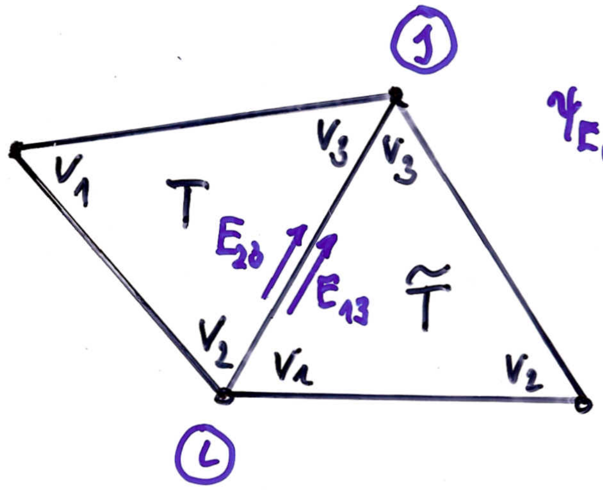
- <u>Exercise 3.7:</u> $\approx$ E26 of Tutorial 7

Let the local dofs associated with the same edge be identified, i.e



local global

$$\psi_{E,23} \equiv \psi_{\tilde{E},12} = \psi_{E,ij}$$

Show that the corresponding global fe space

$$\bar{V}_h = \{ v \in L_2(\Omega)^2 : v|_T \in \bar{V}_T := \mathcal{N}_0 \ \wedge \{ \psi_{E,\alpha\beta} \equiv \psi_{\tilde{E},\tilde{\alpha}\tilde{\beta}} \Longrightarrow \psi_{E,\alpha\beta}(v|_T) = \psi_{\tilde{E},\tilde{\alpha}\tilde{\beta}}(v|_{\tilde{T}}) \} \}$$

is a finite-dimensional subspace of $H(\text{curl},\Omega)$ with $\dim \bar{V}_h = \#$ edges.

<u>Solution:</u> see E26 of Tutorial 7.