## UML STRUCTURAL SOLVER

THIS UML DIAGRAM REPRESENTS
THE OPP STRUCTURE THAT HAS BEEN
FOLLOWED TO DESIGN A
STRCUTURAL NUMERIC SOLVER OF
ARTICULATED
MECHANICAL STRUCTURES

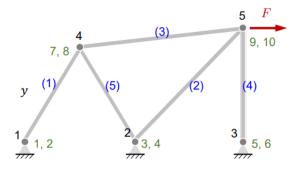
This is a test, the first code done in the Aerospace Structures subject will be used as example.

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Code1\_Example\_Aerospa...

Artureitor1/

GitHub - Artureitor1/Code1\_Example\_AerospaceStructures: This is a test, the first code done in the Aerospace Structures subject will be used as example.



 $n_{
m d}$  : Problem dimension, i.e.  $n_{
m d}=2$  (2D).

 $n_{
m el}$  : Total number of bars.  $n_{
m nod}$  : Total number of nodes (joints).

 $n_{\rm ne}$  : Number of nodes in a bar, i.e.  $n_{\rm ne}=2$ .

 $n_{
m i}$  : Degrees of freedom per node, i.e.  $n_{
m i}=2$ .  $n_{
m dof}$  : Total number of degrees of freedom, i.e.  $n_{
m dof}=n_{
m nod}\times n_{
m i}$ .

 ${f x}$  : Nodal coordinates array ( $n_{
m nod} imes n_{
m d}$ ):

 $\Gamma_{
m n}$  : <u>Nodal</u> connectivity table ( $n_{
m el} imes n_{
m ne}$ ). Example:

 $\mathbf{T}_{\mathrm{d}}$  : <u>Degrees of freedom</u> connectivity table ( $n_{\mathrm{el}} \times (n_{\mathrm{ne}} \times n_{\mathrm{i}})$ ).



