

TASK

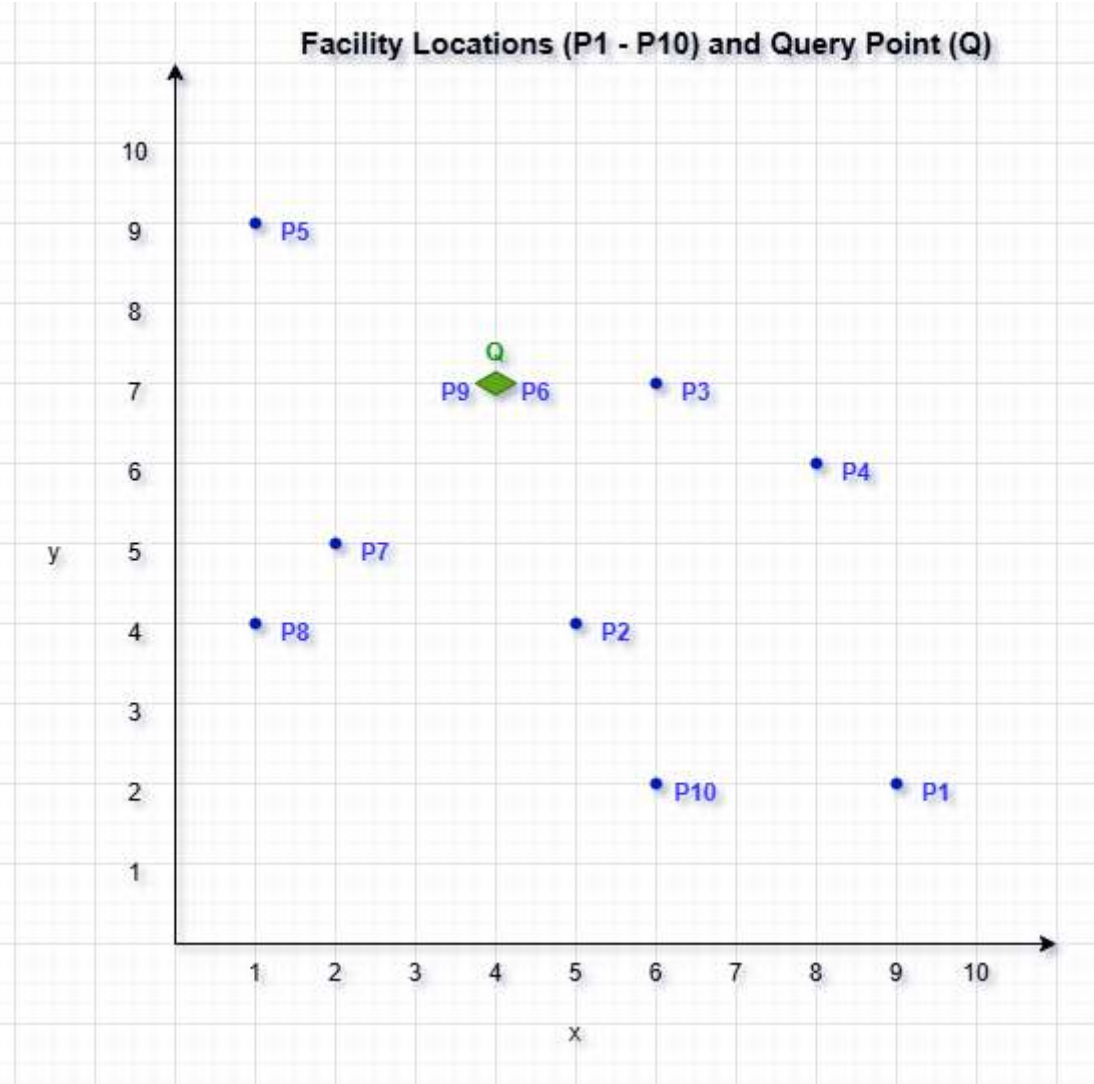
3

ANALYSIS:

- BF Algorithm based NN Search
- BBS Algorithm based Skyline Search

BF ALGORITHM BASED NN SEARCH

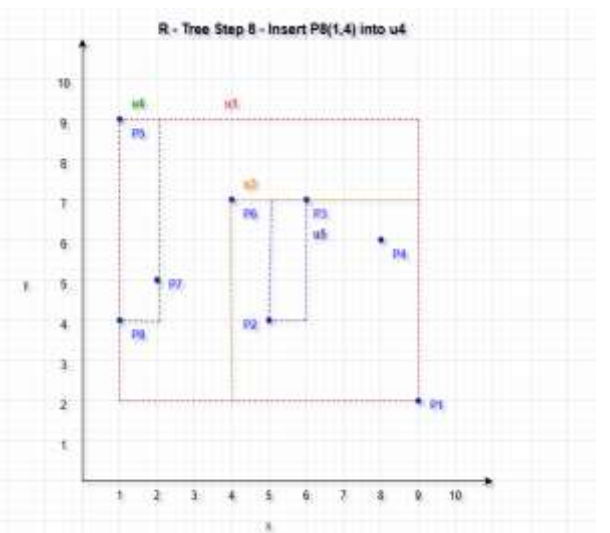
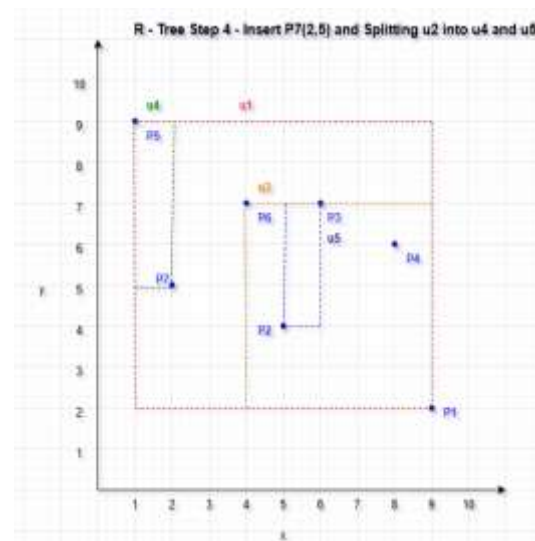
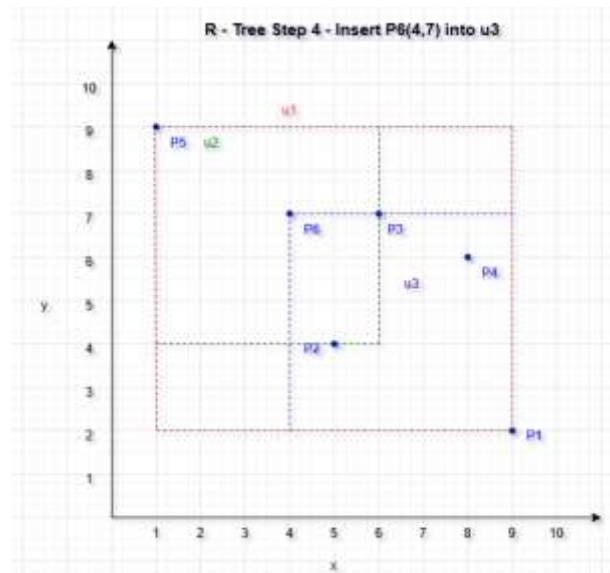
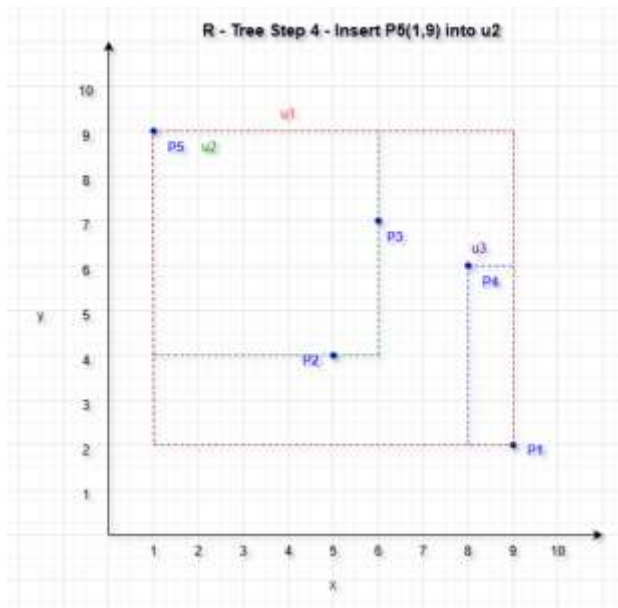
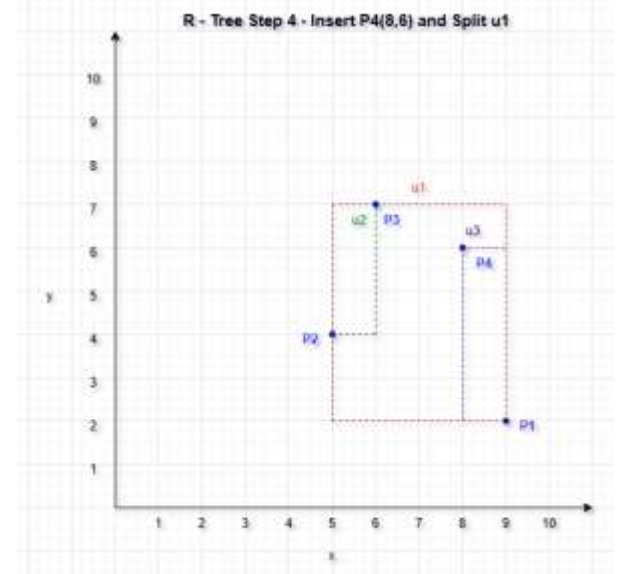
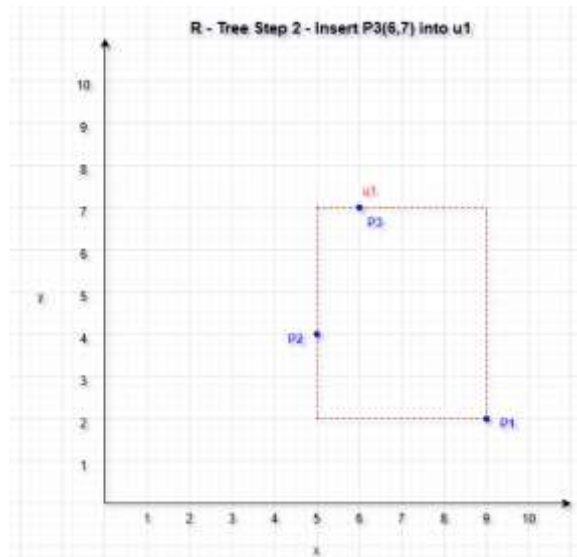
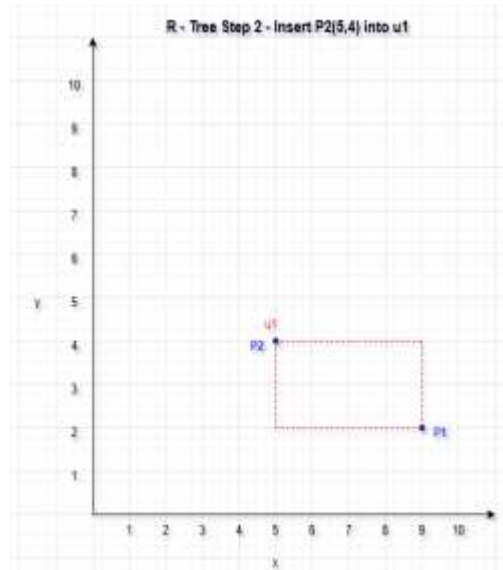
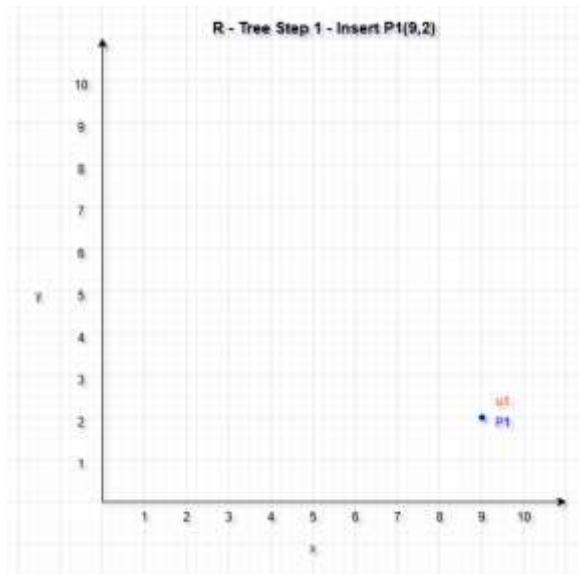
R-Tree Construction



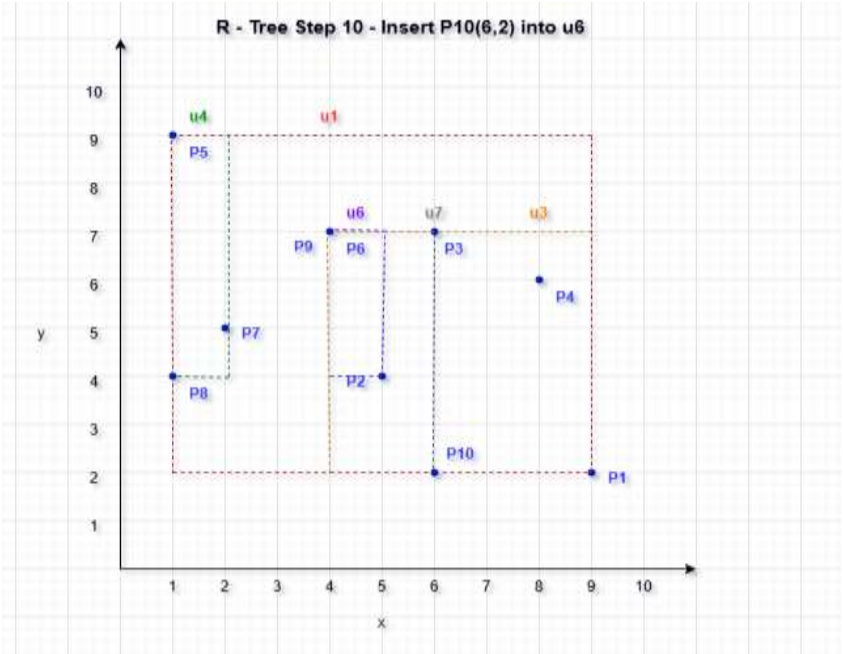
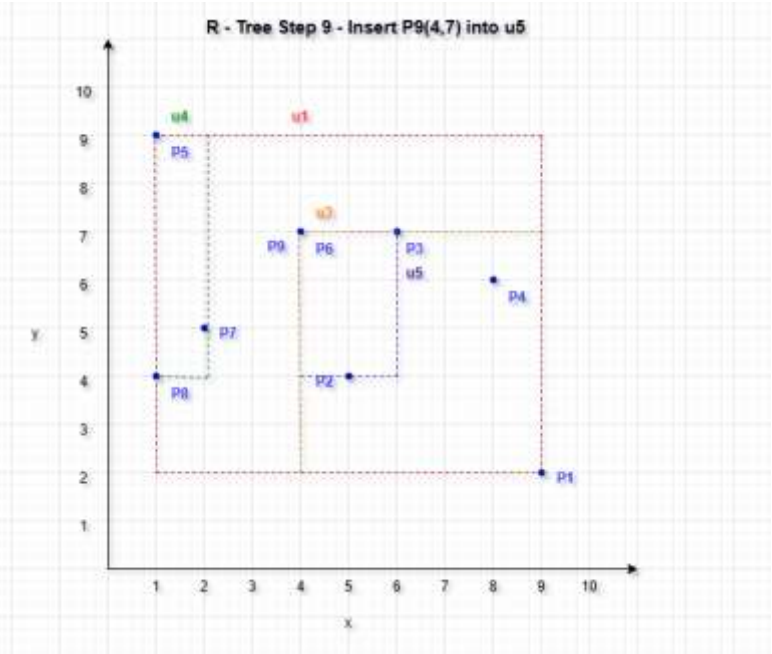
ID	1	2	3	4	5	6	7	8	9	10
X	9	5	6	8	1	4	2	1	4	6
Y	2	4	7	6	9	7	5	4	7	2

Query Point		
ID	X	Y
1	4	7

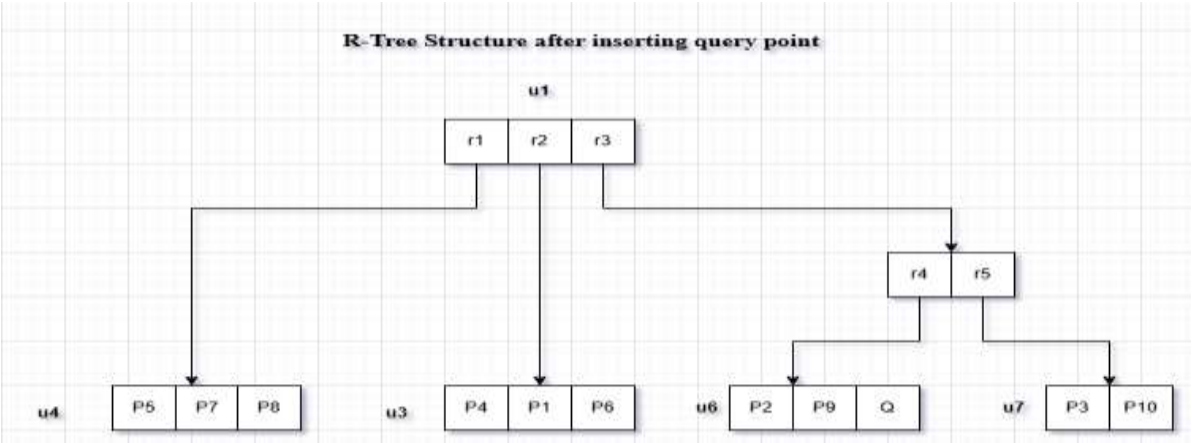
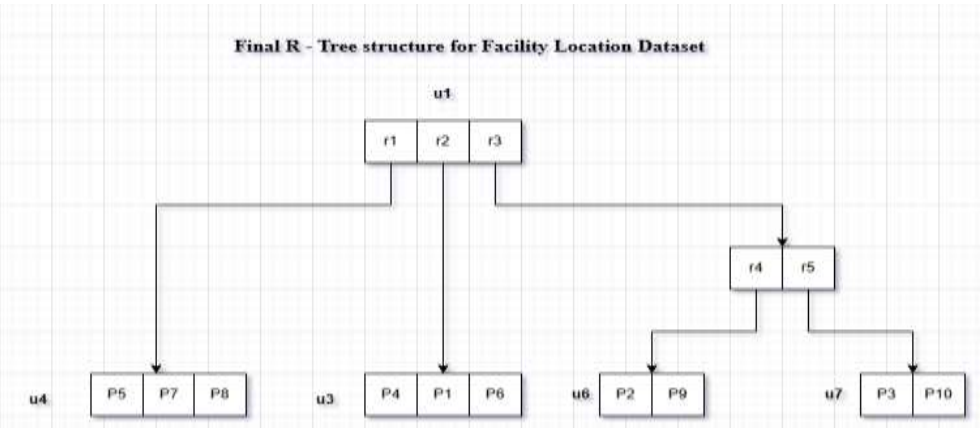
R-Tree Construction



R-Tree Construction

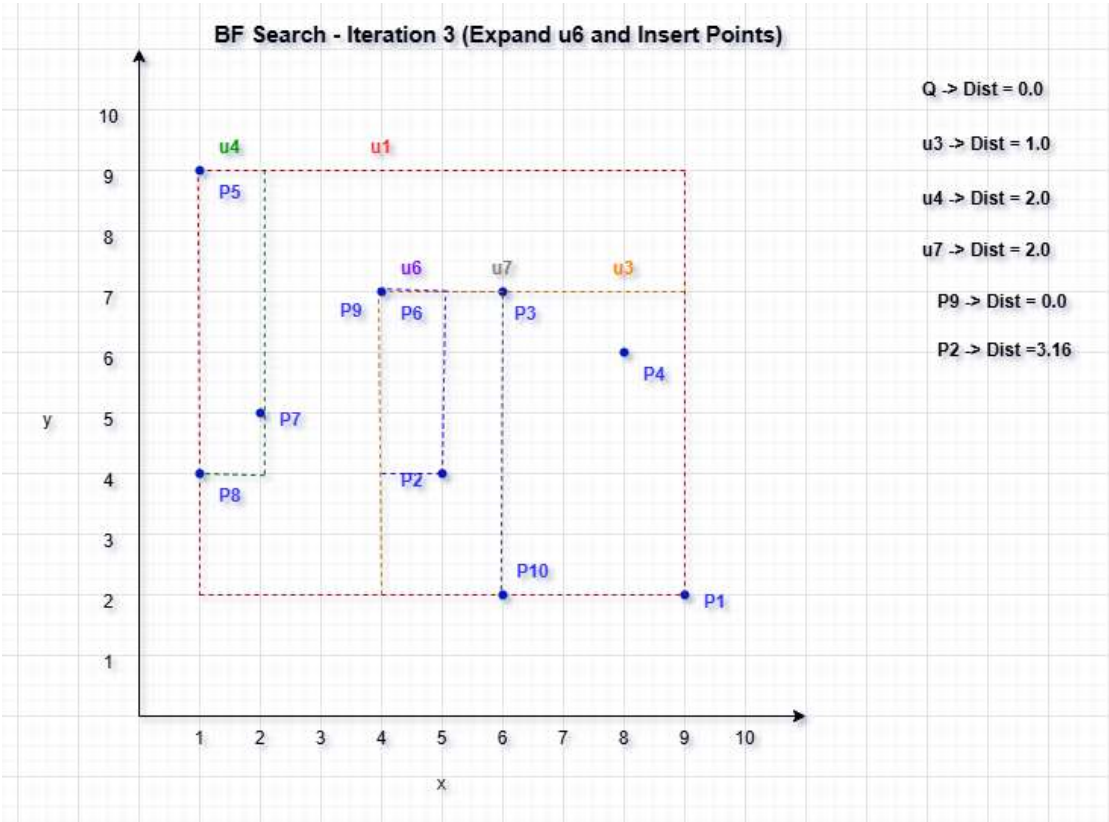
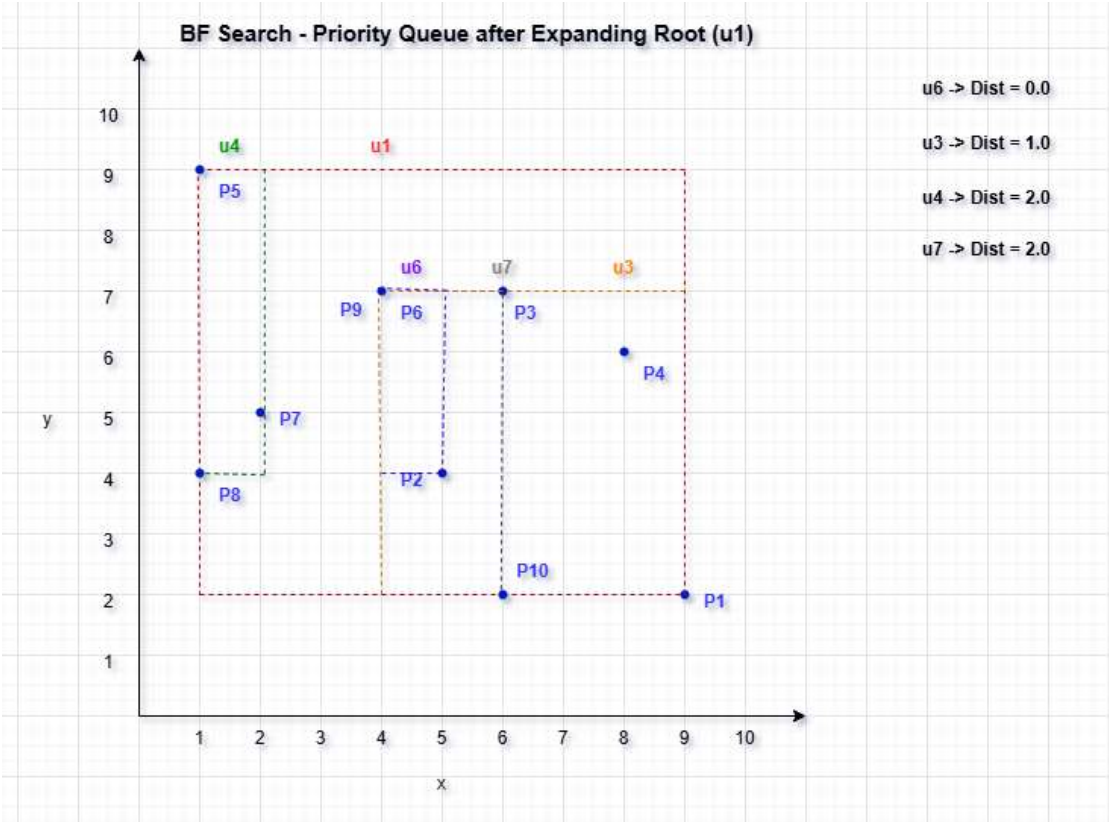


- The final R-tree diagram illustrates a spatial indexing structure built over ten facility location points (P1 to P10).
- The R-tree structure provide resulting in a final structure where all points are efficiently indexed across 4 leaf nodes under a single root node.



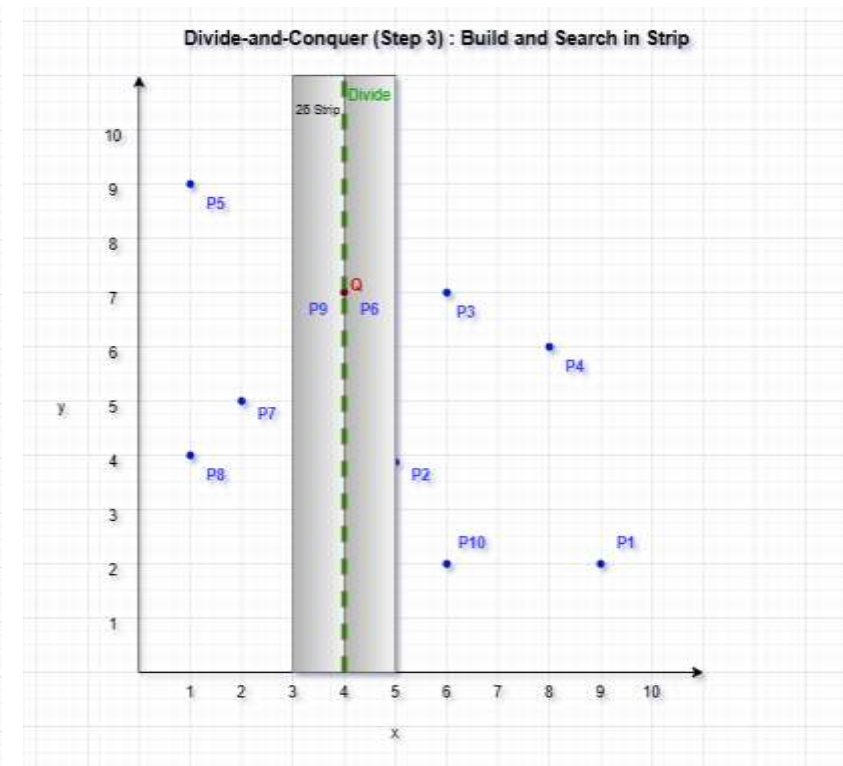
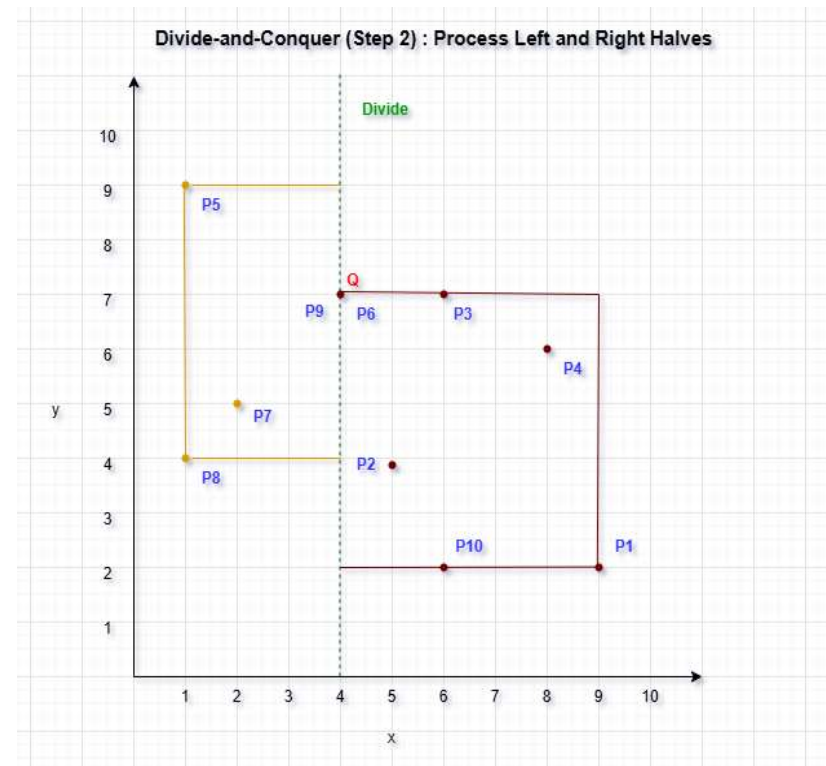
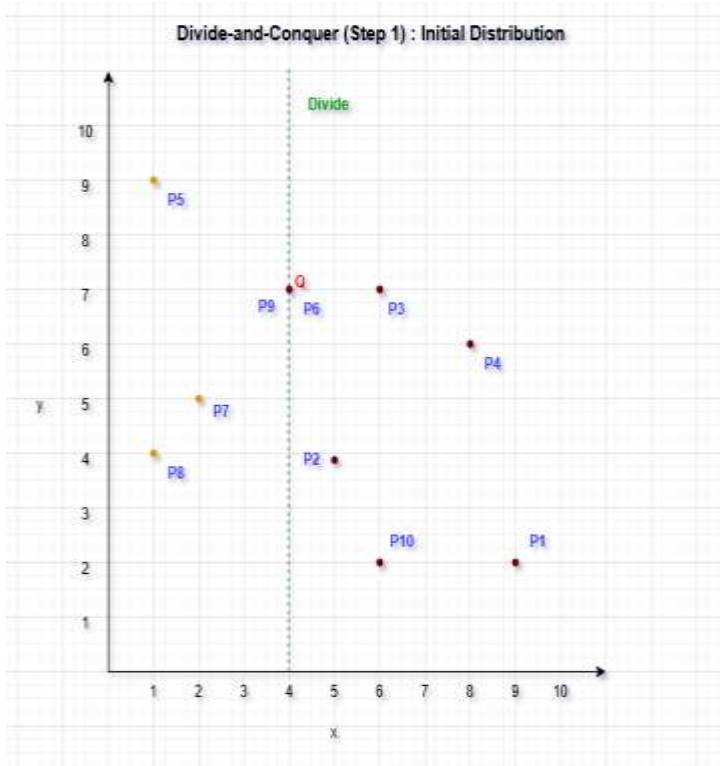
BF ALGORITHM BASED NN SEARCH

BFAlgorithm Process



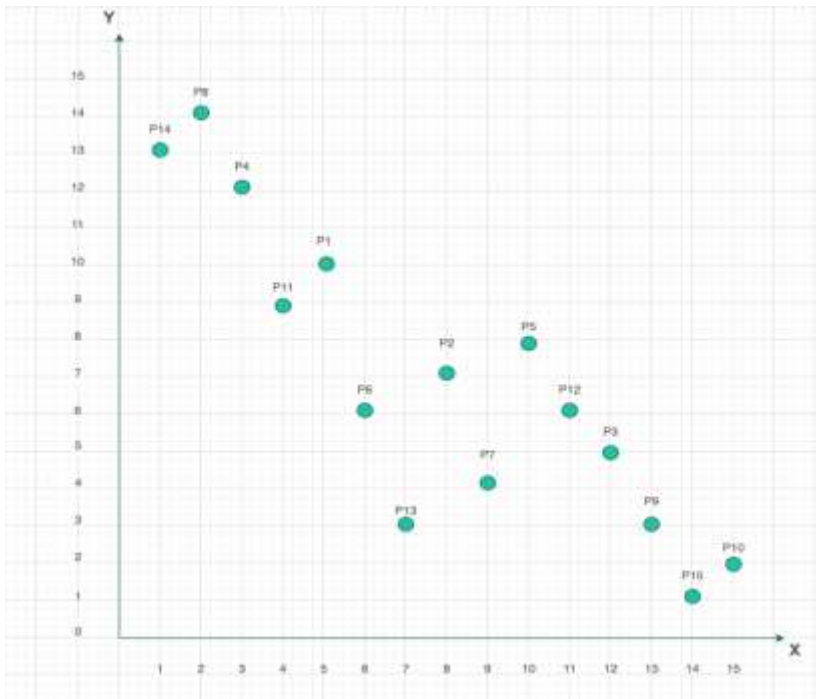
BF ALGORITHM BASED NN SEARCH

Divide & Conquer Process



BBS ALGORITHM BASED SKYLINE SEARCH

R-Tree Construction

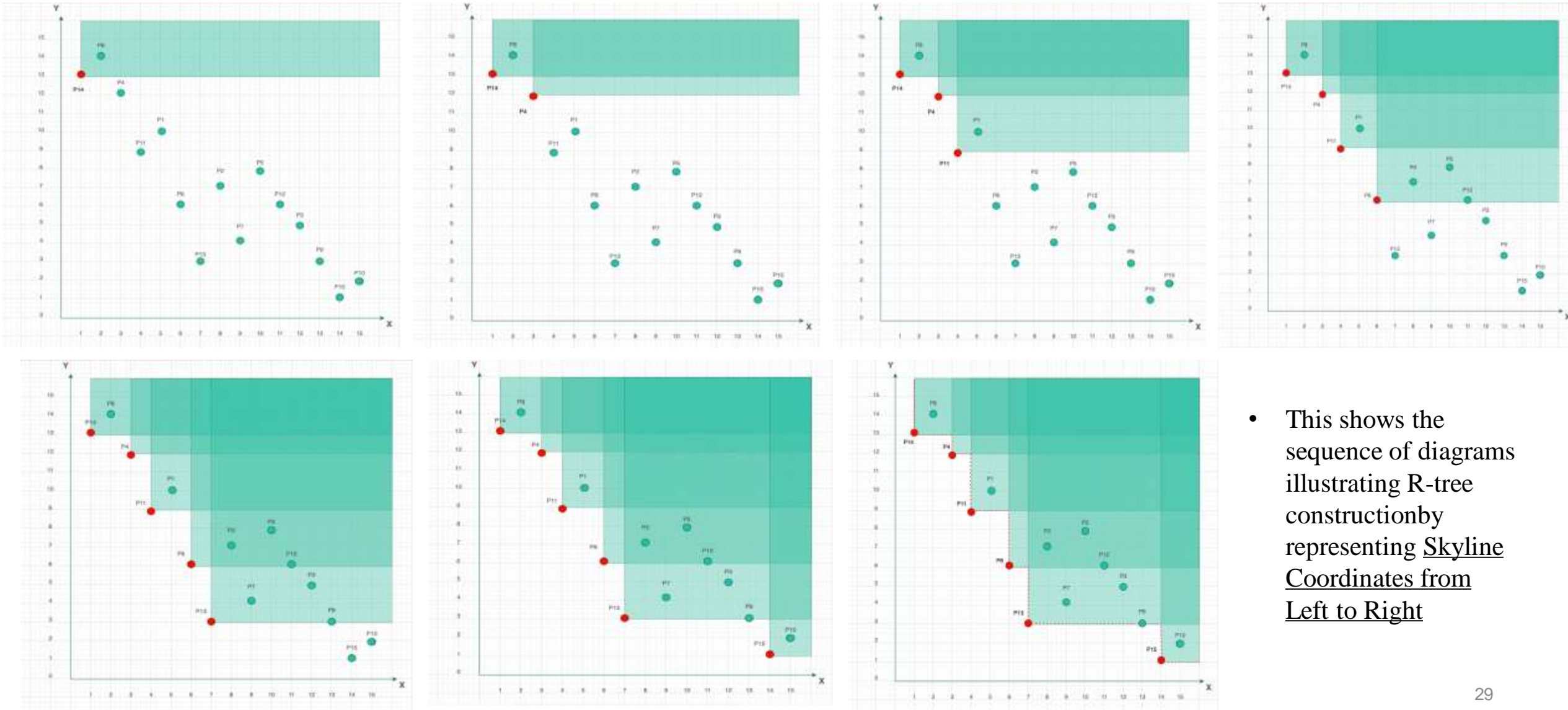


Visualization of Skyline Search Dataset

ID	1	2	3	4	4	6	7	8	9	10	11	12	13	14	15
X	5	8	12	3	10	6	9	2	13	15	4	11	7	1	14
Y	10	7	5	12	8	6	4	14	3	2	9	6	3	13	1

BBS ALGORITHM BASED SKYLINE SEARCH

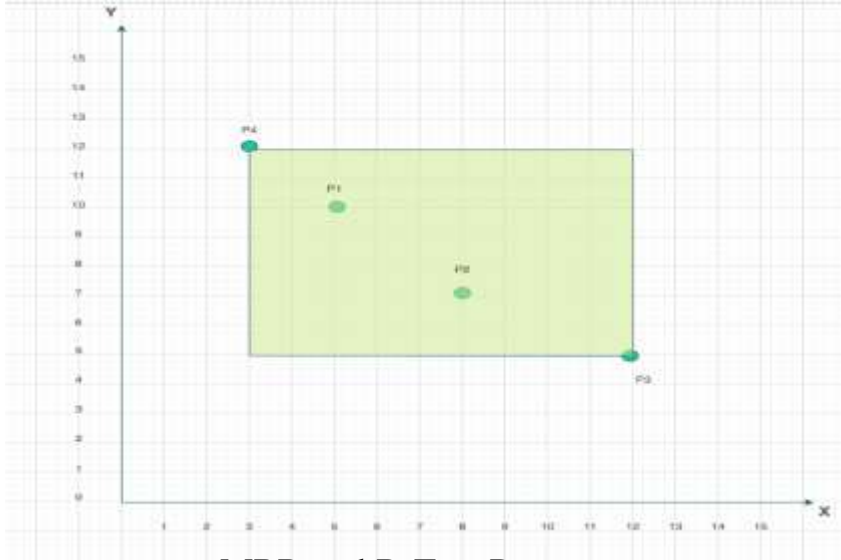
R-Tree Construction



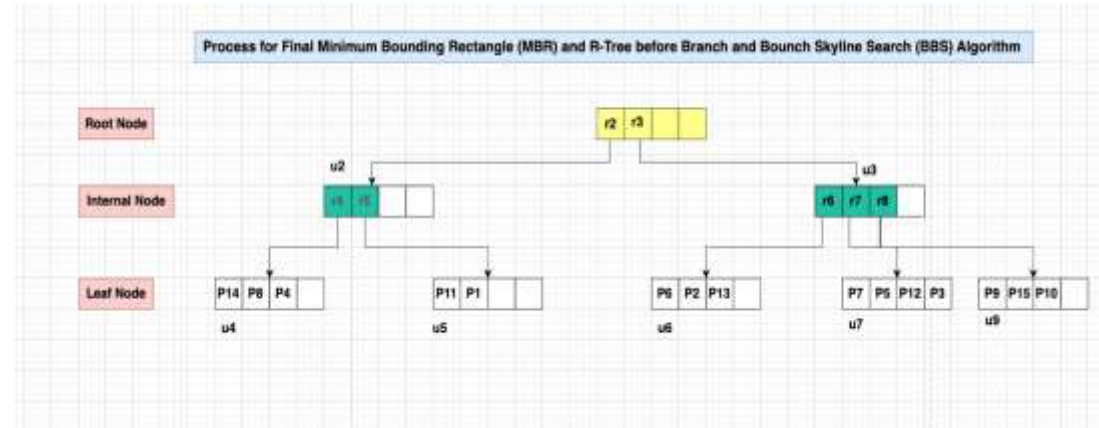
- This shows the sequence of diagrams illustrating R-tree construction by representing Skyline Coordinates from Left to Right

BBS ALGORITHM BASED SKYLINE SEARCH

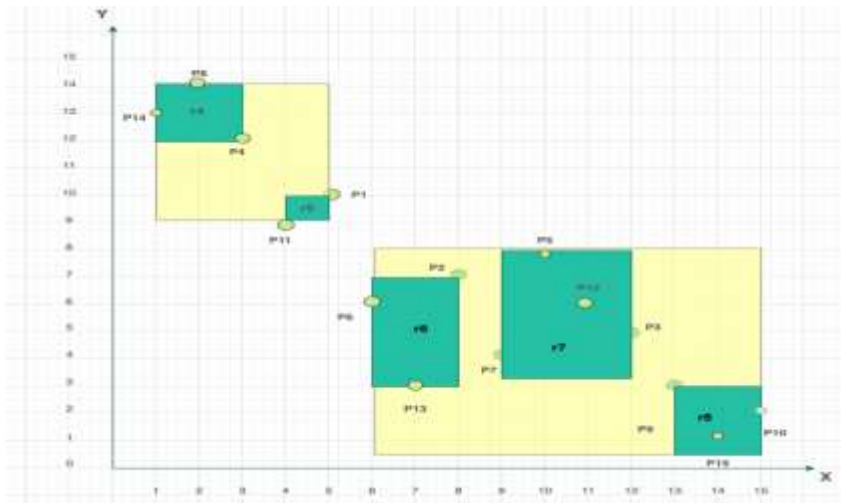
BBS Algorithm



MBR and R-Tree Process

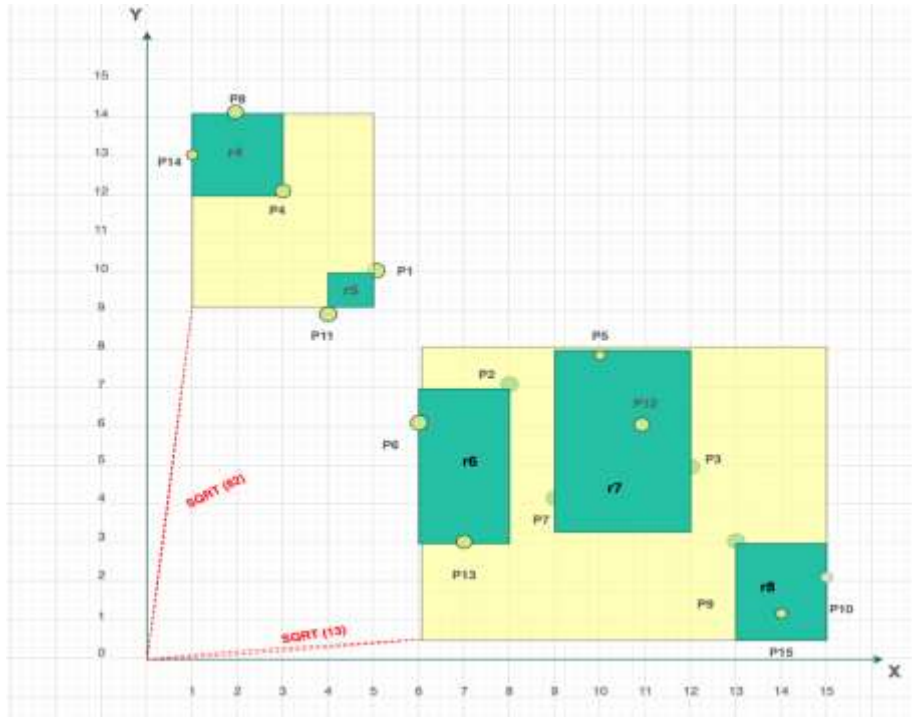


Root Node, Internal Node and Leaf Node

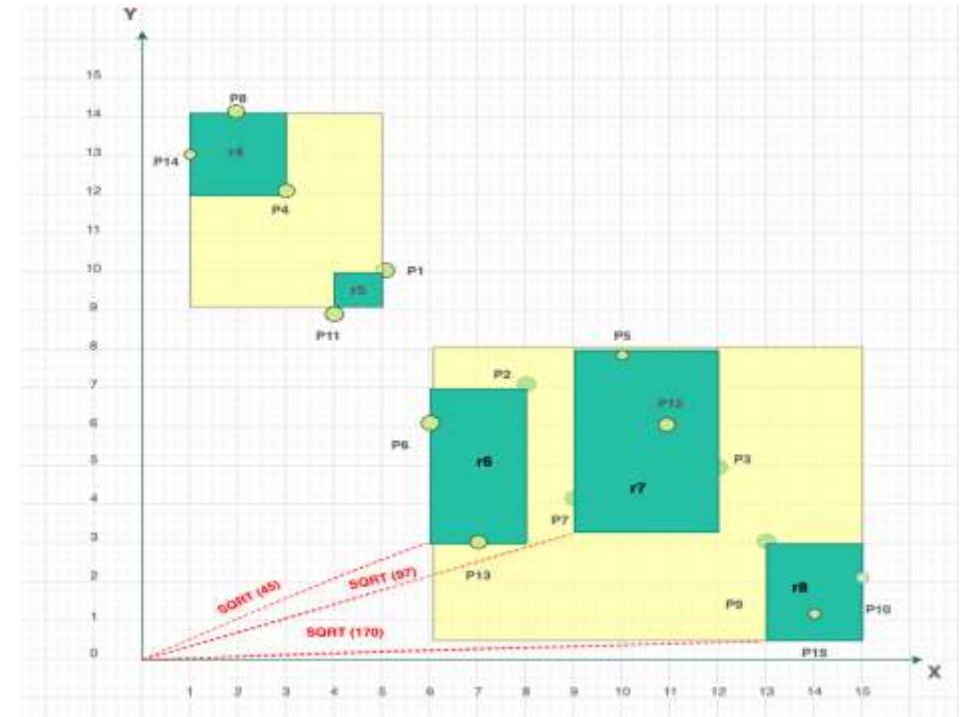


BBS ALGORITHM BASED SKYLINE SEARCH

BBS Algorithm



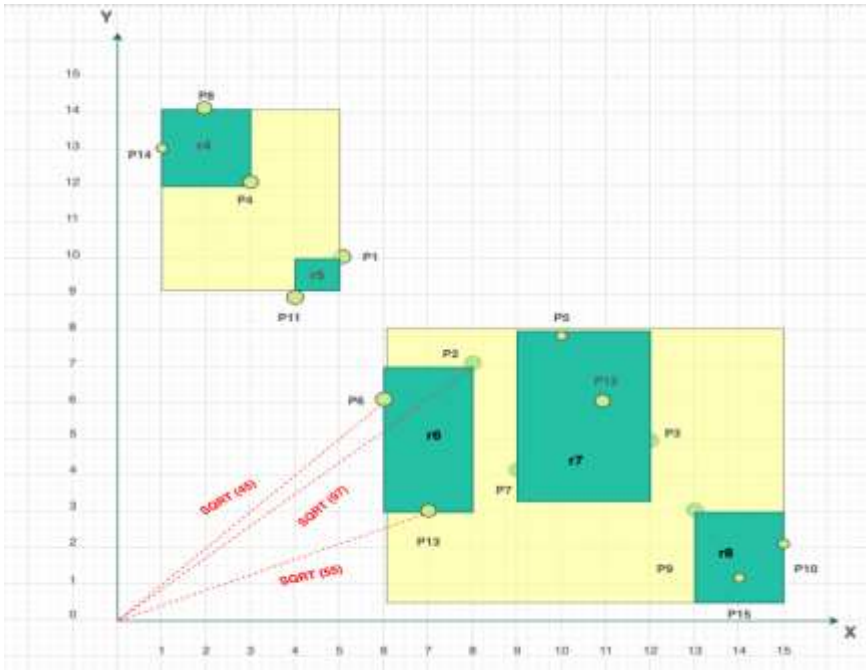
Distance from Origin to Root Node



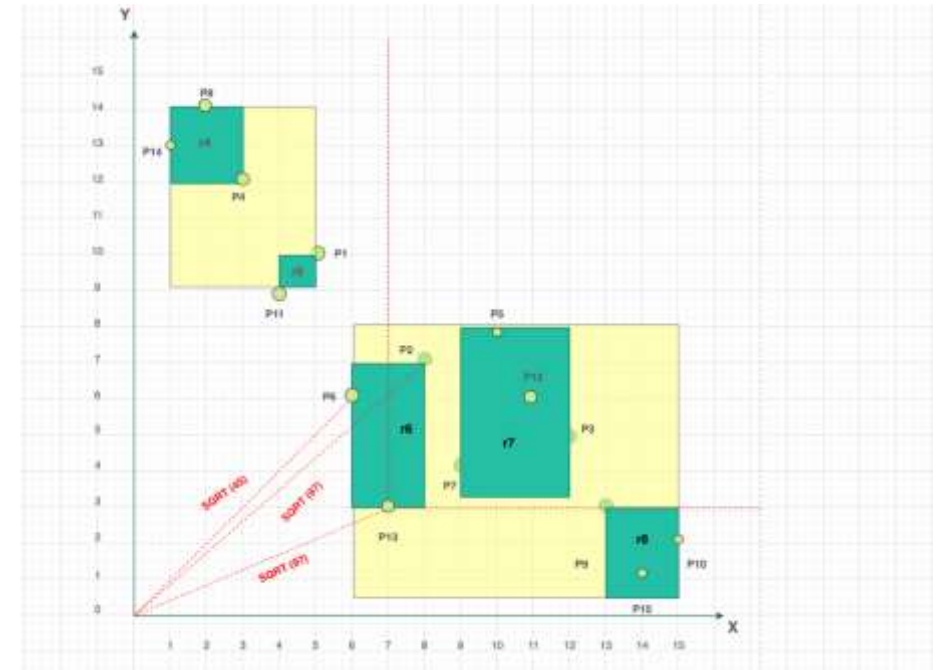
Distance from Origin to u3 Child Node

BBS ALGORITHM BASED SKYLINE SEARCH

BBS Algorithm



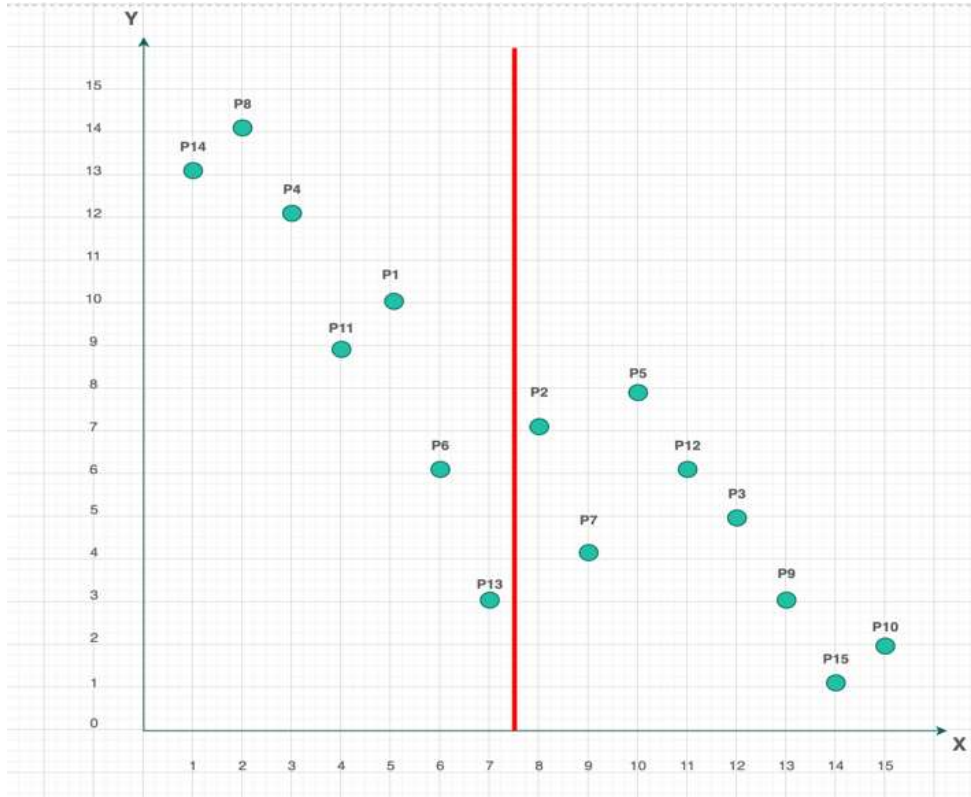
Distance from Origin to r6 Child Node



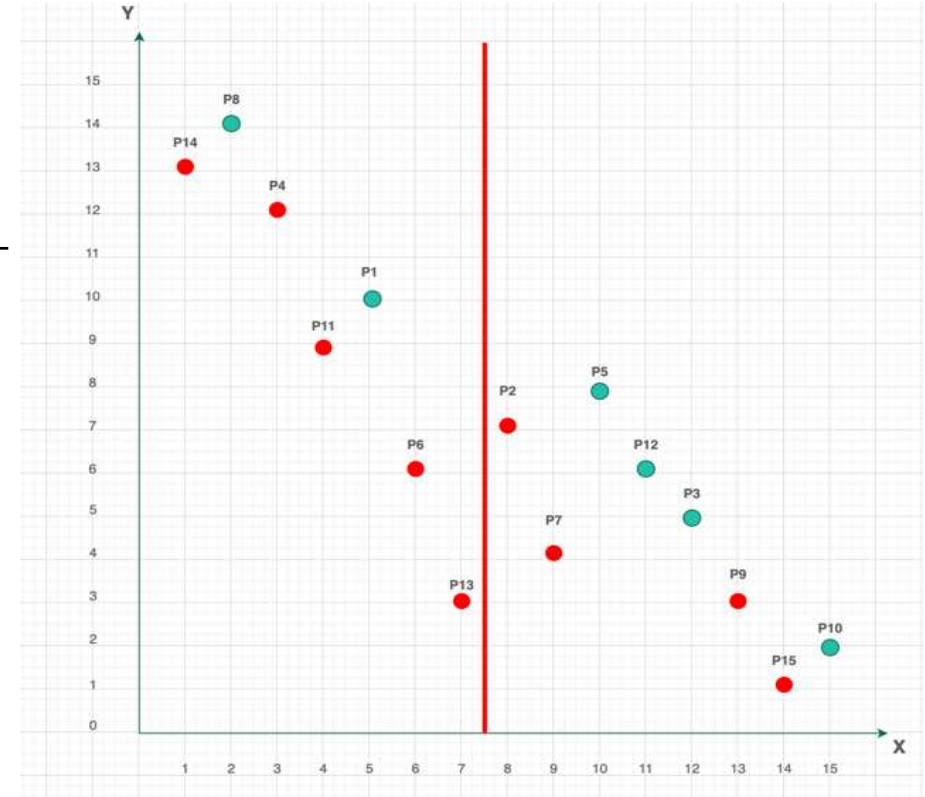
X-coordinates and Y-coordinates (after P13)

BBS ALGORITHM BASED SKYLINE SEARCH

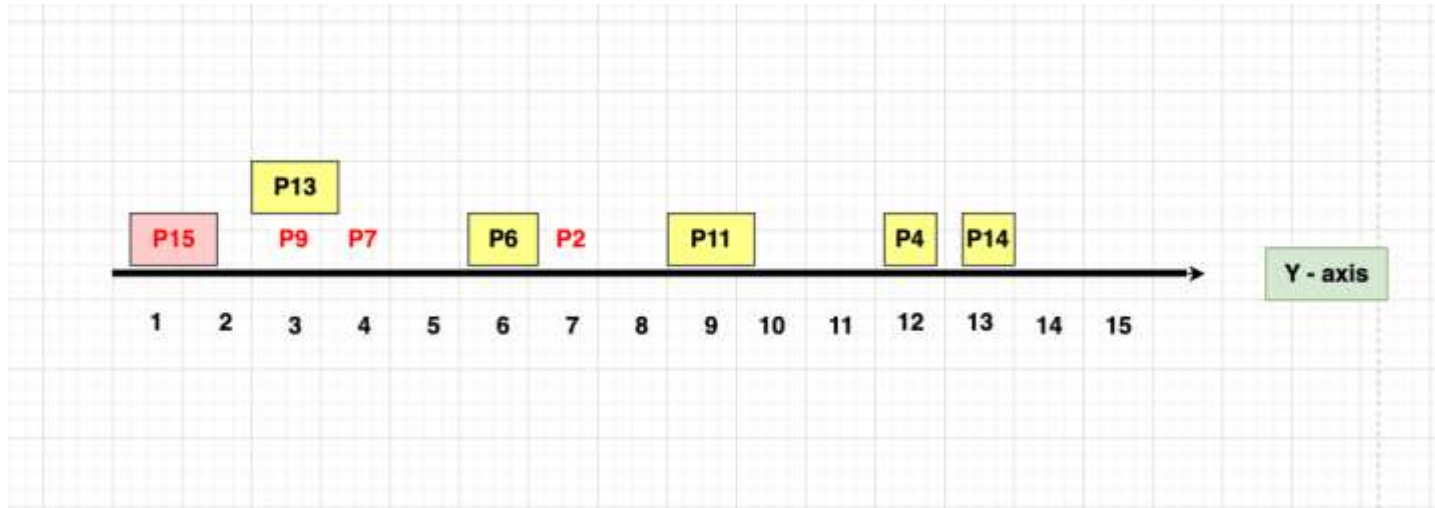
Divide and Conquer BBS Algorithm



- Skyline points shown using Divide and Conquer Approach in X-axis



Divide and Conquer BBS Algorithm



Skyline Points sorting in Y-axis