

→ from a query:

3.2

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SET seed TO 0.011817339;

SELECT * FROM generate-series(1, 16);

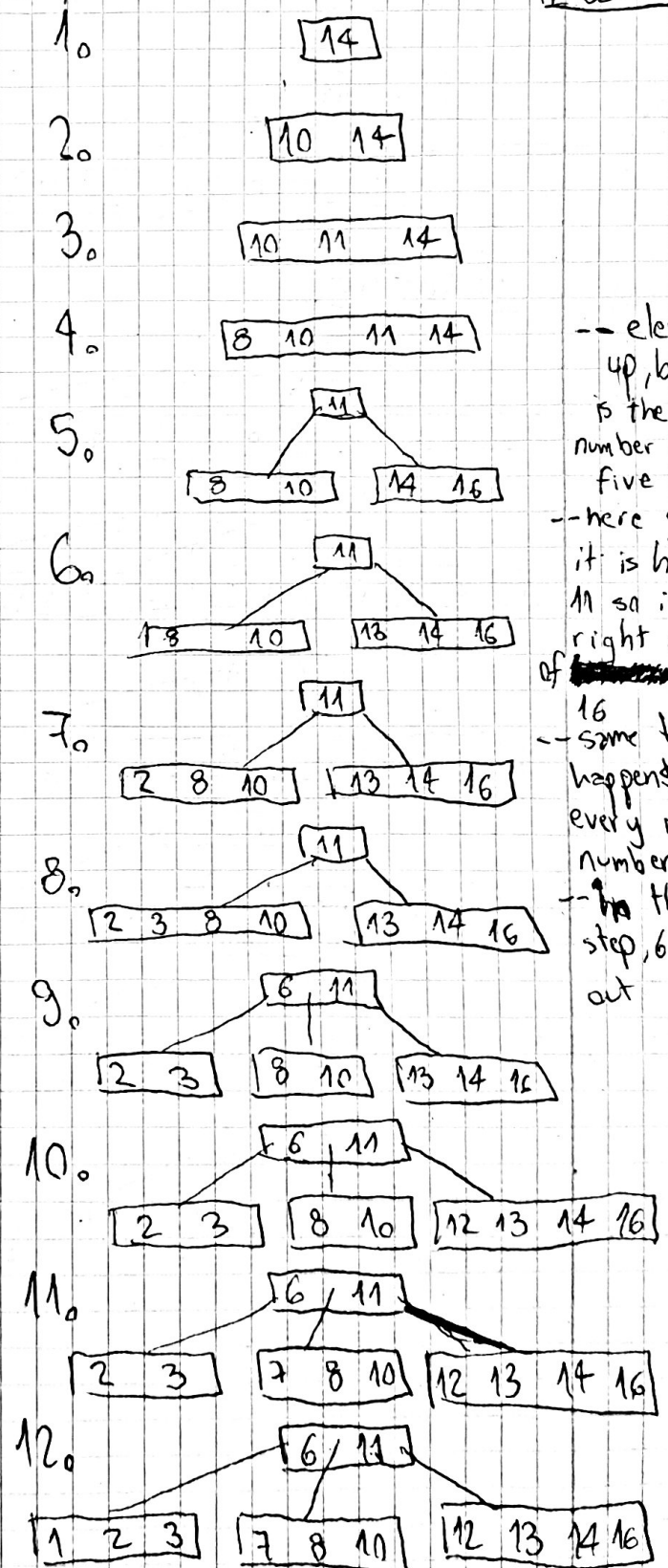
ORDER BY random();

→ I get next results:

	generate-series integer
1	14
2	10
3	11
4	8
5	16
6	13
7	2
8	3
9	6
10	12
11	7
12	1
13	9
14	4
15	5
16	15

B-tree (step-by-step)
Insertion

steps

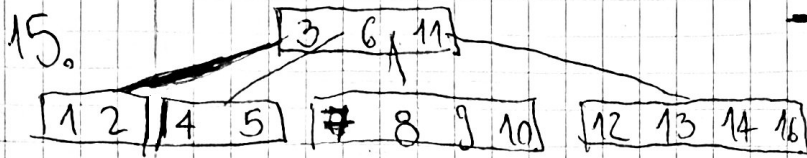
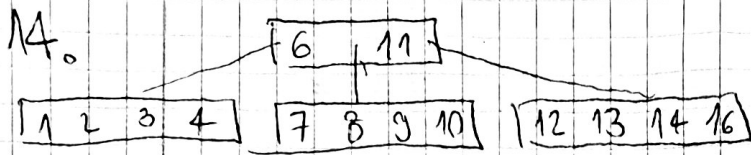
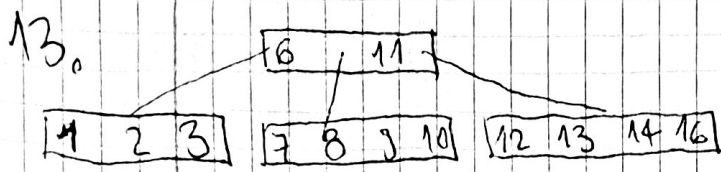


-- eleven goes up, because it is the middle number of these five

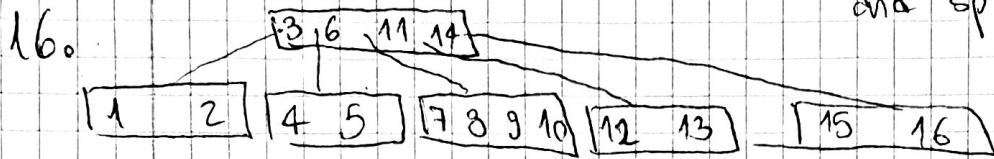
-- here goes 13, it is higher than 11 so it goes right and left of ~~14~~ 14 and 16

-- same thing happens to every next number

-- in this next step, 6 goes out



-- here 3 goes up, because it is the middle number of 12 3 4 5 goes up!! and splits it in two ([1,2], [4,5])

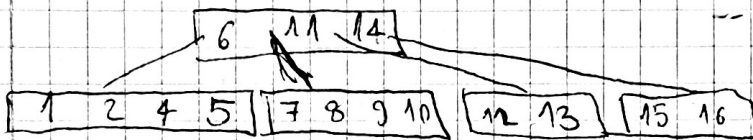


-- since 14 went up and it splits 12, 13, 14, 15, 16

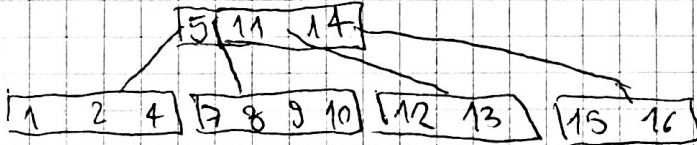
[8, 14)

Deletion

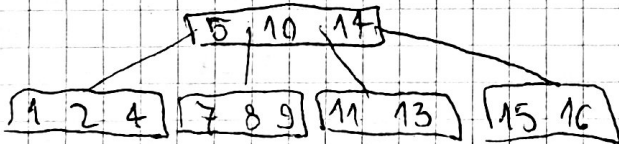
1. remove 3



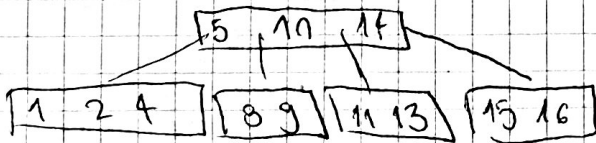
2. remove 6



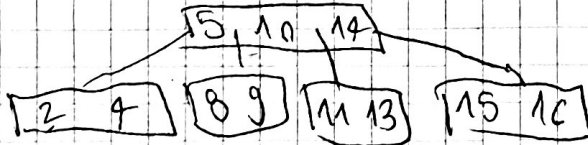
3. remove 12



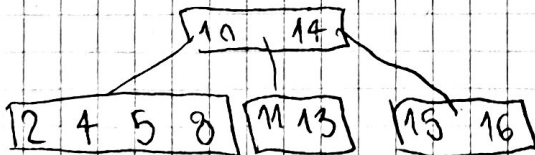
4. remove 7



5. remove 1



6. remove 9



-- first step is to remove 3, but then 2 goes up and comes back down to merge 1 2 4 5 into one

-- this one is pretty straightforward since 6 is deleted 5 goes up.

-- since 12 is removed, 11 has to go down to fill its place, but also 10 goes up in order to have that bridge between the nodes

-- when you remove 9, 8 stays, since 8 is smaller than 10, we merge it with 2, 4 and 5 (5 also moves down, because there is no need for one more node)