# Pipeline for the creation and processing of a basic square nonlinear FEM element

## NX12

* Create a new part in mm
* Create a sketch on the XY plane
  + Draw 5 2mm\*2mm squares horizontally aligned
  + Draw 4 2mm\*2mm squares vertically aligned below the rightmost square
  + Align the leftmost and bottommost squares with the origin
  + Finish sketch
* Save
* Export as IGES file

## Marc Mentat

* Import IGES file
* Fill view
* Geometry & Mesh
  + Coordinate system
    - Edit

|  |  |  |  |
| --- | --- | --- | --- |
| Marc Mentat | Edit Coordinate System | U Domain | 0; 10; 1 |
| Marc Mentat | Edit Coordinate System | V Domain | 0; 10; 1 |

* + Grid
    - On
      * All
      * Ok
  + 20mmx20mm square/quarter thereof
  + 2mm wide walls
  + Centred on the global origin
* Finish sketch
* Application > Pre/Post

Geometry Preparation > More