CENTRO UNIVERSITÁRIO
UniDOM BOSCO | EaD
GRUPO SEB

Algoritmos

Vetores – *Arrays*

9

Prof. Dr. Osmar Betazzi Dordal

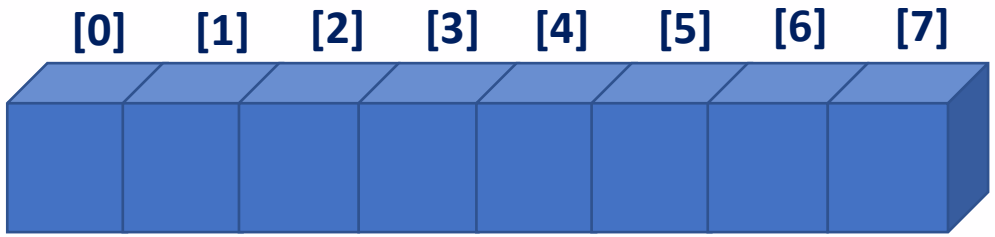
Vetores – *Arrays*

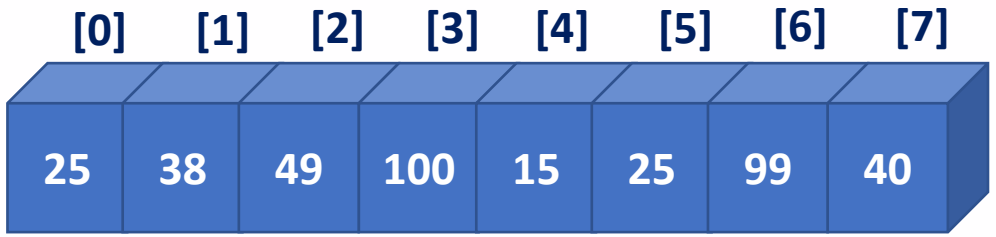
Vetores – *Arrays*

- Um vetor é uma **estrutura** que pode **armazenar várias variáveis do mesmo tipo primitivo**. Formando um agrupamento destas variáveis.

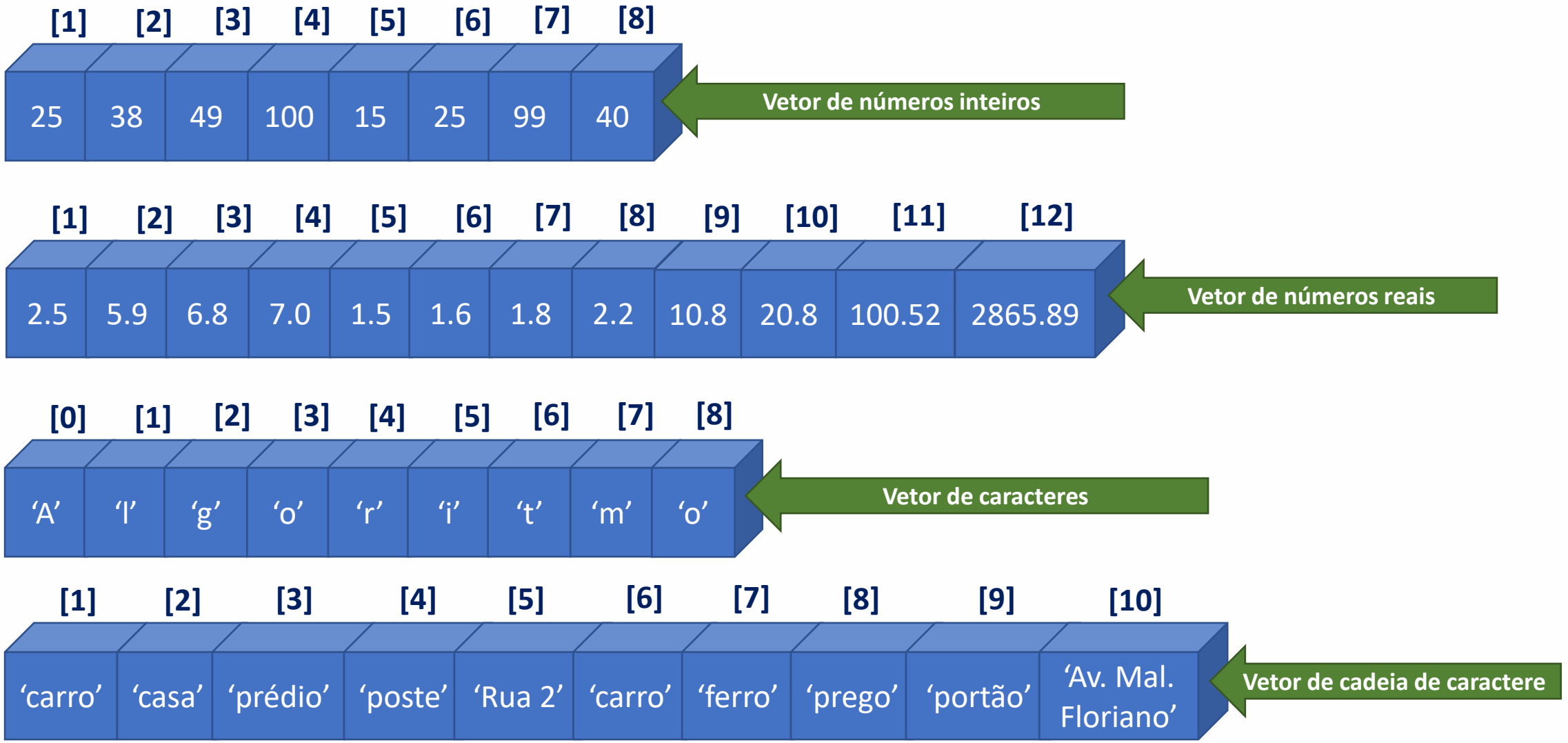
- Um vetor pode ser visto como uma **estrutura de várias "caixas" enfileiradas**, cada uma contendo um **índice para identificar** a sua posição.

- Supondo que tais caixas **permitam apenas números inteiros**, poderíamos colocar um número inteiro em cada posição.

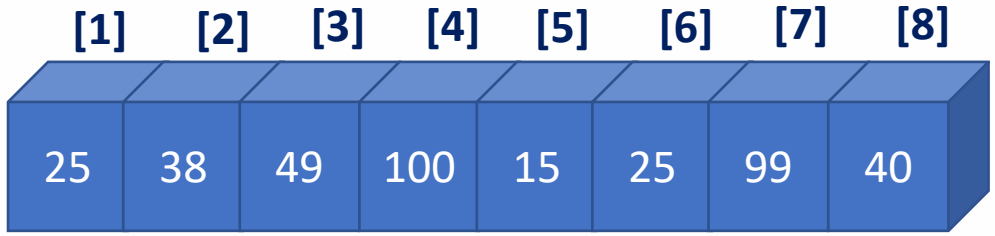




Vetores – *Arrays*

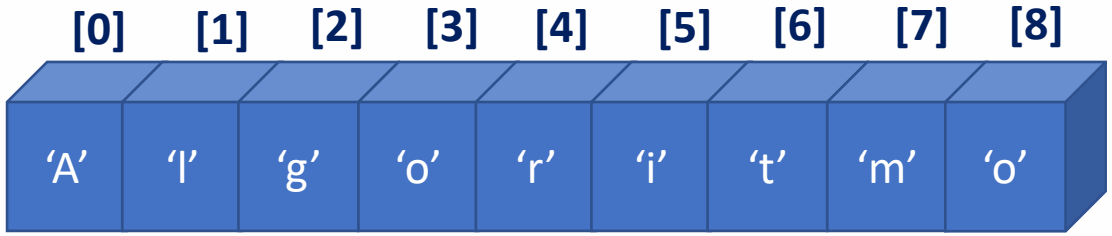


Vetores – *Arrays* – Declarações




```
var
   v: vetor[1..8] de inteiros
   v: array[1..8] of integer
```


```
var
   v: vetor[1..12] de reais
   v: array[1..12] of real
```




```
var
   v: vetor[0..8] de caractere
   v: array[0..8] of char
```


```
var
   v: vetor[1..10] de cadeia
   v: array[1..10] of string
```

Manipulando um Vetor

```
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2  var
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4    i: integer;
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6  Begin
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8    v[1] := 7;
9    v[2] := 89;
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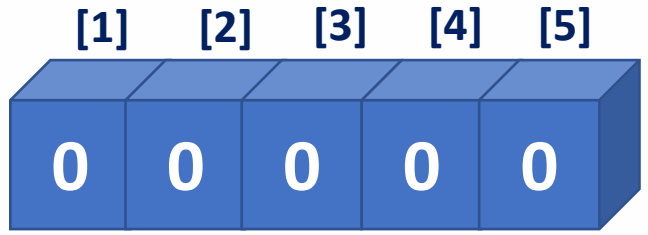

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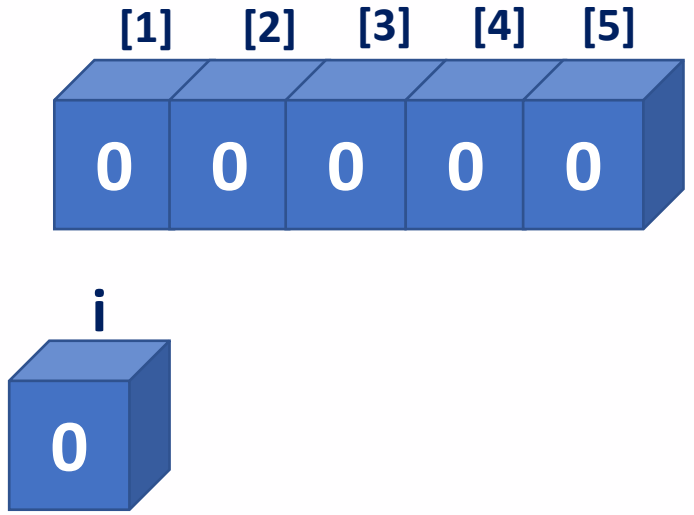

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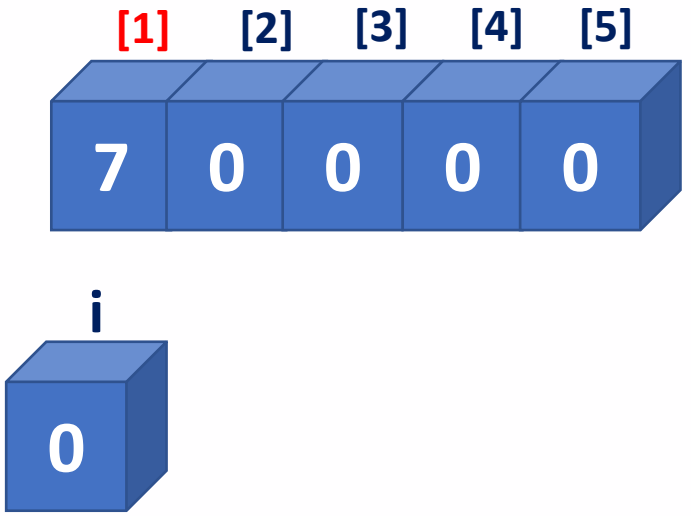

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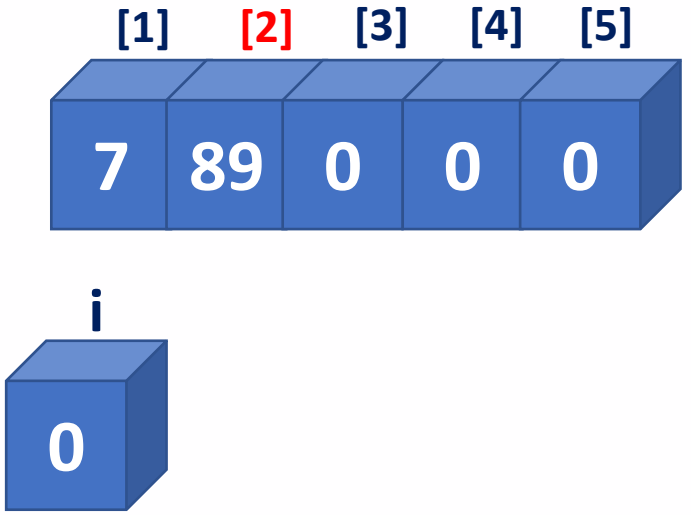

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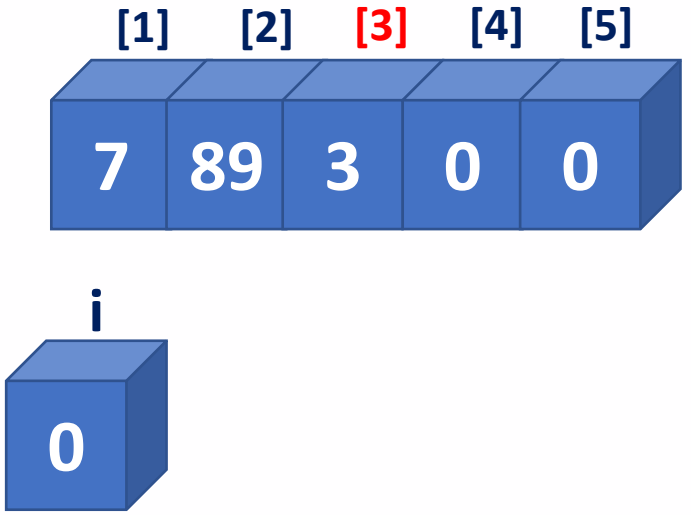

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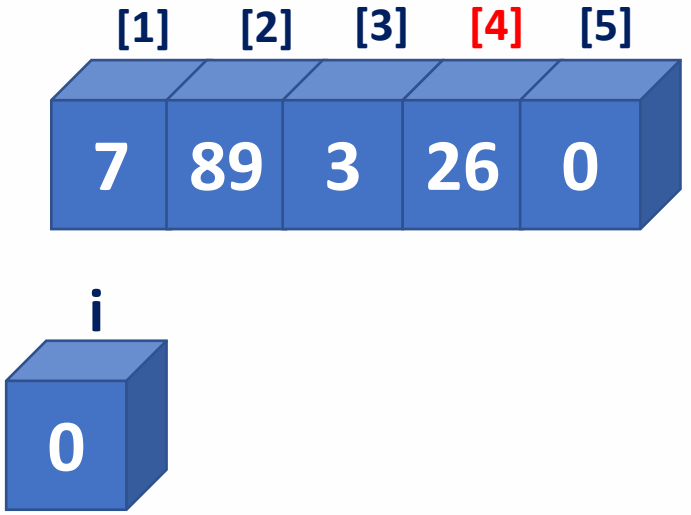

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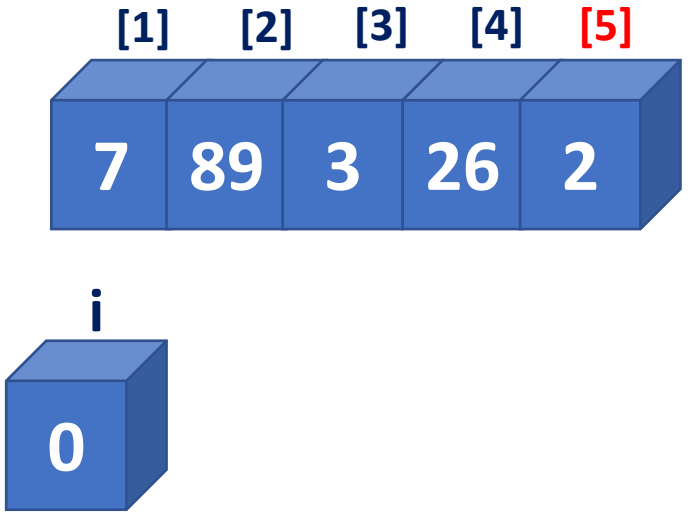

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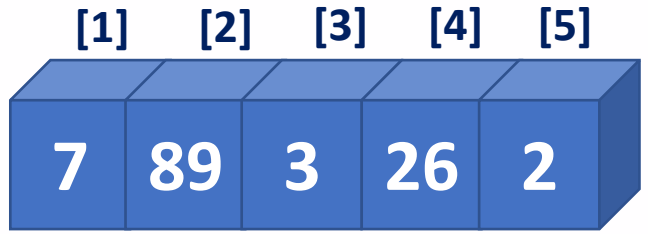

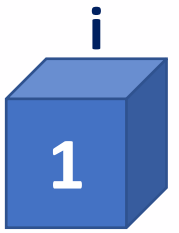

Tela:

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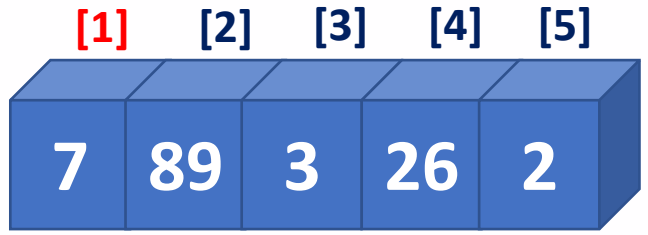

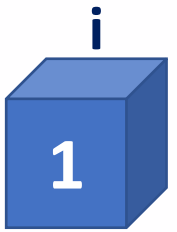

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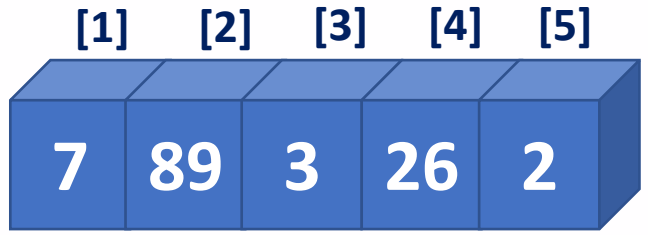

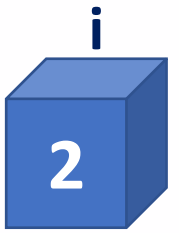

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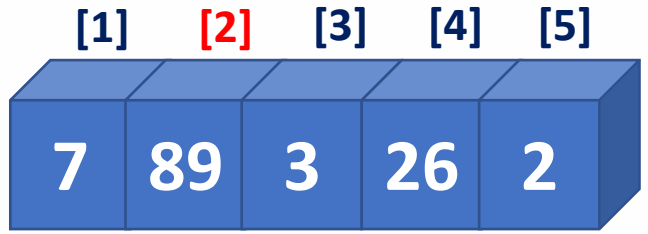

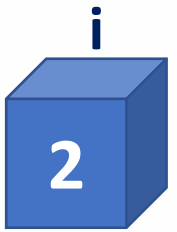

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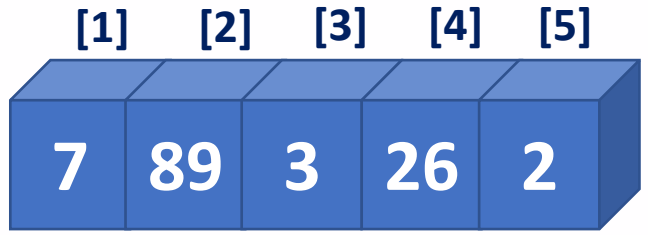

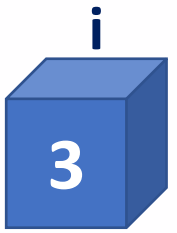

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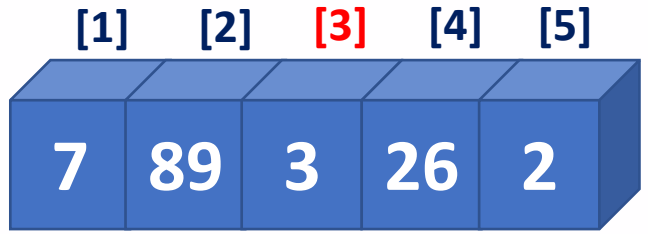

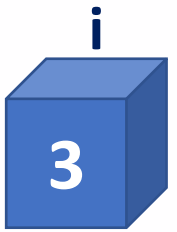

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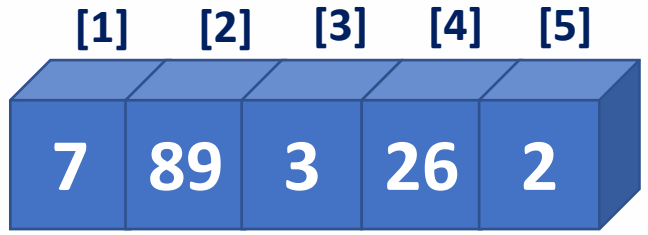

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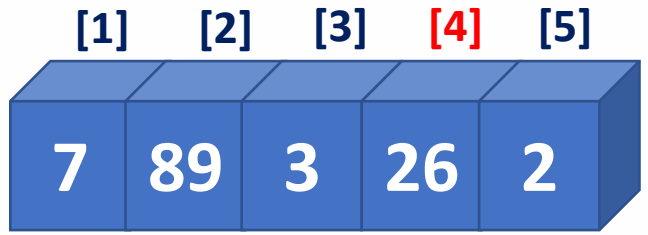

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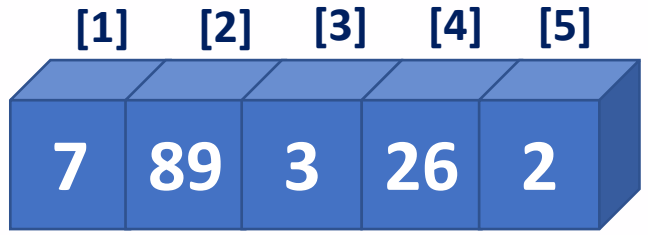

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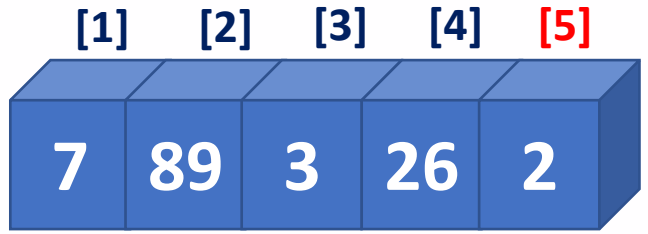

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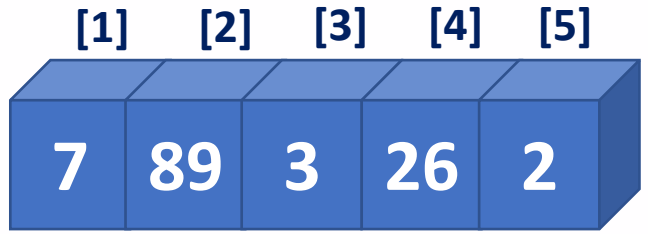

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Manipulando um Vetor – Diferentes Estruturas

```pascal
Program escolha;
var
  v: array[1..5] of integer;
  i: integer;

Begin

  v[1] := 7;
  v[2] := 89;
  v[3] := 3;
  v[4] := 26;
  v[5] := 2;

  for i := 1 to 5 do
    write(v[i], ' ');

End.
```

Mais simples de fazer, menos passos de execução.

```pascal
Program escolha;
var
  v: array[1..5] of integer;
  i: integer;

Begin

  v[1] := 7;
  v[2] := 89;
  v[3] := 3;
  v[4] := 26;
  v[5] := 2;
  i := 1;
  while i <= 5 do
  begin
    write(v[i], ' ');
    inc(i);
  end;

End.
```

Um pouco mais complexo de se fazer, temos que disponibilizar um incremento para o controle de saída do *loop.*

```pascal
Program escolha;
var
  v: array[1..5] of integer;
  i: integer;

Begin

  v[1] := 7;
  v[2] := 89;
  v[3] := 3;
  v[4] := 26;
  v[5] := 2;
  i := 1;
  repeat
    write(v[i], ' ');
    inc(i);
  until i > 5

End.
```

Um pouco mais complexo de se fazer, temos que disponibilizar um incremento para o controle de saída do *loop.*
O cuidado é com a variável *i*, pois ela terá que ser 6 para sair, pois o teste é realizado no final.

Referências

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