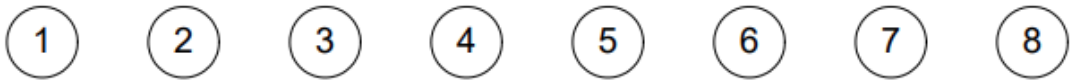
Lab 13: Learn to a build union tree

By using union by size method

Consider the following set of elements,



-1	-1	-1	-1	-1	-1	-1	-1
1	2	3	4	5	6	7	8

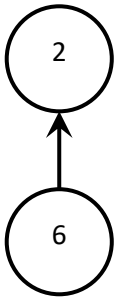
Apply the following sequence of union commands on the above set of elements and draw the tree by using the union by size method. Show the resultant tree only. Also, update the given array by the union of size method.

- union (2,6)
- union (1,3),
- union (4,2)
- union (1,2)
- union (5,2)

Solution:

Note: If we take union of two elements then parent node will be one which have maximum number of elements. If both have same then make the first one parent node

- union (2,6)



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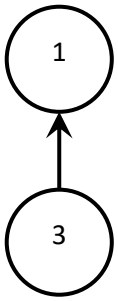
-1	-2	-1	-1	-1	2	-1	-1

1	2	3	4	5	6	7	8

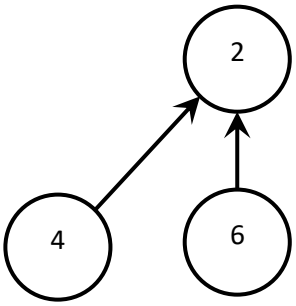
Note: After union child contains its parent and (-) minus is removed while parent contains its number of nodes and we don't remove (-) minus from it.

- union (1,3)



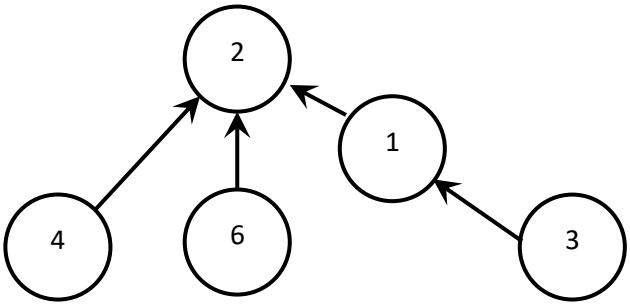
-2	-2	1	-1	-1	2	-1	-1
1	2	3	4	5	6	7	8

- union (4,2)



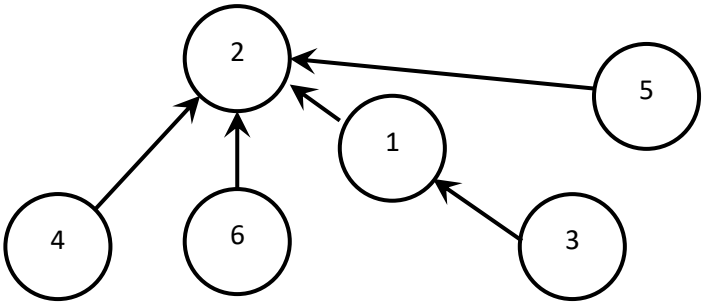
-2	-3	1	2	-1	2	-1	-1
1	2	3	4	5	6	7	8

- union (1,2)



2	-5	1	2	-1	2	-1	-1
1	2	3	4	5	6	7	8

- union (5,2)



2	-6	1	2	2	2	-1	-1
1	2	3	4	5	6	7	8