

07-B2

BST Application

kd-Tree: 2D

凡见字数，如停匀，即平分一半为上卦，一半为下卦。如字数不均，即少一字为上卦，取天轻清之义，以多一字为下卦，取地重浊之义

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Divide-And-Conquer

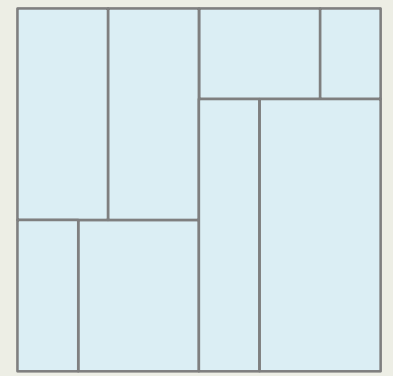
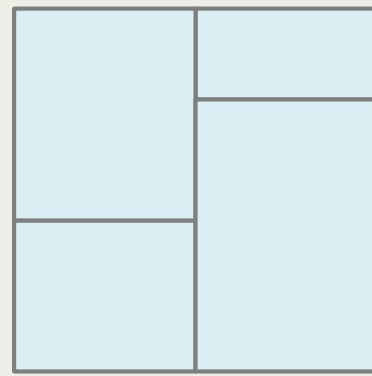
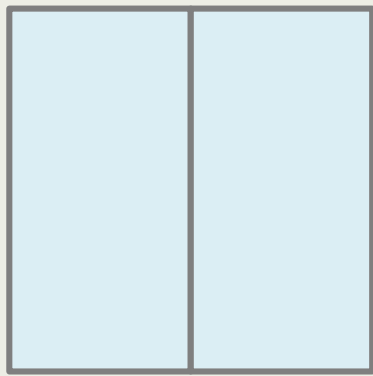
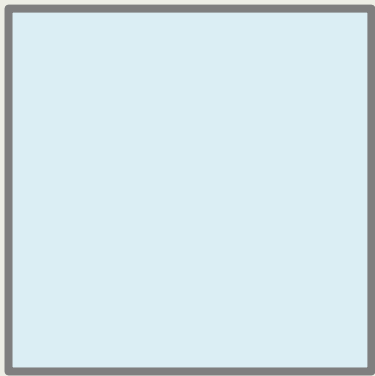
❖ To extend the BBST method to planar GRS, we

- **divide** the plane recursively and
- **arrange** the regions into a kd-tree

❖ Start with a single region (the entire plane)

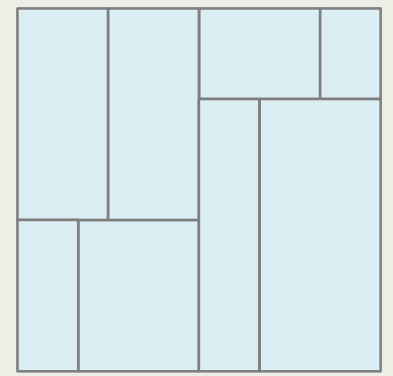
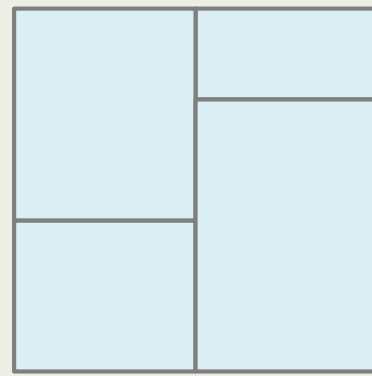
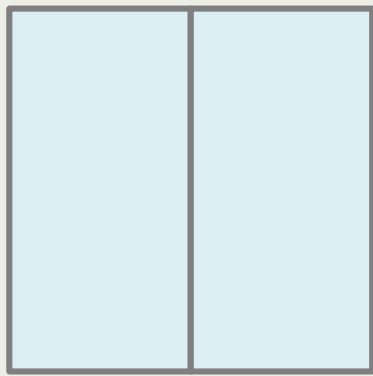
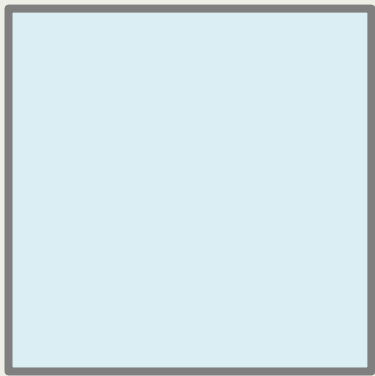
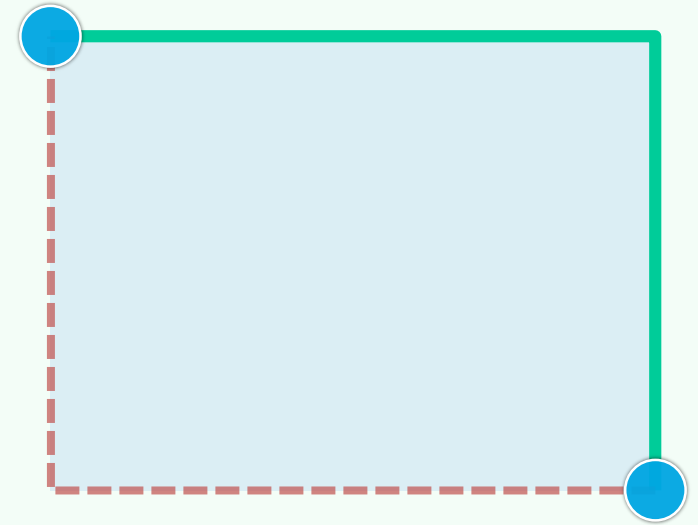
Partition the region vertically/horizontally on each even/odd level

Partition the sub-regions recursively

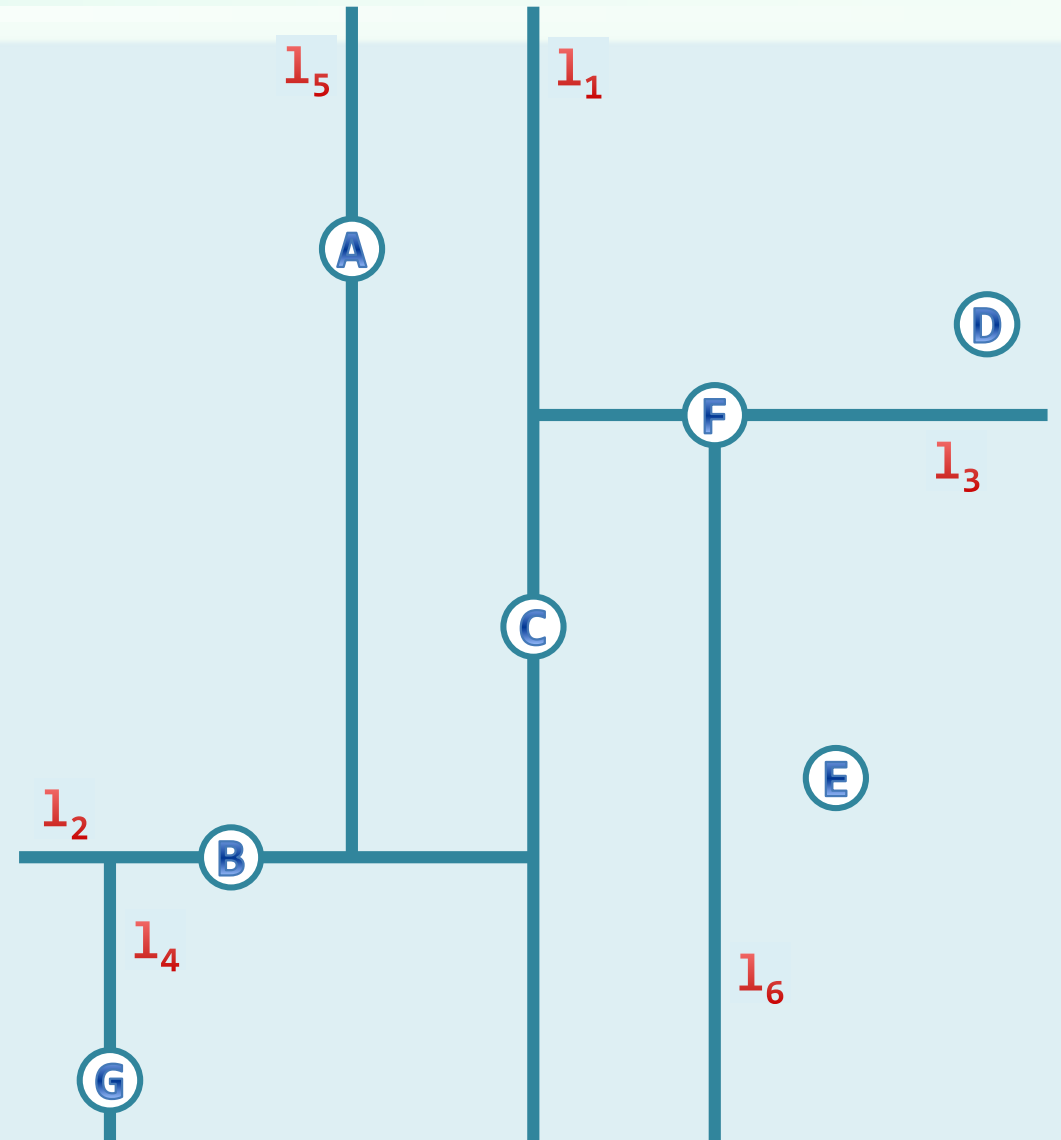
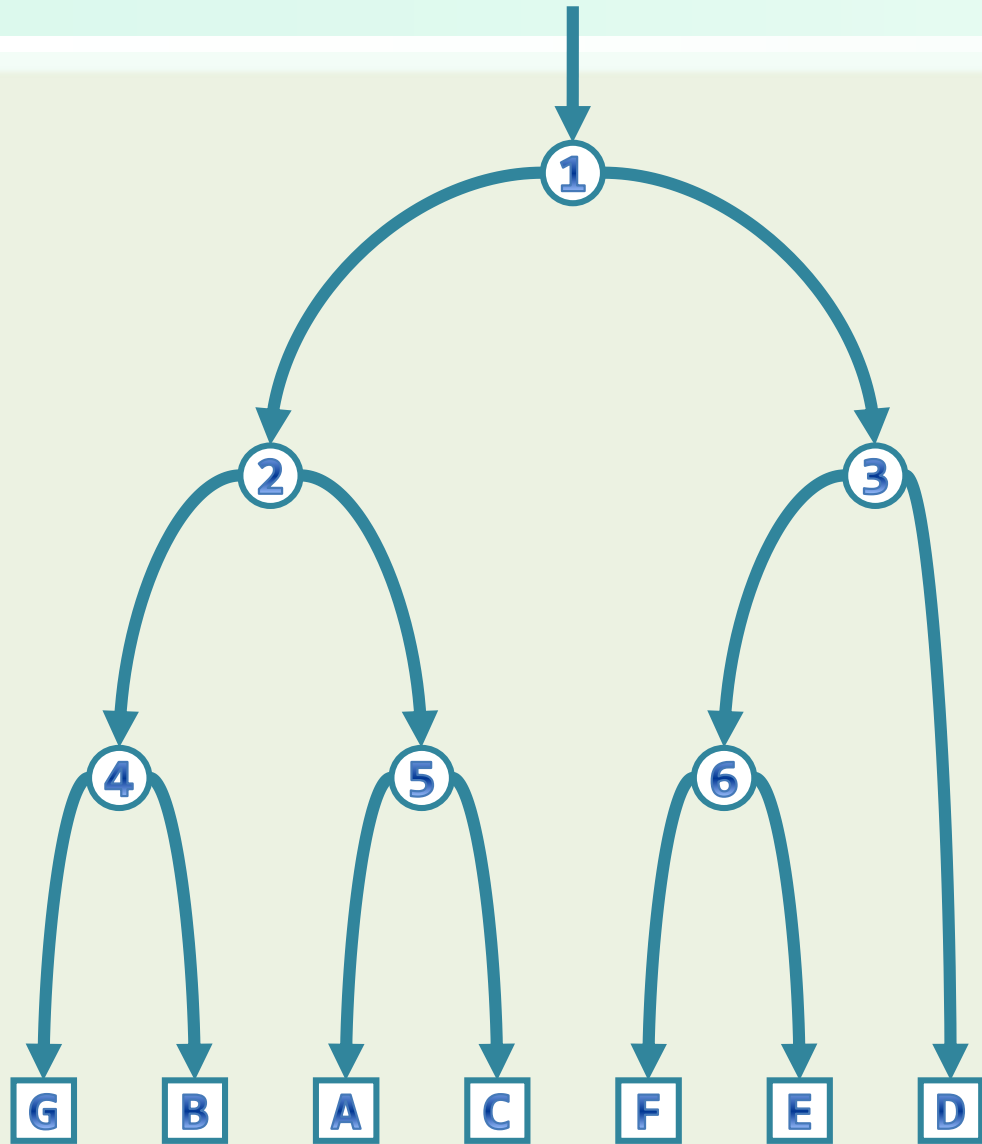


More Details

- ❖ To make it work,
 - each partition should be done as **evenly** as possible (at median)
 - each region is defined to be **open/closed** on the **left-lower/right-upper** sides



Example



Quadtree

