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

## NX12

* Create a sketch on the XY plane
* Draw the basic element
  + 20mmx20mm square/quarter thereof
  + 2mm wide walls
  + Centred on the global origin
* Finish sketch
* Application > Pre/Post
* Geometry Preparation > More > Bounded plane
  + Select the boundaries
* New FEM and Simulation > New FEM > Ok
  + Solver > NX Nastran
  + Analysis Type > Structural
  + 2D Solid Option > XY Plane, X Axis

Ok

2D Mesh

Select surface

Element type -> CQUAD4

Meshing method -> Subdivision

Element size -> 2mm

Attempt free mapped meshing

Automatic mesh creation

Apply

Save