

CSE 326: Data Structures
Part 10
Advanced Data Structures

Henry Kautz
Autumn Quarter 2002

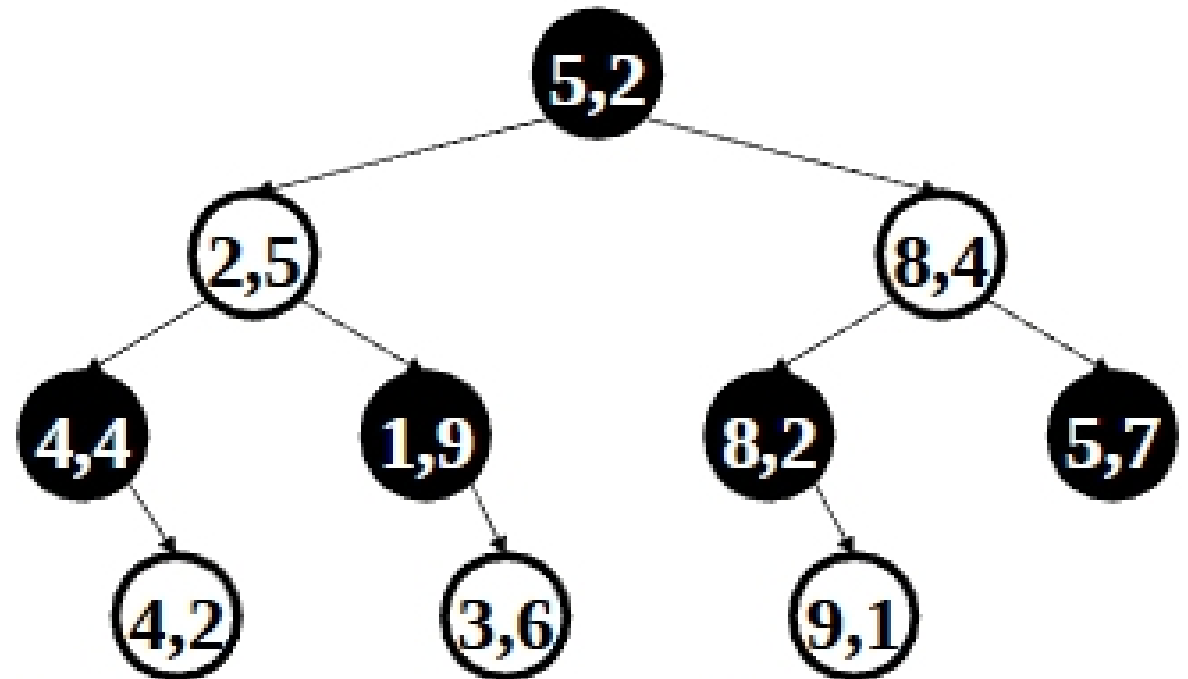
Outline

- Multidimensional search trees
 - Range Queries
 - k -D Trees
 - Quad Trees
- Randomized Data Structures & Algorithms
 - Treaps
 - Primality testing
 - Local search for NP-complete problems

Multi-D Search ADT

- Dictionary operations

- create
- destroy
- find
- insert
- delete
- range queries



- Each item has k keys for a k -dimensional search tree
- Searches can be performed on one, some, or all the keys or on ranges of the keys