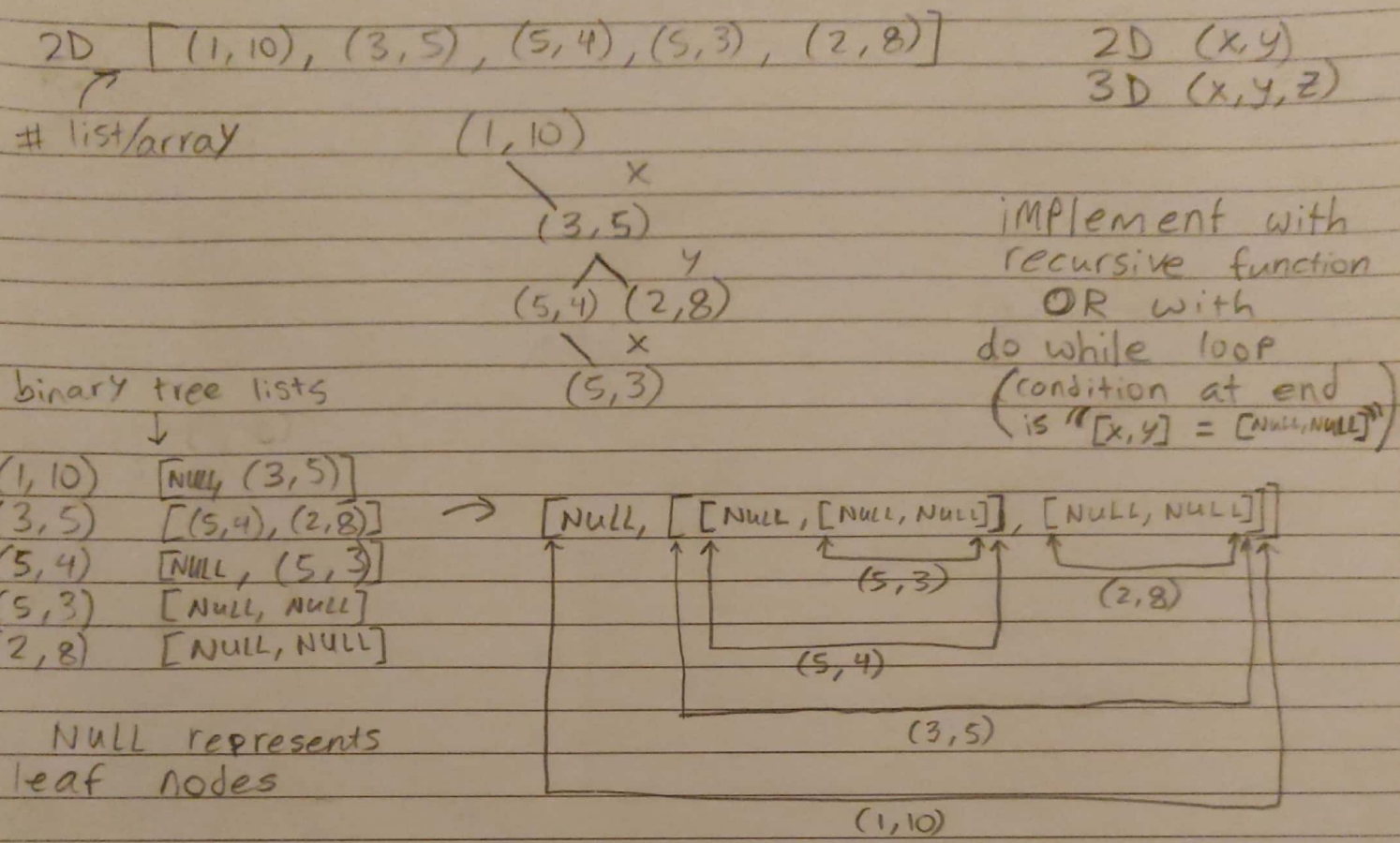


indices → NOT values [0, 1, 2, 3, 4, 5, 6, 7, 8, 9] Vasant kurvari kd-tree



Tree - Node = [Point, left, right, depth], Dimension = 2

Iteration #

- 1st: $[(1, 10), \text{NULL}, \text{NULL}, 0] \leftarrow \text{root}$
- 2nd: $[(1, 10), \text{NULL}, [(3, 5), \text{NULL}, \text{NULL}, 1], 0] \leftarrow$ Checks if NULL and then inserts new list
- 3rd: $[(1, 10), \text{NULL}, [(3, 5), [(5, 4), \text{NULL}, \text{NULL}, 2], \text{NULL}, 1], 0] \leftarrow$ Space was occupied so called function recursively on next list
- ...

insert - function (Point, Tree - Node)

initialize Tree - Node = [root, NULL, NULL, 0]

Compare numbers using 'depth % Dimension'
 where 'depth % dimension' = 0 \Rightarrow x-value comparison and
 'depth % dimension' = 1 \Rightarrow y-value comparison