

Methods for Generating the Mesh Data:

1. Generating the data connecting the local and global numbering of the nodes $r: \alpha \leftrightarrow i$ and the nodal coordinates $i: x_i, y_i$ by "hand"!
2. Semi-automatic generation of the mesh data, i.e., e.g., decompose the domain Ω into subdomains $\bar{\Pi}_e$. To mesh the subdomains $\bar{\Pi}_e$, we use prepared meshes of standard domains from some library. These meshes of the standard domains will be mapped to the subdomains $\bar{\Pi}_e$. We have to ensure that the composed mesh of Ω is admissible (conform)!

$$\bar{\Omega} = \cup_e \bar{\Pi}_e \quad \bar{\Pi}_e = \varphi_e(\bar{\Pi})$$

