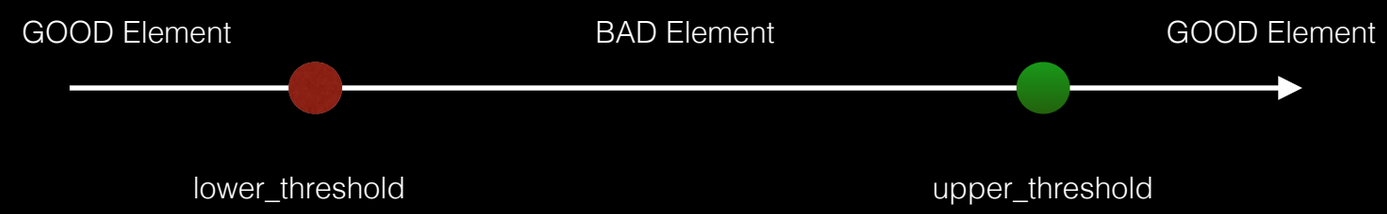
# More Override Examples

- Often one wish to override refinement and coarsening thresholds to control the element sizes in the mesh. This may look as follows
    - override = refinement  1 lower_threshold  0.05
    - override = coarsening  1 upper_threshold  0.001
- Notice that this specify refinement and coarsening for phase with label = 1. The parameter names lower_threshold and upper_threshold requires some explanation.
- Operations using lower/upper threshold values are based on what GRIT calls a threshold quality measure. It means that if the current quality, q, of a given mesh element (edges for coarsening and refinement) are such that
    - q < lower_threshold  then we have a  good mesh element and do nothing
    - q > upper_threshold  then we have a good mesh element and do nothing
    - lower_threshold <= q <= upper_threshold then we have a bad mesh element and perform the operation
- For refinement upper_threshold is always set to infinity, and for coarsening lower_threshold is set to -infinity. For refinement and coarsening it is important that refinement lower_threshold is sufficiently larger than coarsening upper_threshold. As a rule of thumb make refinement lower_threshold > 2 coarsening upper_threshold. This is not guaranteed to work but usually prevents refinement and coarsening operations to counter act each other.

# Threshold Summary

## Threshold Quality Measure




## Refinement

## Coarsening