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Exercises for Spatial Databases and GIS

Sheet 6 (until 09.12.2016)

Exercise 1 (Approximations)

1. Which topological relations may occur between two spatial objects if the given topological relation exists between their conservative/ progressive approximations?
   a) Disjoint
   b) Equal
   c) Contains
   d) Overlap
2. Why do spatial indexes usually use a conservative approximation?
3. Under which circumstances would a progressive approximation be more suitable than a conservative one?

Exercise 2 (Pseodo-quadtree)

Construct pseudo-quadtrees for the points on the right,

1. one that is balanced, i.e. all leaves are on the same level.
2. another one that has as few Nil-pointers as possible.