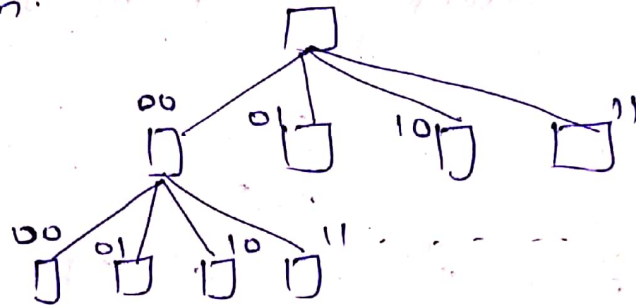Advanced Database Management System
Assignment #2 (Spatial Databases)

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Q. 26.2 : Consider Figure 26.3, which illustrates Z-ordering and Region Quad trees. Answer the following question.
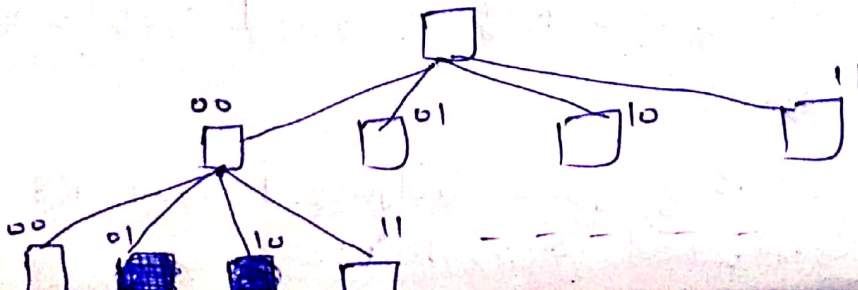

1. Consider the region composed of the points with these z-values: 4, 5, 6 and 7. Mark the nodes that represent this region in the Region Quad tree shown in Figure 26.3 (Expand the tree if necessary).
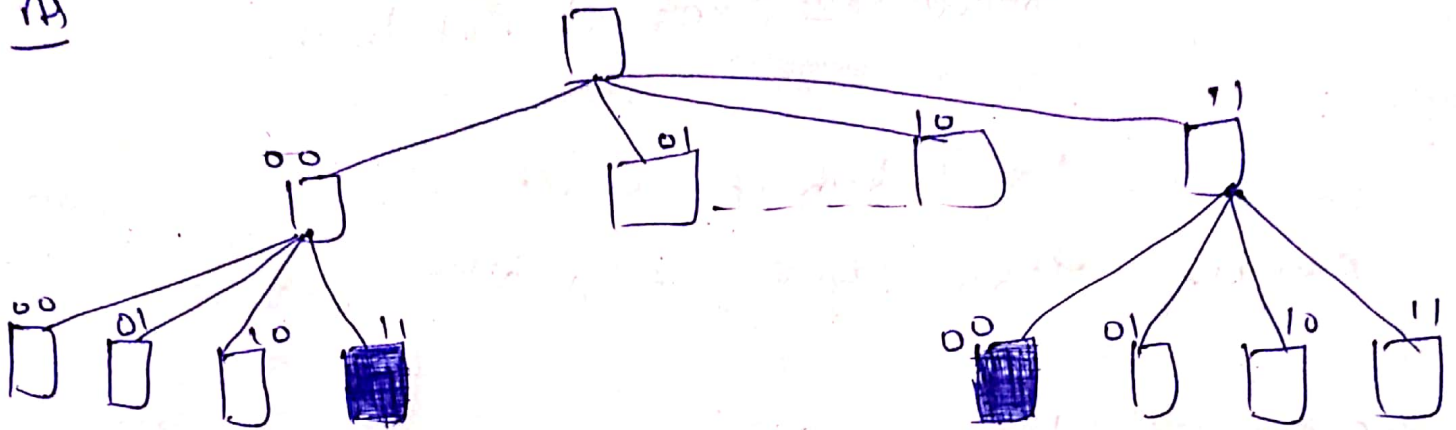
Answer

3. Repeat it for the region composed of the points with z-values 1 and 2.
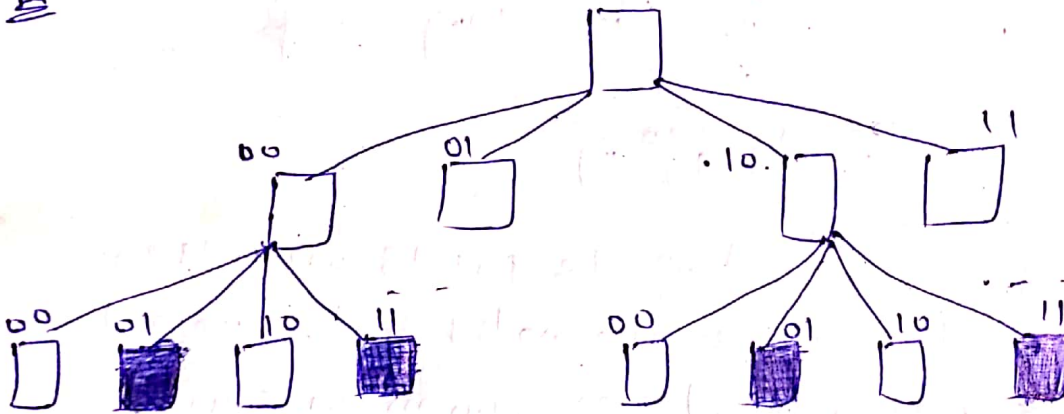
Ans

5 Repeat it for the region composed of the points with z-values 3 and 12.

A

7 Repeat it for the region composed of the points with z-values 1, 3, 9 and 11.

A

26.3: This exercise refers to figure 26.3.

1. Consider the region represented by the 91 child of the root in the region quad tree shown in figure 26.3. what are the z-values of points in this region?

A z-values of points corresponding to 01 child of the root in the given Region quad tree are 4, 5, 6 and 7.

③ List the z-values of four adjacent data points that are distributed across the four

Children of the root in the Region Quad tree.
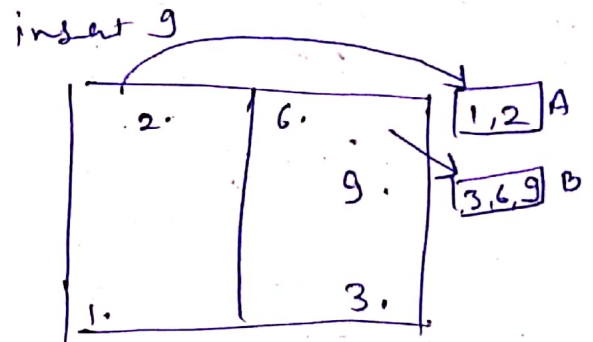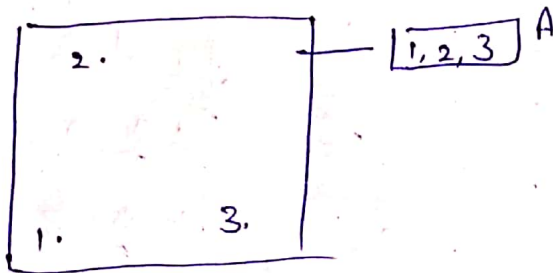
D Those values are 3, 6, 9, 12.

26.4 Consider the grid file instance with three Point 1, 2, and 3 Shown in the first part of figure 26.5
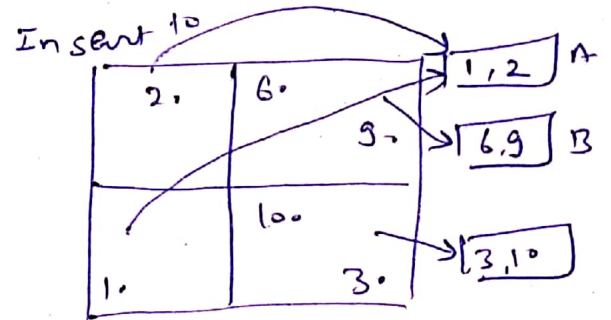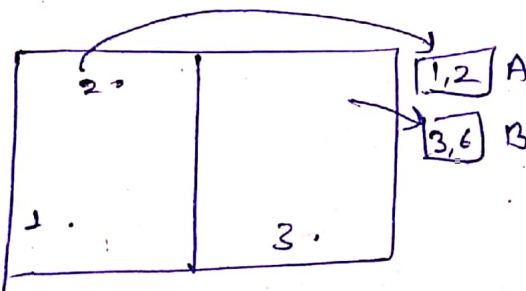
1. Show the grid file after inserting each of these Points, in the order they are listed. 6, 9, 10, 7, 8, 4, and 5.
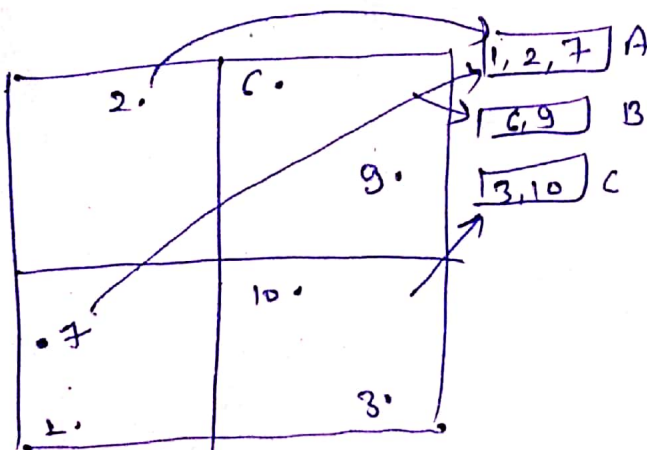
A Initial grid file

Insert 6

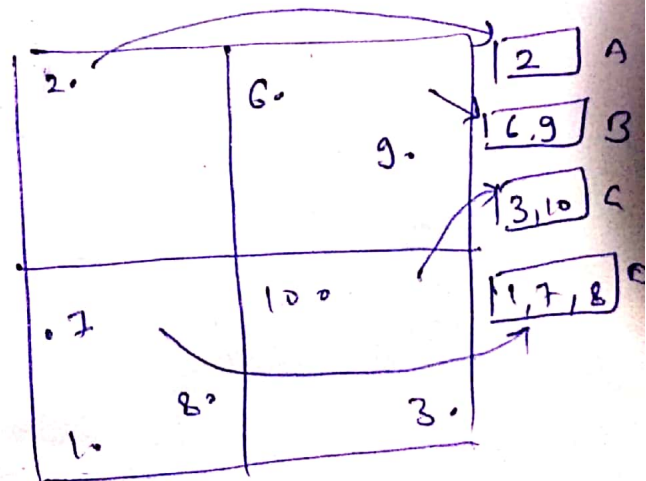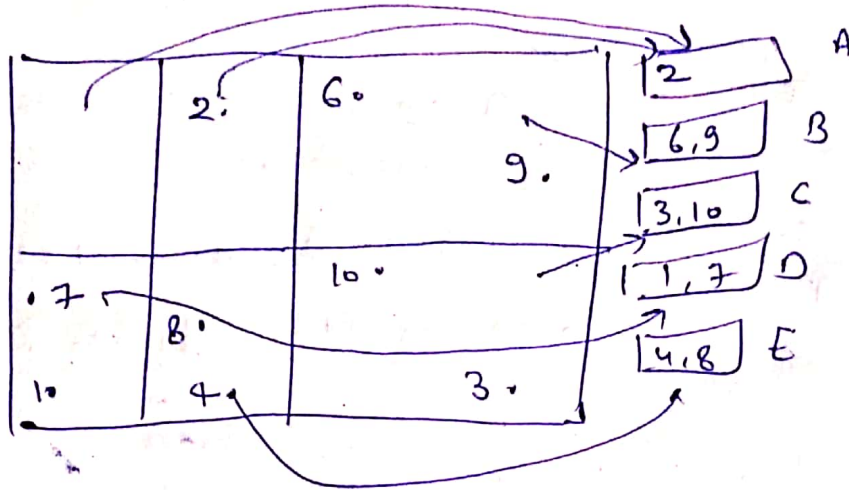Insert 10

Insert 7

Insert 8

Insert 4

	2	6.	
.7	8.	10.	9.
10	4.		3.

A [2]
B [6,9]
C [3,10]
D [1,7]
E [4,8]

Insert 5

	2	6.	
5.			9.
7.	8.	10.	
1.	4.		3.

A [2,5]
B [6,9]
C [3,10]
D [1,7]
E [4,8]