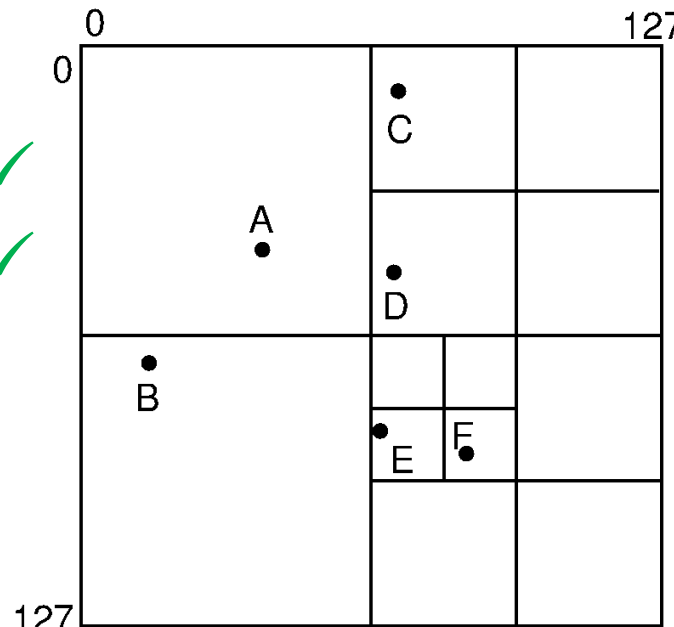
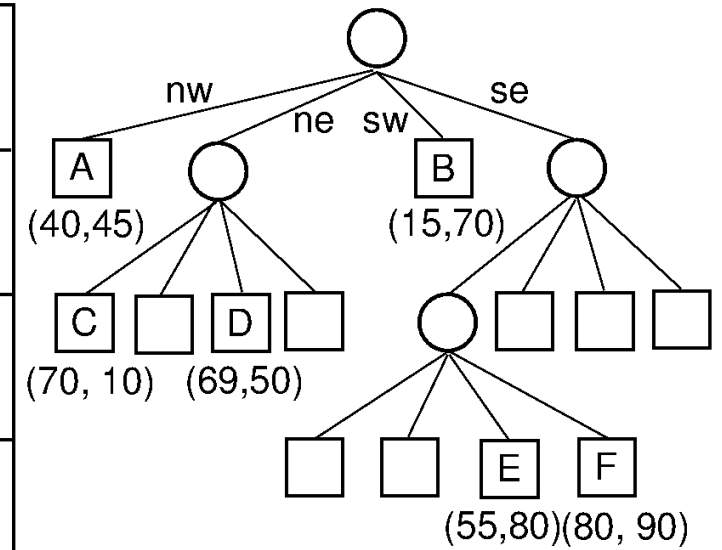


Quadtree

- AxisAlignedBoundingBox ✓ → AxisAlignedBoundingBox & MetaBoundingBox
- Quadtree ✓ → Quadtree
 - Insert ✓ → Quadtree & AxisAlignedBoundingBox
 - Search $O(\log(n))$ ✗ → QueryRegion(MetaBoundingBox)
 - Begin & End ✓ → QuadtreeIterator
- MetaBoundingBox → Hashing ✓
- QuadtreeIterator → Operators ✓



(a)

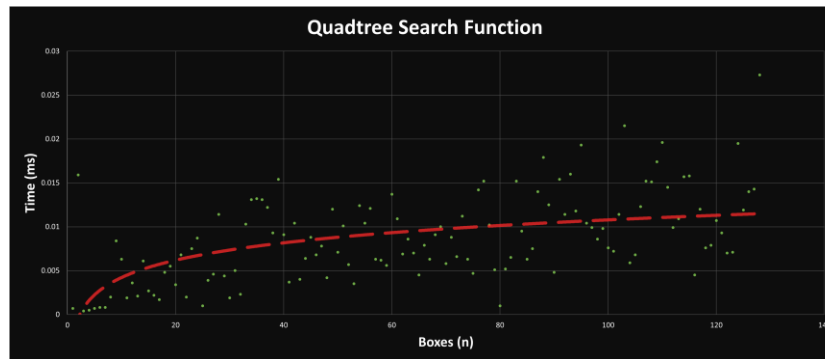


(b)

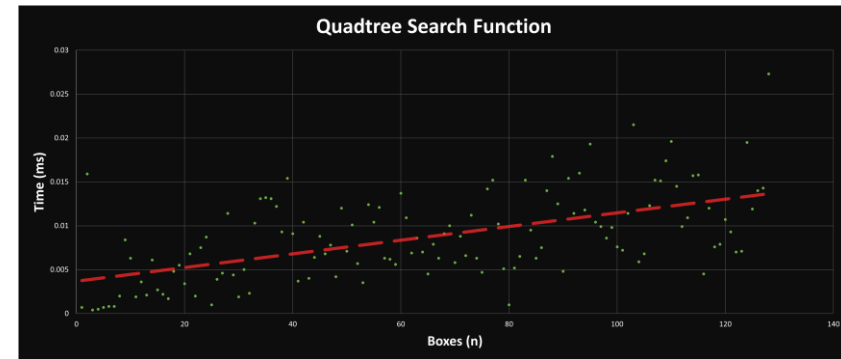
Graphs

$n = 128$

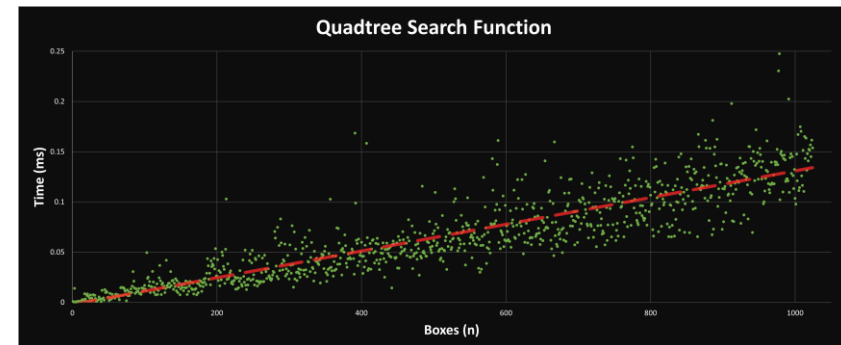
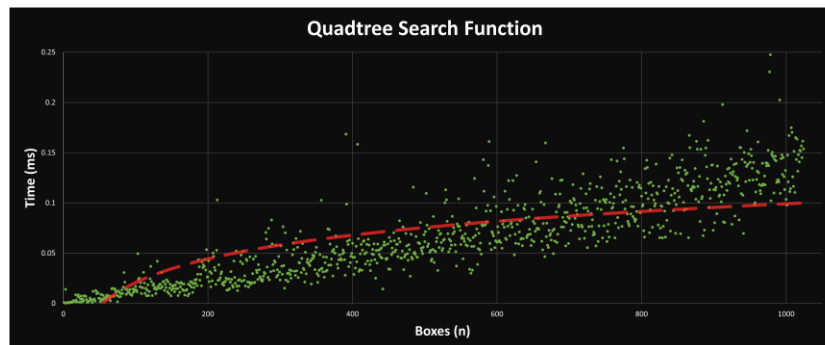
Logaritmimic $O(\log(n))$



Linear $O(n)$



$n = 1024$



$n = 8192$

