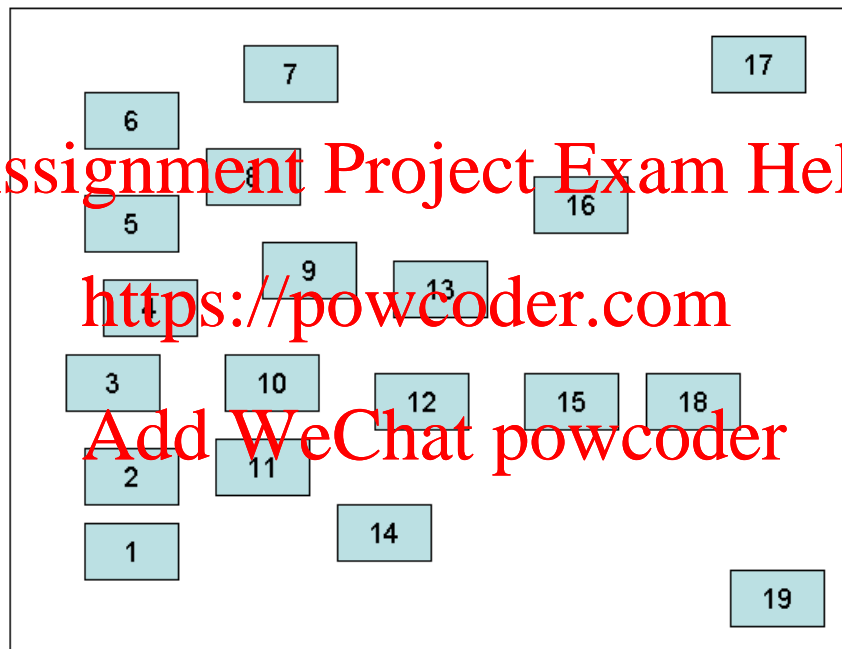


Worked Example - Grid and Quadtree Indexes

1. Create a Grid index and a Quadtree index for the following data. Your grid should be at least 16 cells in size.

Your Quadtree index should have 4 children per node (hence **Quadtree**). You can also assume that the page size on disk for the quadtree allows a maximum of FOUR polygon references per leaf.

For the Quadtree, node order is: Top Left, Top Right, Bottom Left, Bottom Right (in practice this will depend on the software being used)



		A	B	C	D
D C B A	D	6	7		17
	C	5	8	16	
	B	4	9	13	
	A	3	10	12	18
		2	11		
		1	14		19

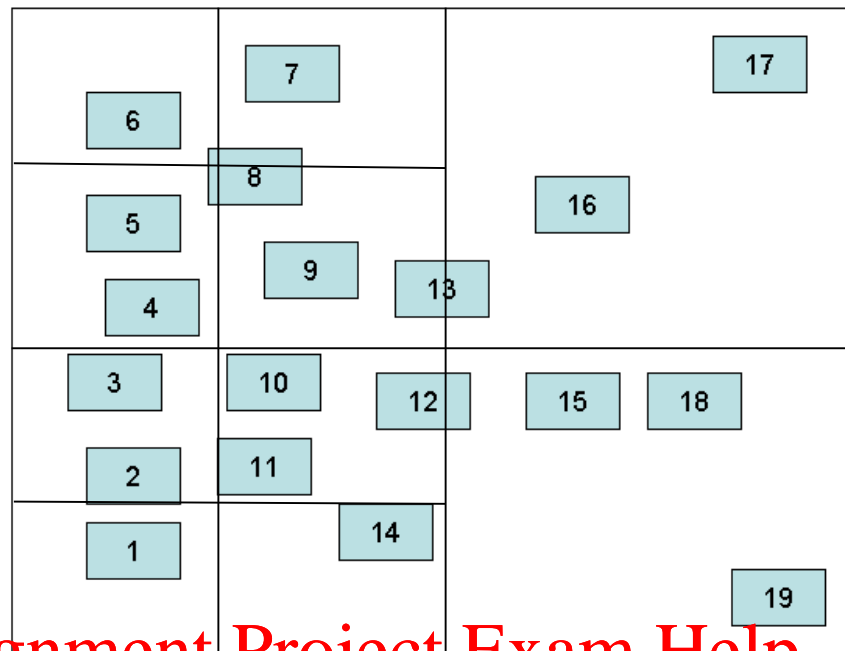
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Grid	Contents
AA	1
AB	14
AC	
AD	19
BA	2,3
BB	10,11,12
BC	12,15
BD	18

Grid	Contents
CA	4,5,8
CB	8,9,13
CC	16
CD	
DA	6,8
DB	7,8
DC	
DD	17

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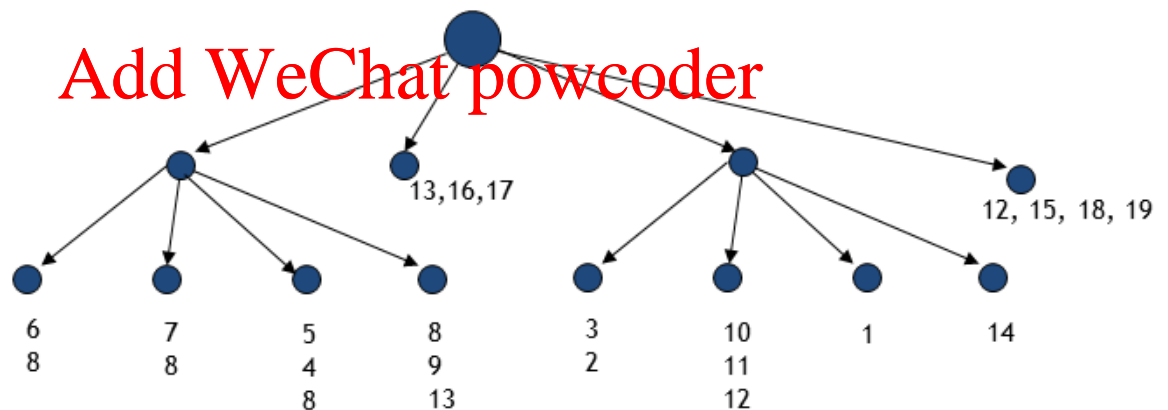
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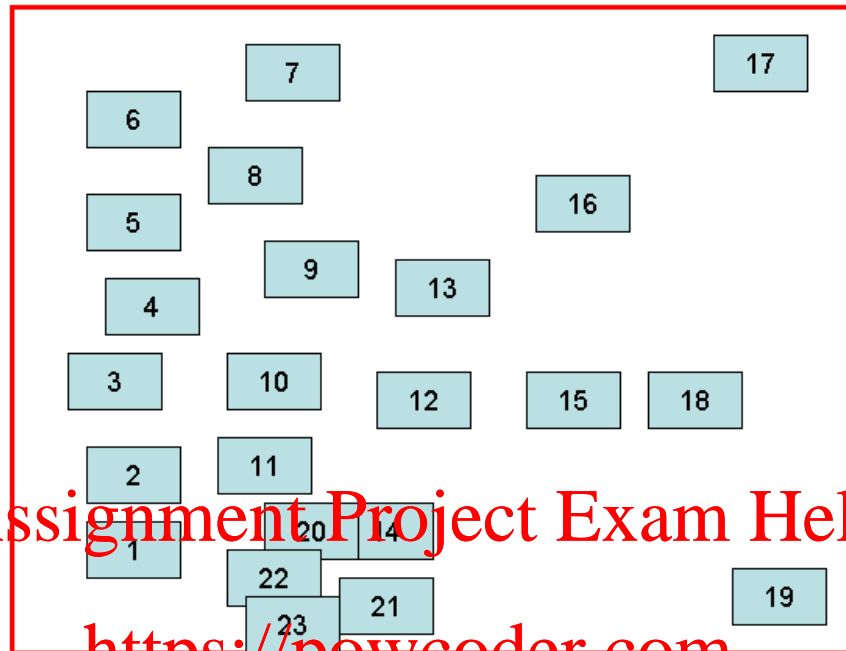
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2. Modify the indexes created above to include Polygons 20, 21, 22 and 23, which have been inserted in the diagram below.

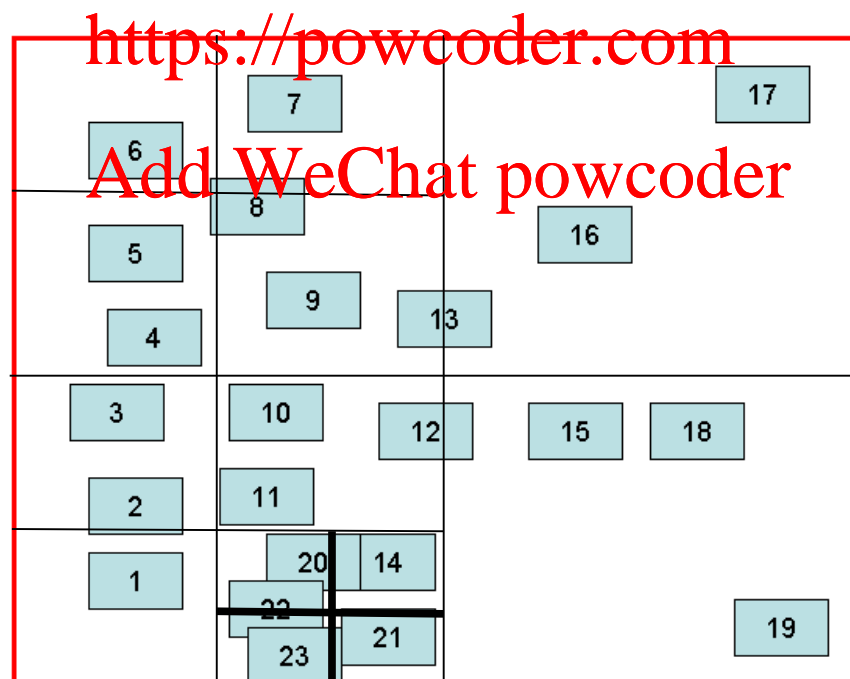


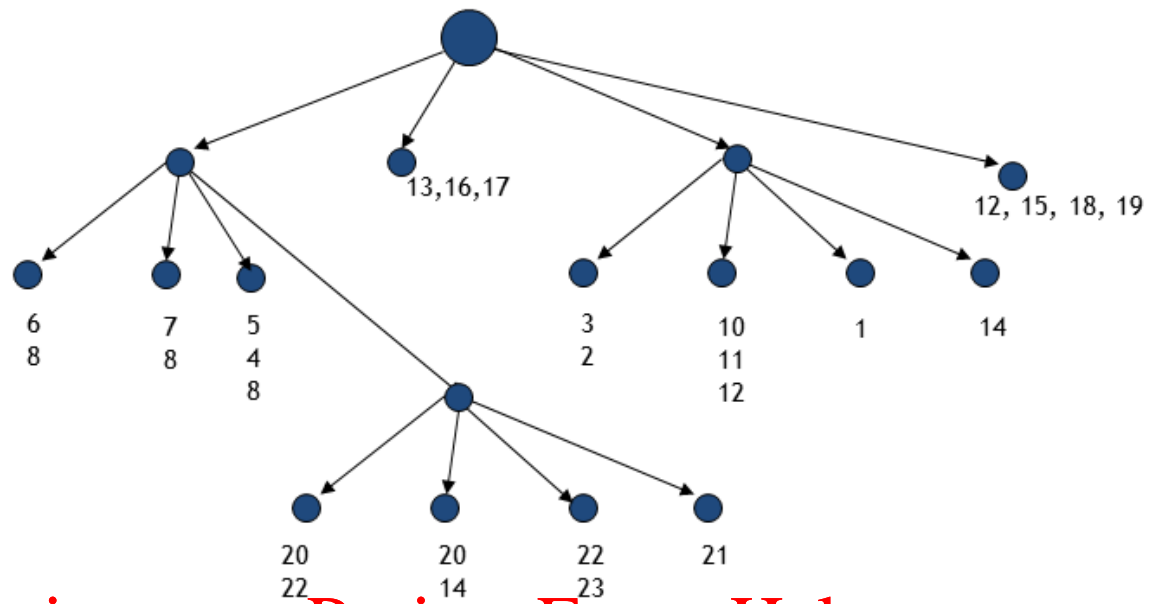
Add WeChat powcoder				
D C B A	6	7		17
	5	8	16	
	4	9	13	
	3	10	12	15
	2	11		
	1	20	14	
		22	21	
		23		19

Grid	Content
AA	1
AB	14, 20,22,23,21
AC	
AD	19
BA	2,3
BB	10,11,12
BC	12,15
BD	18

Grid	Contents
CA	4,5,8
CB	8,9,13
CC	16
CD	
DA	6,8
DB	7,8
DC	
DD	17

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