

Operações com Vetores

- Verificar o funcionamento dos diversos Vis que operam sobre Vetores.



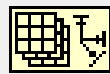
Tipos de Dados

<div>Inteiro</div> <div>0</div>	<div>Vetor 1D de inteiros</div> <div><div>0</div><div>2</div><div>-4</div><div>0</div></div>	<div>Vetor 2D de inteiros</div> <div><div><div>0</div><div>0</div></div><div><div>2</div><div>1</div><div>4</div></div><div><div>-4</div><div>3</div><div>7</div></div><div><div>0</div><div>-8</div><div>0</div></div></div>
<div>Double</div> <div>0</div>	<div>Vetor 1D de Double</div> <div><div>0</div><div>1,2</div><div>-3,2</div><div>1</div></div>	
<div>Boolean</div> <div>T</div>	<div>Vetor 1D de Boolean</div> <div><div>0</div><div>T</div><div>F</div><div>F</div><div>T</div></div>	
<div>String</div> <div>String</div>	<div>Vetor 1D de String</div> <div><div>0</div><div>Casa</div><div>Teto</div><div>Solo</div></div>	<div>Vetor 2D de String</div> <div><div><div>0</div><div>0</div></div><div><div>Casa</div><div>Chão</div><div>Sofá</div></div><div><div>Teto</div><div>Janela</div><div>Cadeira</div></div><div><div>Solo</div><div>Cortina</div><div>Fogão</div></div></div>
<div>Cluster</div> <div><div>0</div><div>T</div><div>String</div></div>	<div>Vetor 1D de Cluster</div> <div><div>0</div><div><div>0</div><div>T</div><div>Casa</div></div><div><div>1</div><div>F</div><div>Teto</div></div></div>	

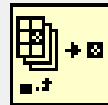
Operações com Vetores e Matrizes

▼ Programming

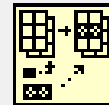
└ Array



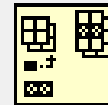
Array Size



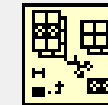
Index Array



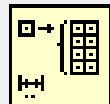
Replace Subs...



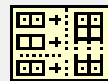
Insert Into Ar...



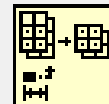
Delete From ...



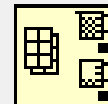
Initialize Array



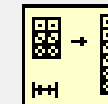
Build Array



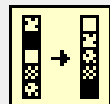
Array Subset



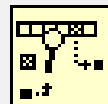
Max & Min



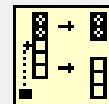
Reshape Array



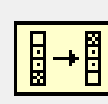
Sort 1D Array



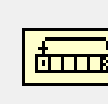
Search 1D Ar...



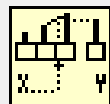
Split 1D Array



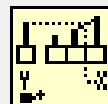
Reverse 1D A...



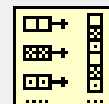
Rotate 1D Ar...



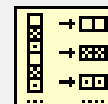
Interpolate 1...



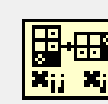
Threshold 1...



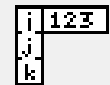
Interleave 1D...



Decimate 1D...



Transpose 2...



Array Consta...



Array To Clu...



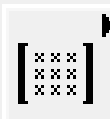
Cluster To Ar...



Array to Matrix



Matrix to Array













Matrix

Operações com Vetores e Matrizes









































▼ Programming

- └ Array
 - └ Matrix

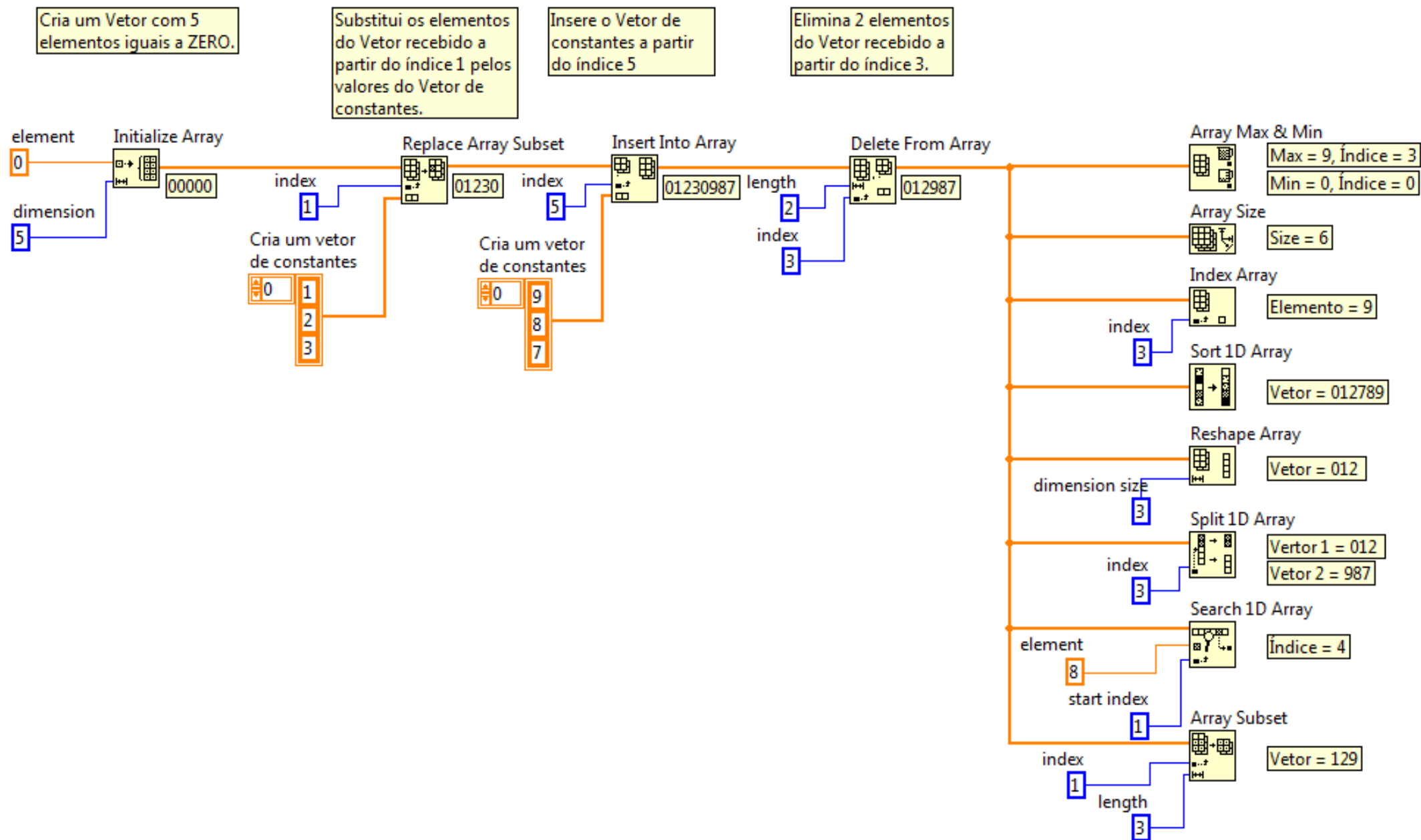
				
Matrix Size	Build Matrix	Resize Matrix	Transpose M...	Get Matrix Di...
				
Get Matrix El...	Get Submatrix	Set Matrix Di...	Set Matrix El...	Set Submatrix

Operações com Vetores e Matrizes

▼ Mathematics
└ Linear Algebra

									
Create Speci...	Create Real ...	Matrix	Solve Linear ...	Dot Product	Outer Product	A x B	Kronecker Pr...	Subspaces A...	Determinant
									
Vector Norm	Matrix Norm	Matrix Rank	Trace	Test Matrix T...	Condition N...	Inverse Matrix	PseudoInv	Transpose	Matrix Sqrt
									
Matrix Exp	Matrix Power	Matrix Log	LU	Cholesky	Cholesky Up...	QR	SVD	Generalized ...	Schur
									
Hessenberg	QZ	Sylvester Eqs	Lyapunov Eqs	Eigenvalues ...	Generalized ...	Matrix Balance	Back Transfo...	Matrix Chara...	BLAS

Operações com Vetores e Matrizes



Exercício

1 - Normalizar um Vetor com N elementos

Dado um Vetor siga os seguintes procedimentos:

- *Obtenha os valores Mínimo e Máximo;*
- *Realize sobre o vetor a operação:*
 - *$Vetor = (Vetor - Min) / (Max - Min)$*

Exercício

2 - Desnormalizar um Vetor com N elementos

Dado um Vetor siga os seguintes procedimentos:

- *Dados os valores Mínimo e Máximo;*
- *Realize sobre o vetor a operação:*
 - *$\text{Vetor} = \text{Vetor} \cdot (\text{Max} - \text{Min}) + \text{Min}.$*

Exercício

3 - Verificar o funcionamento dos Vis abaixo

- *Reverse 1D Array*
- *Rotate 1D Array*
- *Interpolate 1D Array*
- *Threshold 1D Array*
- *Interleave 1D Array*
- *Decimate 1D Array*
- *Transpose 2D Array*

FIM

