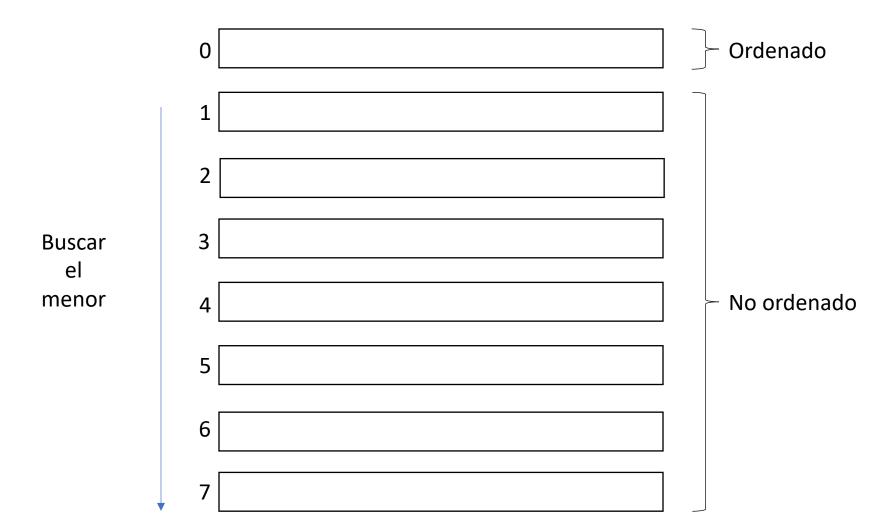
Colocar en la posición 0 el menor intercambiando el elemento de la posición 6 con el de la 0

| <sub>*</sub> 0 |  |            |     |
|----------------|--|------------|-----|
|                |  |            |     |
| 1              |  |            |     |
| 2              |  |            |     |
| 3              |  | → No orden | ada |
| 4              |  | No orden   | auo |
| 5              |  |            |     |
| 6              |  |            |     |
| 7              |  |            |     |



| 0 | Ordenado    |
|---|-------------|
| 1 |             |
| 2 |             |
| 3 |             |
| 4 | No ordenado |
| 5 |             |
| 6 |             |
| 7 |             |







Colocar en la posición 1 el menor intercambiando el elemento de la posición 5 con el de la 1

| 0        | Ordenado    |
|----------|-------------|
| <b>1</b> |             |
| 2        |             |
| 3        |             |
| 4        | No ordenado |
| 5        |             |
| 6        |             |
| 7        |             |



| 0 | ─ Ordenado    |
|---|---------------|
| 1 |               |
| 2 |               |
| 3 |               |
| 4 | ∽ No ordenado |
| 5 | No ordenado   |
| 6 |               |
| 7 |               |



| 1 | Ordenado    |
|---|-------------|
| 2 |             |
| 3 |             |
| 4 |             |
| 5 | No ordenado |
| 6 |             |
| 7 |             |

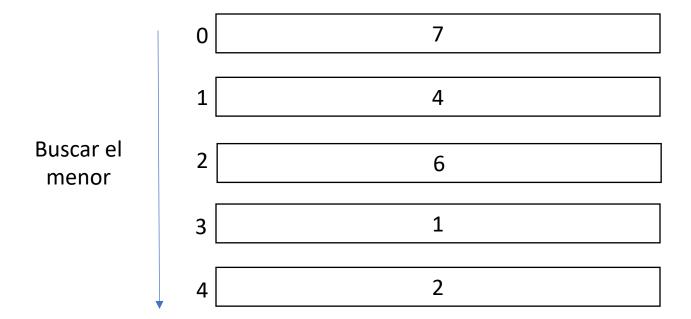


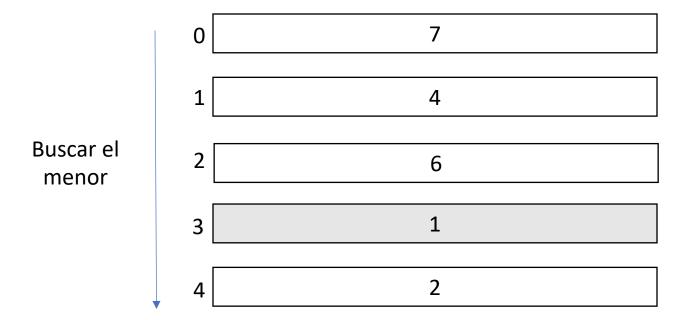
| 0 |  |            |
|---|--|------------|
| 1 |  |            |
| 2 |  |            |
| 3 |  |            |
| 4 |  | ─ Ordenado |
| 5 |  |            |
| 6 |  |            |
| 7 |  |            |



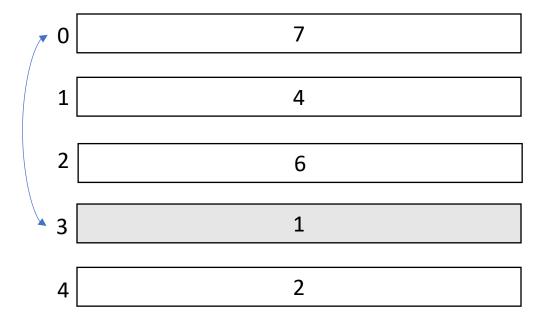
| 0 | 7 |
|---|---|
| 1 | 4 |
| 2 | 6 |
| 3 | 1 |
| 4 | 2 |



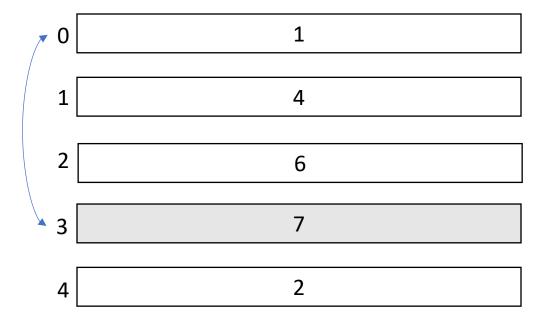




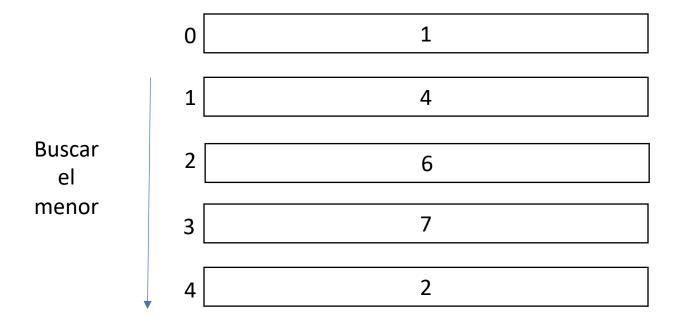




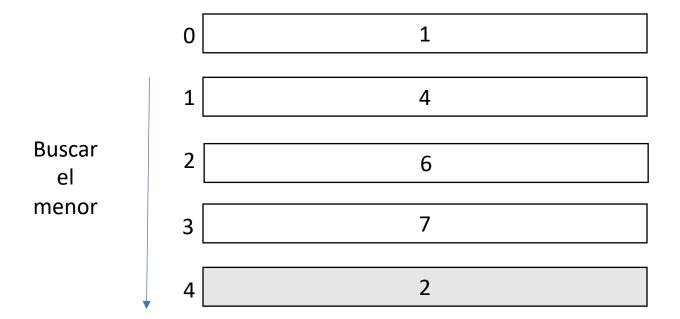


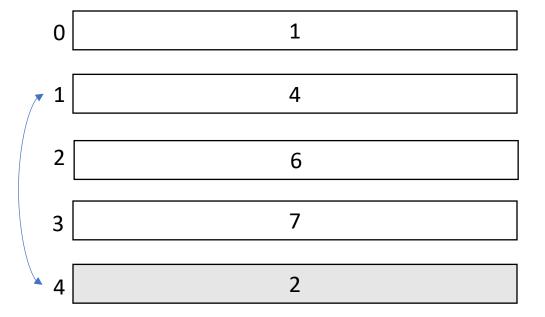




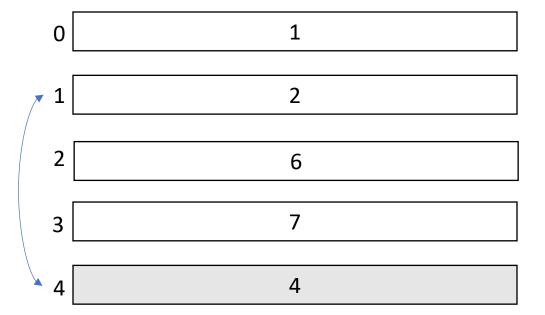




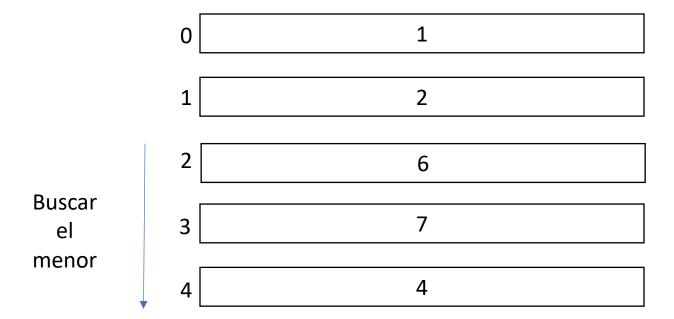




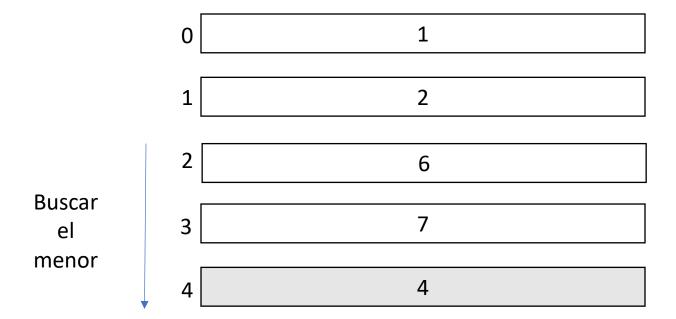




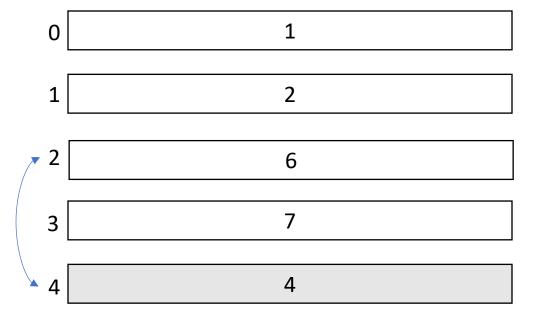




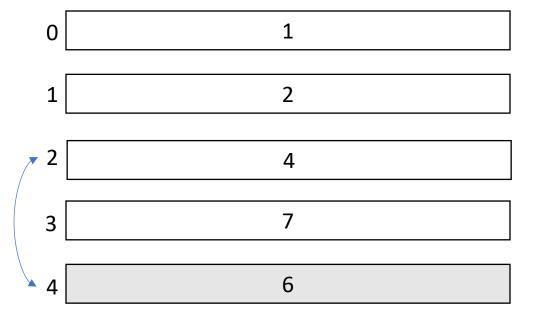




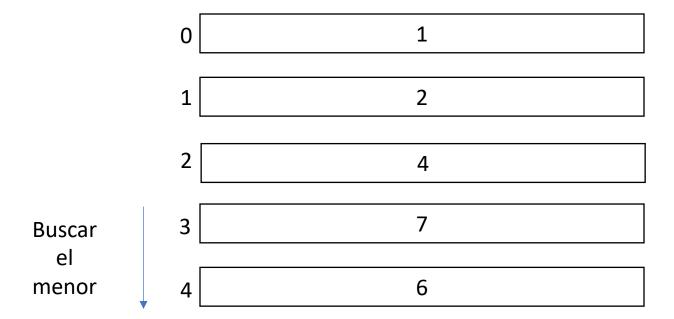




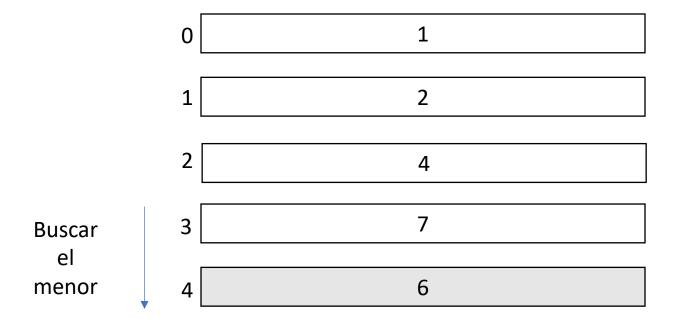




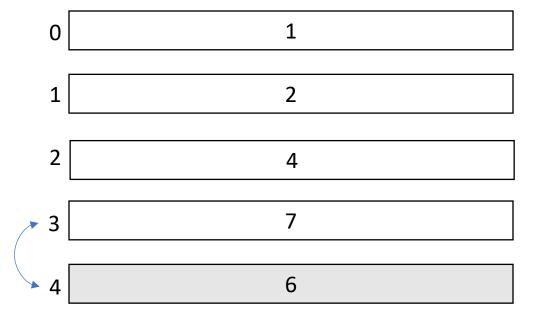




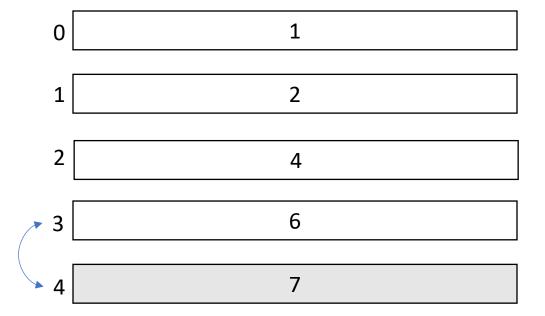














| 0 | 1 |
|---|---|
| 1 | 2 |
| 2 | 4 |
| 3 | 6 |
| 4 | 7 |

