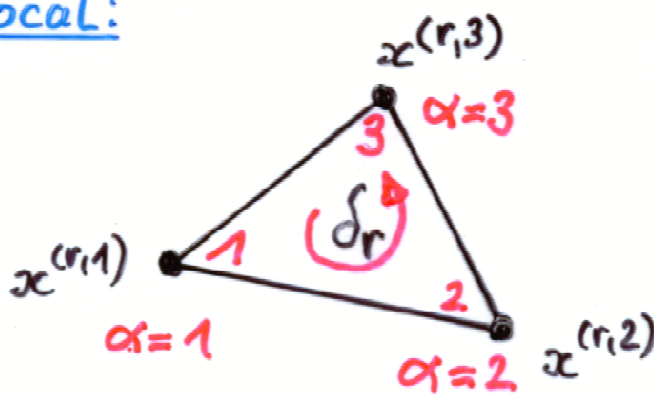



- Meshing the computational domain Ω means the generation of a global and a local mesh topology and their connection:

- global:
- element numbering: $R_h = \{1, 2, \dots, R_h\}$,
 $R_h = \text{Number of Elements} = NE = 24$,
 - node numbering: $\bar{w}_h = \{1, 2, \dots, \bar{N}_h\}$,
 $\bar{N}_h = N_h + \partial N_h = \text{Number of Nodes} = NX = 21$,
 $17 + 4$
 - node coordinates:
 $x^{(i)} = (x_i, y_i) = (x_1^{(i)}, x_2^{(i)}) = (x_{q,i}, x_{e,i})$
 $i \in \bar{w}_h$

local:



$x^{(r,\alpha)}$ - local nodes
 $\alpha \in A_r = A = \{1, 2, 3\}$ 
 = local node numbering

Connection:

r	α	\longleftrightarrow	$i = i(r, \alpha)$	i	$x^{(i)} = (x_1^{(i)}, x_2^{(i)})$
\mathbb{N}	\mathbb{N}		\mathbb{N}	\mathbb{N}	nodal coordinates
R_h	A_r		\bar{w}_h	\bar{w}_h	